Purchasing Division, Finance Department
218-730-5340 | purchasing@duluthmn.gov
Room 120 | 411 West First Street | Duluth, Minnesota 55802
www.duluthmn.gov

Addendum 1
Solicitation 26-4406
DLH Taxiway A Reconstruction Ph 7 and Midfield Ramp Repair Ph 4

This addendum serves to notify all bidders of the following changes to the solicitation documents:

All changes are identified in the attached documents provided by the Project Engineer.

Please acknowledge receipt of this Addendum by checking the acknowledgement box within the solicitation at www.bidexpress.com.

Posted: May 27, 2026

DOCUMENT 00 00 11

ADDENDUM NO. 1
May 26, 2026

Taxiway A Reconstruction - Phase 7 and Midfield Ramp Repair - Phase 4
City of Duluth No. 26-4406
Duluth International Airport (DLH)
Duluth Airport Authority (DAA)
AIP No. 3-27-0024-084-2025
SP Nos. A6901-226 & A6901-229

SEH No. DULAI 186683 & 188850

From: Short Elliott Hendrickson Inc.
3535 Vadnais Center Drive
St. Paul, MN 55110-3507
651.490.2000

To: Document Holders

DOCUMENT HOLDERS on the above-named project are hereby notified that this document shall be appended to, take precedence over and become part of the original bidding documents dated May 8, 2026 for this work. Bids submitted for the construction of this work shall conform to this document.

This addendum consists of the revised bid form reflected in BidExpress, the attached Pre-Bid Meeting Minutes, revisions to the specifications, and revisions to drawings.

Changes to Bidding Requirements:

1. Document 00 41 00 – Bid Form: The Bid Form has been revised to reflect the addition of bid items for specification section 02 60 10 – Handling of Contaminated Soils/Debris. The Bid Form is updated in BidExpress.

Changes to Specifications:

2. Specification 02 60 10 – Handling of Contaminated Soils/Debris has been revised to include updated data and specifications regarding handling of contaminated soils/debris and contaminated water/groundwater at the project site, based on the inclusion of environmental reports (Appendices G, H, I, and J) into the contract requirements per this addendum. DELETE in its entirety and REPLACE with the attached revised specification section.

3. Appendix A.1 – Geotechnical Evaluation Report – Taxiway A Reconstruction Phase 7: Appendix is included to reflect the exploration and evaluation of geotechnical results for the project site.

4. Appendix G – Phase I ESA – Taxiway A Reconstruction Phase 7: Appendix is included to address observed project site environmental contamination based on spring 2026 field investigation.

5. Appendix H – Phase II ESA – Taxiway A Reconstruction Phase 7: Appendix is included to address observed project site environmental contamination based on spring 2026 field investigation.

6. Appendix I – Response Action Plan/Construction Contingency Plan – Taxiway A Reconstruction Phase 7: Appendix is included to address observed project site environmental contamination based on spring 2026 field investigation.

7. Appendix J – Phase II ESA – Midfield Ramp Repair Phase 4: Appendix is included to address observed project site environmental contamination based on spring 2026 field investigation.

Changes to Drawings:

8. Plan Set A – Drawings G5.03, G5.04, and G5.05 – Statement of Estimated Quantities: Updated to reflect the addition of bid items for specification section 02 60 10 – Handling of Contaminated Soils/Debris. DELETE in their entirety and REPLACE with the attached revised drawings.

9. Plan Set B – Drawing G3.03 – Statement of Estimated Quantities: Updated to reflect the addition of a bid item for specification section 02 60 10 – Handling of Contaminated Soils/Debris. DELETE in its entirety and REPLACE with the attached revised drawing.

Attachments:
Pre-Bid Meeting Minutes
Revised Specification Sections
Revised Drawings

NOTE: Receipt of this Addendum No. 1, dated May 26, 2026 shall be acknowledged on BidExpress. Failure to do so will not allow Bidder to submit Bid.

Jarrod Nelson, PE
License Number 26794

END OF ADDENDUM

Building a Better World for All of Us®

PRE-BID MEETING MINUTES

RE: Taxiway A Reconstruction Phase 7 and Midfield Ramp Repair Phase 4
Duluth International Airport (DLH)

Date of Meeting: Thursday, May 21, 2026

Project Manager: Allison Andrashko, Jarrod Nelson

Time of Meeting: 1:30 p.m.

SEH No.: DULAI 186683, 188850 16.00

Location of Meeting: Virtual MS Teams / Airport Conference Room

Attendees: Attendance list is attached with issue of meeting minutes.

The following items were discussed at the above referenced meeting:

I. **Project Representatives**

A. Owner Representatives – Duluth Airport Authority
   1. **Ryan Welch – DAA, Director of Operations**
   2. **Tristan Durfee – DAA, Airside Manager**
   3. Matt Snell – DAA, Public Safety Manager
   4. Paul Sinnot – DAA, Airside

B. Engineer Representative – Short Elliott Hendrickson, Inc.
   1. Shawn McMahon, PE (MN, WI, IA, SD) – SEH, Project Principal, 651.925.7541
   2. Jarrod Nelson, PE (MN, IA, ND, SD) – SEH, Project Manager, 651.325.8161
   3. Allison Andrashko, PE (MN) – SEH, Project Manager, 507.261.7617
   4. Jake Stiebler, PE – SEH, Project Engineer, 651.269.5923
   5. Ben Wolf, PE – SEH, Structural Engineer
   6. Mark Giddings, PE – Burns & McDonnell, Electrical Project Manager
   7. Derek Bruemmer, PE – Burns & McDonnell
   8. Sam Yunker, EIT – Burns & McDonnell
   9. Steven Thayer – Braun Intertec, Geotechnical Engineer

II. **Project Information**

A. Please submit all bidding questions via email to jnelson@sehinc.com, copying aandrashko@sehinc.com

B. Project Documents: Bidding Documents are available to view and download at no cost as www.bidexpress.com. Bidders must create a free account with Bid Express®; and login to search for city projects (search by “City of Duluth” or bid number). Bids will only be received electronically through Bid Express®.

C. Project Award: Project award will be based upon overall lowest base bid cost and available funding at the time of bid opening.

D. Please review **Article 3 – Qualifications of Bidders** included in Instructions to Bidders of the Project Manual for required documents to be submitted during the bid

1. Bid Security (5%, sent separately via email prior to bid opening), Byrd Anti-Lobbying Amendment Certification, Bid Item Prices, Acknowledgement of Addenda, Declaration of Non-Collusion, Responsible Contractor Verification & Cert. of Compliance, First Tier Subcontractor List, and DBE certification reflecting intended DBE utilization percentage.

2. Items to be submitted within 72 hours after bid include: Signed Bid Form (00 41 00), List of Proposed Suppliers (00 43 37), Certificate of Compliance with Minnesota Statues 363A.36 (00 45 47), and Buy American Certification (00 45 48).

E. Major Items of Work Include:

Schedule A – Taxiway A Reconstruction – Phase 7 (Base Bid): 25,000 SY 13-inch P-501 PCC, 10,000 tons bituminous pavement (State Spec., P-401, and P-403 mixes), 43,000 CY excavation, 1,500 CY pond dredging, 7,000 CY P-209 crushed aggregate base, 18,000 CY P-154 granular borrow, pavement markings, turf restoration, conduit, airfield lighting and signage, electrical duct bank and conduit, 1,300 LF storm sewer pipe with storm structures, and 7,000 LF of drain tile pipe with structures.

Schedule B – Taxiway A Reconstruction – Phase 7 (Alternate Bid): 11,000 SY 13-inch P-501 PCC, 5,000 tons bituminous pavement (State Spec. and P-403 mixes), 15,000 CY excavation, 3,000 CY P-209 crushed aggregate base, 9,000 CY P-154 granular borrow, pavement markings, turf restoration, conduit, airfield lighting and signage, and 2,000 LF of drain tile pipe with structures.

Schedule C – Midfield Ramp Repair – Phase 4 (Base Bid): 1,890 SY 12-inch P-501 PCC, 1,330 CY excavation, 615 CY P-209 crushed aggregate base, 910 CY P-154 granular borrow, pavement markings, 472 LF of storm drain pipe and structures, 550 LF drain tile pipe, 420 LF trench drain installation.

F. Anticipated Project Schedule:
1. Receive Bids: June 4, 2026
2. Anticipated Contract Award: June 2026
3. Anticipated Start of Construction: May 17, 2027 (Taxiway A Phase 4 Base Bid Construction – for 85 Calendar Days)
4. No Construction or Contractor Access during DLH Airshow: June 23 – June 28, 2027
5. Taxiway A Phase 7 Alternate Bid Construction (if selected) and Midfield Ramp Repair – Phase 4 work can commence on June 29, 2027 after Contractor regains access to airfield (30 additional calendar days allowed for the Phase 7 Alternate Bid construction and 80 calendar days total for Midfield Ramp Repair Phase 4 work).
6. Anticipated Substantial Completion:
   a. August 9, 2027 (Taxiway A – Phase 7 Base Bid)
   b. September 8, 2027 (Taxiway A – Phase 7 Base Bid + Alternate Bid)
   c. September 17, 2027 (Midfield Ramp – Phase 4)

G. Phasing (See Construction Safety Plan Sheet):
1. Taxiway A Reconstruction, Phase 7
   a. Phase 7A, Phase 7A-1 shall be complete in 85 calendar days, starting on May 17, 2027, substantially complete by August 9, 2027.

(1) Phase 7A-1 construction requires that Runway 9/27 shall be closed for one coordinated 60-hour continuous weekend period and an additional 5 periods of weekday nighttime work for work to be performed inside the designated runway safety area at the location of existing Taxiway A2. These work periods will all be coordinated and approved by the DAA. Work in this area includes the removal of existing taxiway pavement, regrading of the resulting grass area near the runway, and construction of a new runway shoulder pavement and new runway edge lighting.

b. Phase 7B cannot commence before June 29, 2027 and the contractor will be given an additional 30 calendar days from base bid only with substantial completion on September 8, 2027.
   (1) Phase 7B-1 construction requires that Runway 9/27 shall be closed for one additional coordinated 60-hour continuous weekend period for work to be performed inside the designated runway safety area at the location of existing Taxiway A1, in addition to the weekend closure already designated for Phase 7A-1 construction. This work period will be coordinated and approved by the DAA. Work in this area includes the removal of existing taxiway pavement and reconstruction of Taxiway A1 pavement.

2. Midfield Ramp Repair, Phase 4 cannot commence before June 29, 2027 and work shall be complete in 80 calendar days, substantially complete by September 17, 2027.
   a. Concrete paving operations shall not commence for Midfield Ramp Repair construction until after Taxiway A reconstruction concrete paving operations have been completed. This requirement ensures that the taxiway paving operation is prioritized over the ramp paving operation.

H. Airport Security:
1. Bidders must thoroughly examine Project Documents for security related requirements.
2. Airport shall remain in full operation during construction except where required for project specific closures
3. Airfield Safety and Security Training will be held at scheduled times, where the following topics will be discussed:
   a. Project Signage for Haul Routes and Site Access
   b. Procedure for Receipt of Deliveries
   c. Airfield and Site Security
   d. Badging Requirements
4. Failure to comply with safety and phasing plans that results in a runway incursion or vehicle deviation will result in a penalty of $1,000. Security violations could result in a penalty of up to $10,000 per occurrence.
5. Contractor is required to hire a third-party Professional Security Firm, for which DAA approval of security firm is required prior to contract award.

I. Access and Haul Routes
1. Reinforcement of the east/west section of Malstrom using millings from the Taxiway A Phase 7 project area required prior to hauling operations for Midfield Ramp Phase 4.
2. Haul route to airfield Taxiway A reconstruction site will be from Highway 53 on the west side of the airfield via one of two routes (see Sheet G1.00):
   a. To Cirrus Drive and to Airport Road to access both the west side contractor storage areas and the airfield access gate.
   b. To Lavaque Road to access the airfield access gate.
   c. Haul route to Taxiway A reconstruction north side stormwater pond dredging site requires a route around the west end of the airport and then re-accessing the airfield from an access gate on the north side. See Sheet G4.02.

(1) DAA – For the purposes of bidding, a gate guard shall be stationed at both north side airfield gates for the north side stormwater pond dredging work, as indicated on Sheet G4.02.

d. Haul route to Taxiway A reconstruction southeast stormwater pond improvements site requires a primarily landside access route as reflected in Sheet G4.03.

3. Haul route to Midfield Ramp reconstruction site is intended to use the South SRE Gate. See Midfield Ramp Phase 4 Sheet G1.00.

J. Staging and Storage
1. Contractor can pre-position equipment for project start. No contractor presence at airport allowed during DLH Airshow.

K. Quality Control Plan Required

III. Contract Requirements

A. Construction Staking – Contractor's Responsibility

B. Quantity surveys are required to be submitted for payment. As-built survey data to be collected and forwarded to Engineer. See Field Engineering in project manual.

C. Disadvantaged Business Enterprise – DBE Goal of 0.0%

D. Wage Rates
1. Equal Employment Opportunity (EEO)
2. State and Federal prevailing wage rate requirements

E. Buy American Certification

F. Permits
1. City of Duluth Stormwater permit
   a. Paid for by the contractor.
2. NPDES permit
   a. Paid for by the contractor.
3. City of Duluth Haul Route Application
   a. Paid for by the contractor.
4. City of Duluth Grading Permit
   a. Paid for by the contractor.
5. Dewatering (contaminated) for storm sewer installation (if needed)
   a. Paid for by the contractor
   b. Contractor – Is the dewatering of contaminated groundwater part of the MPCA NPDES permit, or what permit(s) will be required for this work?
      (1) SEH – More information regarding permitting for this work will be provided via Addendum No. 1.

IV. Project Work

A. General Scope
1. Batch Plant Setup – Mobilization Limited to 10% of total cost
2. Installation of Traffic Control Devices/Signage and Barricades
3. Covering of existing airfield taxiway and runway signs

4. Erosion Control BMP installation

B. Civil Scope
1. Concrete and Asphalt Pavement, Earthwork and Storm Sewer System Removals
2. Storm Sewer/Drain Tile Construction, trench drain, and Storm Sewer Structure Construction
3. Pavement Construction
4. Pavement Markings
5. Seeding and Hydromulching
6. Disposal of Contaminated Soils and Materials
7. Contaminated groundwater which may require dewatering

C. Electrical Scope – as discussed by Burns & McDonnell staff
1. Removal of existing taxiway edge lighting and signage
2. Existing utilities – locate, flag, and protect existing utilities. Pull back, protect, and reconnect existing cable. Reconstruction required for designated utilities.
3. Installation of new lighting, signage, and circuitry.
4. Routing of new circuit homerun duct banks and installation of new handholes adjacent to existing circuit homerun duct bank. Temporary jumpers required for construction phasing. Existing circuit homerun duct bank to be demolished upon cutover of new homerun circuitry.
5. Detailed Schedule and Phasing Submittal Required
6. Conversion of airfield signage for existing Taxiway W pavement to "Taxiway A2" signage
7. Electrical vault work includes installation of (2) regulators
   a. 1 of the 2 regulators is included in the Alternate Bid construction
8. Note that there are some duplicate line items with different quantities in the bid form, this is intended to reflect the different funding source schedules (FAA eligible versus FAA ineligible (MN Air National Guard).

D. Restoration
1. Locations: disturbed areas, storage areas, haul roads
2. Restored to equal or better conditions

V. **Addendum Items**
A. Geotechnical Report – aiming to release the report via Addendum No. 1 on Tuesday, May 26.
B. Environmental Reports Addressing Management of PFAS contamination – aiming to release the reports via Addendum No. 1 on Tuesday, May 26.
1. PFAS observed in pondwater at north side pond dredging site. PFAS not observed at significant levels in the material to be dredged.
2. PFAS observed in soils in select areas of Taxiway A Reconstruction site.
3. No PFAS at significant levels observed at southeast stormwater pond expansion site.
4. PFAS observed in groundwater at Midfield Ramp Repair site.
   a. Contractor – Can treatment of contaminated dewatering be defined for biding purposes?
      (1) SEH – More information regarding requirements for this work will be provided via Addendum No. 1.
5. See Addendum No. 1 for final clarifications regarding contract requirements.

VI. **Questions/Comments**
A. Contractor – Is dredging of the north side stormwater pond expected to be performed in water or is the pond expected to be dewatered?
1. SEH – Dredging is expected to occur with wet conditions, due to the significant volume of pondwater. In general, expect to place dredged material on poly sheeting adjacent to the pond, so water can then drain back into the pond.

a. Is poly required?
   (1) See Addendum No. 1 regarding requirements for managing contaminated materials at project site.
b. Can dredged material be used on site or does it need to be land-filled?
   (1) See Addendum No. 1 regarding requirements for managing materials at project site.

B. SEH – Discussed how the two easterly doors of Hangar 104 can open and temporary fencing and poly sheeting will need to be installed to protect the interior of the hangar bays from dust and debris. The two westerly doors of Hangar 104 do not open as there is no longer a mechanism to do so; construction limits will be very close to the face of the building.
C. SEH – Discussed the separate bid form schedules that differentiate the funding sources (FAA eligible versus FAA ineligible). The Midfield Ramp Repair project is MnDOT funded.
D. DAA – Discussed the impact of ongoing construction of the Air Traffic Control Tower (ATCT) project adjacent to the Midfield Ramp Repair project. Based on the intended ATCT project schedule, it's anticipated that most of the ATCT work will be performed "inside" at the time of Midfield Ramp Repair construction, with limited ATCT hauling impact on Midfield Ramp Repair construction. Some contractor coordination will be required.
E. 60-hour Closure(s) – There is one (1) 60-hour weekend closure anticipated for the Base Bid work (Phase 7A-1), including 5 weekday nighttime closures to support construction within the Runway Safety Area. There is one (1) additional 60-hour closure anticipated (for Phase 7B-1), should the Alternate Bid work be awarded, not including any additional weekday nighttime closures. Work can be conducted in both Phase 7A-1 and Phase 7B-1 areas during both closures, should the contractor choose to do so.
F. DAA – Thanks to the contractors for their interest in bidding on this project and all of the previous work leading up to it. Looking forward to working with the contractor(s) on the project.

PRE-BID MEETING ATTENDANCE - TWY A PHASE 7 & MIDFIELD RAMP PHASE 4

1:30PM - Thursday May 21, 2026 - 3rd Floor Airport Conference Room and Teams Meeting

Name	Email	Present
Ryan Welch	rwelch@duluthairport.com	X
Tristan Durfee	tdurfee@duluthairport.com	X
Paul Sinnott	psinnott@duluthairport.com	
Matt Snell	msnell@duluthairport.com	
Kyle Nelson	knelson@sehinc.com	V
Jarrod Nelson	jnelson@sehinc.com	X
Allison Andrashko	aandrashko@sehinc.com	X
Jake Stiebler	jstiebler@sehinc.com	X
Shawn McMahon	smcmahon@sehinc.com	
Ben Wolf	bwolf@sehinc.com	V
Steven Thayer	sthayer@braunintertec.com	
Mark Giddings	mgiddings@burnsmcd.com	V
Bruemmer, Derek	dbruemmer@burnsmcd.com	
Sam Yunker	sayunker@burnsmcd.com	V
Heath Line	heath@kgmcontractors.com	X
Aaron Brockman	aaron.brockman@northlandconstructors.us	
Eric Hiti	eric.hiti@northlandconstructors.us	
Brad Mattson	bmattson@shafercontracting.com	V
Ben Mattson	benmattson@shafercontracting.com	X
Greg Pelkey	gpelkey@shafercontracting.com	
Garrett Collins	gcollins@ulland.com	X
Robby Meseroll	rmeseroll@Ulland.com	X
Neil Schroeder	neils@kgmcontractors.com	X
Tory George	tory.george@archkey.com	X
Rick Johnson	rjohnson@huntelec.com	V

Indicates Virtual Attendance	V

SECTION 02 60 10

HANDLING OF CONTAMINATED SOILS/DEBRIS

PART 1 GENERAL

1.01 SUMMARY

A. This section includes excavation, handling and disposal of contaminated soil, and debris that could be encountered during the Taxiway A Reconstruction, Phase 7 and Midfield Ramp Repair, Phase 4. Part 3.04 of this section addresses the potential need for dewatering contaminated water/groundwater that may be encountered for the Project. All contaminated material found on the Project shall be handled according to the following section. The Contractor shall comply with all applicable safety regulations imposed by federal and state law for handling pollutants, contaminants, or hazardous substances, wastes, or materials, including but not limited to 29 CFR PART 1910 and all subsequent revisions thereof.

B. The following is not included in this Section:
   1. Asbestos and heavy metals.
   2. Abrasives, additives, or coating chips generated from construction.

C. Related Sections:
   1. Section 02 41 33 – Removing Pavement and Miscellaneous Structures

D. Measurement:
   1. Contaminated soil removed from the site will be measured based on tonnage of material weighed and certified slips from Minnesota-permitted landfill chosen by the Contractor. The Contractor should identify a landfill that will accept all of the contaminants and concentrations that were identified in the Phase II Environmental Investigation.
   2. Dewatering will be a per lump sum cost therefore no measurements are required.
   3. There is no separate measurement for temporary fencing around contaminated materials.
   4. There is no separate measurement for materials needed to stockpile contaminated materials.

E. Payment:
   1. Costs related to encountering contaminated soils or debris during the Project, including possible additional excavation and resulting additional backfill, stockpiling, removing, and continuing on and beneath impervious structures or materials, as authorized by Engineer, shall be at the Contract Unit Price as shown on the bid form and paid by the tonnage of removed material. This includes anything beyond the estimated quantity as shown in the contract documents. The Contractor shall provide weight slips from disposal site to confirm payment.
   2. No adjustment in Contract time or price will be made for Work stoppage and securing of Site.
   3. <u>There is no separate payment or adjustment for temporary fencing around contaminated materials. This is incidental to the project.</u>
   4. <u>There is no separate payment or adjustment for materials, labor, equipment, etc needed to stockpile contaminated materials.</u>
   5. Dewatering will be a per lump sum cost as shown on bid form.

1.02 REFERENCES

A. MDH - Hazardous Waste Disposal Rule 7045

B. MPCA - LUST Consultant Guidance for Petroleum UST/AST Investigation and Cleanup

C. OSHA - Hazardous Waste Operations and Emergency Response 1910.120

1.03 QUALITY ASSURANCE

A. Health and Safety:
   1. Excavation and stockpiling of contaminated soils and debris is governed by OSHA Standard 1910.120.
   2. Comply with Minnesota Pollution Control regulations for soil storage and disposal.
   3. Comply with local, state, and federal regulations pertaining to handling of contaminated soils
   4. File a Site Safety Plan with Engineer for acknowledgement at or prior to preconstruction meeting.

B. Environmental Documentation
   1. A Phase I Environmental Site Assessment (ESA), Phase II Environmental Investigation, and Response Action Plan/Construction Contingency Plan (RAP/CCP) have been prepared for the Taxiway A Reconstruction – Phase 7 project (**Appendices G** through **I**, respectively). A Phase II Environmental Investigation has been prepared for the Midfield Ramp – Phase 4 project (**Appendix J**).

PART 2 PRODUCTS

2.01 MATERIALS

A. Reinforced Woven Polyethylene (PE) Sheeting:
   1. Tensile Strength: 60 lbf/in, per ASTM D7003.
   2. Thickness: 10 mil base, 10 mil cover.
   3. Impermeable, non-adsorbent, UV resistant, rot and mildew proof.
   4. Supplier: McMaster Carr 8552K36, or approved equal.

PART 3 EXECUTION

3.01 DESCRIPTION OF CONTAMINATED SOIL, GROUNWATER, SURFACE WATER, AND OTHER MATERIALS

A. Environmental investigations to determine the presence and magnitude of contaminated materials were completed at both Taxiway A Reconstruction – Phase 7 and the Midfield Ramp Repair – Phase 4 projects areas on April 20 and 21, 2026.

Taxiway A Reconstruction – Phase 7 - On the western extent of the Taxiway A area, perfluorodecanoic acid (PFDA) (up to 9.24 nanograms per gram [ng/g]) and perfluorooctanoic acid (PFOA) (4.34 ng/g) exceeded the MPCA Commercial/Industrial SRVs (ISRVs) in boring HA-01 at depths ranging from 1 to 3 feet below ground surface (bgs). Perfluorooctanesulfonic acid (PFOS) (up to 180 ng/g) and PFOA (0.366 ng/g) exceeded the MPCA Residential/Recreational SRVs (RSRVs) in borings HA-01 (at 1 and 3 feet bgs) and HA-02 (at 1 foot bgs). However, no exceedances were identified at 3 feet bgs in HA-02. All other PFAS analytes in HA-01, HA-02, and HA-03 were below their respective laboratory reporting limits (RLs). On the eastern extent of the Taxiway A area, PFOS (up to 27.4 ng/g) and PFOA (up to 1.24 ng/g) exceeded the MPCA RSRVs in borings HA-09 (at 1 and 3 feet bgs) and HA-07 (at 1 and 3 feet bgs). All other PFAS analytes in HA-06, HA-07, HA-08, and HA-09 were below their respective RLs. Soil encountered elsewhere during this Phase II Environmental Investigation met MPCA Unregulated Fill Criteria (UFC), SRVs, and Soil Leaching Value (SLVs).

Groundwater was not encountered during the Phase II Environmental Investigation. If dewatering is necessary, the CCP will be implemented.

Surface water located in the Northern Stormwater Pond contains PFAS contaminants above regulatory levels that will require proper management during dredging activities.

Midfield Ramp Repair – Phase 4 - No contaminants were detected in soil samples at concentrations exceeding the MPCA UFC.

A groundwater sample was collected from the nearby MW-12 on April 30, 2026. Depth to groundwater was measured to be 5.95 feet bgs at the time of the sample and the monitoring well was sealed. Various PFAS compounds were detected above their respective laboratory reporting limits but below their respective Environmental Protection Agency (EPA) Maximum Contaminant Levels (MCLs) and Minnesota Department of Health (MDH) Health Based Guidance (HBGs). However, National Pollutant Discharge Elimination System (NPDES) General Permit Limits (GPLs) prohibit the discharge of pollutants associated with emerging contaminants such as PFAS. If dewatering is necessary, water will need to be managed in accordance with all regulations prior to its discharge.

Soil that meets the Minnesota Pollution Control Agency (MPCA) definition of unregulated fill (https://www.pca.state.mn.us/sites/default/files/c-rem1-01.pdf) is not considered contaminated and may be re-used onsite.

Per MPCA's Best Management Practices for the Off-Site Reuse of Unregulated Fill dated March 2024 (see link above), Regulated Soil has the following characteristics:

- Contains solid waste, debris, or asbestos containing material or exhibits visual staining and chemical odors.
- Organic vapors above 10 parts per million (ppm), as measured by a PID;
- Greater than 100 milligrams per kilogram (mg/kg) diesel range organics (DRO)/gasoline range organics (GRO); or
- Contaminant concentrations greater than the MPCA's Residential/Recreational Soil Reference Values (RSRVs) and Screening Soil Leaching Values (SLVs). Naturally occurring concentrations of some metals, including arsenic, selenium or copper, can exceed SRVs or SLVs. Such soils are not considered impacted in the absence of a contaminant source or other field or laboratory indications of contamination.

Regulated soil that is petroleum-impacted and has PID readings between 10 and 200 ppm may be re-used on site in certain circumstances as outlined in the RAP/CCP and as directed by the Engineer. Excess Regulated Soil, if encountered, will be properly disposed at a Minnesota-permitted landfill.

B. A Phase I ESA, Phase II Environmental Investigation, and RAP/CCP have been prepared for the Taxiway A Reconstruction – Phase 7 project (**Appendices G** through **I**, respectively). A Phase II Environmental Investigation was prepared for the Midfield Ramp – Phase 4 project (**Appendix J**). The RAP/CCP was written to conform to these provisions.

3.02 EXCAVATION

A. Prior to the start of the project earthwork activities within the Taxiway A Reconstruction Area, delineation test pit excavations will be excavated at a radius of 25 feet, 50 feet, and 75 feet from previously completed sample locations HA-01, HA-02, HA-07, HA-09 to the north, south, east, and west, and from the southern project boundary (near sample location BGSL-11) to the northeast and northwest to a depth up to 5 feet (See **Appendix I** for additional detail regarding the test pit excavations).

The test pit excavation will be completed by the Contractor. The following table depicts the location of the previously completed sample locations that the test pit investigation will be completed from:

BORING ID	UTM Zone 15 N (meters)		NAD 1983 HARN Adj MN St. Louis South (US Feet)	
	Easting	Northing	Easting	Northing
HA-01	559423.173905	5187790.815921	557390.920042	169754.930666
HA-02	559525.524249	5187854.395694	557728.306591	169961.25678
HA-07	560058.614975	5187829.496995	559477.403271	169867.293716
HA-09	560157.635038	5187807.270878	559801.888574	169792.070967
BGSL-11	559633.23123	5187724.405659	558078.828856	169532.140058

The purpose of the test pit investigation is to collect representative soil samples for field screening and lab chemical analysis. The DAA's environmental consultant will be on-site collecting samples during the test pit excavations. Following the completion of each test pit excavation, soils will be placed back into the test pit at the interval from where it was generated. Sample lab analytical results will take a minimum of 10 business days, unless expedited analysis is approved by the Engineer and the lab has capacity to complete expedited analysis.

Project earthwork cannot be completed within the Taxiway A Reconstruction Area until the lab analytical results of the test pit investigation have been received and decisions regarding future delineation are made. Contractor's proposed schedule needs to accommodate laboratory turnaround time and potential waste profile amendment.

B. Environmental monitoring will be conducted during excavation in areas with previously identified impacts (See **Part 3.01**). Notify Engineer immediately and stop work in the vicinity if obvious contaminated soil or debris is encountered outside of the specific areas identified above.

C. The Contractor shall notify the Engineer no less than three (3) working days before planned excavation in areas with identified impacts. The Engineer will arrange for the Duluth Airport Authority's (DAA's) Environmental Consultant to be at the site to screen, observe, and document the excavation and removal of contaminated material. DAA's Environmental Consultant will determine if conditions encountered during excavation are consistent with the Contaminated Soil category for the excavation area.

If contaminated groundwater requires dewatering or if stormwater/snow melt comes in contact with contaminated soil and requires dewatering, the Contractor is responsible for obtaining and paying for all dewatering discharge permits for contaminated groundwater/surface water, permit incidental to the project Mobilization bid item or the Storm Sewer Construction Dewatering bid item. The Contractor shall submit the draft permit application(s) to the Engineer for review/comment prior to submitting to the regulator. DAA's Environmental Consultant will assist with providing previous sampling results, collecting additional samples as required by the permit(s) and can assist in completing permit-required discharge monitoring and reporting if approved by the Engineer. The Contractor shall submit reports as required by the regulator(s). (See **Part 3.04**).

The Contractor is responsible for all **02-60-10 Handling of Contaminated Soil-Debris** and landfill disposal approvals (See **Part 3.03**). The Contractor shall notify the Engineer at the Preconstruction Conference if additional laboratory analytical sampling is required by the Minnesota-permitted landfill(s) to accept the waste. The DAA's Environmental Consultant will be responsible for collecting and analyzing any additional laboratory samples required by the landfill. The Contractor should be aware that typical sample analytical turnaround time is ten (10) business days (Monday through Friday).

The Engineer must approve excavation of any soils beyond the Project limits of disturbance.

Imported fill soil must be demonstrated to be contaminant free in accordance with MPCA's requirements for Unregulated Fill to the satisfaction of the Owner and Engineer. The Contractor shall document the source and volume of fill soil and provide associated analytical testing results to the Engineer for review and acceptance a minimum of 10 working days prior to importing fill soil to the Project. For import sources that are determined to have no known or potential sources of contamination through environmental due diligence conducted by others, the Engineer may, after their review of the due diligence data, accept the import fill soil without associated analytical testing results. If the Engineer determines additional analytical data is required to characterize the import fill soil, the Contractor shall be responsible for collecting and chemically analyzing the additional samples at no cost to the Project.

D. Contaminated Soil Category Requirements. The Contractor shall handle soil that is generated from the areas of identified contamination (See **Part 3.01**) in accordance with the contaminated soil categories as specified below.

1. Unregulated Soil – meets the MPCA definition of unregulated fill summarized in **Part 3.01**. Unregulated soil will be managed as unrestricted reuse material both within the project Site, and potentially as excess material off-site at the discretion of the Contractor. Any soil that meets Unregulated Soil Criteria but is not geotechnically suitable for the project design requirements will become the property of the Contractor for unrestricted use off-site. MPCA Guidance Document c-rem1-01 (MPCA, 2024) *Best Management Practices for the Off-Site Reuse of Unregulated Fill* prohibits the placement of unregulated fill in sensitive areas and describes the following Best Management Practices*:*
   a. Avoid placing unregulated fill at schools, playgrounds, daycares, and residential properties. Unregulated fill is most suitable for use at industrial or commercial properties.
   b. Avoid placing unregulated fill in gardens where food for human/animal ingestion will be grown.
   c. Observe a minimum ten-foot separation distance between unregulated fill and the water table.
   d. Avoid placing unregulated fill where contaminants may be transported by run-off to lakes, rivers, wetlands, or streams.

2. Regulated Soil – The Contractor may reuse Regulated Soil on-site under certain circumstances (see RAP). Excess Regulated Soil excavated for the project shall be disposed of at a Minnesota-permitted landfill.
3. Industrial Exceedance Soil - Industrial Exceedance Soil will be managed as contaminated material and will be disposed of at a Minnesota-permitted landfill. Industrial Exceedance Soil is prohibited from reuse on or off the project Site.
4. Undesignated Soil - The Contractor shall be prepared to temporarily stockpile soil for additional testing if field screening results indicate that different contaminants than those identified during previous environmental investigations are potentially present. The Contractor shall be prepared to manage Undesignated Soil in accordance with Regulated Soil or Industrial Exceedance Soil requirements if the DAA's Environmental Consultant or Engineer determines that the Undesignated Soil is contaminated (e.g., based on elevated field screening results, laboratory analytical results, debris, etc.).

3.03 CONTAMINATED SOIL AND MATERIAL HANDLING, STORAGE, AND DISPOSAL

A. Contaminated Soil and Material Approval and Documentation Requirements

The Contractor shall select a Minnesota-permitted landfill for disposal of Contaminated Soil and Material. The Contractor is responsible for obtaining landfill approval to accept material. The Contractor shall complete the following documentation for landfill approval and disposal tracking:

1. Complete a waste profile form provided by the landfill.
2. Submit the completed waste profile form to the Engineer and DAA's Environmental Consultant for review and signature.
3. Submit the signed waste profile form and analytical data to the landfill.
4. Receive written approval from the landfill (e-mail is acceptable) and submit the approval to the Engineer and DAA's Environmental Consultant before hauling material to the landfill(s).
5. Provide copies of manifests to the Engineer before hauling material to the landfill(s) and arrange with the Engineer for DAA or a DAA authorized representative to be available to sign contaminated soil manifests as trucks leave the Project.
6. Submit copies of landfill scale tickets and corresponding manifests for each load hauled to the landfill(s) to the Engineer daily during hauling.

B. Contaminated Soil Excavation and Removal of Contaminated Materials

The Contractor shall allow the DAA's Environmental Consultant access to all Project areas to observe and field screen soil during excavation.

The Contractor shall be prepared to segregate contaminated and potentially contaminated material for additional field screening and analytical testing as directed by the DAA's Environmental Consultant. The DAA's Environmental Consultant will perform any additional testing and analysis. The Contractor shall be prepared to dig test pits as directed by the Engineer in order for the DAA's Environmental

Consultant to access soil to collect samples for analysis. If the DAA's Environmental Consultant determines for any reason that excavated material cannot be directed for reuse or disposal, the Contractor shall temporarily stockpile the material.

The Contractor shall manage open excavation areas to prevent to the extent possible, the flow of rainwater/snow melt runoff into the excavation or the flow of contaminated groundwater out of the excavation. Water that comes into contact with contaminated soil is considered contaminated. The Contractor shall manage water run-off and run-on (for example: minimize the drainage area around the excavation, place berms up gradient of the excavation to divert runoff and/or cover the excavation). If water needs to be removed from the excavation, the Contractor shall use procedures described in **Part 3.04-Contaminated Groundwater Handling, Storage and Disposal**.

Additional considerations should be made for the stockpiling of saturated soil (See **Part 3.03.C.5**).

C. Stockpiling of Contaminated Material

If excavated Contaminated Soil or debris cannot be directly hauled to the landfill, the Contractor shall temporarily stockpile the material.

1. Engineer shall approve all stockpile location(s).
2. The Contractor shall place contaminated soil from separate contaminated areas (as determined by the DAA's Environmental Consultant) into separate stockpiles.
3. The Contractor shall stockpile the contaminated soil on minimum 10- mil reinforced plastic and cover the stockpile with minimum 10-mil reinforced plastic. The stockpile cover will be securely anchored. Every stockpile will be covered as soon as work on the stockpile has been completed during the day, or at a minimum at the end of the working day. The stockpile will be constructed to protect the stockpile/containment area from the flow of rainwater into the stockpile or the flow of contaminated water out of the stockpile/containment area.
4. The Contractor shall surround the stockpile with temporary fencing if the DAA's Environmental Consultant determines that additional security measures are necessary. The Contractor shall be responsible for the maintenance of the stockpile cover (and fencing if installed) for the duration of the Contract or until all contaminated materials are removed. The Contractor shall inspect the stockpile a minimum of once per week and document the stockpile(s) condition on a weekly tracking form that the Contractor shall provide to the Engineer each week.
5. The Contractor shall construct saturated soil stockpiles to either contain free liquids or drain free liquids back into the excavation/dredging area from which the soil was generated. The Contractor shall implement best management practices sufficient to restrict excess water generated by the excavation/dredging activities to prevent an unauthorized release. All water generated during excavation/dredging shall be managed in an appropriate manner that prevents infiltration to the ground surface or discharge to infrastructure.

   The Contractor shall manage the stockpiles so that soil sufficiently dries to pass the paint filter test. The Contractor shall collect free liquids for disposal in accordance with **02 60 10 Contaminated Groundwater Handling, Storage and Disposal**. Alternatively, the Engineer may approve mixing saturated contaminated soil with dry contaminated soils or light weight amendments so that the soil passes the paint filter test.

   If the Contractor elects to move a secured stockpile for any reason, the cost of moving and re-stockpiling the soil shall be incidental.

D. Contaminated Soil and Other Material Disposal

The Contractor shall haul Contaminated Soil removed for the project to a Minnesota-permitted landfill for use by the landfill as daily cover if the soil meets the landfill's daily cover criteria, or for disposal in a cell by the landfill if the material does not meet daily cover criteria.

1. The Contractor shall cover (tarp) loads of contaminated soil while in transit.
2. The Contractor shall not haul soil that contains free liquids to the landfill(s).
3. The Contractor shall minimize track out of contaminated soil from the project. Track out from contaminated soil areas will be treated as contaminated soil.

E. Contaminated Soil Contingency Plan

The Contractor shall follow the procedure outlined in Construction Contingency Plan (CCP) contained in the RAP/CCP (**Appendix I**) in the event on-site observations indicate contaminated materials or contaminated soil as listed in CCP are unexpectedly encountered.

After the Engineer and DAA's Environmental Consultant have approved work to resume in the unexpected, contaminated area, the Contractor shall complete work in accordance with **02 60 10 Contaminated Soil Handling, Storage, and Disposal** or as directed by the Engineer.

3.04 CONTAMINATED GROUNDWATER HANDLING, STORAGE, AND DISPOSAL

A. If groundwater dewatering is necessary or surface water or snow melt comes in contact with Contaminated Soil and requires removal, the Contractor shall be responsible for obtaining and paying for all necessary permits incidental to mobilization bid item and completing required documentation reports for discharge of contaminated groundwater. The Contractor shall submit the permit application(s) to the Engineer for review and approval before submitting the application(s) to the permitting authority. A minimum of 5 working days shall be allowed for the review.

B. Groundwater or impacted stormwater removed by the Contractor from within the Project limits of disturbance shall be discharged to the sanitary sewer under a sanitary permit and/or to the storm sewer under a National Pollutant Discharge Elimination System/State Disposal System Industrial (Contaminated Groundwater) Pump-Out Permit. Groundwater containing excess contaminant concentrations as determined by the permitting authority shall not be directly discharged to the storm and/or sanitary sewer.

C. The Contractor shall notify the Engineer no less than three (3) working days prior to beginning Project dewatering.

D. The DAA's Environmental Consultant will complete necessary sampling and testing of the dewatered groundwater as required by the permitting authority for discharge. The Contractor shall provide DAA's Environmental Consultant reasonable access to the effluent discharge sampling port.

E. The Contractor shall measure and document the rate of water discharge during dewatering via a water meter. The Contractor shall record the rate of discharge daily and shall submit a discharge report to the Engineer weekly.

F. The Contractor shall complete and submit discharge monitoring reports required by the permit(s) to the Engineer for review and acceptance prior to submitting to permitting authority(s). A minimum of 5 working days shall be allowed for the review.

G. In the event contaminant concentrations in a discharge sample exceed permit limits, the Contractor shall immediately stop discharging. The Contractor shall not re-start discharging until a groundwater treatment system has been designed and implemented to sufficiently treat the contaminated groundwater to meet permit limits and after the Engineer has given approval to restart dewatering.

H. The Contractor shall be prepared to treat contaminated groundwater prior to discharge with a portable groundwater treatment system designed by a Minnesota Professional Engineer if contaminant concentrations are determined to exceed permit limits. Treatment of the contaminated groundwater with a portable groundwater treatment system will include but not limited to the groundwater treatment equipment, equipment mobilization and demobilization, equipment installation, equipment operation and maintenance, and disposal. The portable groundwater treatment system shall have a treatment capacity equal to or greater than the rate of temporary construction dewatering. The groundwater treatment system shall include an effluent discharge sampling port. The Contractor shall provide a minimum of one on-site operator at all times during operation of the groundwater treatment system. The on-site operator shall be trained and experienced in operating and maintaining the groundwater treatment system and shall be responsible for maintaining the system in proper working order.

END OF SECTION

BRAUN INTERTEC

the science you build on

Geotechnical Evaluation Report

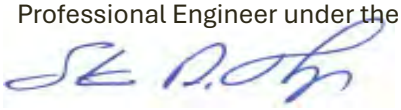
DLH Taxiway A Phase 7

4701 Grinden Drive
Duluth, Minnesota

Prepared for

Short Elliott Hendrickson, Inc.

Professional Certification:
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.



Steven A. Thayer, PE
Senior Manager, Senior Engineer
License Number: 24674
May 26, 2026

Braun Intertec Corporation

Project 10000948_001

May 26, 2026 Project 10000948_001

Jarrod Nelson, PE
Short Elliott Hendrickson, Inc.
3535 Vadnais Center Drive
St. Paul, MN 55110

Re: Geotechnical Evaluation Rev. 1
DLH Taxiway A Phase 7
4701 Grinden Drive
Duluth, Minnesota

Dear Mr. Nelson:

We are pleased to present this geotechnical evaluation report for the proposed Phase 7 reconstruction of Taxiway A at Duluth International Airport in Duluth, Minnesota.

Thank you for making Braun Intertec Corporation (Braun Intertec) your geotechnical consultant for this project. If you have questions about this report, or if there are other services that we can provide in support of our work to date, please contact Steve Thayer at 320.980.3187 or sthayer@braunintertec.com.

Sincerely,
Braun Intertec Corporation

Steven A. Thayer, PE
Senior Manager, Senior Engineer

Joseph C. Butler, PE
Director, Senior Engineer

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1.0 Introduction

1.1 Project Description

This geotechnical evaluation report addresses the proposed design and construction for Phase 7 of Taxiway A reconstruction at Duluth International Airport in Duluth, Minnesota. The project will include reconstructing the western 2,100 feet of Taxiway A. Reconstruction will include realignment of Taxiway A1 and Taxiway A2.

Based on conversations with Short Elliott Hendrickson, Inc. (SEH), we understand the desired new pavement section will be similar to the pavement sections include in previous phases of the Taxiway A project; they will consist of Cement Concrete Pavement (FAA P-501), underlain by Asphalt Mix Pavement (FAA P-401, FAA P-403, or MnDOT 2360), underlain by Crushed Aggregate Base Course (P-209), underlain by Granular Subbase (P-154).

We anticipate design elevations will be similar to the adjacent pavement elevations. We anticipate fills to meet design grades in the turf areas will be up to 4 feet. We have assumed design and construction will be in accordance with Federal Aviation Association (FAA) design and construction standards for aircrafts greater than 100,000 pounds.

The figure below shows an illustration of the proposed site layout.

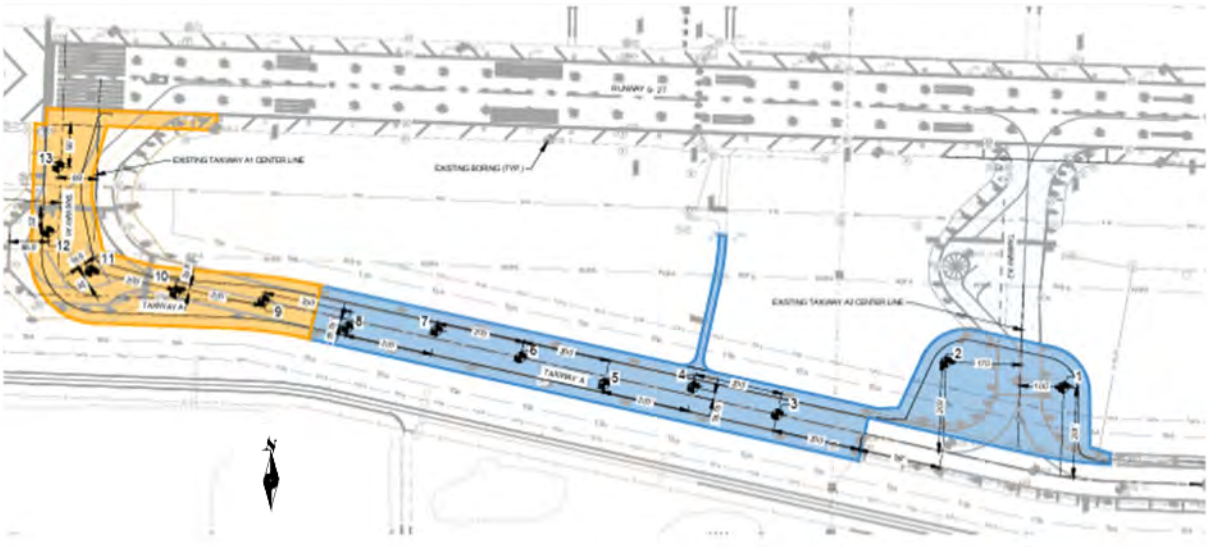

Figure 1-1. Site Layout
Figure provided by SEH dated January 2026.

1.2 Site Conditions and History

Pavement condition index (PCI) data available from ARA, Inc. shows that the pavement surface of the Phase 6 area in December of 2024 was generally considered to be very good (PCI value of 78 to 83). The primary distress types noted in the bituminous pavements included longitudinal and transverse cracking. Taxiway A1 was considered to be fair (PCI value of 41 to 55). Figure 2 below shows an illustration of the PCI rating of each pavement feature at the Duluth International Airport at the time of the survey.

Figure 1-2. PCI Rating Summary
Figure provided by Applied Research Associates, Inc. (ARRA), dated December 2024.

1.3 Purpose

The purpose of our geotechnical evaluation is to characterize subsurface geologic conditions at selected exploration locations, evaluate their impact on the project, and provide geotechnical recommendations for the design and reconstruction of the taxiway and adjacent connector taxiways.

1.4 Background Information and Reference Documents

We reviewed the following information:

- Soil Boring Figure 1, provided by SEH and dated January 2026.
- Advisory Circular 150/5320-6G, Airport Pavement Desing and Evaluation, Federal Aviation Administration, June 7, 2021 (FAA AC/150).
- Pavement Condition Report prepared by ARRA dated December 2024.
- Communications with Jarrod Nelson, PE, SEH, regarding the scope of the proposed project.

In addition to the provided sources, we have used several publicly available sources of information.

We have described our understanding of the proposed construction and site to the extent others reported it to us. Depending on the extent of available information, we may have made assumptions based on our experience with similar projects. If we have not correctly recorded or interpreted the project details, the project team should notify us. New or changed information could require additional evaluation, analyses, and/or recommendations.

1.5 Scope of Services

We performed our scope of services for the project in accordance with our Proposal to Mr. Nelson dated May 15, 2025. The following list describes the geotechnical tasks completed in accordance with our authorized scope of services.

- Reviewing the background information and reference documents previously cited.
- Clearing the exploration location of underground utilities. SEH selected and we staked the exploration locations. The Soil Boring Location Sketch included in the Appendix shows the approximate locations of the borings.
- Performing 15 standard penetration test (SPT) borings, to nominal depths of 10 to 30 feet.
- Performing laboratory testing on select samples to aid in soil classification and engineering analysis.
- Preparing this report containing a boring location sketch, logs of soil borings, a summary of the soils encountered, results of laboratory tests, and recommendations for pavement subgrade preparation.

Prior to completing the borings, SEH requested one additional boring and reduced the 30-foot borings to 15 feet. Thus, three borings were completed in a proposed pond area. These borings were labeled PE, PS and PW. The pond project has since been cancelled, and no analyses or recommendations are provided for these borings.

Our scope of services did not include environmental services or testing and our geotechnical personnel performing this evaluation are not trained to provide environmental services or testing. We can provide environmental services or testing at your request.

2.0 Results

2.1 Geologic Overview

We based the geologic origins used in this report on the soil types, in-situ and laboratory testing, and available common knowledge of the geological history of the site. Because of the complex depositional history, geologic origins can be difficult to ascertain. We did not perform a detailed investigation of the geologic history for the site.

2.2 Pavement Core Results

Cores were completed within the pavements at 9 of the boring locations. The table below provides a summary of the pavement thicknesses.

Boring/Core Number	Bituminous Thickness (inches)	Concrete Thickness (inches)
3	15	--
4	16.5	--
6	13	--
7	14.5	--
8	13	--
10	16	--
11	--	15.5
12	--	14.5
13	--	9.5

Representative pictures of the bituminous and concrete pavements are provided in the table below.

Boring/Core Location 4	Boring/Core Location 11

2.3 Boring Results

Table 2-1 provides a summary of the soil boring results, in the general order we encountered the strata. Please refer to the Log of Boring sheets in the Appendix for additional details. The Descriptive Terminology sheets in the Appendix include definitions of abbreviations used in the table below.

Table 2-1. Subsurface Profile Summary*

Strata	Soil Type -ASTM Classification	Range of Penetration Resistances	Commentary and Details
Pavement Section			▪ Overall thicknesses range from 22 to 40 inches. ▪ Bituminous thickness ranged from 13 to 16 inches. ▪ Apparent aggregate base[1] ranged from 9 to 24 inches. ▪ Concrete thickness ranged from 9 1/2 to 15 1/2.
Topsoil fill	SM		▪ Predominantly SM. ▪ Dark brown to black. ▪ Encountered in Borings 1 and 2. ▪ Thickness was about 1/2 foot. ▪ Moisture condition generally moist.

Strata	Soil Type -ASTM Classification	Range of Penetration Resistances	Commentary and Details
Fill[2]	SP-SM, SM		▪ Encountered in all of the borings. ▪ Extended to depths ranging from 4 to 9 feet. ▪ Moisture content generally moist to wet.
Swamp deposits	PT	2 to 9 BPF	▪ Encountered in Borings 2, 5, 7 and 8, below the fill soils at depths ranging from 9 to 10 feet. ▪ Peat extended to depths ranging from 13 to 17 feet.
Glacial deposits	SP, SM, ML	2 to 70 BPF	▪ Mostly consisted of SM or ML. Soils were generally loose, except in Borings 11, 12 and 13, where they were dense to very dense. ▪ Variable amounts of gravel; may contain cobbles and boulders. ▪ Moisture condition generally moist or wet.

*Abbreviations are defined in the attached Descriptive Terminology sheets.
[1]We did not perform gradation analysis on the apparent aggregate base material encountered as part of the pavement section, in accordance with our scope of work. Therefore, we cannot conclusively determine if the encountered material satisfies a particular specification, and it should not be assumed it is suitable for reuse.
[2]For simplicity in this report, we define existing fill to mean existing, uncontrolled, or undocumented fill.

Boring nine encountered auger refusal at a depth of about 3 feet. Refusal occurs when the auger cannot be further advanced without potential of equipment breaking. Refusal can be caused by cobbles, boulders, bedrock, or very dense soils. In this case, we suspect the refusal was caused by a cobble or boulder. Coring is needed to positively identify the cause.

2.4 Groundwater

Table 2-2 summarizes the depths where we observed groundwater; the attached Log of Boring sheets in the Appendix also include this information and additional details.

Table 2-2. Groundwater Summary

Location	Surface Elevation	Measured Depth to Groundwater (ft)	Corresponding Groundwater Elevation (ft)
1	1415.6	Not observed	Not observed
2	1415.0	Not observed*	Not observed*
3	1419.6	10	1409 1/2
4	1419.4	10	1409 1/2
5	1419.4	10	1409 1/2
6	1419.7	7 1/2	1412
7	1419.5	7 1/2	1412

Location	Surface Elevation	Measured Depth to Groundwater (ft)	Corresponding Groundwater Elevation (ft)
8	1419.8	7 1/2	1412
9	1420.9	Not observed	Not observed
10	1421.9	7 1/2	1414 1/2
11	1423.5	Not observed	Not observed
12	1423.4	Not observed	Not observed
13	1425.7	Not observed	Not observed

*Groundwater was not observed in Boring 2, however, we expect in an open hole or excavation, groundwater is likely near or above the organic soil layers at 9 feet, elevation 1406.

Seasonal and annual fluctuations of the groundwater level should be anticipated.

2.5 Laboratory Test Results

The boring logs show the results of moisture content and percent-passing-200-seive testing we performed, next to the tested sample depth. We also performed modified Proctor and California Bearing Ratio (CBR) testing. The Appendix contains the results of these tests.

Table 2-3 presents the results of our laboratory tests.

Table 2-3. Laboratory Classification Test Results

Location	Sample Depth (ft)	Classifications	Moisture Content (w, %)	Percent Passing a #200 Sieve	Maximum Modified Proctor Density	Optimum Moisture	CBR
4	5	SPSM	5	12	--	--	--
4	3 to 6	SM	--	14	139.2	7.0	82.3
5	3	SPSM	14	10	--	--	--
6	5	SPSM	4	9	--	--	--
7	3	SM	5	16	--	--	--
7	3 to 6	SM	--	17	144.7	5.5	27.6
7	10	PT	166	--	--	--	--
11	3	SM	4	22	--	--	--
11	5	SM	8	49	--	--	--
12	3 to 6	SM	--	39	142.8	7.1	17.9
13	3	SM	5	33	--	--	--
13	5	SM	6	37	--	--	--

3.0 Recommendations

3.1 Design and Construction Discussion

3.1.1 Frost Protection

The subgrade soils at the site are considered frost susceptible. Based on the FAA Advisory Circular 150/5320-6G, Table 2-2. Soil Frost Groups, the subgrade soils are classified in Frost Groups FG-3 and FG-4. The FAA recommends that frost protection be handled in one of three ways: 1) the complete frost protection method, 2) the limited subgrade frost penetration or 3) reduced subgrade strength method. The complete frost protection method requires removal of all frost-susceptible soil down to the frost penetration depth. The limited subgrade frost penetration method allows frost to penetrate a limited amount into the underlying frost susceptible soils. Typically, thickness of the non-frost susceptible soils is 65 percent of the extreme frost penetration depth. The reduced subgrade strength method uses a reduced CBR value to account for the frost melting period when the subgrade soils are weakest.

Based on the design CBR value of the in-place materials of 14.2 percent and the frost susceptibility of the existing soils, we recommend matching the adjacent pavements with the limited subgrade frost penetration method to mitigate frost heave. Using an anticipated frost depth of 60 inches, pavement design should incorporate a non-frost susceptible section of 39 inches.

3.1.2 Organic Soils

Borings two, five, seven and eight encountered peat and organic silt buried below 9 to 10 feet of existing fill soils. Organic soils are generally wet, soft and compressible when load is applied. Compression of these soils can lead to uneven settlement and resulting pavement surfaces. Minimizing risk of future settlement would require removing the existing organic soils, resulting in excavations 13 to 17 feet deep.

At this site, it is likely the peat has stabilized compression from the load of the existing fill and pavements applied many years ago. Grade will not be raised in the areas of Borings five, seven and eight, thereby not increasing the load on the soil. Grades in the area of Boring two, however, will be raised by 4 feet. We anticipate the grade raise in the area of Boring 2 will result in up to 1 foot of compression (settlement).

Based on these results and past projects at the airport, we recommend the following be considered.

- Borings five, seven and eight: Since no grade change is planned, we do not anticipate noticeable settlement in these areas after the construction is complete. Also, since the organic soils are buried 9 feet deep, we do not anticipate they will significantly affect the proposed construction. We recommend these soils be left in place. Care should be taken not to subcut more than the planned 39 inch pavement section and equipment should be limited to low ground pressure machine to minimize disturbance of the soils. We also recommend consideration be given to including a geogrid between the P-154 layer and the P-209 layer in these areas to further distribute loads above the organic soils.

- Boring two, there are generally two options around this location since this will be a new pavement area. The options are described below.

  - Option 1. Completely remove the peat from below the pavement and oversize area. This option provides the least amount of risk for long-term settlement. Care should be taken not to undermine the existing pavements by providing a slope of at least 1 1/2 horizontal to 1 vertical down and out from the top edge of the pavement, unless special excavation/backfill techniques are used to protect the pavement. The excavation should be backfilled as recommended below with granular soils.

  - Option 2. Complete the grading as described below, to at least top of pavement grade. After grading is complete, we recommend waiting at least 2 months prior to paving, to allow some of the consolidation to occur within the peat layer. Several monitoring points should be periodically surveyed to determine the rate and amount of settlement occurring. These measurements (total settlement and rate) should be considered prior to final paving.

3.2 Site Grading and Subgrade Preparation

3.2.1 Pavement Excavations

We recommend completely removing all surficial topsoil fill, topsoil and bituminous and concrete pavement from the proposed pavement areas. Based on the borings, we anticipate removals of the pavements will likely extend 10 to 28 inches in the pavement areas, and 3 to 6 inches in the grass surfaced areas. Additional removals will be needed for frost penetration as discussed in Section C.1.a.

After completion of the removals, we recommend scarifying (thoroughly mixing/disking) the resulting subgrades to a depth of at least 1/2-foot, moisture conditioning, and recompacting the subgrade prior to placing additional fill and pavement materials.

3.2.2 Engineered Fill Materials and Compaction

Table 3-1 below contains our recommendations for engineered fill materials.

Table 3-1. Engineered Fill Materials*

Locations To Be Used	Engineered Fill Classification	Possible Soil Type Descriptions	Gradation	Additional Requirements
▪ Embankment fill below 39 inches	FAA P-152	SP, SP-SM, SM	100% passing 2-inch sieve	< 2% Organic Content (OC)
▪ Subbase Course ▪ Nonfrost-susceptible	FAA P-154	GP, GW, SP, SW, SP-SM, SW-SM	100% passing 1-inch sieve < 60% passing #40 sieve < 10% passing #200 sieve	< 2% OC
Below landscaped surfaces, where subsidence is not a concern	Non-structural fill	All	100% passing 6-inch sieve	< 10% OC

* More select soils comprised of coarse sands with < 5% passing #200 sieve may be needed to accommodate work occurring in periods of wet or freezing weather.

We recommend spreading engineered fill in loose lifts of approximately 8 to 12 inches thick. We recommend compacting engineered fill in accordance with the criteria presented below in Table 3-2. The project documents should specify relative compaction of engineered fill, based on the structure located above the engineered fill, and vertical proximity to that structure.

Table 3-2. Compaction Recommendations Summary

Reference	Relative Compaction, percent (ASTM D1557 – Modified Proctor)	Moisture Content Variance from Optimum, percentage points
Cohesive Subgrade/Embankment (P-152) (Below 39 inches)	95	±2
Non-cohesive Subgrade/Embankment (P-152) (Below 39 inches)	100	±2
Subbase Course (P-154) (Upper 39 inches)	100	±2
Below landscaped surfaces	90	±5

The project documents should not allow the contractor to use frozen material as engineered fill or to place engineered fill on frozen material. Frost should not penetrate under foundations during construction.

We recommend performing density tests in engineered fill to evaluate if the contractors are effectively compacting the soil and meeting project requirements.

3.2.3 Pavement Subgrade Proofroll

After preparing the subgrade as described above and prior to the placement of the aggregate base, we recommend proofrolling the subgrade soils as required by Specification P-152. We also recommend having a geotechnical representative observe the proofroll. Areas that fail the proofroll likely indicate soft or weak areas that will require additional soil correction work to support pavements.

The contractor should correct areas that display excessive yielding or rutting during the proofroll, as determined by the geotechnical representative. Possible options for subgrade correction include moisture conditioning and recompaction, subcutting and replacement with soil or crushed aggregate, chemical stabilization, and/or geotextiles. We recommend performing a second proofroll after the aggregate base material is in place, and prior to placing bituminous or concrete pavement.

3.3 Pavements

3.3.1 Subgrade Stiffness Values

The average CBR value was calculated as 42.6 percent, and the standard deviation was calculated as 28.4. Therefore, based on FAA guidance for determining the design CBR using a value that is one standard deviation below the mean, it would be reasonable to design the pavement using a CBR of 14.2 percent.

This CBR value correlates to a modulus of subgrade reaction value (k) of 225 pci using the following correlation provided in FAA Advisory Circular 150/5320-6G section 3.16.4.1.

$k\ (pci) = 28.6926 \times CBR^{0.7788}$

3.3.2 Materials and Compaction

We recommend specifying crushed aggregate base meeting Federal Aviation Administration (FAA) Standard for Specifying Construction of Airports: Item P-209 Crushed Aggregate Base Course. Furthermore, we recommend specifying that the bituminous and concrete pavement meet either Federal Aviation Administration (FAA) Standard for Specifying Construction of Airports: Item P-401 or P-403 Asphalt Mix Pavement and Item P-501 Cement Concrete Pavement.

We recommend compacting crushed aggregate base and granular subbase placed within 3 feet of pavement subgrade elevations to at least 100 percent of their maximum modified Proctor dry densities (ASTM D1557).

3.3.3 Subgrade Drainage

We recommend that a subsurface drainage system be installed in order to reduce the amount of water in the frost zone. The drainage system should include a drainage pipe along each side of the excavation with an outlet at the lowest elevation to allow the water to be drained away from the pavement subgrade.

3.3.4 Performance and Maintenance

Many conditions affect the overall performance of the exterior slabs and pavements. Some of these conditions include the environment, loading conditions and the level of ongoing maintenance. With regard to bituminous pavements in particular, it is common to have thermal cracking develop within the first few years of placement and continue throughout the life of the pavement. We recommend developing a regular maintenance plan for filling cracks in exterior slabs and pavements to lessen the potential impacts for cold weather distress due to frost heave or warm weather distress due to wetting and softening of the subgrade.

4.0 Procedures

4.1 Pavement Cores

We obtained core samples of the pavement using a truck-mounted coring machine advancing a 6-inch diameter core barrel. After completing the boring at the core location, we repaired the pavement with a cold-mix bituminous patch. We measured the cores to obtain approximate pavement thickness and noted their material conditions based on visual observation.

4.2 Penetration Test Borings

We drilled the penetration test borings with truck and all-terrain-mounted core and auger drill equipped with hollow-stem auger. We performed the borings in general accordance with ASTM D6151 taking penetration test samples at 2 1/2- or 5-foot intervals in general accordance with ASTM D1586. The boring logs show the actual sample intervals and corresponding depths. We also collected bulk samples of auger cuttings at selected locations for laboratory testing.

We sealed penetration test boreholes meeting the Minnesota Department of Health (MDH) Environmental Borehole criteria with an MDH-approved grout.

4.3 Exploration Logs

4.3.1 Log of Boring Sheets

The Appendix includes Log of Boring sheets for our penetration test borings. The logs identify and describe the penetrated geologic materials and present the results of penetration resistance and other in-situ tests performed. The logs also present the results of organic vapor screening, laboratory tests performed on penetration test samples, and groundwater measurements.

We inferred strata boundaries from changes in the penetration test samples and the auger cuttings. Because we did not perform continuous sampling, the strata boundary depths are only approximate. The boundary depths likely vary away from the boring locations, and the boundaries themselves may occur as gradual rather than abrupt transitions.

4.3.2 Geologic Origins

We assigned geologic origins to the materials shown on the logs and referenced within this report, based on: (1) a review of the background information and reference documents cited above, (2) visual classification of the various geologic material samples retrieved during the course of our subsurface exploration, (3) penetration resistance and other in-situ testing performed for the project, (4) laboratory test results, and (5) available common knowledge of the geologic processes and environments that have impacted the site and surrounding area in the past .

4.4 Material Classification and Testing

4.4.1 Visual and Manual Classification

We visually and manually classified the geologic materials encountered based on ASTM D2488. When we performed laboratory classification tests, we used the results to classify the geologic materials in accordance with ASTM D2487. The Appendix includes a chart explaining the classification system we used.

4.4.2 Laboratory Testing

The exploration logs in the Appendix note most of the results of the laboratory tests performed on geologic material samples. The remaining laboratory test results follow the exploration logs. We performed the tests in general accordance with ASTM procedures.

4.5 Groundwater Measurements

The drillers checked for groundwater while advancing the penetration test borings, and again after auger withdrawal. We then filled the boreholes as noted on the boring logs.

5.0 Qualifications

5.1 Variations in Subsurface Conditions

5.1.1 Material Strata

We developed our evaluation, analyses, and recommendations from a limited amount of site and subsurface information. It is not standard engineering practice to retrieve material samples from exploration locations continuously with depth. Therefore, we must infer strata boundaries and thicknesses to some extent. Strata boundaries may also be gradual transitions, and project planning should expect the strata to vary in depth, elevation, and thickness, away from the exploration locations.

Variations in subsurface conditions present between exploration locations may not be revealed until performing additional exploration work or starting construction. If future activity for this project reveals any such variations, you should notify us so that we may reevaluate our recommendations. Such variations could increase construction costs, and we recommend including a contingency to accommodate them.

5.1.2 Groundwater Levels

We made groundwater measurements under the conditions reported herein and shown on the exploration logs and interpreted in the text of this report. Note that the observation periods were relatively short, and project planning can expect groundwater levels to fluctuate in response to rainfall, flooding, irrigation, seasonal freezing and thawing, surface drainage modifications and other seasonal and annual factors.

5.2 Continuity of Professional Responsibility

5.2.1 Plan Review

We based this report on a limited amount of information, and we made a number of assumptions to help us develop our recommendations. We should be retained to review the geotechnical aspects of the designs and specifications. This review will allow us to evaluate whether we anticipated the design correctly, if any design changes affect the validity of our recommendations, and if the design and specifications correctly interpret and implement our recommendations.

5.2.2 Construction Observations and Testing

We recommend retaining us to perform the required observations and testing during construction as part of the ongoing geotechnical evaluation. This will allow us to correlate the subsurface conditions exposed during construction with those encountered by the borings and provide professional continuity from the design phase to the construction phase. If we do not perform observations and testing during construction, it becomes the responsibility of others to validate the assumption made during the preparation of this report and to accept the construction-related geotechnical engineer-of-record responsibilities.

5.3 Use of Report

This report is for the exclusive use of the addressed parties. Without written approval, we assume no responsibility to other parties regarding this report. Our evaluation, analyses and recommendations may not be appropriate for other parties or projects.

5.4 Standard of Care

In performing its services, Braun Intertec used that degree of care and skill ordinarily exercised under similar circumstances by reputable members of its profession currently practicing in the same locality. No warranty, express or implied, is made.

Appendix

Soil Boring Location Sketch
Log of Boring Sheets 1 to 13, PE, PS, PW
Descriptive Terminology of Soil
Modified Proctor M-D Relationship 4, 7, 12
California Bearing Ratio 4, 7, 12

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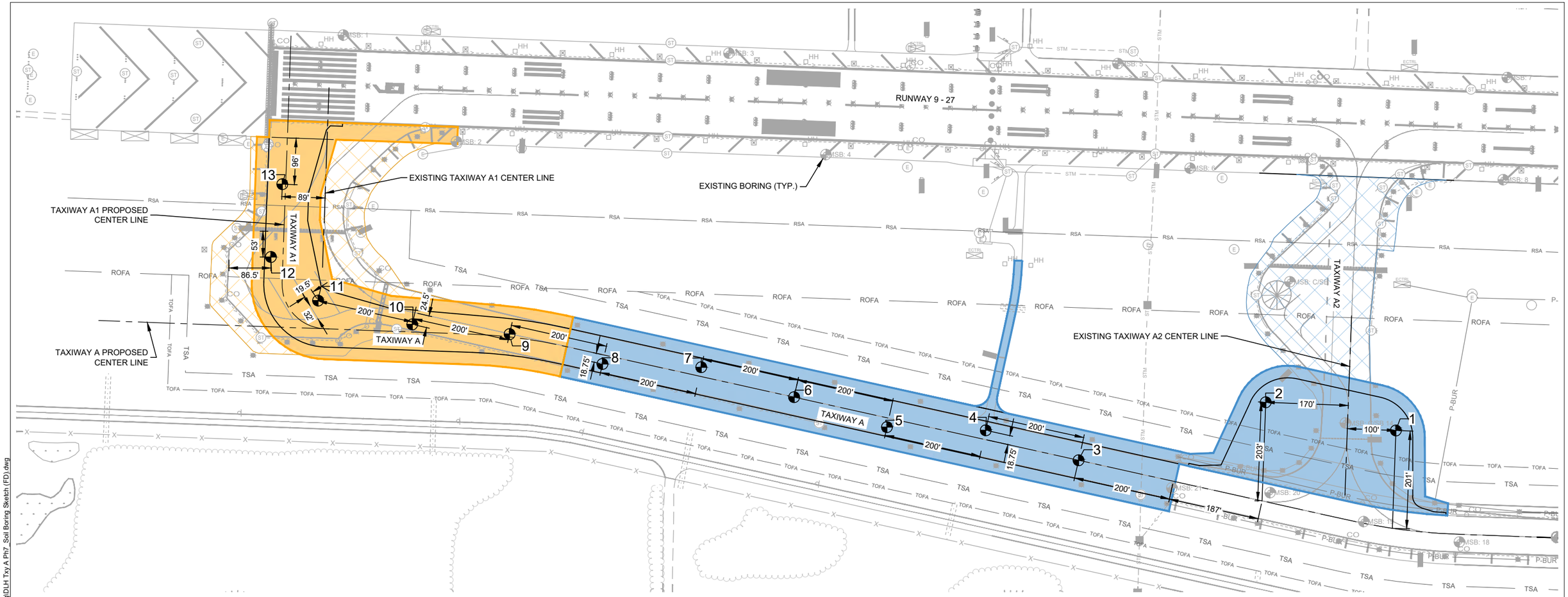
DLH Taxiway A, Phase 7 Preliminary Design

Figure 1

Duluth International Airport
Duluth, Minnesota

Soil Boring
01/2026; DULAI



Point Table						
Point #	Northing	Easting	Latitude	Longitude	Elevation	Raw Description
1	169566.8047	559806.6137	N46° 50' 25.73"	W92° 12' 39.76"	1416.5	SOIL BORING
2	169624.8516	559538.6531	N46° 50' 26.31"	W92° 12' 43.61"	1415.0	SOIL BORING
3	169505.4987	559153.2527	N46° 50' 25.14"	W92° 12' 49.16"	1419.6	BORING/CORE
4	169567.1124	558962.0567	N46° 50' 25.75"	W92° 12' 51.91"	1419.4	BORING/CORE
5	169573.7784	558758.6777	N46° 50' 25.83"	W92° 12' 54.83"	1419.4	BORING/CORE
6	169635.3294	558567.4678	N46° 50' 26.44"	W92° 12' 57.58"	1419.7	BORING/CORE
7	169696.9902	558376.2822	N46° 50' 27.05"	W92° 13' 00.33"	1419.5	BORING/CORE
8	169703.6562	558172.9032	N46° 50' 27.13"	W92° 13' 03.25"	1419.8	BORING/CORE
9	169765.1601	557981.6828	N46° 50' 27.74"	W92° 13' 06.00"	1420.9	BORING/CORE
10	169785.1622	557781.2294	N46° 50' 27.94"	W92° 13' 08.88"	1421.9	BORING/CORE
11	169834.1459	557587.3120	N46° 50' 28.43"	W92° 13' 11.67"	1423.5	BORING/CORE
12	169923.9116	557490.1850	N46° 50' 29.32"	W92° 13' 13.06"	1423.4	BORING/CORE
13	170073.7550	557513.6333	N46° 50' 30.80"	W92° 13' 12.72"	1425.7	BORING/CORE

Legend

- PROJECT AREA - PHASE 7
- EXISTING PAVEMENT REMOVAL - PHASE 7
- PROJECT AREA - PHASE 7 (ALT BID)
- EXISTING PAVEMENT REMOVAL - PHASE 7 (ALT BID)
- EXISTING SOIL BORING
- SOIL BORING LOCATION

N

0 100' 200'

X:\AE\D\DULAI\Common\Duluth International\General Documents\DLH Txy A Phase 7 Figures\Soil Boring\DLH Txy A Ph7 - Soil Boring Sketch (FD).dwg

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number 10000948_001
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 7
4701 Grinden Drive
Duluth, Minnesota

BORING: **1**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis Central (US Feet)
NORTHING: 169566.8 EASTING: 559806.6
DRILLER: M. Heinzen LOGGED BY: K. Warmuth START DATE: 02/06/26 END DATE: 02/06/26
SURFACE ELEVATION: 1416.5 ft RIG: 7505 METHOD: 3 1/4" HSA SURFACING: Grass WEATHER: Snow, Wind, 30°

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
~~1416.2~~ 0.3		SILTY SAND (SM), fine to medium-grained, with Gravel, brownish black, moist (TOPSOIL FILL)					
		FILL: SILTY SAND (SM), fine to medium-grained, with Gravel, brown, moist		14-20-4-3 (24) 5"			
				2-4-4-4 (8) 0"			No Recovery
1407.5				3-3-3 (6) 5"			
9.0		SILTY SAND (SM), fine to medium-grained, with Gravel, brown, wet, very loose (GLACIAL TILL)		1-1-1 (2) 4"			
1405.5							Water not observed while drilling.
11.0		END OF BORING Boring then backfilled with auger cuttings					

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number 10000948_001
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 7
4701 Grinden Drive
Duluth, Minnesota

BORING: **2**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis Central (US Feet)
NORTHING: 169624.9 EASTING: 559538.7
DRILLER: M. Heinzen LOGGED BY: K. Warmuth START DATE: 02/06/26 END DATE: 02/06/26
SURFACE ELEVATION: 1415.0 ft RIG: 7505 METHOD: 3 1/4" HSA SURFACING: Grass WEATHER: Snow, Wind, 30°

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1414.5							
0.5		SILTY SAND (SM), fine to medium-grained, with Gravel, brownish black, moist (TOPSOIL FILL)					
		FILL: SILTY SAND (SM), fine to medium-grained, with Gravel, organic, brown, moist		4-3-5-7 (8) 15"			
1411.0							
4.0		FILL: SILTY SAND (SM), fine to medium-grained, with Gravel, trace organic, brown, moist		1-1-2-1 (3) 5"			
			5				
				1-1-2 (3) 4"			
1406.0							
9.0		PEAT (PT), black, moist, very loose (SWAMP DEPOSIT)		1-1-1 (2) 15"			
			10				
1403.0							
12.0		ORGANIC SILT (OL), gray, wet, soft (SWAMP DEPOSIT)		1-1-2 (3) 13"			
1401.0							
14.0		SILT (ML), wet, medium (GLACIAL TILL)		1-3-5 (8) 15"			
			15				
1399.0							
16.0		END OF BORING					Water not observed while drilling.
		Boring then backfilled with auger cuttings					
			20				
			25				
			30				

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number 10000948_001
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 7
4701 Grinden Drive
Duluth, Minnesota

BORING: **3**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis Central (US Feet)
NORTHING: 169505.5 EASTING: 559153.3
DRILLER: D. Michalski LOGGED BY: S. Thayer START DATE: 02/05/26 END DATE: 02/05/26
SURFACE ELEVATION: 1419.6 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Bituminous WEATHER: Clear, 22°

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1418.5		BITUMINOUS, 13 inches		AU			
1.1		APPARENT AGGREGATE BASE, 12 inches					
1417.4				50/3" (REF) 3"			
2.2		FILL: POORLY GRADED SAND (SP), fine to medium-grained, with Gravel, brown, frozen (moist when thawed)		25-42-27-30 (69) 18"			Bag sample at 3 to 6 feet
1413.6			5				
6.0		FILL: POORLY GRADED SAND with SILT (SP-SM), fine to medium-grained, with Gravel, brown, moist		8-16-16 (32) 12"			
	▽		10	4-7-8 (15) 6"			Water observed at 10.0 feet while drilling.
1408.6							
11.0		END OF BORING Boring immediately backfilled					
			15				
			20				
			25				
			30				

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Project Number 10000948_001
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 7
4701 Grinden Drive
Duluth, Minnesota

BORING: **4**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis Central (US Feet)
NORTHING: 169567.1 EASTING: 558962.1
START DATE: 02/05/26 END DATE: 02/05/26
SURFACING: Bituminous WEATHER: Clear, 22°

DRILLER: D. Michalski LOGGED BY: S. Thayer
SURFACE ELEVATION: 1419.4 ft RIG: 7516B METHOD: 3 1/4" HSA

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1418.0		BITUMINOUS, 16.5 inches		AU			
1.4		APPARENT AGGREGATE BASE, 10 inches		50/4" (REF) 3"			
1417.2 2.2		FILL: POORLY GRADED SAND with SILT (SP-SM), fine to medium-grained, with Gravel, brown, frozen (moist when thawed) to moist		25-50/5" (REF) 8"		5	P200=12% Bag sample at 3 to 6 feet
5				7-14-18 (32) 12"			
1409.4 10.0	▽			8-14-14 (28) 12"			
10		SILTY SAND (SM), fine to medium-grained, with Gravel, brown, wet, medium dense (GLACIAL OUTWASH)					Water observed at 10.0 feet while drilling.
1408.4 11.0		END OF BORING Boring immediately backfilled					
15							
20							
25							
30							

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number 10000948_001
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 7
4701 Grinden Drive
Duluth, Minnesota

BORING: **5**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis Central (US Feet)
NORTHING: 169573.8 EASTING: 558758.7
DRILLER: D. Michalski LOGGED BY: S. Thayer START DATE: 02/05/26 END DATE: 02/05/26
SURFACE ELEVATION: 1419.4 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Bituminous WEATHER: Clear, 22°

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1418.1		BITUMINOUS, 16 inches		AU			
1.3		APPARENT AGGREGATE BASE, 10 inches		50/4" (REF) 4"			
1417.2		FILL: POORLY GRADED SAND with SILT (SP-SM), fine to medium-grained, with Gravel, brown, frozen (moist when thawed)		25-50/3" (REF) 8"		14	P200=10%
2.2			5				
				5-15-15 (30) 12"			
1409.4	▽			3-6-3 (9) 12"			
10.0		PEAT (PT), black, wet (SWAMP DEPOSIT)	10				
1406.4							
13.0		POORLY GRADED SAND (SP), fine to medium-grained, with Gravel, brown, wet, loose (GLACIAL OUTWASH)		2-4-2 (6) 1"			
1403.4			15				
16.0		END OF BORING Boring immediately backfilled					Water observed at 10.0 feet while drilling.
			20				
			25				
			30				

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Project Number 10000948_001
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 7
4701 Grinden Drive
Duluth, Minnesota

BORING: **6**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis Central (US Feet)
NORTHING: 169635.3 EASTING: 558567.5
START DATE: 02/05/26 END DATE: 02/05/26
SURFACING: Bituminous WEATHER: Clear, 22°

DRILLER: D. Michalski LOGGED BY: S. Thayer
SURFACE ELEVATION: 1419.7 ft RIG: 7516B METHOD: 3 1/4" HSA

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1418.6		BITUMINOUS, 13 inches		AU			
1.1		APPARENT AGGREGATE BASE, 9 inches					
1417.9		FILL: POORLY GRADED SAND with SILT (SP-SM), fine to medium-grained, with Gravel, brown, frozen (moist when thawed) to moist		50/3" (REF) 3"			
1.8				22-44-33-33 (77) 20"		4	P200=9%
1410.7	▽			4-7-7 (14) 10"			
9.0		SILTY SAND (SM), fine to medium-grained, with Gravel, brown, wet, medium dense (GLACIAL OUTWASH)		4-7-11 (18) 10"			
1408.7							Water observed at 7.5 feet while drilling.
11.0		END OF BORING Boring immediately backfilled					

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number 10000948_001
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 7
4701 Grinden Drive
Duluth, Minnesota

BORING: **7**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis Central (US Feet)
NORTHING: 169697.0 EASTING: 558376.3
DRILLER: D. Michalski LOGGED BY: S. Thayer START DATE: 02/05/26 END DATE: 02/05/26
SURFACE ELEVATION: 1419.5 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Bituminous WEATHER: Clear, 22°

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1418.2		BITUMINOUS, 14.5 inches					
1.3		APPARENT AGGREGATE BASE, 10 inches		AU			
1417.4		FILL: SILTY SAND (SM), fine to medium-grained, with Gravel, brown, frozen (moist when thawed)				5	P200=16% Bag sample at 3 to 6 feet
2.1							
1415.5				27-34-16-16			
4.0		FILL: SILTY SAND (SM), fine to medium-grained, with Gravel, brown, moist	5	(50)			
1413.5				18"			
6.0	▽	FILL: SILTY SAND (SM), fine to medium-grained, with Gravel, brown, wet		6-88-5			
				(93)			
1410.5				10"			
9.0		PEAT (PT), black, wet (SWAMP DEPOSIT)	10	1-3-4		166	
				(7)			
1406.5				14"			
13.0		SILTY SAND (SM), fine-grained, with Gravel, brown, moist, loose (GLACIAL TILL)	15	3-4-4			
1403.5				(8)			
16.0		END OF BORING Boring immediately backfilled		12"			Water observed at 7.5 feet while drilling.
			20				
			25				
			30				

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number 10000948_001
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 7
4701 Grinden Drive
Duluth, Minnesota

BORING: **8**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis Central (US Feet)
NORTHING: 169703.7 EASTING: 558172.9
DRILLER: D. Michalski LOGGED BY: S. Thayer START DATE: 02/05/26 END DATE: 02/05/26
SURFACE ELEVATION: 1419.8 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Bituminous WEATHER: Clear, 22°

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1418.7		BITUMINOUS, 13 inches					
1.1		APPARENT AGGREGATE BASE, 10 inches		AU			
1417.7		FILL: POORLY GRADED SAND with SILT (SP-SM), fine to medium-grained, with Gravel, brown, frozen (moist when thawed)					
2.1				23-16-12-11			
1415.8		FILL: POORLY GRADED SAND (SP), fine to medium-grained, with Gravel, brown, moist	5	(28) 18"			
4.0							
1412.8				3-6-6			
7.0	▽	FILL: POORLY GRADED SAND with SILT (SP-SM), fine to medium-grained, with Gravel, brown, wet		(12) 6"			
1410.8							
9.0		FILL: SILTY SAND (SM), fine to medium-grained, with Gravel, brown, moist	10	2-2-4 (6) 12"			
1409.8		PEAT (PT), black, wet (SWAMP DEPOSIT)					
10.0							
			15	1-1-2 (3) 12"			
1402.8							
17.0		SILT (ML), brown, moist, medium dense (GLACIAL TILL)					
			20	2-6-7 (13) 12"			
1398.8							
21.0		END OF BORING					Water observed at 7.5 feet while drilling.
		Boring immediately backfilled with bentonite grout					
			25				
			30				

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number 10000948_001
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 7
4701 Grinden Drive
Duluth, Minnesota

BORING: **9**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis Central (US Feet)
NORTHING: 169765.2 EASTING: 557981.7

DRILLER:	D. Michalski	LOGGED BY:	S. Thayer	START DATE:	02/05/26
SURFACE ELEVATION:	1420.9 ft	RIG:	7516B	METHOD:	3 1/4" HSA
END DATE:	02/05/26	SURFACING:	Bituminous	WEATHER:	Clear, 22°

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1419.6		BITUMINOUS, 16 inches					
1.3		APPARENT AGGREGATE BASE, 21 inches		AU			
1417.8		*Auger refusal at 3.1 feet*					
3.1		END OF BORING					Water not observed while drilling.
		Boring immediately backfilled					

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number 10000948_001
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 7
4701 Grinden Drive
Duluth, Minnesota

BORING: **10**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis Central (US Feet)
NORTHING: 169785.2 EASTING: 557781.2
DRILLER: D. Michalski LOGGED BY: S. Thayer START DATE: 02/05/26 END DATE: 02/05/26
SURFACE ELEVATION: 1421.8 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Bituminous WEATHER: Clear, 30°

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1420.5		BITUMINOUS, 16 inches					
1.3		APPARENT AGGREGATE BASE, 24 inches		AU			
1418.5							
3.3	▽	FILL: POORLY GRADED SAND with SILT (SP-SM), with Gravel, brown, frozen (moist when thawed), moist to wet		30-25-16-12 (41) 20"			
1412.8				7-7-7 (14) 10"			
9.0		SILTY SAND (SM), fine to medium-grained, with Gravel, brown, loose (GLACIAL TILL)		1-2-4 (6) 12"			
1410.8							
11.0		END OF BORING Boring immediately backfilled					Water observed at 7.5 feet while drilling.

5 10 15 20 25 30

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number 10000948_001
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 7
4701 Grinden Drive
Duluth, Minnesota

BORING: **11**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis Central (US Feet)
NORTHING: 169834.1 EASTING: 557587.3

DRILLER:	D. Michalski	LOGGED BY:	S. Thayer	START DATE:	02/05/26
SURFACE ELEVATION:	1423.5 ft	RIG: 7516B	METHOD: 3 1/4" HSA	SURFACING:	Concrete
END DATE:	02/05/26	WEATHER:	Clear, 30°		

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1422.2		CONCRETE, 15.5 inches					
1.3		APPARENT AGGREGATE BASE, 24 inches		AU		4	P200=22%
1420.2							
3.3		FILL: POORLY GRADED SAND with SILT (SP-SM), fine to medium-grained, with Gravel, brown, frozen (moist when thawed)		27-46-24-50/ 3"			
1419.5							
4.0		SILTY SAND (SM), fine to medium-grained, with Gravel, brown, frozen (moist when thawed) to moist (GLACIAL TILL)	5	(70) 20"		8	P200=49%
				14-18-17 (35) 16"			
			10				
1412.5							
11.0		END OF BORING					Water not observed while drilling.
		Boring immediately backfilled					
			15				
			20				
			25				
			30				

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number 10000948_001
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 7
4701 Grinden Drive
Duluth, Minnesota

BORING: **12**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis Central (US Feet)
NORTHING: 169923.9 EASTING: 557490.2
DRILLER: D. Michalski LOGGED BY: S. Thayer START DATE: 01/25/26 END DATE: 01/25/26
SURFACE ELEVATION: 1424.2 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Concrete WEATHER: Clear, 30°

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1423.0		CONCRETE, 14.5 inches					
1.2		APPARENT AGGREGATE BASE, 24 inches		AU			
1421.0							Bag sample at 3 to 6 feet
3.2		FILL: POORLY GRADED SAND with SILT (SP-SM), fine to medium-grained, with Gravel, brown, frozen (moist when thawed)		33-50/4" (REF) 12"			
1420.2 4.0		SILTY SAND (SM), fine to medium-grained, with Gravel, brown, moist, very dense (GLACIAL TILL)	5	18-29-40 (69) 16"			
1413.5			10	26-48-50/3" (REF) 12"			
10.7		END OF BORING Boring immediately backfilled					Water not observed while drilling.
			15				
			20				
			25				
			30				

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number 10000948_001
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 7
4701 Grinden Drive
Duluth, Minnesota

BORING: **13**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis Central (US Feet)
NORTHING: 170073.8 EASTING: 557513.6
DRILLER: D. Michalski LOGGED BY: S. Thayer START DATE: 02/06/26 END DATE: 02/06/26
SURFACE ELEVATION: 1425.7 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Concrete WEATHER: Clear, 30°

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1424.8		CONCRETE, 9.5 inches					
0.9		APPARENT AGGREGATE BASE, 24 inches		AU		5	P200=33%
1422.5							
3.2		FILL: POORLY GRADED SAND with SILT (SP-SM), fine to medium-grained, with Gravel, brown, frozen (moist when thawed)		39-35-25-27 (60) 22"		6	P200=37%
1421.7							
4.0		SILTY SAND (SM), fine to medium-grained, with Gravel, brown, frozen (moist when thawed) to moist (GLACIAL TILL)		8-20-24 (44) 14"			
				20-17-19-18 (36) 12"			
1414.7							
11.0		END OF BORING Boring immediately backfilled					Water not observed while drilling.

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number 10000948_001
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 7
4701 Grinden Drive
Duluth, Minnesota

BORING: **PE**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis Central (US Feet)
NORTHING: 173971.8 EASTING: 561254.3
DRILLER: D. Michalski LOGGED BY: S. Thayer START DATE: 02/06/26 END DATE: 02/06/26
SURFACE ELEVATION: 1403.0 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Grass WEATHER: Clear, 20°

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1399.0		FILL: SILTY SAND (SM), fine to medium-grained, with Gravel, brown, frozen (moist when thawed)		AU 4-5-5 (10) 6"			
4.0 1394.0		SANDY LEAN CLAY (CL), brown, moist, stiff (GLACIAL TILL)		3-4-5 (9) 10"			
				4-11-20 (31) 12"			
9.0 1391.5	▽	POORLY GRADED GRAVEL (GP), brown, wet (GLACIAL OUTWASH) *Auger refusal at 10.5 feet*		12-15-16 (31) 6"			
11.5		END OF BORING Boring immediately backfilled					Water observed at 10.0 feet while drilling.

5 10 15 20 25 30

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number 10000948_001
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 7
4701 Grinden Drive
Duluth, Minnesota

BORING: **PS**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis Central (US Feet)
NORTHING: 173980.7 EASTING: 561215.7
DRILLER: D. Michalski LOGGED BY: S. Thayer START DATE: 02/06/26 END DATE: 02/06/26
SURFACE ELEVATION: 1401.0 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Grass WEATHER: Clear, 20°

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
		SILTY SAND (SM), fine to medium-grained, with Gravel, brown, frozen (dry when thawed), medium dense to dense (GLACIAL TILL)		AU			
				6-8-18 (26) 10"			
			5	12-10-6 (16) 6"			
				5-6-8 (14) 12"			
			10	4-11-35 (46) 12"			
1389.5		*Auger refusal at 11.5 feet*					
11.5		END OF BORING Boring immediately backfilled					Water not observed while drilling.
			15				
			20				
			25				
			30				

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number 10000948_001
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 7
4701 Grinden Drive
Duluth, Minnesota

BORING: **PW**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis Central (US Feet)
NORTHING: 173376.2 EASTING: 560991.2

DRILLER:	D. Michalski	LOGGED BY:	S. Thayer	START DATE: 02/06/26	END DATE: 02/06/26
SURFACE ELEVATION:	1408.0 ft	RIG: 7516B	METHOD: 3 1/4" HSA	SURFACING: Grass	WEATHER: Clear, 20°

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1404.0		FILL: SILTY SAND (SM), fine to medium-grained, brown, frozen (moist when thawed)		AU 3-3-4 (7) 12"			
4.0 1399.0		SILTY SAND (SM), fine to medium-grained, with Gravel, brown, moist, medium dense (GLACIAL TILL)		4-12-14 (26) 1" 7-12-16 (28) 12"			
9.0 1397.6	▽	POORLY GRADED GRAVEL (GP), brown, wet (GLACIAL TILL)		10-50/4" (REF) 4"			Water observed at 10.0 feet while drilling.
10.4		*Auger refusal at 10.4 feet* END OF BORING Boring immediately backfilled					

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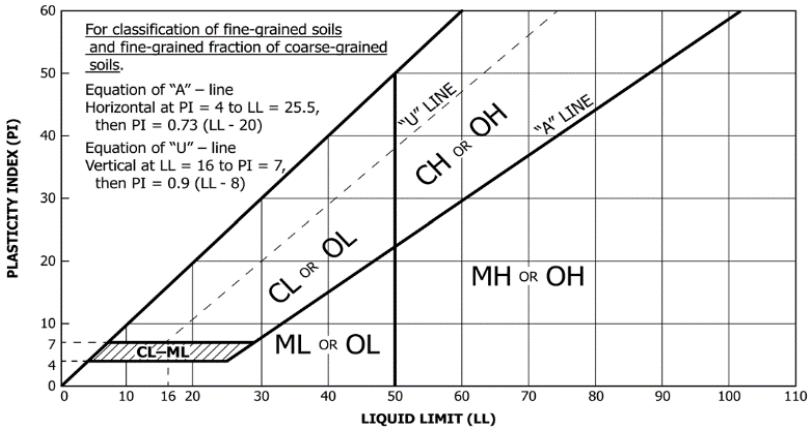
Descriptive Terminology of Soil

Based on Standards ASTM D2487/2488
(Unified Soil Classification System)

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests[A]				Soil Classification	
				Group Symbol	Group Name[B]
Coarse-grained Soils (more than 50% retained on No. 200 sieve)	Gravels (More than 50% of coarse fraction retained on No. 4 sieve)	Clean Gravels (Less than 5% fines[C])	$C_u \geq 4$ and $1 \leq C_c \leq 3^D$	GW	Well-graded gravel[E]
			$C_u < 4$ and/or ($C_c < 1$ or $C_c > 3$)[D]	GP	Poorly graded gravel[E]
		Gravels with Fines (More than 12% fines[C])	Fines classify as ML or MH	GM	Silty gravel[E F G]
			Fines Classify as CL or CH	GC	Clayey gravel[E F G]
	Sands (50% or more coarse fraction passes No. 4 sieve)	Clean Sands (Less than 5% fines[H])	$C_u \geq 6$ and $1 \leq C_c \leq 3^D$	SW	Well-graded sand[I]
			$C_u < 6$ and/or ($C_c < 1$ or $C_c > 3$)[D]	SP	Poorly graded sand[I]
		Sands with Fines (More than 12% fines[H])	Fines classify as ML or MH	SM	Silty sand[F G I]
			Fines classify as CL or CH	SC	Clayey sand[F G I]
Fine-grained Soils (50% or more passes the No. 200 sieve)	Silts and Clays (Liquid limit less than 50)	Inorganic	PI > 7 and plots on or above "A" line[J]	CL	Lean clay[K L M]
			PI < 4 or plots below "A" line[J]	ML	Silt[K L M]
		Organic	Liquid Limit – oven dried / Liquid Limit – not dried <0.75	OL	Organic clay[K L M N] / Organic silt[K L M O]
	Silts and Clays (Liquid limit 50 or more)	Inorganic	PI plots on or above "A" line	CH	Fat clay[K L M]
			PI plots below "A" line	MH	Elastic silt[K L M]
		Organic	Liquid Limit – oven dried / Liquid Limit – not dried <0.75	OH	Organic clay[K L M P] / Organic silt[K L M Q]
Highly Organic Soils		Primarily organic matter, dark in color, and organic odor		PT	Peat

A. Based on the material passing the 3-inch (75-mm) sieve.
B. If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.
C. Gravels with 5 to 12% fines require dual symbols:
   GW-GM well-graded gravel with silt
   GW-GC well-graded gravel with clay
   GP-GM poorly graded gravel with silt
   GP-GC poorly graded gravel with clay
D. $C_u = D_{60} / D_{10}$ $C_c = (D_{30})^2 / (D_{10} \times D_{60})$
E. If soil contains ≥ 15% sand, add "with sand" to group name.
F. If fines classify as CL-ML, use dual symbol GC-GM or SC-SM.
G. If fines are organic, add "with organic fines" to group name.
H. Sands with 5 to 12% fines require dual symbols:
   SW-SM well-graded sand with silt
   SW-SC well-graded sand with clay
   SP-SM poorly graded sand with silt
   SP-SC poorly graded sand with clay
I. If soil contains ≥ 15% gravel, add "with gravel" to group name.
J. If Atterberg limits plot in hatched area, soil is CL-ML, silty clay.
K. If soil contains 15 to < 30% plus No. 200, add "with sand" or "with gravel", whichever is predominant.
L. If soil contains ≥ 30% plus No. 200, predominantly sand, add "sandy" to group name.
M. If soil contains ≥ 30% plus No. 200 predominantly gravel, add "gravelly" to group name.
N. PI ≥ 4 and plots on or above "A" line.
O. PI < 4 or plots below "A" line.
P. PI plots on or above "A" line.
Q. PI plots below "A" line.



Laboratory Tests

DD	Dry density, pcf	**q_p**	Pocket penetrometer strength, tsf
WD	Wet density, pcf	**q_u**	Unconfined compression test, tsf
P200	% Passing #200 sieve	**LL**	Liquid limit
MC	Moisture content, %	**PL**	Plastic limit
OC	Organic content, %	**PI**	Plasticity index

Particle Size Identification

Boulders	over 12"
Cobbles	3" to 12"
Gravel	
Coarse	3/4" to 3" (19.00 mm to 75.00 mm)
Fine	No. 4 to 3/4" (4.75 mm to 19.00 mm)
Sand	
Coarse	No. 10 to No. 4 (2.00 mm to 4.75 mm)
Medium	No. 40 to No. 10 (0.425 mm to 2.00 mm)
Fine	No. 200 to No. 40 (0.075 mm to 0.425 mm)
Silt	No. 200 (0.075 mm) to .005 mm
Clay	< .005 mm

Relative Proportions[L, M]

trace	0 to 5%
little	6 to 14%
with	≥ 15%

Inclusion Thicknesses

lens	0 to 1/8"
seam	1/8" to 1"
layer	over 1"

Apparent Relative Density of Cohesionless Soils

Very loose	0 to 4 BPF
Loose	5 to 10 BPF
Medium dense	11 to 30 BPF
Dense	31 to 50 BPF
Very dense	over 50 BPF

Consistency of Cohesive Soils	Blows Per Foot	Approximate Unconfined Compressive Strength
Very soft	0 to 1 BPF	< 0.25 tsf
Soft	2 to 4 BPF	0.25 to 0.5 tsf
Medium	5 to 8 BPF	0.5 to 1 tsf
Stiff	9 to 15 BPF	1 to 2 tsf
Very Stiff	16 to 30 BPF	2 to 4 tsf
Hard	over 30 BPF	> 4 tsf

Moisture Content:

Dry: Absence of moisture, dusty, dry to the touch.
Moist: Damp but no visible water.
Wet: Visible free water, usually soil is below water table.

Drilling Notes:

Blows/N-value: Blows indicate the driving resistance recorded for each 6-inch interval. The reported N-value is the blows per foot recorded by summing the second and third interval in accordance with the Standard Penetration Test, ASTM D1586.

Partial Penetration: If the sampler could not be driven through a full 6-inch interval, the number of blows for that partial penetration is shown as #/x" (i.e. 50/2"). The N-value is reported as "REF" indicating refusal.

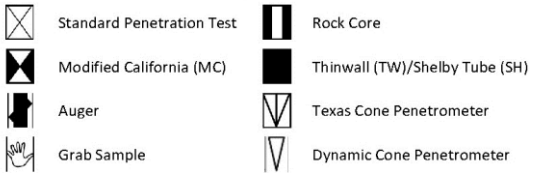
Recovery: Indicates the inches of sample recovered from the sampled interval. For a standard penetration test, full recovery is 18", and is 24" for a thinwall/shelby tube sample.

WOH: Indicates the sampler penetrated soil under weight of hammer and rods alone; driving not required.

WOR: Indicates the sampler penetrated soil under weight of rods alone; hammer weight and driving not required.

Water Level: Indicates the water level measured by the drillers either while drilling (▽), at the end of drilling (▼), or at some time after drilling (⧗).

Sample Symbols



5/2021

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3900 Roosevelt Road
Suite 113
Saint Cloud, MN 56301
Phone: 320-253-9940

Modified Proctor M-D Relationship

ASTM D1557

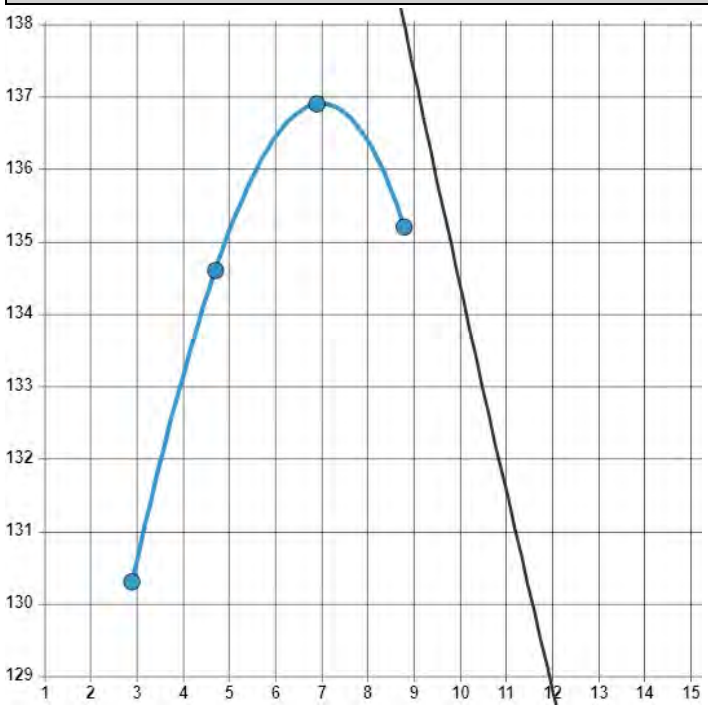
Report #: BI0579-000002
Report Date: 05/01/2026

Client:	**Project:**
Short Elliott Hendrickson, Inc. 3535 Vadnais Center Dr Saint Paul, MN 55110	10000948_001.00.03 Proposed DLH Taxiway A Phase 7 4701 Grinden Drive Duluth, MN 55811

Sample Information

Sample Number:	724532	**Depth (ft):**	3 to 6
Boring Number:	4	**Sampled By:**	Drill Crew
Sampling Method:	Auger Boring ASTM D1452		
Location:	Subgrade		
Location Details:	Taxiway, Soil Boring 4		
Sample Date:	02/05/2026		
Received Date:	04/30/2026	**Lab:**	11001 Hampshire Ave S, Bloomington, MN
Tested Date:	05/01/2026	**Tested By:**	Kortenbusch, Trent

Laboratory Data



Proctor ID:	P-02-mod
Maximum Dry Density (pcf):	136.9
Optimum Moisture (%):	7.0
Corrected Maximum Dry Density (pcf):	139.2
Corrected Optimum Moisture (%):	6.4
Method:	Method B
Oversize Sieve:	3/8 Sieve
Dry Coarse Material (%):	8
Dry Fine Material (%):	92
Preparation Method:	Moist
Rammer Type:	Mechanical Round
Specific Gravity:	2.75
Specific Gravity Source:	Assumed

Passes #200 (%):	14	**Retained #200 (%):**	86
Retained On 3/4 (%):	2	**Retained On 3/8 (%):**	8
Retained On #4 (%):	18	**Passing #4 (%):**	82

Classification: SC Clayey sand with gravel, fine to coarse grained, brown

General

Remarks: The % passing the #200 is for informational purposes only.

Steven Thayer 05/14/2026

Uncertainty was not taken into account in determining whether the test results meet the requirements. The results included in this report relate only to the items inspected or tested. Sampled per project specifications or industry standards. Also, this report is for the exclusive use of the addressed parties. We assume no responsibility to other parties regarding this report. The information indicated in this report shall not be reproduced, except in full, without prior written approval.

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3900 Roosevelt Road
Suite 113
Saint Cloud, MN 56301
Phone: 320-253-9940

Modified Proctor M-D Relationship

ASTM D1557

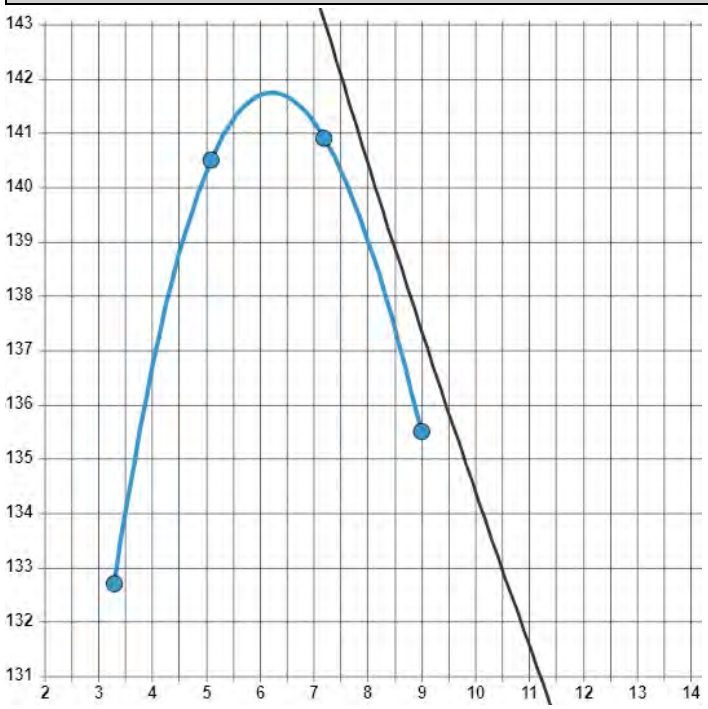
Report #: BI0579-000003
Report Date: 05/01/2026

Client:	**Project:**
Short Elliott Hendrickson, Inc. 3535 Vadnais Center Dr Saint Paul, MN 55110	10000948_001.00.03 Proposed DLH Taxiway A Phase 7 4701 Grinden Drive Duluth, MN 55811

Sample Information

Sample Number:	724534	**Depth (ft):**	3 to 6
Boring Number:	7	**Sampled By:**	Drill Crew
Sampling Method:	Auger Boring ASTM D1452		
Location:	Subgrade		
Location Details:	Taxiway, Soil Boring 7		
Sample Date:	02/05/2026		
Received Date:	04/30/2026	**Lab:**	11001 Hampshire Ave S, Bloomington, MN
Tested Date:	05/01/2026	**Tested By:**	Kortenbusch, Trent

Laboratory Data



Proctor ID:	P-03-mod
Maximum Dry Density (pcf):	141.7
Optimum Moisture (%):	6.2
Corrected Maximum Dry Density (pcf):	144.7
Corrected Optimum Moisture (%):	5.5
Method:	Method B
Oversize Sieve:	3/8 Sieve
Dry Coarse Material (%):	12
Dry Fine Material (%):	88
Preparation Method:	Moist
Rammer Type:	Mechanical Round
Specific Gravity:	2.75
Specific Gravity Source:	Assumed

Passes #200 (%):	17	**Retained #200 (%):**	83
Retained On 3/4 (%):	3	**Retained On 3/8 (%):**	12
Retained On #4 (%):	24	**Passing #4 (%):**	76

Classification: SC Clayey sand with gravel, fine to coarse grained, brown

General

Remarks: The % passing the #200 is for informational purposes only.

Steven Thayer 05/14/2026

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Saint Cloud, MN 56301
Phone: 320-253-9940

Modified Proctor M-D Relationship

ASTM D1557

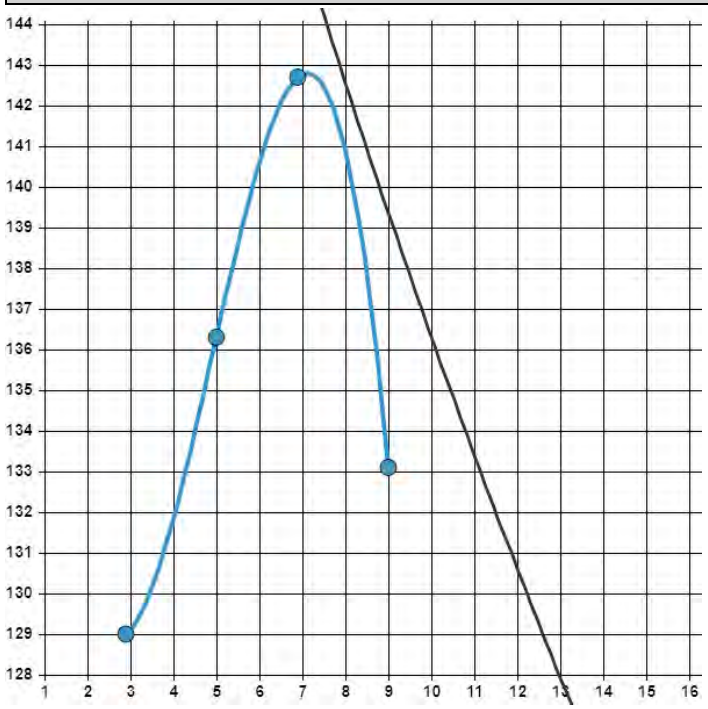
Report #: BI0579-000001
Report Date: 05/01/2026

Client:	**Project:**
Short Elliott Hendrickson, Inc. 3535 Vadnais Center Dr Saint Paul, MN 55110	10000948_001.00.03 Proposed DLH Taxiway A Phase 7 4701 Grinden Drive Duluth, MN 55811

Sample Information

Sample Number:	724535	**Depth (ft):**	3 to 6
Boring Number:	12	**Sampled By:**	Drill Crew
Sampling Method:	Auger Boring ASTM D1452		
Location:	Subgrade		
Location Details:	Taxiway, Soil Boring 12		
Sample Date:	02/05/2026		
Received Date:	04/30/2026	**Lab:**	11001 Hampshire Ave S, Bloomington, MN
Tested Date:	05/01/2026	**Tested By:**	Vang, Yang

Laboratory Data



Proctor ID:	P-01-mod
Maximum Dry Density (pcf):	142.8
Optimum Moisture (%):	7.1
Method:	Method B
Total Retained:	2 % on 3/8 Sieve
Preparation Method:	Moist
Rammer Type:	Mechanical Round
Specific Gravity:	2.80
Specific Gravity Source:	Assumed

Passes #200 (%):	39	**Retained #200 (%):**	61
Retained On 3/4 (%):	0	**Retained On 3/8 (%):**	2
Retained On #4 (%):	7	**Passing #4 (%):**	93

Classification: SC Clayey sand, fine to medium grained, brown

General

Remarks: The % passing the #200 is for informational purposes only.

Steven Thayer 05/14/2026

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Phone: 320-253-9940

California Bearing Ratio

ASTM D1883

Report #: BI0641-000004
05/12/2026

Client:	**Project:**
Short Elliott Hendrickson, Inc. 3535 Vadnais Center Dr Saint Paul, MN 55110	10000948_001.00.03 Proposed DLH Taxiway A Phase 7 4701 Grinden Drive Duluth, MN 55811

Sample Information

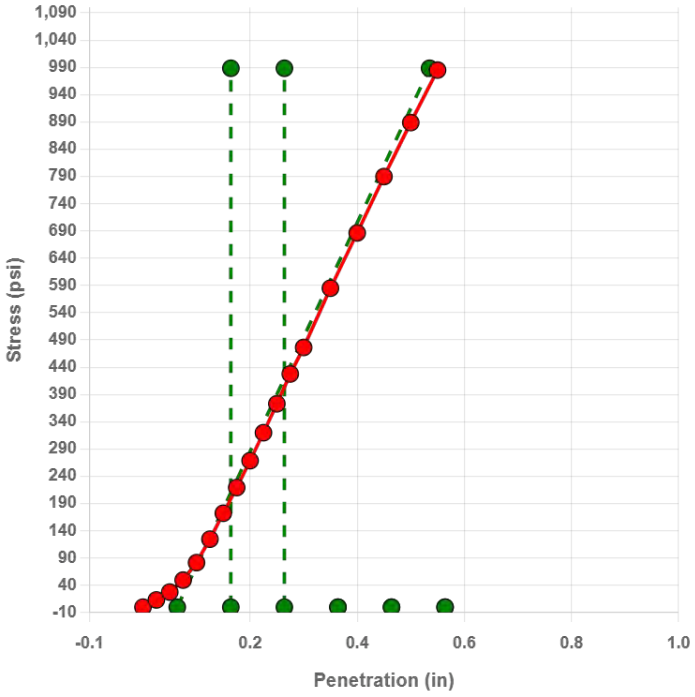
Sample Number:	724535	**Depth (ft):**	3 to 6
Sampling Method:	Auger Boring ASTM D1452	**Sampled By:**	Drill Crew
Boring Number:	12		
Location Details:	Taxiway, Soil Boring 12		
Sample Date:	02/05/2026		
Received Date:	04/30/2026	**Lab:**	11001 Hampshire Ave S, Bloomington, MN
Tested Date:	05/11/2026	**Tested By:**	Andraschko, Nina

Laboratory Data

Property	Result
Soaked Or Unsoaked:	Soaked
Method Of Preparation:	ASTM D698
Number Of Blows Per Lift:	18
Surcharge (lbs):	10
Molding Moisture Content (%):	7.5
Final Moisture Content (%):	7.6
Moisture in Top Inch (%):	7.7
Molded Dry Density (pcf):	139.8
Percent Of Maximum Density:	97.9
Swell (%):	-0.1
CBR at 0.1 Penetration:	20.0
CBR at 0.2 Penetration:	26.7

Soil Classification:
Clayey Sand, fine-medium grain, brown

CBR Load Graph



Minimum Specified

Bearing Ratio Result: 26.7

General

Results: The test is for informational purposes.

Steven Thayer 05/14/2026

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Phone: 320-253-9940

California Bearing Ratio

ASTM D1883

Report #: BI0641-000005
05/12/2026

Client:	**Project:**
Short Elliott Hendrickson, Inc. 3535 Vadnais Center Dr Saint Paul, MN 55110	10000948_001.00.03 Proposed DLH Taxiway A Phase 7 4701 Grinden Drive Duluth, MN 55811

Sample Information

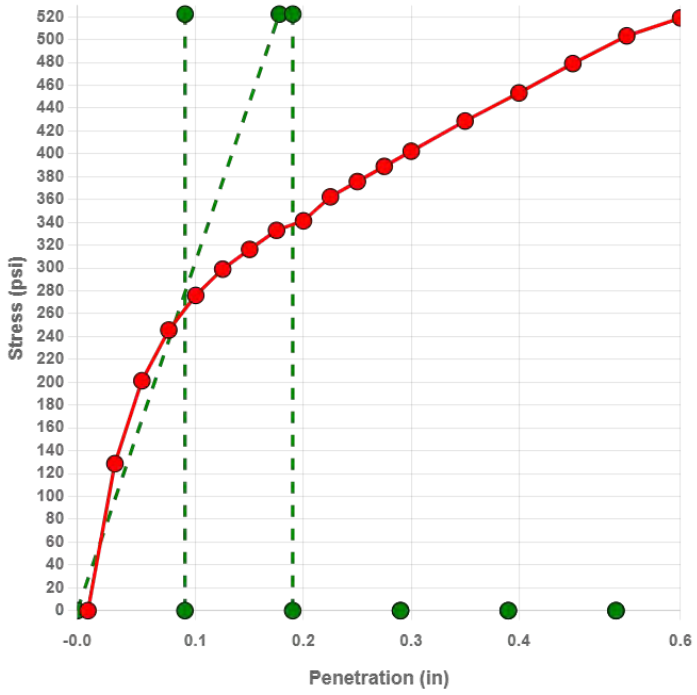
Sample Number:	724534	**Depth (ft):**	3 to 6
Sampling Method:	Auger Boring ASTM D1452	**Sampled By:**	Drill Crew
Boring Number:	7		
Location Details:	Taxiway, Soil Boring 7		
Sample Date:	02/05/2026		
Received Date:	04/30/2026	**Lab:**	11001 Hampshire Ave S, Bloomington, MN
Tested Date:	05/11/2026	**Tested By:**	Andraschko, Nina

Laboratory Data

Property	Result
Soaked Or Unsoaked:	Soaked
Method Of Preparation:	ASTM D698
Number Of Blows Per Lift:	20
Surcharge (lbs):	10
Molding Moisture Content (%):	6.3
Final Moisture Content (%):	7.6
Moisture in Top Inch (%):	16.3
Molded Dry Density (pcf):	135.1
Percent Of Maximum Density:	93.4
Swell (%):	0.3
CBR at 0.1 Penetration:	27.6
CBR at 0.2 Penetration:	22.8

Soil Classification:
SC clayey sand with gravel, fine-coarse grain. reddish-brown

CBR Load Graph



Minimum Specified

Bearing Ratio Result: 27.6

General

Results: The test is for informational purposes.

Steven Thayer 05/14/2026

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California Bearing Ratio

ASTM D1883

Report #: BI0641-000006
05/12/2026

Client:	**Project:**
Short Elliott Hendrickson, Inc. 3535 Vadnais Center Dr Saint Paul, MN 55110	10000948_001.00.03 Proposed DLH Taxiway A Phase 7 4701 Grinden Drive Duluth, MN 55811

Sample Information

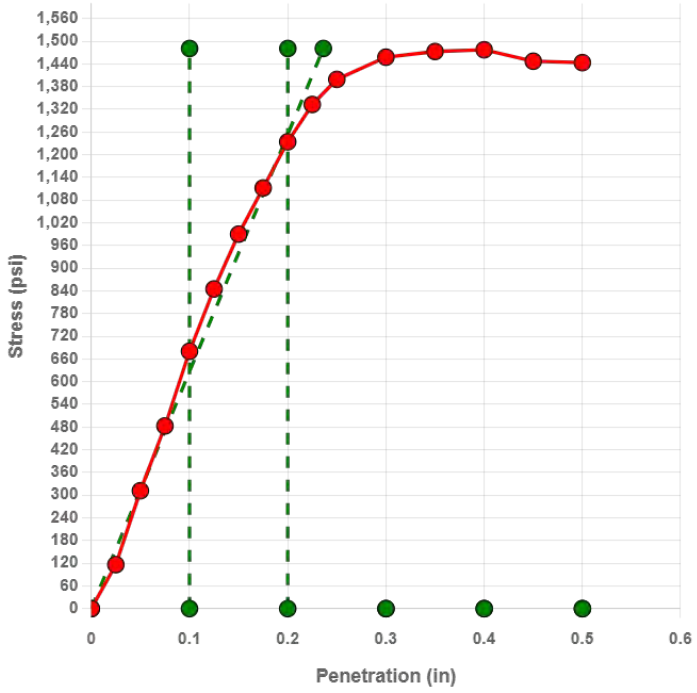
Sample Number:	724532	**Depth (ft):**	3 to 6
Sampling Method:	Auger Boring ASTM D1452	**Sampled By:**	Drill Crew
Boring Number:	4		
Location Details:	Taxiway, Soil Boring 4		
Sample Date:	02/05/2026		
Received Date:	04/30/2026	**Lab:**	11001 Hampshire Ave S, Bloomington, MN
Tested Date:	05/11/2026	**Tested By:**	Andraschko, Nina

Laboratory Data

Property	Result
Soaked Or Unsoaked:	Soaked
Method Of Preparation:	ASTM D698
Number Of Blows Per Lift:	18
Surcharge (lbs):	10
Molding Moisture Content (%):	7.1
Final Moisture Content (%):	7.7
Moisture in Top Inch (%):	8.2
Molded Dry Density (pcf):	134.8
Percent Of Maximum Density:	96.8
Swell (%):	-0.1
CBR at 0.1 Penetration:	63.3
CBR at 0.2 Penetration:	83.3

Soil Classification:
SC clayey sand with gravel. fine-coarse grain, reddish-brown

CBR Load Graph



Minimum Specified

Bearing Ratio Result: 83.3

General

Results: The test is for informational purposes.

Steven Thayer 05/14/2026

Uncertainty was not taken into account in determining whether the test results meet the requirements. The results included in this report relate only to the items inspected or tested. Sampled per project specifications or industry standards. Also, this report is for the exclusive use of the addressed parties. We assume no responsibility to other parties regarding this report. The information indicated in this report shall not be reproduced, except in full, without prior written approval.

Geotechnical Evaluation Report

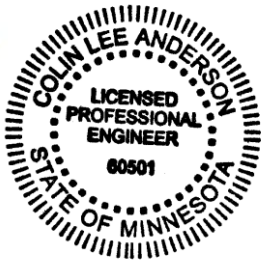
Proposed DLH Taxiway A, Phase 6
Duluth International Airport
4701 Grinden Drive
Duluth, Minnesota

Prepared for

Short Elliott Hendrickson, Inc.

Professional Certification:
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the State of Minnesota.

Colin L. Anderson, PE
Project Engineer
License Number: 60501
May 2, 2025



Project B2408391

Braun Intertec Corporation

BRAUN INTERTEC
The Science You Build On.

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4511 West First Street, Suite 4
Duluth, MN 55807

Phone: 218.624.4967
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May 2, 2025 Project B2408391

Jarrod Nelson, PE
Short Elliott Hendrickson, Inc.
3535 Vadnais Center Drive
Saint Paul, MN 55110

Re: Geotechnical Evaluation
Proposed DLH Taxiway A, Phase 6
Duluth International Airport
4701 Grinden Drive
Duluth, Minnesota

Dear Mr. Nelson:

We are pleased to present this Geotechnical Evaluation Report for the construction of Phase 6 of Taxiway A at the Duluth International Airport in Duluth, Minnesota.

Thank you for making Braun Intertec Corporation your geotechnical consultant for this project. If you have questions about this report, or if there are other services that we can provide in support of our work to date, please contact Colin Anderson at 320.305.0628 (coanderson@braunintertec.com).

Sincerely,

BRAUN INTERTEC CORPORATION

Colin L. Anderson, PE
Project Engineer

Steven A. Thayer, PE
Senior Manager, Senior Engineer

AA/EOE

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Appendix

Taxiway A, Phase 6 Preliminary Design, Soil Boring Figures (2 pages)
Fence Diagram (4)
Log of Boring Sheets 1 to 21
Descriptive Terminology of Soil
Hydrometer and Sieve Analysis (4)
Modified Proctor M-D Relationship (4)
California Bearing Ratio (4)

A. Introduction

A.1. Project Description

This Geotechnical Evaluation Report addresses the proposed design and construction of Phase 6 of the Taxiway A improvements at the Duluth International Airport located at 4701 Grinden Drive, in Duluth, Minnesota. This phase of the Taxiway A project includes the reconstruction and realignment of approximately 3,200 feet of Taxiway A, including the construction of a new connector taxiway to Runway 9-27 and the removal of an existing connector taxiway (Taxiway A2). The project area is north of the Cirrus Ramp. Figures 1 and 2 below show illustrations of the proposed site layout and the soil boring and core locations.

Figure 1. East Portion of Site Layout

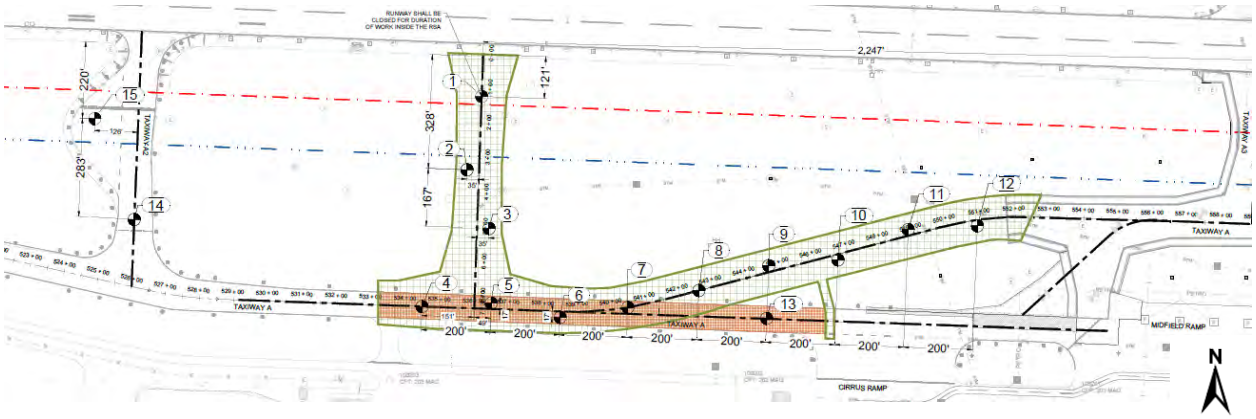


Figure provided by SEH, dated August 2024.

Figure 2. West Portion of Site Layout

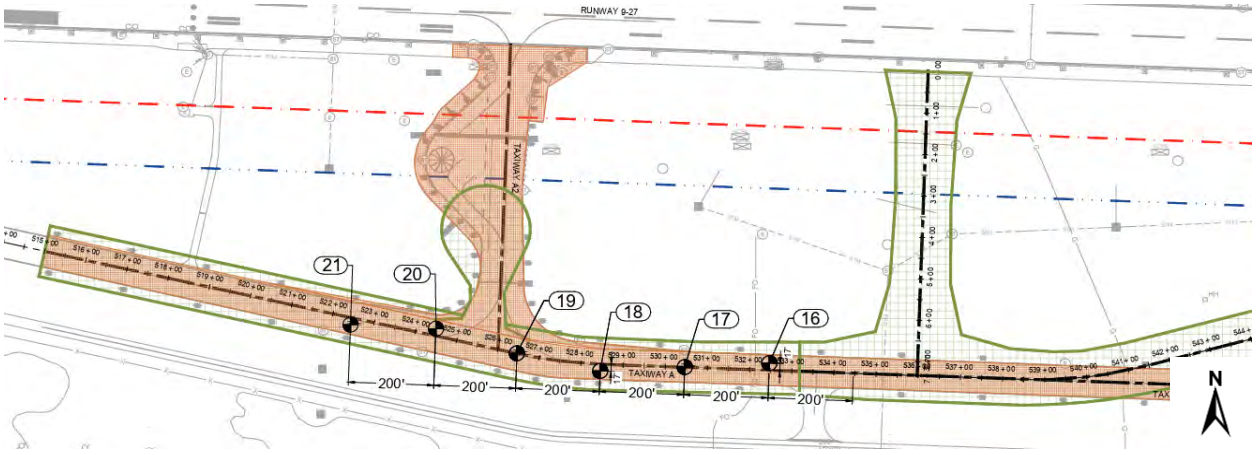


Figure provided by SEH, dated October 2024.

Based on conversations with Short Elliott Hendrickson, Inc. (SEH), we understand the desired new pavement section will be similar to the pavement sections of the previous phases of the Taxiway A project and consist of Cement Concrete Pavement (FAA P-501), underlain by Asphalt Mix Pavement (FAA P-401, FAA P-403, or MnDOT 2360), underlain by Crushed Aggregate Base Course (P-209), underlain by Granular Subbase (P-154).

We anticipate design elevations will be similar to the adjacent pavement elevations. We anticipate fills to meet design grades in the turf areas will be up to 10 feet. We have assumed design and construction will be in accordance with Federal Aviation Association (FAA) design and construction standards for aircrafts greater than 100,000 pounds.

A.2. Existing Conditions

Pavement condition index (PCI) data available from ARA, Inc. shows that the pavement surface of the Phase 6 area in December of 2024 was generally considered to be very good (PCI values of 78 to 83). The primary distress types noted in the bituminous pavements included longitudinal and transverse cracking. Figure 2 below shows an illustration of the PCI rating of each pavement feature at the Duluth International Airport at the time of the survey.

Figure 2. PCI Rating Summary

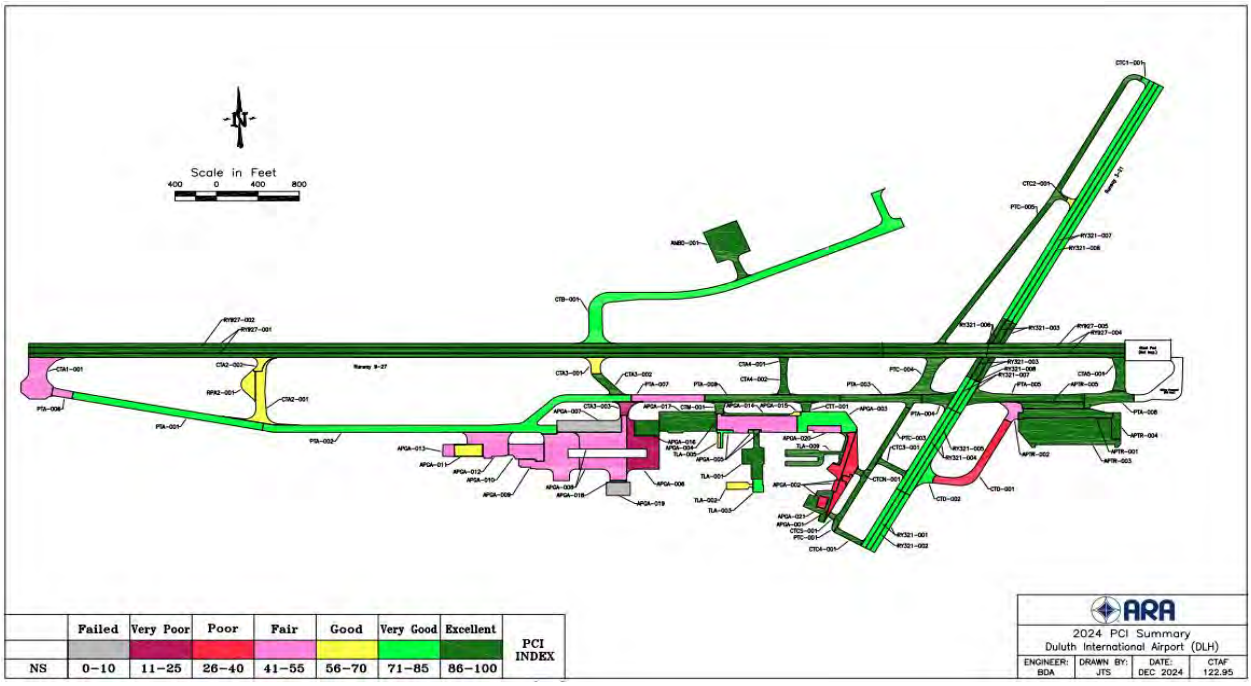


Figure provided by Applied Research Associates, Inc. (ARA), dated December 2024.

A.3. Purpose

The purpose of our geotechnical evaluation is to characterize subsurface geologic conditions at selected exploration locations, evaluate their impact on the project, and provide geotechnical recommendations for the design and reconstruction of the taxiway and adjacent connector taxiways.

A.4. Background Information and Reference Documents

We reviewed the following information:

- Soil boring figures showing the project limits and desired soil boring locations provided by SEH, dated August 2024 and October 2024.
- A Geologic Map of Minnesota, prepared by Howard C. Hobbs and Joseph E. Goebel, 1982.
- Advisory Circular 150/5320-6G, Airport Pavement Design and Evaluation, Federal Aviation Administration, June 7, 2021 (FAA AC/150).
- Pavement Condition Report prepared by Applied Research Associates, Inc. (ARA), December 2024.
- Communications with Jarrod Nelson, PE, SEH, regarding the scope of the proposed project.
- Aerial photographs of the project areas using Google Earth®.

We have described our understanding of the proposed construction and site to the extent others reported it to us. Depending on the extent of available information, we may have made assumptions based on our experience with similar projects. If we have not correctly recorded or interpreted the project details, the project team should notify us. New or changed information could require additional evaluation, analyses and/or recommendations.

A.5. Scope of Services

We performed our scope of services for the project in accordance with our Proposals QTB198606 and QTB205635 to Mr. Nelson, dated August 26, 2024, and November 7, 2024, respectively. The following list describes the geotechnical tasks completed in accordance with our authorized scope of services.

- Reviewing the background information and reference documents previously cited.
- Clearing the exploration locations of underground utilities. SEH selected and staked the new exploration locations. The Soil Boring Figures included in the Appendix show the approximate locations of the borings.
- Performing 21 standard penetration test (SPT) borings denoted as Borings 1 to 21, to depths of 9.7 to 21 feet below grade.
- Performing eight pavement cores denoted as C-4 to C-7 and C-13 to C-16. Note that cores C-17 to C-21 were not able to be completed due to mechanical issues with our coring machine.
- Performing laboratory testing on select samples to aid in soil classification and engineering analysis.
- Preparing this report containing a boring location sketch, logs of soil borings, a summary of the soils encountered, results of laboratory tests, and recommendations for pavement subgrade preparation and a recommended California Bearing Ratio (CBR) value to aid in pavement design.

Our scope of services did not include environmental services or testing and our geotechnical personnel performing this evaluation are not trained to provide environmental services or testing. We can provide environmental services or testing at your request.

B. Results

B.1. Geologic Overview

We based the geologic origins used in this report on the soil types, laboratory testing, and available common knowledge of the geological history of the site. Because of the complex depositional history, geologic origins can be difficult to ascertain. We did not perform a detailed investigation of the geologic history for the site.

B.2. Pavement Core Results

We cored the existing pavement in eight locations. Table 1 below provides a summary of the pavement thicknesses. Photos of the typical pavement encountered in Taxiway A and the adjacent pavement areas are displayed in Table 2.

Table 1. Summary of Core Results

Core Number	Bituminous Thickness (inches)	Concrete Thickness (inches)
C-4	10 1/2	---
C-5	13 3/4	---
C-6	13 1/2	---
C-7	13	---
C-13	10	---
C-14	11 1/2	---
C-15	---	11 1/2
C-16	13 1/4	---

Table 2. Core Photos

C-5[1]	C-6[2]	C-15

[1] Cores C-5 and C-7 were bituminous pavements with good pavement matrices.

[2] Cores C-4, C-6, C-13, C-14, and C-16 appeared to consist of older bituminous pavement with 3-4 distinct pavement layers, moderate weathering, and large aggregate at the base of the cores. Core C-6 is inverted in the photo above.

B.3. Boring Results

Table 3 provides a summary of the soil boring results, in the general order we encountered the strata. Please refer to the Log of Boring sheets in the Appendix for additional details. The Descriptive Terminology sheets in the Appendix include definitions of abbreviations used in Table 3.

Table 3. Subsurface Profile Summary

Strata	Soil Type - ASTM Classification	Range of Penetration Resistances	Commentary and Details
Pavement section	---	---	▪ Overall thickness ranges from 10 to 28 3/4 inches. ▪ Bituminous thickness ranges from 10 to 17 inches. ▪ Concrete thickness is 11 1/2 inches. ▪ Apparent aggregate base was encountered beneath the pavement section at Borings 4 to 7 and 16 to 21. Thickness ranges from 6 to 15 inches. ▪ No discernable aggregate base layer was encountered beneath the pavement at Borings 13 to 15.
Topsoil or topsoil fill	SM	---	▪ Dark brown and brown in color. ▪ Thicknesses ranged from 3 to 6 inches. ▪ Moisture conditions are generally moist.
Fill	SP-SM, SM, SC, ML, OL	---	▪ Encountered in all borings except Boring 9. ▪ Extended to depths ranging from 3 1/2 to 9 feet. ▪ Generally nonorganic except in Boring 3. ▪ Black and dark brown organic clay fill soils with wood fragments encountered in Boring 3 from depths of 5 to 9 feet. ▪ Boring 8 encountered dark brown silt with wood fragments from 5 to 6 1/2 feet. ▪ General penetration resistance of sandy fill soils is 10 to 30 BPF. ▪ Reddish brown, brown, and dark brown, in color. ▪ Moisture conditions are generally moist to wet.
Swamp deposits	OL, PT	4 to 6 BPF	▪ Organic clays encountered at depths of 5 to 12 feet in Borings 3 and 11. ▪ Peat encountered at depths of 4 to 18 feet in Borings 12 and 20. ▪ Thickness ranges from 1 1/2 to 9 feet. ▪ Dark gray and black in color. ▪ Moisture conditions are generally moist

Strata	Soil Type - ASTM Classification	Range of Penetration Resistances	Commentary and Details
Glacial till	SM, ML, CL	8 BPF to Refusal*	▪ General penetration resistance of 15 to 25 BPF indicating that the glacial till soils are generally medium dense, or stiff to very stiff. ▪ Variable amounts of sand and gravel. ▪ Reddish brown in color. ▪ Moisture conditions are generally moist to wet.
Alluvium	ML, CL	4 to 9 BPF	▪ General penetration resistances indicate that the alluvial soils are generally loose or medium to stiff. ▪ Reddish brown in color. ▪ Moisture conditions are generally moist to wet.
Glacial outwash	SP-SM	26 to 57 BPF	▪ Encountered at a depth of 6 1/2 feet in Boring 21. ▪ General penetration resistances indicate that the glacial sands are generally medium dense to very dense. ▪ Reddish brown in color. ▪ Moisture conditions are generally moist to wet.

*Refusal is defined as the sampler not being driven through a full 6-inch interval by 50 blows.

We did not perform gradation analysis on the apparent aggregate base material encountered as part of the pavement section, in accordance with our scope of work. Therefore, we cannot conclusively determine if the encountered material satisfies a particular specification, and it should not be assumed it is suitable for reuse.

For simplicity in this report, we define fill to mean existing, uncontrolled or undocumented fill.

B.4. Groundwater

Table 4 summarizes the depths where we observed groundwater; the attached Log of Boring sheets in the Appendix also include this information and additional details.

Table 4. Groundwater Summary

Boring Location	Surface Elevation (ft)	Measured or Estimated Depth to Groundwater (ft)	Corresponding Groundwater Elevation (ft)
1	1415	10	1404
2	1417	Not Observed	---
3	1415	5	1410
4	1419	10	1405
5	1419	Not Observed	---
6	1419	Not Observed	---
7	1419	Not Observed	---
8	1417	Not Observed	---
9	1415	Not Observed	---
10	1414	Not Observed	---
11	1411	Not Observed	---
12	1410	10	1400
13	1419	7 1/2	1411 1/2
14	1419	Not Observed	---
15	1416	Not Observed	---
16	1419	Not Observed	---
17	1419	Not Observed	---
18	1419	Not Observed	---
19	1420	Not Observed	---
20	1419	Not Observed	---
21	1419	9 1/2	1409 1/2

At the time of our observation, the groundwater surface elevation appeared to range from approximately 1400 to 1411 1/2 feet. The soil borings indicate a layered soil profile that is conducive for encountering trapped water conditions. Groundwater may take days or longer to reach equilibrium in the boreholes and we backfilled the boreholes immediately after completion or after groundwater samples were taken, in accordance with our scope of work. If the project team identifies a need for more accurate determination of groundwater depth, we can install piezometers. Project planning should anticipate seasonal and annual fluctuations of groundwater.

B.5. Laboratory Test Results

B.5.a. Moisture Contents

The moisture content of the soil samples varied from 4 to 21 percent, indicating that the material was either near or above its estimated optimum moisture content for compaction. Moisture content of the organic clay fill soils in Borings 3 and 11 varied from 40 to 87 percent and the peat in Borings 12 and varied from 109 to 416 percent. The moisture contents are displayed in the "MC" column on the Log of Boring sheets in the Appendix.

B.5.b. Percent Passing the #200 Sieve Tests

We performed tests to evaluate the percent of particles passing the #200 sieve (P200) (per ASTM D1140) to estimate the engineering properties of the subgrade material. The results of these tests indicated the soils encountered had P200s ranging from 8 to 37 percent. The Log of Boring sheets list the results of P200 tests in the "Tests or Remarks" column.

B.5.c. Atterberg Limits

We performed four Atterberg limits tests (per ASTM D4318) on selected samples for classification, evaluation of the soil's plasticity, and estimation of engineering parameters related to Frost Groups. The tests on the bag samples from Borings 5, 11, and 20 indicated the material was not plastic. The results of the Atterberg limits test on the bag sample from Boring 2 indicated the soil tested had a liquid limit (LL) of 19 percent, plastic limit (PL) of 16 percent, and plasticity index (PI) of 3 percent, indicating the tested soils were silty sand and are classified in Frost Group FG-3. The Log of Boring sheets list the results of Atterberg limits tests in the "Tests or Notes" column.

B.5.d. Mechanical Sieve-Hydrometer Tests

Four mechanical sieve-hydrometer analyses (ASTM D422) were performed on selected samples to aid in classification. The tests indicated the samples tested were classified as silty sand and silty sand with gravel. Graphical representation of the results of the mechanical sieve-hydrometer grain size analyses are attached in the Appendix.

B.5.e. Modified Proctor and CBR Tests

Four modified Proctor tests (ASTM D1557) were performed on bulk samples to aid in estimating the CBR value of the soils. The results of the modified Proctor tests are provided in Table 5 below and in graphical representation attached in the Appendix.

California Bearing Ratio (CBR) tests (per ASTM D1883) were performed on bulk samples collected from auger cuttings of four borings. The CBR tests were performed on remolded samples that were compacted to 95 percent of the material's modified Proctor maximum dry density near the optimum moisture content. We reported the greater CBR value between the penetrations at 0.1 and 0.2 inches in the table below. The results of the CBR tests are summarized in Table 5 and individual test reports are provided in the Appendix.

Table 5. Laboratory Compaction/Strength Test Results

Location	Classification	Maximum Dry Density (pcf)	Optimum Moisture Content (%)	CBR Result
2	Silty Sand with Gravel (SM)	141.5	6.3	24.7
5	Silty Sand with Gravel (SM)	143.9	5.0	46.8
11	Silty Sand (SM)	117.3	13.7	7.8
19	Silty Sand with Gravel (SM)	140.8	6.1	66.7

C. Recommendations

C.1. Design and Construction Discussion

C.1.a. Frost Protection

The subgrade soils at the site are considered frost susceptible. Based on the FAA Advisory Circular 150/5320-6G, Table 2-2. Soil Frost Groups, the subgrade soils are classified in Frost Groups FG-3 and FG-4. The FAA recommends that frost protection be handled in one of three ways: 1) the complete frost protection method, 2) the limited subgrade frost penetration or 3) reduced subgrade strength method. The complete frost protection method requires removal of all frost-susceptible soil down to the frost penetration depth. The limited subgrade frost penetration method allows frost to penetrate a limited amount into the underlying frost susceptible soils. Typically, thickness of the non-frost susceptible soils is 65 percent of the extreme frost penetration depth. The reduced subgrade strength method uses a reduced CBR value to account for the frost melting period when the subgrade soils are weakest.

Based on the design CBR value of the in-place materials of 14.2 percent and the frost susceptibility of the existing soils, it is our opinion that the limited subgrade frost penetration method is appropriate to mitigate frost heave of the Phase 6 portion of Taxiway A. Using an anticipated frost depth of 60 inches, pavement design should incorporate a non-frost susceptible section of 39 inches.

C.1.b. Organic Soils

Borings 3 and 11 encountered dark gray and black organic clay soils to depths of 6 1/2 and 12 feet. Borings 12 and 20 encountered peat to depths of 9 and 18 feet. The organic clay and peat soils are highly compressible. These soils will not provide a stable working platform during the placement of additional fill and/or pavement materials. Excessive settlement may occur under additional fill loads as well as planned aircraft traffic loads.

For estimating quantities, peat can compress to one-half its thickness or one-half the total thickness of the fill, whichever is less; organic clay can compress to one-fourth its thickness or one-fourth the total thickness of the fill, whichever is less. Based on these approximations, and assuming grades will be raised by approximately 6 to 10 feet in turf areas, our estimates of settlement during fill placement range from 1/2 to 2 1/2 feet. In addition, we anticipate these soils will continue to compress over time, which could lead to several more inches of additional long-term settlement. If the organic soils are left in place below the pavement areas, the airport must accept the risk of the settlement described above.

Based on our conversations with the project team, the steps below will be taken to mitigate the settlement of the organic soils.

Boring 3 - Surcharge:

- All grading to the top of the Crushed Aggregate Base Course (FAA P-209) will be completed at least 2 months prior to paving.
- Several points along the surface of the embankment will be periodically surveyed and monitored to determine if the rate of settlement is slowing before paving.
- Before paving, the Crushed Aggregate Base Course (FAA P-209) should be regraded and compacted.

Borings 11 and 12 – Remove and Replace:

- Organic soils and peat will be removed in the Borings 11 and 12 area as described in Section C.2.a.
- We recommend test pits be performed under the direct supervision of a geotechnical engineer or representative to define the extent of the organic soils.
- Granular Subbase (FAA P-154) should be used as backfill and statically rolled in wet areas. Non-organic subgrade soils can be used as backfill in stable areas to a depth of 39 inches below the top of pavement.

Boring 20 – Left in Place:

- No grade change is planned for the reconstruction near Boring 20.
- We anticipate the settlement of the peat at this location has taken place over many years of aircraft traffic and no significant settlement should be anticipated.
- Care should be taken to not disturb the subgrade soils in the Boring 20 area. The subgrade soils should not be subcut more than the planned 39 inches below the top of pavement.
- The project team should consider incorporating Geogrid between the Granular Subbase (FAA P-154) and Crushed Aggregate Base Course (FAA P-209) from Sta. 523+50 to Sta. 525+50.

C.2. Site Grading and Subgrade Preparation

C.2.a. Pavement Subgrade Preparation

We recommend completely removing all topsoil and bituminous and concrete pavement from the proposed pavement areas. Based on the borings, we anticipate removals of the pavements will likely extend 10 to 28 inches in the pavement areas, and 3 to 6 inches in the grass surfaced areas. Additional removals will be needed for frost penetration as discussed in Section C.1.a.

As discussed in Section C.1.b., we recommend the organic clay and peat soils be removed from beneath the pavement areas near Borings 11 and 12. Table 6 below provides the anticipated excavation depths.

Table 6. Excavation Depths

Boring	Ground Elevation	Anticipated Excavation Depth	Anticipated Bottom of Excavation Elevation
11	1411	6 1/2	1404 1/2
12	1410	9	1401

Excavation depths will vary between the borings. Portions of the excavations may also extend deeper than indicated by the borings. A geotechnical representative should observe the excavations to make the necessary field judgments regarding the suitability of the exposed soils.

When removing unsuitable materials below pavements, we recommend the excavation extend outward and downward at a slope of 1H:1V (horizontal:vertical) or flatter beyond the edge of the pavement.

Care should be taken to protect the existing pavements from undermining or sloughing if the excavations approach the existing pavement areas.

After completion of the removals, we recommend scarifying (thoroughly mixing/disking) the resulting subgrades to a depth of at least 1/2-foot, moisture conditioning, and recompacting to the requirements in Section C.2.b prior to placing additional fill and pavement materials. The excavation subgrades for organic removals will likely wet. We recommend not scarifying and compacting these subgrades. We recommend placement and compaction of sand fill directly on the excavated subgrades if they are wet.

C.2.b. Engineered Fill Materials and Compaction

Table 7 below contains our recommendations for engineered fill materials.

Table 7. Engineered Fill Materials*

Locations To Be Used	Engineered Fill Classification	Possible Soil Type Descriptions	Gradation	Additional Requirements
▪ Embankment fill below 39 inches	FAA P-152	SP-SM, SP-SC, SM, SC, CL	100% passing 2-inch sieve	< 2% Organic Content (OC)
▪ Subbase Course ▪ Non-frost-susceptible ▪ Wet Subgrades	FAA P-154	GP, GW, GP-GM, GW-GM SP, SW, SP-SM, SW-SM	100% passing 3-inch sieve < 60% passing #40 sieve < 10% passing #200 sieve	< 2% OC
Below landscaped surfaces, where subsidence is not a concern	Non-structural fill	All	100% passing 6-inch sieve	< 10% OC

We recommend spreading engineered fill in loose lifts of approximately 8 to 12 inches thick. We recommend compacting engineered fill in accordance with the criteria presented below in Table 8. The project documents should specify relative compaction of engineered fill.

Table 8. Compaction Recommendations Summary

Reference	Relative Compaction, percent (ASTM D1557 – Modified Proctor)	Moisture Content Variance from Optimum, percentage points
Cohesive Subgrade/Embankment (P-152) (Below 39 inches)	95	±2
Non-cohesive Subgrade/Embankment (P-152) (Below 39 inches)	100	±2
Subbase Course (P-154) (Upper 39 inches)	100	±2
Below landscaped surfaces	90	±5

The project documents should not allow the contractor to use frozen material as engineered fill or to place engineered fill on frozen material. Frost should not penetrate under foundations during construction.

We recommend performing density tests in engineered fill to evaluate if the contractors are effectively compacting the soil and meeting project requirements.

C.2.c. Pavement Subgrade Proofroll

After preparing the subgrade as described above and prior to the placement of the subbase course, we recommend proofrolling the subgrade soils with a fully loaded tandem-axle truck as required by specification P-152. We also recommend having a geotechnical representative observe the proofroll. Areas that fail the proofroll likely indicate soft or weak areas that will require additional soil correction work to support pavements.

The contractor should correct areas that display excessive yielding or rutting during the proofroll or surficial compaction, as determined by the geotechnical representative. Possible options for subgrade correction include moisture conditioning and recompaction, subcutting and replacement with soil or crushed aggregate, or geotextiles. We recommend performing a second proofroll after the aggregate base material is in place, and prior to placing pavement.

C.3. Pavements

C.3.a. Subgrade Stiffness Values

The average CBR value was calculated as 36.5 percent, and the standard deviation was calculated as 22.3. Therefore, based on FAA guidance for determining the design CBR using a value that is one standard deviation below the mean, it would be reasonable to design the pavement using a CBR of 14.2 percent.

This CBR value correlates to a modulus of subgrade reaction value (k) of 225 pci using the following correlation provided in FAA Advisory Circular 150/5320-6G section 3.16.4.1.

$$k\ (pci) = 28.6926 \times CBR^{0.7788}$$

C.3.b. Materials and Compaction

We recommend specifying crushed aggregate base meeting Federal Aviation Administration (FAA) Standard for Specifying Construction of Airports: Item P-209 Crushed Aggregate Base Course. Furthermore, we recommend specifying that the bituminous and concrete pavement meet either Federal

Aviation Administration (FAA) Standard for Specifying Construction of Airports: Item P-401 or P-403 Asphalt Mix Pavement and Item P-501 Cement Concrete Pavement.

We recommend compacting crushed aggregate base and granular subbase placed within 3 feet of pavement subgrade elevations to at least 100 percent of their maximum modified Proctor dry densities (ASTM D1557).

C.3.c. Drainage

We recommend that a subsurface drainage system be installed in order to reduce the amount of water in the frost zone. The drainage system should include a drainage pipe along each side of the excavation with an outlet at the lowest elevation to allow the water to be drained away from the pavement subgrade.

C.3.d. Performance and Maintenance

Many conditions affect the overall performance of the pavements. Some of these conditions include the environment, loading conditions and the level of ongoing maintenance. We recommend developing a regular maintenance plan for filling cracks in pavements to lessen the potential impacts for cold weather distress due to frost heave or warm weather distress due to wetting and softening of the subgrade.

D. Procedures

D.1. Pavement Cores

We obtained core samples of the pavement using a truck-mounted coring machine advancing a 6-inch diameter core barrel. After completing the boring at the core location, we repaired the pavement with a cold-mix bituminous patch. We measured the cores to obtain approximate pavement thickness and noted their material conditions based on visual observation.

D.2. Penetration Test Borings

We drilled the penetration test borings with a truck-mounted core and auger drill equipped with hollow-stem auger. We performed the borings in general accordance with ASTM D6151 taking penetration test samples at continuous or 2 1/2-foot intervals in general accordance with ASTM D1586. The boring logs

show the actual sample intervals and corresponding depths. We also collected bulk samples of auger cuttings at selected locations for laboratory testing.

D.3. Exploration Logs

D.3.a. Log of Boring Sheets

The Appendix includes Log of Boring sheets for our penetration test borings. The logs identify and describe the penetrated geologic materials and present the results of penetration resistance tests performed. The logs also present the results of laboratory tests performed on penetration test samples, and groundwater measurements. The Appendix also includes a Fence Diagram intended to provide a summarized cross-sectional view of the soil profile across the site.

We inferred strata boundaries from changes in the penetration test samples and the auger cuttings. At depths we did not perform continuous sampling, the strata boundary depths are only approximate. The boundary depths likely vary away from the boring locations, and the boundaries themselves may occur as gradual rather than abrupt transitions.

D.3.b. Geologic Origins

We assigned geologic origins to the materials shown on the logs and referenced within this report, based on: (1) a review of the background information and reference documents cited above, (2) visual classification of the various geologic material samples retrieved during the course of our subsurface exploration, (3) penetration resistance testing performed for the project, (4) laboratory test results, and (5) available common knowledge of the geologic processes and environments that have impacted the site and surrounding area in the past.

D.4. Material Classification and Testing

D.4.a. Visual and Manual Classification

We visually and manually classified the geologic materials encountered based on ASTM D2488. When we performed laboratory classification tests, we used the results to classify the geologic materials in accordance with ASTM D2487. The Appendix includes a chart explaining the classification system we used.

D.4.b. Laboratory Testing

The exploration logs in the Appendix note most of the results of the laboratory tests performed on geologic material samples. The remaining laboratory test results follow the exploration logs. We performed the tests in general accordance with ASTM or AASHTO procedures.

D.5. Groundwater Measurements

The drillers checked for groundwater while advancing the penetration test borings, and again after auger withdrawal. We then filled the boreholes or allowed them to remain open for an extended period of observation, as noted on the boring logs.

E. Qualifications

E.1. Variations in Subsurface Conditions

E.1.a. Material Strata

We developed our evaluation, analyses, and recommendations from a limited amount of site and subsurface information. It is not standard engineering practice to retrieve material samples from exploration locations continuously with depth. Therefore, we must infer strata boundaries and thicknesses to some extent. Strata boundaries may also be gradual transitions, and project planning should expect the strata to vary in depth, elevation, and thickness, away from the exploration locations.

Variations in subsurface conditions present between exploration locations may not be revealed until performing additional exploration work or starting construction. If future activity for this project reveals any such variations, you should notify us so that we may reevaluate our recommendations. Such variations could increase construction costs, and we recommend including a contingency to accommodate them.

E.1.b. Groundwater Levels

We made groundwater measurements under the conditions reported herein and shown on the exploration logs and interpreted in the text of this report. Note that the observation periods were relatively short, and project planning can expect groundwater levels to fluctuate in response to rainfall, flooding, irrigation, seasonal freezing and thawing, surface drainage modifications and other seasonal and annual factors.

E.2. Continuity of Professional Responsibility

E.2.a. Plan Review

We based this report on a limited amount of information, and we made a number of assumptions to help us develop our recommendations. We should be retained to review the geotechnical aspects of the designs and specifications. This review will allow us to evaluate whether we anticipated the design correctly, if any design changes affect the validity of our recommendations, and if the design and specifications correctly interpret and implement our recommendations.

E.2.b. Construction Observations and Testing

We recommend retaining us to perform the required observations and testing during construction as part of the ongoing geotechnical evaluation. This will allow us to correlate the subsurface conditions exposed during construction with those encountered by the borings and provide professional continuity from the design phase to the construction phase. If we do not perform observations and testing during construction, it becomes the responsibility of others to validate the assumption made during the preparation of this report and to accept the construction-related geotechnical engineer-of-record responsibilities.

E.3. Use of Report

This report is for the exclusive use of the addressed parties. Without written approval, we assume no responsibility to other parties regarding this report. Our evaluation, analyses and recommendations may not be appropriate for other parties or projects.

E.4. Standard of Care

In performing its services, Braun Intertec used that degree of care and skill ordinarily exercised under similar circumstances by reputable members of its profession currently practicing in the same locality. No warranty, express or implied, is made.

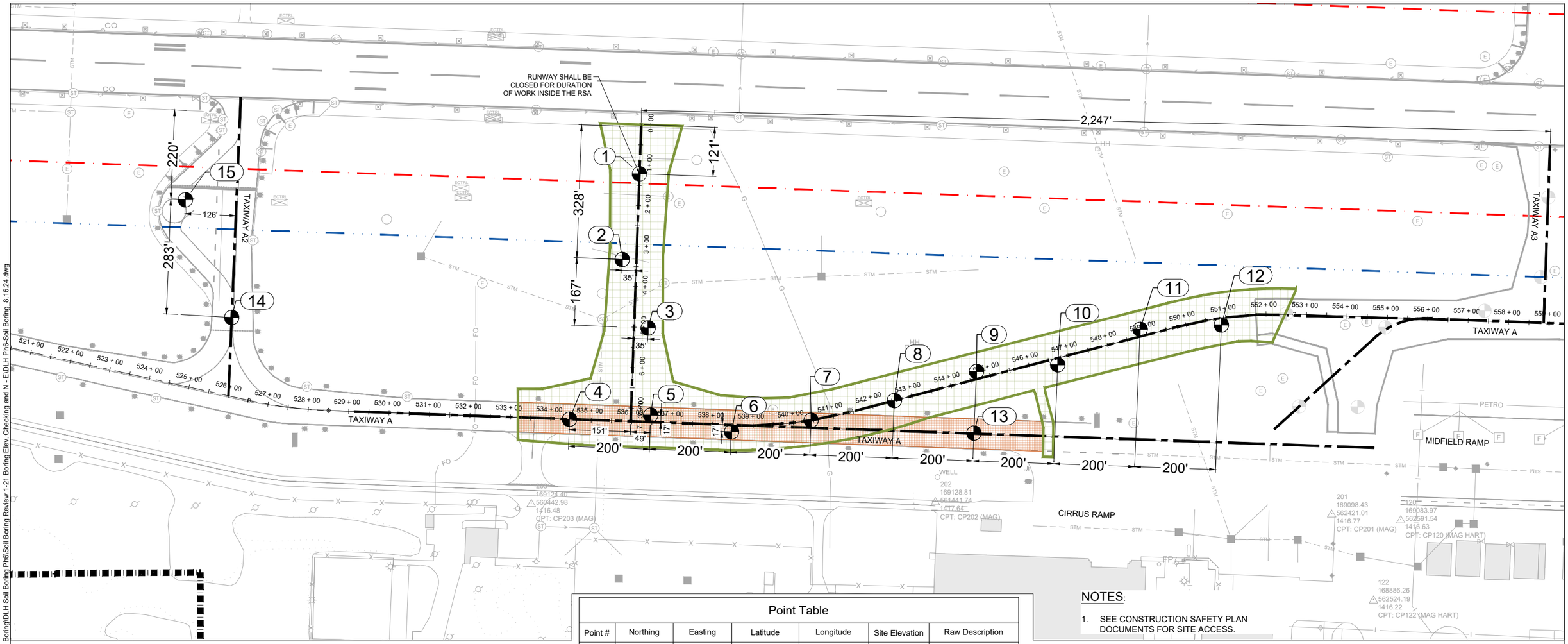
Appendix

Taxiway A, Phase 6 Preliminary Design

Duluth International Airport
Duluth, Minnesota

Figure 1

Soil Boring
04/2025; DULAI



Legend

- Soil Boring Location
- Existing Soil Boring
- Proposed Pavement Area
- Existing Pavement Area
- Runway Safety Area (RSA)
- Runway Object Free Area (ROFA)
- Midfield Ramp Phase 2 - Construction Limits

Point Table

Point #	Northing	Easting	Latitude	Longitude	Site Elevation	Raw Description
1	169936.7942	560710.4435	N46° 50' 29.35"	W92° 12' 26.74"	1415	SOIL BORING
2	169725.3734	560667.9169	N46° 50' 27.27"	W92° 12' 27.36"	1417	SOIL BORING
3	169556.3084	560731.9599	N46° 50' 25.59"	W92° 12' 26.45"	1415	SOIL BORING
4	169330.7941	560537.5554	N46° 50' 23.37"	W92° 12' 29.26"	1419	CORE/SOIL BORING
5	169341.0826	560738.0633	N46° 50' 23.47"	W92° 12' 26.37"	1419	CORE/SOIL BORING
6	169299.9359	560938.0386	N46° 50' 23.06"	W92° 12' 23.50"	1419	CORE/SOIL BORING
7	169328.3788	561134.5106	N46° 50' 23.33"	W92° 12' 20.67"	1419	CORE/SOIL BORING
8	169377.1789	561340.4160	N46° 50' 23.81"	W92° 12' 17.71"	1417	SOIL BORING
9	169448.8534	561543.1376	N46° 50' 24.51"	W92° 12' 14.79"	1415	SOIL BORING
10	169465.3901	561743.9699	N46° 50' 24.67"	W92° 12' 11.90"	1414	SOIL BORING
11	169553.0116	561947.6769	N46° 50' 25.52"	W92° 12' 08.96"	1411	SOIL BORING
12	169563.8005	562148.2767	N46° 50' 25.62"	W92° 12' 06.08"	1410	SOIL BORING
13	169296.8061	561536.9887	N46° 50' 23.01"	W92° 12' 14.88"	1419	CORE/SOIL BORING
14	169582.1766	559702.8204	N46° 50' 25.88"	W92° 12' 41.25"	1419	CORE/SOIL BORING
15	169872.8243	559588.5511	N46° 50' 28.75"	W92° 12' 42.88"	1416	CORE/SOIL BORING

NOTES:

1. SEE CONSTRUCTION SAFETY PLAN DOCUMENTS FOR SITE ACCESS.

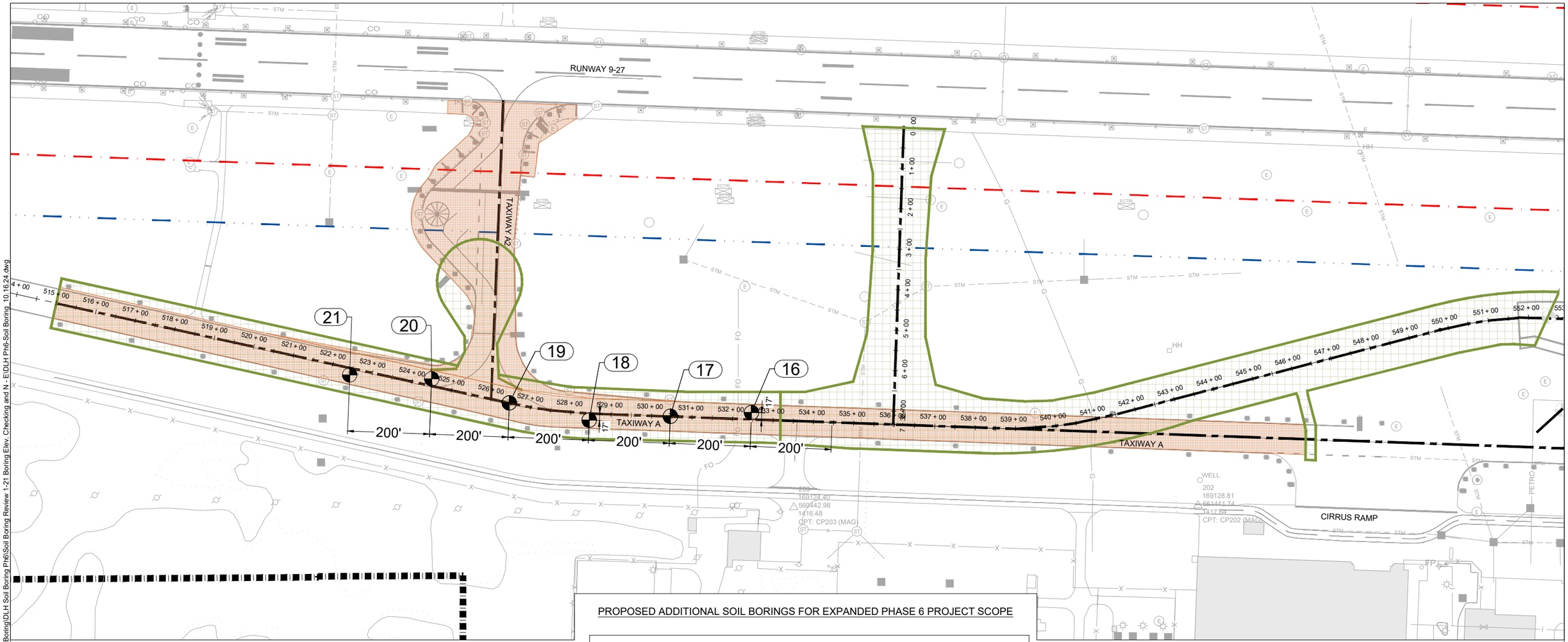
X:\AE\DULAI\Common\PM, DLH and DYT\2024\2024-9 DLH TXY A Phase 6 FD\Soil Boring\DLH Soil Boring Ph6\Soil Boring Review 1-21 Boring Elev, Checking and N - EIDLH Ph6-Soil Boring_8.16.24.dwg

Taxiway A, Phase 6 Preliminary Design

Duluth International Airport
Duluth, Minnesota

Figure 1

Soil Boring
10/2024; DULAI



Legend

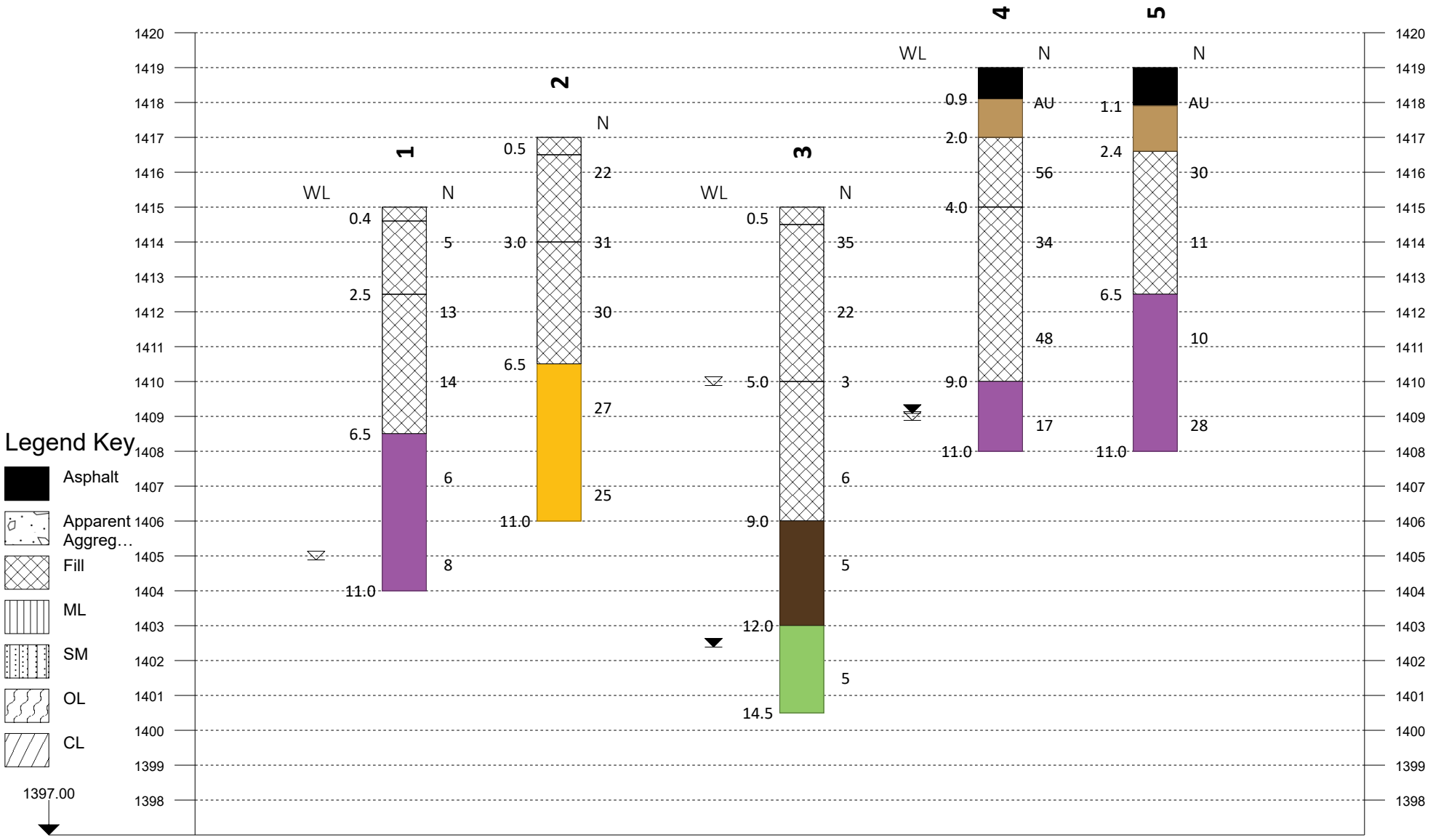
- Soil Boring Location
- Existing Soil Boring
- Proposed Pavement Area
- Existing Pavement Area
- Runway Safety Area (RSA)
- Runway Object Free Area (ROFA)

PROPOSED ADDITIONAL SOIL BORINGS FOR EXPANDED PHASE 6 PROJECT SCOPE

Point Table

Point #	Northing	Easting	Latitude	Longitude	Site Elevation	Raw Description
16	169355.3934	560338.3473	N46° 50' 23.62"	W92° 12' 32.12"	1419	CORE/SOIL BORING
17	169346.0174	560137.8452	N46° 50' 23.54"	W92° 12' 35.01"	1419	CORE/SOIL BORING
18	169336.6413	559937.3431	N46° 50' 23.45"	W92° 12' 37.89"	1419	CORE/SOIL BORING
19	169379.1414	559739.9150	N46° 50' 23.88"	W92° 12' 40.73"	1420	CORE/SOIL BORING
20	169438.5935	559548.2005	N46° 50' 24.47"	W92° 12' 43.48"	1419	CORE/SOIL BORING
21	169448.3565	559345.5768	N46° 50' 24.57"	W92° 12' 46.40"	1419	CORE/SOIL BORING

X:\AE\DULAI\Common\PM_DLH and DYT\2024\2024-9 DLH TXY A Phase 6 FD\Soil Boring\DLH Soil Boring PH6\Soil Boring Review 1-21 Boring Elev. Checking and N - E\DLH PH6-Soil Boring_10.16.24.dwg



Project ID: B2408391
Vert. Scale: 1"= 4'
Hor. Scale: NTS
Date: 05/01/2025

Fence Diagram
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 6
4701 Grinden Drive
Duluth, Minnesota

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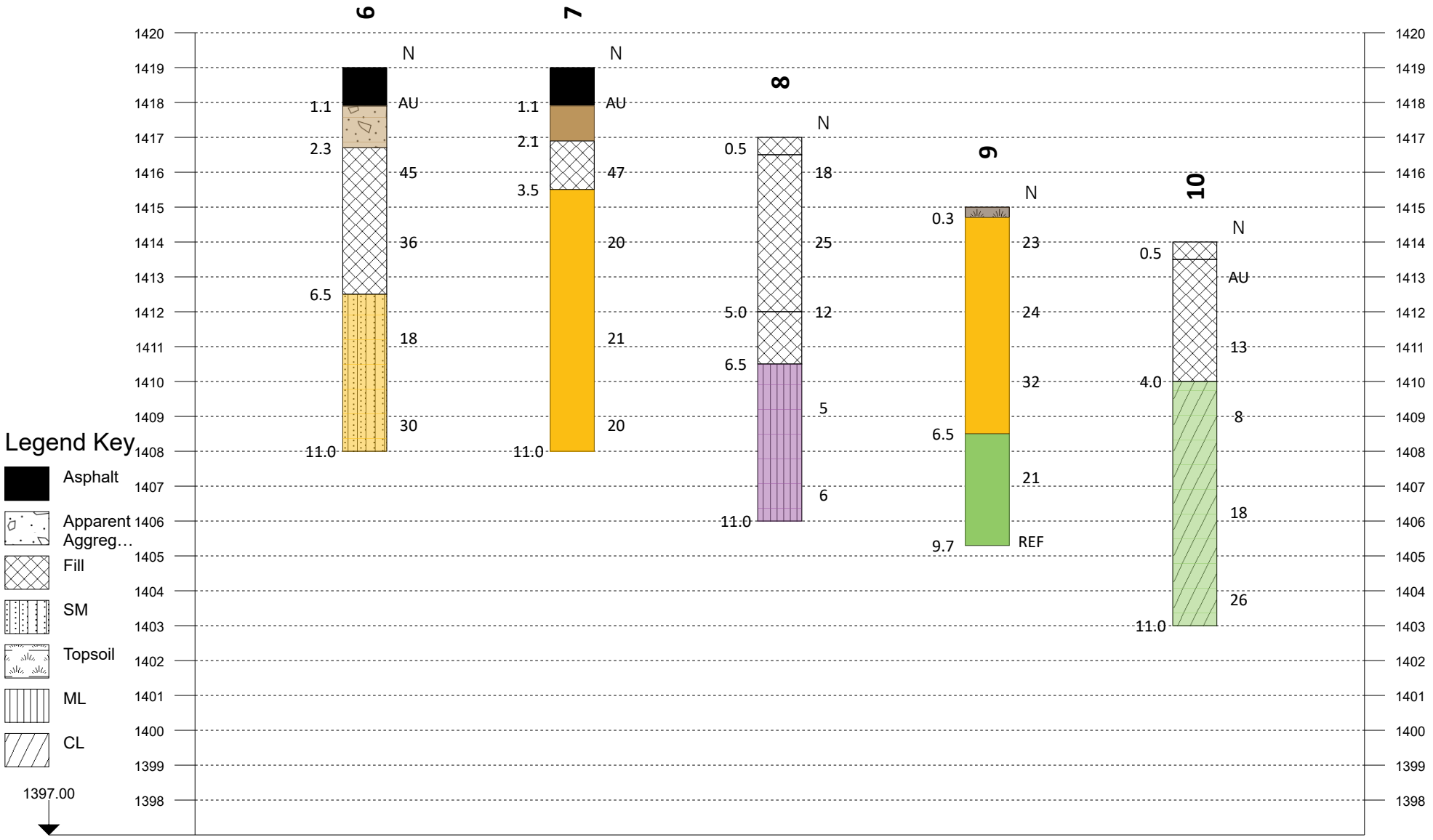
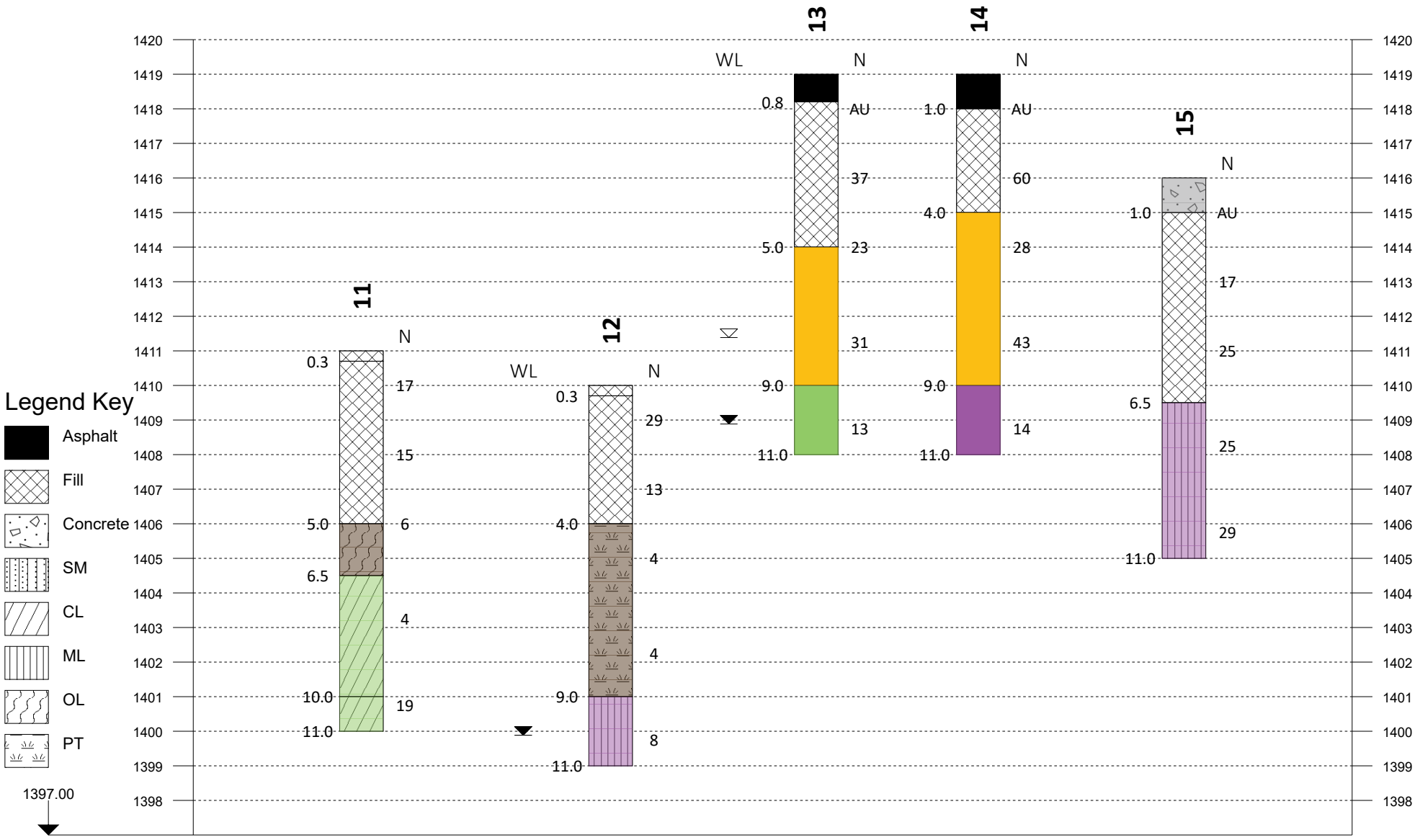
The Science You Build On.



Project ID: B2408391
Vert. Scale: 1"= 4'
Hor. Scale: NTS
Date: 05/01/2025

Fence Diagram
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 6
4701 Grinden Drive
Duluth, Minnesota

BRAUN INTERTEC
The Science You Build On.



Project ID: B2408391
Vert. Scale: 1"= 4'
Hor. Scale: NTS
Date: 05/01/2025

Fence Diagram
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 6
4701 Grinden Drive
Duluth, Minnesota

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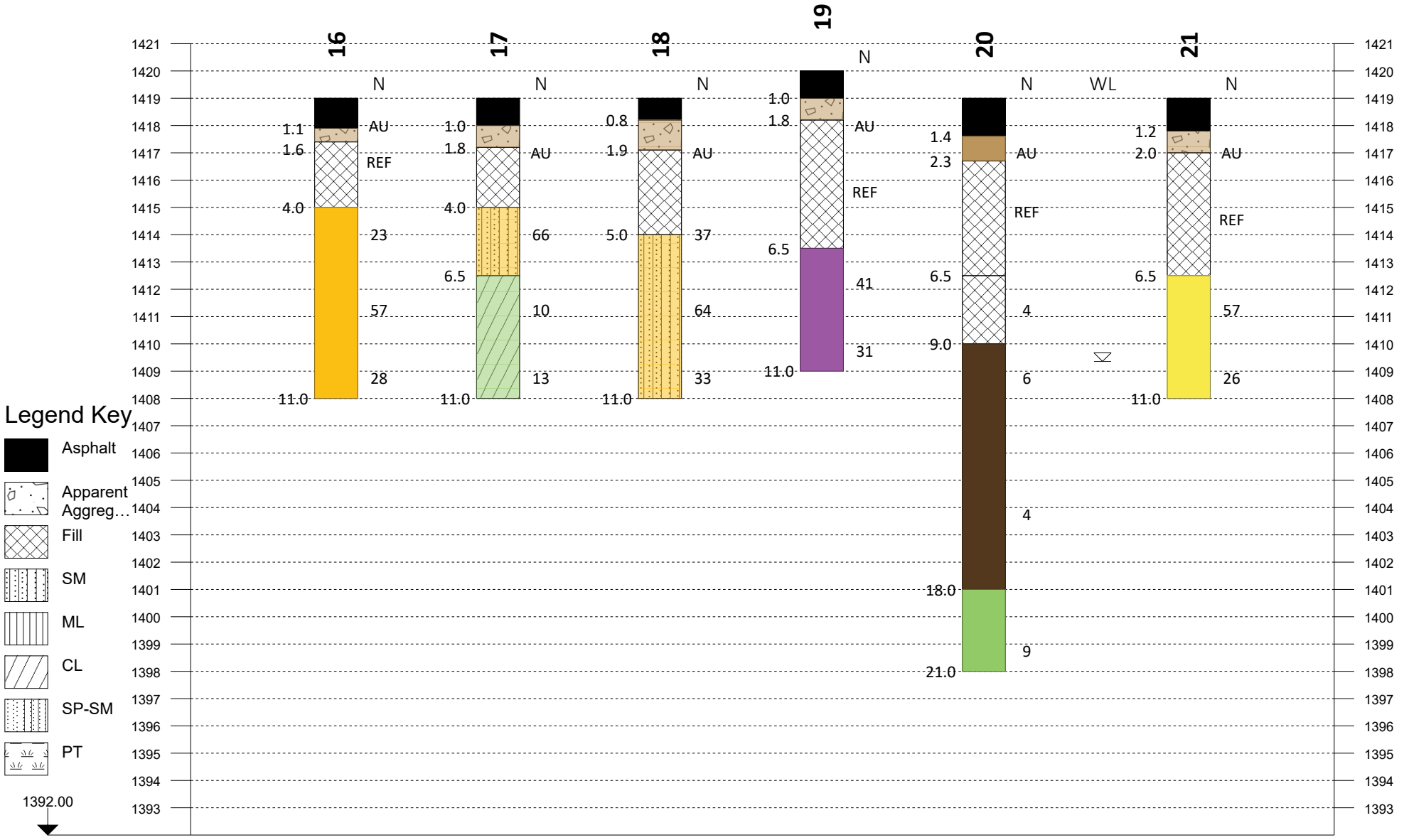

Project ID: B2408391
Vert. Scale: 1"= 5'
Hor. Scale: NTS
Date: 05/01/2025

Fence Diagram
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 6
4701 Grinden Drive
Duluth, Minnesota

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2408391
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 6
4701 Grinden Drive
Duluth, Minnesota

BORING: **1**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis South (US Feet)
NORTHING: 169936.8 EASTING: 560710.4
DRILLER: D. Michalski LOGGED BY: C. Anderson START DATE: 09/13/24 END DATE: 09/13/24
SURFACE ELEVATION: 1415.0 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Grass WEATHER: Clear

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1414.6		SILTY SAND (SM), fine to medium-grained, with roots, dark brown, moist (TOPSOIL FILL)		2-2-3-3 (5) 6"			
0.4		FILL: CLAYEY SAND (SC), fine to medium-grained, dark brown, moist					
1412.5				4-6-7-9 (13) 12"			
2.5		FILL: SILTY SAND (SM), fine to coarse-grained, trace Gravel, reddish brown with brown, moist					
			5	6-7-7-6 (14) 8"			
1408.5							
6.5	▽	SILT (ML), with Sand, reddish brown, moist to wet, loose (ALLUVIUM)		2-3-3 (6) 6"		15	
			10	4-4-4 (8) 8"			
1404.0							
11.0		END OF BORING Boring then backfilled with auger cuttings					Water observed at 10.0 feet with 9.5 feet of tooling in the ground while drilling. Water not observed at end of drilling.
			15				

BRAUN INTERTEC
The Science You Build On.

LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2408391
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 6
4701 Grinden Drive
Duluth, Minnesota

BORING: **2**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis South (US Feet)
NORTHING: 169725.4 EASTING: 560667.9
DRILLER: D. Michalski LOGGED BY: C. Anderson START DATE: 09/13/24 END DATE: 09/13/24
SURFACE ELEVATION: 1417.0 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Grass WEATHER: Clear

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1416.5		SILTY SAND (SM), fine to medium-grained, brown, moist (TOPSOIL FILL)		8-8-14-16 (22) 16"			
0.5		FILL: POORLY GRADED SAND with SILT (SP-SM), fine to coarse-grained, with Gravel, reddish brown, moist		12-15-16-20 (31) 18"			
1414.0							
3.0		FILL: SILTY SAND (SM), fine to coarse-grained, with Gravel, dark brown with reddish brown, moist		11-14-16-14 (30) 16"			Bag sample taken from 3 to 6 feet
			5				LL=19, PL=16, PI=3
1410.5							
6.5		SILTY SAND (SM), fine to coarse-grained, with Gravel, reddish brown, moist, medium dense (GLACIAL TILL)		11-12-15 (27) 10"			
			10	10-12-13 (25) 12"			
1406.0							
11.0		END OF BORING					Water not observed while drilling.
		Boring then backfilled with auger cuttings					Water not observed at end of drilling.
			15				

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2408391
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Proposed DLH Taxiway A Phase 6
4701 Grinden Drive
Duluth, Minnesota

BORING: **3**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis South (US Feet)
NORTHING: 169556.3 EASTING: 560732.0
DRILLER: D. Michalski LOGGED BY: C. Anderson START DATE: 09/12/24 END DATE: 09/12/24
SURFACE ELEVATION: 1415.0 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Grass WEATHER: Clear

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1414.5		SILTY SAND (SM), fine to medium-grained, with roots, dark brown, moist (TOPSOIL FILL)		6-16-19-16 (35) 16"			
0.5		FILL: CLAYEY SAND (SC), fine to coarse-grained, trace Gravel, reddish brown and brown, moist		16-12-10-7 (22) 18"		15	
				2-1-2-3 (3) 16"			
1410.0	▽		5				
5.0		FILL: ORGANIC CLAY (OL), with Sand, with wood fragments, black and dark brown, moist to wet				21	
				3-3-3 (6) 12"		87	
1406.0							
9.0		ORGANIC CLAY (OL), with Sand, with roots, dark gray, moist, medium (SWAMP DEPOSIT)	10	1-2-3 (5) 12"		79	
1403.0							
12.0	▼	LEAN CLAY (CL), with Sand, contains lenses of Silt, reddish brown, moist to wet, medium (ALLUVIUM)		2-2-3-3 (5) 14"			
1400.5							
14.5		END OF BORING	15				Water observed at 5.0 feet with 4.0 feet of tooling in the ground while drilling.
		Boring then backfilled with auger cuttings					Water observed at 12.5 feet at end of drilling.

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See Descriptive Terminology sheet for explanation of abbreviations

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BORING: **4**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis South (US Feet)
NORTHING: 169330.8 EASTING: 560537.6
DRILLER: D. Michalski LOGGED BY: C. Anderson START DATE: 09/12/24 END DATE: 09/12/24
SURFACE ELEVATION: 1419.0 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Bituminous WEATHER: Clear

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1418.1		BITUMINOUS, 10 1/2 inches					
0.9		APPARENT AGGREGATE BASE, 14 inches		AU			
1417.0							
2.0		FILL: SILTY SAND (SM), fine to coarse-grained, reddish brown and dark brown, moist		14-27-29-28 (56) 18"			
1415.0							
4.0		FILL: POORLY GRADED SAND with SILT (SP-SM), fine to coarse-grained, trace Gravel, reddish brown, moist	5	12-16-18-12 (34) 16"		9	
				8-22-26 (48) 18"			
1410.0							
9.0	▽	SANDY SILT (ML), with Gravel, reddish brown, wet, medium dense (GLACIAL TILL)	10	3-5-12 (17) 12"			
1408.0							
11.0		END OF BORING Boring then backfilled with auger cuttings	15				Water observed at 10.0 feet with 9.5 feet of tooling in the ground while drilling. Water observed at 9.8 feet at end of drilling.

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See Descriptive Terminology sheet for explanation of abbreviations

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BORING: **5**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis South (US Feet)
NORTHING: 169341.1 EASTING: 560738.1
DRILLER: D. Michalski LOGGED BY: C. Anderson START DATE: 09/12/24 END DATE: 09/12/24
SURFACE ELEVATION: 1419.0 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Bituminous WEATHER: Clear

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1417.9		BITUMINOUS, 13 3/4 inches		AU			
1.1 1416.6		APPARENT AGGREGATE BASE, 15 inches		13-17-13-17 (30) 18"			
2.4		FILL: SILTY SAND (SM), fine to coarse-grained, with Gravel, reddish brown, moist					Bag sample taken from 3 to 6 feet Non-plastic
1412.5			5	6-5-6-5 (11) 18"		10	
6.5		SANDY SILT (ML), with Gravel, reddish brown, moist, loose to medium dense (GLACIAL TILL)		4-5-5 (10) 10"			
1408.0			10	7-12-16 (28) 12"			
11.0		END OF BORING Boring then backfilled with auger cuttings	15				Water not observed while drilling. Water not observed at end of drilling.

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See Descriptive Terminology sheet for explanation of abbreviations

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BORING: **6**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis South (US Feet)
NORTHING: 169299.9 EASTING: 560938.0
DRILLER: D. Michalski LOGGED BY: C. Anderson START DATE: 09/12/24 END DATE: 09/12/24
SURFACE ELEVATION: 1419.0 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Bituminous WEATHER: Foggy

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1417.9		BITUMINOUS, 13 1/2 inches		AU			
1.1 1416.7		APPARENT AGGREGATE BASE, 14 inches		20-22-23-26 (45) 18"			
2.3		FILL: SILTY SAND (SM), fine to coarse-grained, with Gravel, brown and reddish brown, moist				4	P200=16%
1412.5			5	8-17-19-19 (36) 18"			
6.5		SILTY SAND (SM), fine to coarse-grained, with Gravel, reddish brown, moist, medium dense (GLACIAL TILL)		5-7-11 (18) 0"			No recovery
1408.0			10	11-17-13 (30) 12"			
11.0		END OF BORING Boring then backfilled with auger cuttings	15				Water not observed while drilling. Water not observed at end of drilling.

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See Descriptive Terminology sheet for explanation of abbreviations

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BORING: **7**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis South (US Feet)
NORTHING: 169328.4 EASTING: 561134.5
DRILLER: D. Michalski LOGGED BY: C. Anderson START DATE: 09/12/24 END DATE: 09/12/24
SURFACE ELEVATION: 1419.0 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Bituminous WEATHER: Foggy

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1417.9		BITUMINOUS, 13 inches		AU			
1.1 1416.9		APPARENT AGGREGATE BASE, 12 inches		35-29-18-21 (47) 18"			
2.1 1415.5		FILL: POORLY GRADED SAND with SILT (SP-SM), fine to coarse-grained, with Gravel, brown with reddish brown, moist		10-9-11-13 (20) 18"			
3.5		SILTY SAND (SM), fine to coarse-grained, with Gravel, reddish brown, moist, medium dense (GLACIAL TILL)	5	4-10-11 (21) 8"			
1408.0			10	5-11-9 (20) 12"			
11.0		END OF BORING Boring then backfilled with auger cuttings	15				Water not observed while drilling. Water not observed at end of drilling.

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BORING: **8**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis South (US Feet)
NORTHING: 169377.2 EASTING: 561340.4
DRILLER: D. Michalski LOGGED BY: C. Anderson START DATE: 09/12/24 END DATE: 09/12/24
SURFACE ELEVATION: 1417.0 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Grass WEATHER: Foggy

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1416.5		SILTY SAND (SM), fine to coarse-grained, with roots, dark brown, moist (TOPSOIL FILL)		5-9-9-11 (18) 12"			
0.5		FILL: SILTY SAND (SM), fine to coarse-grained, with Gravel, reddish brown, moist		10-13-12-11 (25) 14"			
				6-7-5-7 (12) 16"			
1412.0			5				
5.0		FILL: SANDY SILT (ML), with wood fragments, dark brown, moist					
1410.5							
6.5		SILT (ML), with Sand, reddish brown, moist, loose (ALLUVIUM)		3-3-2 (5) 12"		18	
			10	1-2-4 (6) 6"			
1406.0							
11.0		END OF BORING Boring then backfilled with auger cuttings					Water not observed while drilling. Water not observed at end of drilling.
			15				

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BORING: **9**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis South (US Feet)
NORTHING: 169448.9 EASTING: 561543.1
DRILLER: D. Michalski LOGGED BY: C. Anderson START DATE: 09/12/24 END DATE: 09/12/24
SURFACE ELEVATION: 1415.0 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Grass WEATHER: Clear

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1414.7							
0.3		SILTY SAND (SM), fine to coarse-grained, dark brown, moist (TOPSOIL)					
		SILTY SAND (SM), fine to coarse-grained, with Gravel, with Cobbles, reddish brown, moist, medium dense to dense (GLACIAL TILL)		7-14-9-10 (23) 14"			
				7-12-12-10 (24) 18"			
				6-19-13-13 (32) 18"			
			5			8	P200=37%
1408.5							
6.5		SANDY LEAN CLAY (CL), with Gravel, reddish brown, moist, very stiff to hard (GLACIAL TILL)		3-8-13 (21) 18"			
1405.3							
9.7		END OF BORING	10	50/2" (REF) 2"			Water not observed while drilling.
		Boring then backfilled with auger cuttings					Water not observed at end of drilling.
			15				

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BORING: **10**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis South (US Feet)
NORTHING: 169465.4 EASTING: 561744.0
DRILLER: D. Michalski LOGGED BY: C. Anderson START DATE: 09/12/24 END DATE: 09/12/24
SURFACE ELEVATION: 1414.0 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Grass WEATHER: Clear

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1413.5		SILTY SAND (SM), fine to medium-grained, dark brown, moist (TOPSOIL FILL)					
0.5		FILL: CLAYEY SAND (SC), fine to coarse-grained, trace Gravel, brown and dark brown, moist		AU			
				2-5-8-5 (13) 14"			
1410.0							
4.0		SANDY LEAN CLAY (CL), with Gravel, reddish brown, moist, medium to very stiff (GLACIAL TILL)		4-4-4-6 (8) 16"		14	
		5					
				4-6-12 (18) 12"			
		10		3-12-14 (26) 12"			
1403.0							
11.0		END OF BORING					Water not observed while drilling.
		Boring then backfilled with auger cuttings					Water not observed at end of drilling.
		15					

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Duluth, Minnesota

BORING: **11**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis South (US Feet)
NORTHING: 169553.0 EASTING: 561947.7
DRILLER: D. Michalski LOGGED BY: C. Anderson START DATE: 09/12/24 END DATE: 09/12/24
SURFACE ELEVATION: 1411.0 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Grass WEATHER: Clear

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1410.7		SILTY SAND (SM), fine to medium-grained, dark brown, moist (TOPSOIL FILL)		6-12-5-4 (17) 12"			
0.3		FILL: SILTY SAND (SM), fine to coarse-grained, little Gravel, brown and reddish brown, moist		10-10-5-6 (15) 16"			Bag sample taken from 2 to 5 feet Non-plastic
				2-3-3-3 (6) 10"			
1406.0			5				
5.0		ORGANIC CLAY (OL), trace Sand, with roots, dark gray, moist, soft (SWAMP DEPOSIT)				40	
1404.5							
6.5		LEAN CLAY (CL), with Sand, reddish brown, moist, soft (ALLUVIUM)		1-2-2 (4) 8"		17	
1401.0				2-8-11 (19) 16"			
10.0		SANDY LEAN CLAY (CL), with Gravel, reddish brown, moist, very stiff (GLACIAL TILL)	10				
1400.0							
11.0		END OF BORING Boring then backfilled with auger cuttings					Water not observed while drilling. Water not observed at end of drilling.
			15				

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BORING: **12**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis South (US Feet)
NORTHING: 169563.8 EASTING: 562148.3
DRILLER: D. Michalski LOGGED BY: C. Anderson START DATE: 09/12/24 END DATE: 09/12/24
SURFACE ELEVATION: 1410.0 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Grass WEATHER: Clear

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1409.7		SILTY SAND (SM), fine to medium-grained, trace roots, dark brown, moist (TOPSOIL FILL)		5-13-16-13 (29) 16"			
0.3		FILL: SILTY SAND (SM), fine to coarse-grained, trace Gravel, brown and reddish brown, moist		5-6-7-9 (13) 10"		11	
1406.0		PEAT (PT), trace Sand, with roots, black, moist, soft (SWAMP DEPOSIT)		2-2-2-2 (4) 10"		109	
4.0			5	1-2-2 (4) 8"		179	
1401.0		SILT (ML), with Sand, reddish brown, wet, loose (ALLUVIUM)		5-4-4 (8) 8"			
9.0	▼		10				
1399.0		END OF BORING					Water observed at 10.0 feet with 9.5 feet of tooling in the ground while drilling.
11.0		Boring then backfilled with auger cuttings					Water observed at 10.0 feet at end of drilling.
			15				

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BORING: **13**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis South (US Feet)
NORTHING: 169296.8 EASTING: 561537.0
DRILLER: D. Michalski LOGGED BY: C. Anderson
START DATE: 09/12/24 END DATE: 09/12/24
SURFACE ELEVATION: 1419.0 ft RIG: 7516B METHOD: 3 1/4" HSA
SURFACING: Bituminous WEATHER: Clear

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1418.2		BITUMINOUS, 10 inches					No discernable aggregate base
0.8		FILL: SILTY SAND (SM), fine to coarse-grained, brown and reddish brown, moist		AU			
				14-16-21-29 (37) 18"			
				6-10-13-21 (23) 12"			
1414.0			5				
5.0	▽	SILTY SAND (SM), fine to coarse-grained, little Gravel, reddish brown, moist, medium dense to dense (GLACIAL TILL)		7-10-21 (31) 12"			
1410.0							
9.0	▼	SANDY LEAN CLAY (CL), with Gravel, reddish brown, wet, stiff (GLACIAL TILL)		7-9-4 (13) 8"			
1408.0			10				
11.0		END OF BORING Boring then backfilled with auger cuttings					Water observed at 7.5 feet with 7.0 feet of tooling in the ground while drilling. Water observed at 10.0 feet at end of drilling.
			15				

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BORING: **14**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis South (US Feet)
NORTHING: 169582.2 EASTING: 559702.8
DRILLER: D. Michalski LOGGED BY: C. Anderson START DATE: 09/13/24 END DATE: 09/13/24
SURFACE ELEVATION: 1419.0 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Bituminous WEATHER: Clear

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1418.0		BITUMINOUS, 11 1/2 inches					No discernable aggregate base
1.0		FILL: SILTY SAND (SM), fine to coarse-grained, trace Gravel, reddish brown and brown, moist		AU 18-36-24-21 (60) 16"			
1415.0							
4.0		SILTY SAND (SM), fine to coarse-grained, with Gravel, reddish brown, moist, medium dense to dense (GLACIAL TILL)		12-16-12-9 (28) 14"			
1410.0			5	17-21-22 (43) 10"			
9.0		SANDY SILT (ML), with Gravel, reddish brown, moist, medium dense (GLACIAL TILL)					
1408.0			10	3-5-9 (14) 8"			
11.0		END OF BORING Boring then backfilled with auger cuttings					Water not observed while drilling. Water not observed at end of drilling.
			15				

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BORING: **15**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis South (US Feet)
NORTHING: 169872.8 EASTING: 559588.6
DRILLER: D. Michalski LOGGED BY: C. Anderson START DATE: 09/13/24 END DATE: 09/13/24
SURFACE ELEVATION: 1416.0 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Concrete WEATHER: Clear

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1415.0		CONCRETE, 11 1/2 inches					No discernable aggregate base
1.0		FILL: SILTY SAND (SM), fine to coarse-grained, with Gravel, brown and dark brown, moist		AU 10-7-10-8 (17) 12"			
			5	13-13-12-15 (25) 2"			
1409.5							
6.5		SANDY SILT (ML), with Gravel, reddish brown, moist, medium dense (GLACIAL TILL)		7-11-14 (25) 12"			
			10	13-15-14 (29) 12"			
1405.0							
11.0		END OF BORING Boring then backfilled with auger cuttings					Water not observed while drilling. Water not observed at end of drilling.
			15				

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Proposed DLH Taxiway A Phase 6
4701 Grinden Drive
Duluth, Minnesota

BORING: **16**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis South (US Feet)
NORTHING: 169355.4 EASTING: 560338.3
DRILLER: D. Michalski LOGGED BY: C. Anderson START DATE: 02/25/25 END DATE: 02/25/25
SURFACE ELEVATION: 1419.0 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Bituminous WEATHER: Clear

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1417.9		BITUMINOUS, 13 1/4 inches					Frost encountered to a depth of 4 feet
1.1		APPARENT AGGREGATE BASE, 6 inches		AU			
1417.4		FILL: POORLY GRADED SAND with SILT (SP-SM), fine to coarse-grained, with Gravel, brown and reddish brown, frozen (moist when thawed)		50-50/2" (REF) 6"			
1.6							
1415.0				9-14-9-9 (23) 12"			
4.0		SILTY SAND (SM), fine to coarse-grained, with Gravel, reddish brown, moist, medium dense to very dense (GLACIAL TILL)				11	
		5					
				4-27-30 (57) 12"			
				27-18-10 (28) 8"			
		10					
1408.0							
11.0		END OF BORING					Water not observed while drilling.
		Boring then backfilled with auger cuttings					Water not observed at end of drilling.
		15					

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2408391
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 6
4701 Grinden Drive
Duluth, Minnesota

BORING: **17**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis South (US Feet)
NORTHING: 169346.0 EASTING: 560137.8
DRILLER: D. Michalski LOGGED BY: C. Anderson START DATE: 02/25/25 END DATE: 02/25/25
SURFACE ELEVATION: 1419.0 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Bituminous WEATHER: Clear

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1418.0		BITUMINOUS, 12 inches					Frost encountered to a depth of 4 feet
1.0 1417.2		APPARENT AGGREGATE BASE, 9 inches					
1.8 1415.0		FILL: SILTY SAND (SM), fine to coarse-grained, dark brown with reddish brown, frozen (moist when thawed)		AU			
4.0 1412.5		SILTY SAND (SM), fine to coarse-grained, with Gravel, reddish brown, moist, very dense (GLACIAL TILL)	5	44-46-20-22 (66) 18"			
6.5 1408.0		SANDY LEAN CLAY (CL), trace Gravel, reddish brown, moist, stiff (GLACIAL TILL)	10	4-5-5 (10) 10" 9-6-7 (13) 10"		16	
11.0		END OF BORING Boring then backfilled with auger cuttings	15				Water not observed while drilling. Water not observed at end of drilling.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2408391
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 6
4701 Grinden Drive
Duluth, Minnesota

BORING: **18**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis South (US Feet)
NORTHING: 169336.6 EASTING: 559937.3
DRILLER: D. Michalski LOGGED BY: C. Anderson START DATE: 02/25/25 END DATE: 02/25/25
SURFACE ELEVATION: 1419.0 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Bituminous WEATHER: Clear

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1418.2		BITUMINOUS, 10 inches					Frost encountered to a depth of 4 feet
0.8		APPARENT AGGREGATE BASE, 12 1/2 inches					
1417.1							
1.9		FILL: POORLY GRADED SAND with SILT (SP-SM), fine to coarse-grained, trace Gravel, brown with reddish brown, frozen (moist when thawed) to moist		AU		6	P200=8%
1414.0				21-20-17-19 (37) 16"			
5.0		SILTY SAND (SM), fine to coarse-grained, with Gravel, reddish brown, moist, dense to very dense (GLACIAL TILL)	5				
				7-19-45 (64) 10"			
			10	7-9-24 (33) 10"			
1408.0							
11.0		END OF BORING					Water not observed while drilling.
		Boring then backfilled with auger cuttings					Water not observed at end of drilling.
			15				

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2408391
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 6
4701 Grinden Drive
Duluth, Minnesota

BORING: **19**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis South (US Feet)
NORTHING: 169379.1 EASTING: 559739.9
DRILLER: D. Michalski LOGGED BY: C. Anderson START DATE: 02/25/25 END DATE: 02/25/25
SURFACE ELEVATION: 1420.0 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Bituminous WEATHER: Clear

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1419.0		BITUMINOUS, 12 1/2 inches					Frost encountered to a depth of 4 feet
1.0 1418.2		APPARENT AGGREGATE BASE, 9 1/2 inches					
1.8		FILL: SILTY SAND (SM), fine to coarse-grained, with Gravel, dark brown with reddish brown, frozen (moist when thawed) to moist		AU			Bag sample taken from 3 to 6 feet
				29-50/4" (REF) 8"		12	Non-plastic
5							
1413.5							
6.5		SANDY SILT (ML), with Gravel, reddish brown, moist, dense (GLACIAL TILL)		10-27-14 (41) 10"			
10				5-9-22 (31) 10"			
1409.0							
11.0		END OF BORING Boring then backfilled with auger cuttings					Water not observed while drilling. Water not observed at end of drilling.
15							

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2408391
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 6
4701 Grinden Drive
Duluth, Minnesota

BORING: **20**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis South (US Feet)
NORTHING: 169438.6 EASTING: 559548.2
DRILLER: D. Michalski LOGGED BY: C. Anderson START DATE: 02/25/25 END DATE: 02/25/25
SURFACE ELEVATION: 1419.0 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Bituminous WEATHER: Clear

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1417.6		BITUMINOUS, 17 inches					Frost encountered to a depth of 4 feet
1.4 1416.7		APPARENT AGGREGATE BASE, 10 inches		AU			
2.3		FILL: SILTY SAND (SM), fine to coarse-grained, trace Gravel, dark brown with brown, frozen (dry when thawed) to moist		50/4" (REF) 4"			
1412.5			5				
6.5		FILL: ORGANIC CLAY with SAND (OL), black with dark brown, moist		2-2-2 (4) 10"			
1410.0							
9.0		PEAT (PT), with roots, black, moist, soft (SWAMP DEPOSIT)		1-3-3 (6) 14"		284	OC=81%
			10				
			15	1-2-2 (4) 18"		416	OC=91%
1401.0							
18.0		LEAN CLAY (CL), with Sand, reddish brown, moist, stiff (ALLUVIUM)		2-3-6			

Continued on next page

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2408391
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 6
4701 Grinden Drive
Duluth, Minnesota

BORING: **20**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis South (US Feet)
NORTHING: 169438.6 EASTING: 559548.2
START DATE: 02/25/25 END DATE: 02/25/25
SURFACING: Bituminous WEATHER: Clear

DRILLER: D. Michalski LOGGED BY: C. Anderson
SURFACE ELEVATION: 1419.0 ft RIG: 7516B METHOD: 3 1/4" HSA

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1398.0		LEAN CLAY (CL), with Sand, reddish brown, moist, stiff (ALLUVIUM)		(9) 18"			
21.0		END OF BORING Boring immediately backfilled with bentonite grout					Water not observed while drilling. Water not observed at end of drilling.

25
30
35

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2408391
Geotechnical Evaluation
Proposed DLH Taxiway A Phase 6
4701 Grinden Drive
Duluth, Minnesota

BORING: **21**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN St Louis South (US Feet)
NORTHING: 169448.4 EASTING: 559345.6
DRILLER: D. Michalski LOGGED BY: C. Anderson START DATE: 02/25/25 END DATE: 02/25/25
SURFACE ELEVATION: 1419.0 ft RIG: 7516B METHOD: 3 1/4" HSA SURFACING: Bituminous WEATHER: Clear

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1417.8		BITUMINOUS, 14 inches					Frost encountered to a depth of 4 feet
1.2 1417.0		APPARENT AGGREGATE BASE, 10 inches					
2.0		FILL: SILTY SAND (SM), fine to coarse-grained, with Gravel, dark brown with reddish brown, frozen (moist when thawed) to moist		AU			
				33-50/4.5" (REF) 8"		8	
5							
1412.5							
6.5	▽	POORLY GRADED SAND with SILT (SP-SM), fine to coarse-grained, trace Gravel, reddish brown and gray, moist to wet, very dense to medium dense (GLACIAL OUTWASH)		13-29-28 (57) 10"			
10				12-13-13 (26) 10"			
1408.0							
11.0		END OF BORING Boring then backfilled with auger cuttings					Water observed at 9.5 feet with 9.5 feet of tooling in the ground while drilling.
15							

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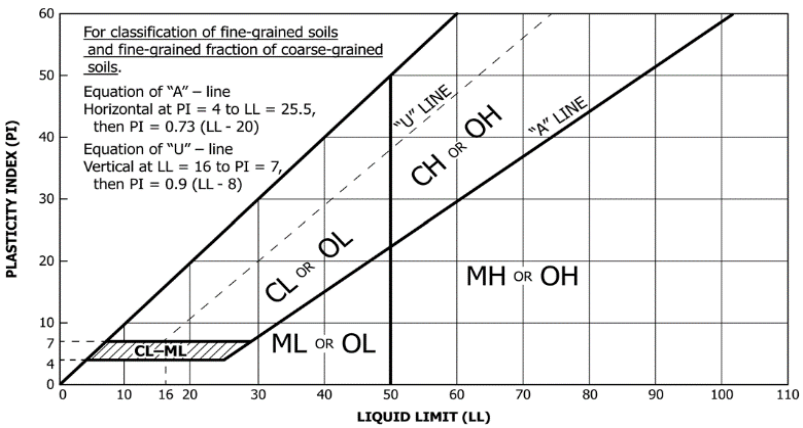
Descriptive Terminology of Soil

Based on Standards ASTM D2487/2488
(Unified Soil Classification System)

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests[A]				Soil Classification	
				Group Symbol	Group Name[B]
Coarse-grained Soils (more than 50% retained on No. 200 sieve)	Gravels (More than 50% of coarse fraction retained on No. 4 sieve)	Clean Gravels (Less than 5% fines[C])	$C_u \geq 4$ and $1 \leq C_c \leq 3$[D]	GW	Well-graded gravel[E]
			$C_u < 4$ and/or ($C_c < 1$ or $C_c > 3$)[D]	GP	Poorly graded gravel[E]
		Gravels with Fines (More than 12% fines[C])	Fines classify as ML or MH	GM	Silty gravel[E F G]
			Fines Classify as CL or CH	GC	Clayey gravel[E F G]
	Sands (50% or more coarse fraction passes No. 4 sieve)	Clean Sands (Less than 5% fines[H])	$C_u \geq 6$ and $1 \leq C_c \leq 3$[D]	SW	Well-graded sand[I]
			$C_u < 6$ and/or ($C_c < 1$ or $C_c > 3$)[D]	SP	Poorly graded sand[I]
		Sands with Fines (More than 12% fines[H])	Fines classify as ML or MH	SM	Silty sand[F G I]
			Fines classify as CL or CH	SC	Clayey sand[F G I]
Fine-grained Soils (50% or more passes the No. 200 sieve)	Silts and Clays (Liquid limit less than 50)	Inorganic	PI > 7 and plots on or above "A" line[J]	CL	Lean clay[K L M]
			PI < 4 or plots below "A" line[J]	ML	Silt[K L M]
		Organic	Liquid Limit – oven dried / Liquid Limit – not dried <0.75	OL	Organic clay[K L M N] / Organic silt[K L M O]
	Silts and Clays (Liquid limit 50 or more)	Inorganic	PI plots on or above "A" line	CH	Fat clay[K L M]
			PI plots below "A" line	MH	Elastic silt[K L M]
		Organic	Liquid Limit – oven dried / Liquid Limit – not dried <0.75	OH	Organic clay[K L M P] / Organic silt[K L M Q]
Highly Organic Soils		Primarily organic matter, dark in color, and organic odor		PT	Peat

A. Based on the material passing the 3-inch (75-mm) sieve.
B. If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.
C. Gravels with 5 to 12% fines require dual symbols:
   GW-GM well-graded gravel with silt
   GW-GC well-graded gravel with clay
   GP-GM poorly graded gravel with silt
   GP-GC poorly graded gravel with clay
D. $C_u = D_{60} / D_{10}$ $C_c = (D_{30})^2 / (D_{10} \times D_{60})$
E. If soil contains ≥ 15% sand, add "with sand" to group name.
F. If fines classify as CL-ML, use dual symbol GC-GM or SC-SM.
G. If fines are organic, add "with organic fines" to group name.
H. Sands with 5 to 12% fines require dual symbols:
   SW-SM well-graded sand with silt
   SW-SC well-graded sand with clay
   SP-SM poorly graded sand with silt
   SP-SC poorly graded sand with clay
I. If soil contains ≥ 15% gravel, add "with gravel" to group name.
J. If Atterberg limits plot in hatched area, soil is CL-ML, silty clay.
K. If soil contains 15 to < 30% plus No. 200, add "with sand" or "with gravel", whichever is predominant.
L. If soil contains ≥ 30% plus No. 200, predominantly sand, add "sandy" to group name.
M. If soil contains ≥ 30% plus No. 200 predominantly gravel, add "gravelly" to group name.
N. PI ≥ 4 and plots on or above "A" line.
O. PI < 4 or plots below "A" line.
P. PI plots on or above "A" line.
Q. PI plots below "A" line.



Particle Size Identification

Boulders..... over 12"
Cobbles..... 3" to 12"
Gravel
  Coarse..... 3/4" to 3" (19.00 mm to 75.00 mm)
  Fine..... No. 4 to 3/4" (4.75 mm to 19.00 mm)
Sand
  Coarse..... No. 10 to No. 4 (2.00 mm to 4.75 mm)
  Medium..... No. 40 to No. 10 (0.425 mm to 2.00 mm)
  Fine..... No. 200 to No. 40 (0.075 mm to 0.425 mm)
Silt..... No. 200 (0.075 mm) to .005 mm
Clay..... < .005 mm

Relative Proportions[L, M]

trace..... 0 to 5%
little..... 6 to 14%
with..... ≥ 15%

Inclusion Thicknesses

lens..... 0 to 1/8"
seam..... 1/8" to 1"
layer..... over 1"

Apparent Relative Density of Cohesionless Soils

Very loose ..... 0 to 4 BPF
Loose ..... 5 to 10 BPF
Medium dense..... 11 to 30 BPF
Dense..... 31 to 50 BPF
Very dense..... over 50 BPF

Consistency of Cohesive Soils	Blows Per Foot	Approximate Unconfined Compressive Strength
Very soft	0 to 1 BPF	< 0.25 tsf
Soft	2 to 4 BPF	0.25 to 0.5 tsf
Medium	5 to 8 BPF	0.5 to 1 tsf
Stiff	9 to 15 BPF	1 to 2 tsf
Very Stiff	16 to 30 BPF	2 to 4 tsf
Hard	over 30 BPF	> 4 tsf

Moisture Content:

Dry: Absence of moisture, dusty, dry to the touch.
Moist: Damp but no visible water.
Wet: Visible free water, usually soil is below water table.

Drilling Notes:

Blows/N-value: Blows indicate the driving resistance recorded for each 6-inch interval. The reported N-value is the blows per foot recorded by summing the second and third interval in accordance with the Standard Penetration Test, ASTM D1586.

Partial Penetration: If the sampler could not be driven through a full 6-inch interval, the number of blows for that partial penetration is shown as #/x" (i.e. 50/2"). The N-value is reported as "REF" indicating refusal.

Recovery: Indicates the inches of sample recovered from the sampled interval. For a standard penetration test, full recovery is 18", and is 24" for a thinwall/shelby tube sample.

WOH: Indicates the sampler penetrated soil under weight of hammer and rods alone; driving not required.

WOR: Indicates the sampler penetrated soil under weight of rods alone; hammer weight and driving not required.

Water Level: Indicates the water level measured by the drillers either while drilling (▽), at the end of drilling (▼), or at some time after drilling (▽▼).

Laboratory Tests

DD	Dry density, pcf	**OC**	Organic content, %	**LL**	Liquid limit
WD	Wet density, pcf	**q_p**	Pocket penetrometer strength, tsf	**PL**	Plastic limit
P200	% Passing #200 sieve	**MC**	Moisture content, %	**PI**	Plasticity index
		q_U	Unconfined compression test, tsf		

Hydrometer And Sieve Analysis

ASTM D422

Report Date: 11/22/2024

4511 West First Street
Suite 4
Duluth, MN 55807
Phone: 218-624-4967

Client:

Short Elliott Hendrickson, Inc.
3535 Vadnais Center Dr
Suite 200
Saint Paul, MN 55110

Project:

B2408391
Proposed DLH Taxiway A Phase 6
Duluth International Airport4701 Grinden Driv...
Duluth, MN 55811

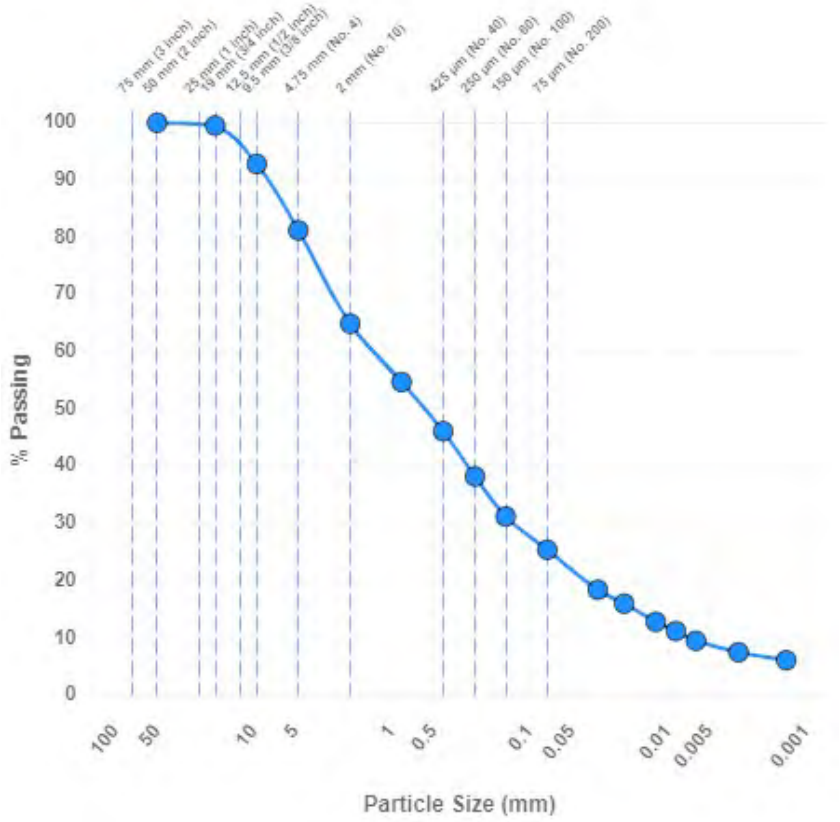
Sample Information

Sample Number:	621641	**Depth (ft):**	3 to 6
Sampling Method:	Auger Boring ASTM D1452	**Sampled By:**	Drill Crew
Boring Number:	2		
Sample Date:	09/12/2024		
Received Date:	10/01/2024	**Lab:**	11001 Hampshire Ave S, Bloomington, MN
Tested Date:	10/21/2024	**Tested By:**	Streier, Jim

Laboratory Data

Sieve-Hydrometer Analysis

Particle Size	% Passing	Specification
50 mm (2 inch)	100.0	-
19 mm (3/4 inch)	99.5	-
9.5 mm (3/8 inch)	92.8	-
4.75 mm (No. 4)	81.2	-
2 mm (No. 10)	64.9	-
850 µm (No. 20)	54.7	-
425 µm (No. 40)	46.1	-
250 µm (No. 60)	38.2	-
150 µm (No. 100)	31.2	-
75 µm (No. 200)	25.4	-
32.3 (µm)	18.4	-
20.8 (µm)	16.0	-
12.3 (µm)	12.8	-
8.8 (µm)	11.2	-
6.3 (µm)	9.5	-
3.1 (µm)	7.5	-
1.4 (µm)	6.1	-



Soil Classification: SM Silty sand with gravel

Gravel (%):	18.8	**Sand (%):**	55.8	**Silt (%):**	16.7	**Clay (%):**	8.7		
D_{60} (µm):	1447.5	**D_{30} (µm):**	134.5	**D_{10} (µm):**	7.0	**C_u:**	206.79	**C_c:**	1.79

General

Uncertainty was not taken into account in determining whether the test results meet the requirements. The results included in this report relate only to the items inspected or tested. Sampled per project specifications or industry standards. Also, this report is for the exclusive use of the addressed parties. We assume no responsibility to other parties regarding this report. The information indicated in this report shall not be reproduced, except in full, without prior written approval.

Hydrometer And Sieve Analysis

ASTM D422

Report Date: 11/22/2024

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4511 West First Street
Suite 4
Duluth, MN 55807
Phone: 218-624-4967

Client:

Short Elliott Hendrickson, Inc.
3535 Vadnais Center Dr
Suite 200
Saint Paul, MN 55110

Project:

B2408391
Proposed DLH Taxiway A Phase 6
Duluth International Airport4701 Grinden Driv...
Duluth, MN 55811

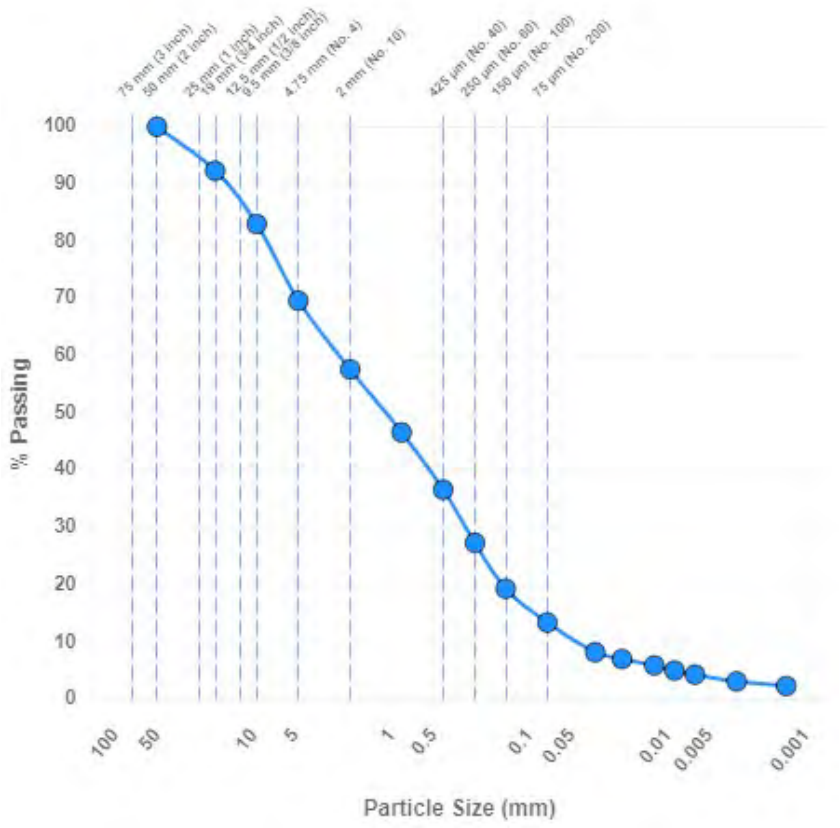
Sample Information

Sample Number:	621643	**Depth (ft):**	3 to 6
Sampling Method:	Auger Boring ASTM D1452	**Sampled By:**	Drill Crew
Boring Number:	5		
Sample Date:	09/12/2024		
Received Date:	10/01/2024	**Lab:**	11001 Hampshire Ave S, Bloomington, MN
Tested Date:	10/21/2024	**Tested By:**	Streier, Jim

Laboratory Data

Sieve-Hydrometer Analysis

Particle Size	% Passing	Specification
50 mm (2 inch)	100.0	-
19 mm (3/4 inch)	92.3	-
9.5 mm (3/8 inch)	83.0	-
4.75 mm (No. 4)	69.6	-
2 mm (No. 10)	57.6	-
850 µm (No. 20)	46.6	-
425 µm (No. 40)	36.6	-
250 µm (No. 60)	27.3	-
150 µm (No. 100)	19.3	-
75 µm (No. 200)	13.4	-
33.8 (µm)	8.2	-
21.6 (µm)	7.0	-
12.6 (µm)	5.9	-
9.0 (µm)	5.0	-
6.4 (µm)	4.3	-
3.2 (µm)	3.1	-
1.4 (µm)	2.3	-



Soil Classification: SM Silty sand with gravel

Gravel (%):	30.4	**Sand (%):**	56.2	**Silt (%):**	9.6	**Clay (%):**	3.8		
D_{60} (µm):	2550.0	**D_{30} (µm):**	300.8	**D_{10} (µm):**	48.1	**C_u:**	53.01	**C_c:**	0.74

General

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Hydrometer And Sieve Analysis

ASTM D422

Report Date: 11/22/2024

4511 West First Street
Suite 4
Duluth, MN 55807
Phone: 218-624-4967

Client:

Short Elliott Hendrickson, Inc.
3535 Vadnais Center Dr
Suite 200
Saint Paul, MN 55110

Project:

B2408391
Proposed DLH Taxiway A Phase 6
Duluth International Airport4701 Grinden Driv...
Duluth, MN 55811

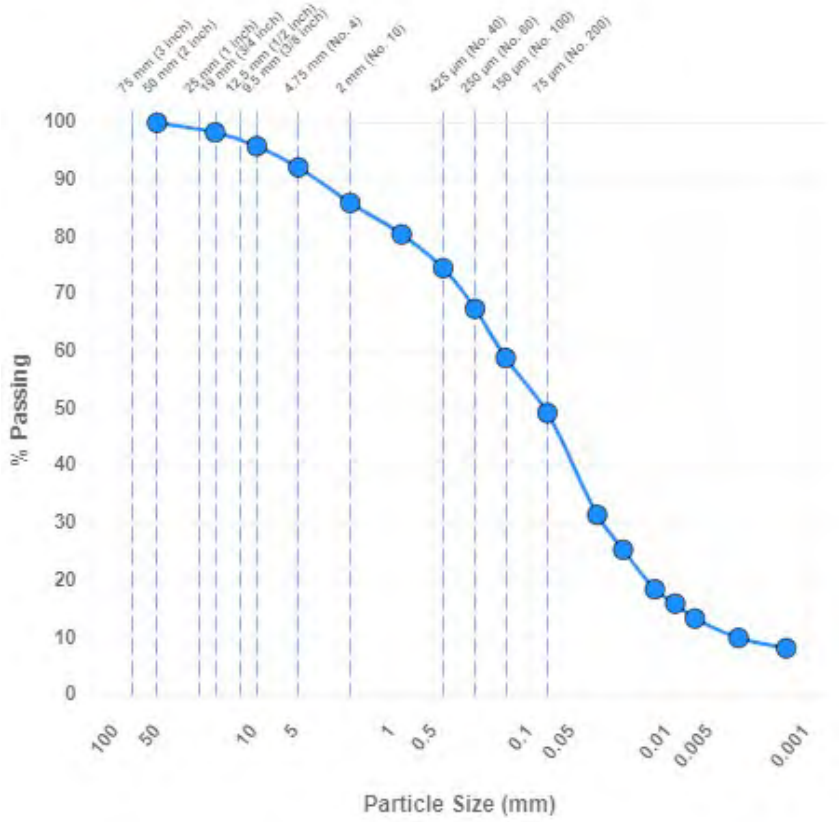
Sample Information

Sample Number:	621644	**Depth (ft):**	2 to 5
Sampling Method:	Auger Boring ASTM D1452	**Sampled By:**	Drill Crew
Boring Number:	11		
Sample Date:	09/12/2024		
Received Date:	10/01/2024	**Lab:**	11001 Hampshire Ave S, Bloomington, MN
Tested Date:	10/21/2024	**Tested By:**	Streier, Jim

Laboratory Data

Sieve-Hydrometer Analysis

Particle Size	% Passing	Specification
50 mm (2 inch)	100.0	-
19 mm (3/4 inch)	98.3	-
9.5 mm (3/8 inch)	95.9	-
4.75 mm (No. 4)	92.2	-
2 mm (No. 10)	86.0	-
850 µm (No. 20)	80.5	-
425 µm (No. 40)	74.6	-
250 µm (No. 60)	67.5	-
150 µm (No. 100)	58.9	-
75 µm (No. 200)	49.3	-
32.7 (µm)	31.5	-
21.2 (µm)	25.4	-
12.5 (µm)	18.5	-
8.9 (µm)	16.0	-
6.4 (µm)	13.4	-
3.1 (µm)	10.0	-
1.4 (µm)	8.2	-



Soil Classification: SM Silty sand

Gravel (%):	7.8	**Sand (%):**	42.9	**Silt (%):**	37.3	**Clay (%):**	12.0		
D_{60} (µm):	162.8	**D_{30} (µm):**	29.9	**D_{10} (µm):**	3.1	**C_u:**	52.52	**C_c:**	1.77

General

Uncertainty was not taken into account in determining whether the test results meet the requirements. The results included in this report relate only to the items inspected or tested. Sampled per project specifications or industry standards. Also, this report is for the exclusive use of the addressed parties. We assume no responsibility to other parties regarding this report. The information indicated in this report shall not be reproduced, except in full, without prior written approval.

Hydrometer And Sieve Analysis

ASTM D422

Report Date: 05/01/2025

BRAUN INTERTEC
The Science You Build On.

4511 West First Street
Suite 4
Duluth, MN 55807
Phone: 218-624-4967

Client:

Short Elliott Hendrickson, Inc.
3535 Vadnais Center Dr
Suite 200
Saint Paul, MN 55110

Project:

B2411434
Proposed DLH Taxiway A Phase 6
Duluth International Airport4701 Grinden Driv...
Duluth, MN 55811

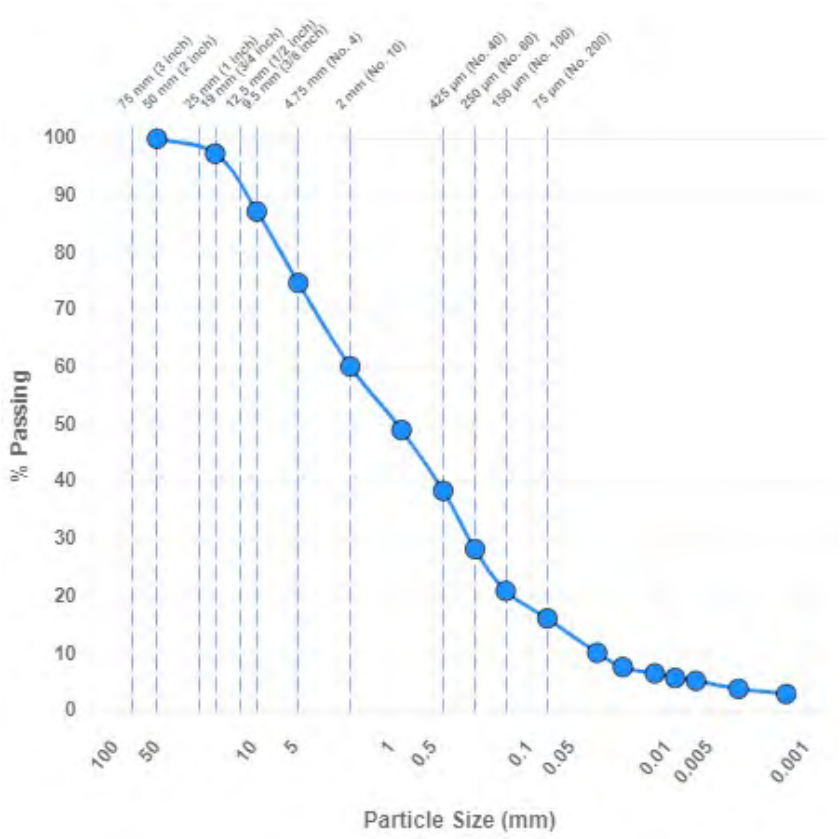
Sample Information

Sample Number:	645149	**Depth (ft):**	3 to 6
Sampling Method:	Auger Boring ASTM D1452	**Sampled By:**	Drill Crew
Boring Number:	19		
Location:	Sub-grade		
Sample Date:	02/25/2025		
Received Date:	03/19/2025	**Lab:**	11001 Hampshire Ave S, Bloomington, MN
Tested Date:	03/27/2025	**Tested By:**	Streier, Jim

Laboratory Data

Sieve-Hydrometer Analysis

Particle Size	% Passing	Specification
50 mm (2 inch)	100.0	-
19 mm (3/4 inch)	97.4	-
9.5 mm (3/8 inch)	87.3	-
4.75 mm (No. 4)	74.8	-
2 mm (No. 10)	60.2	-
850 µm (No. 20)	49.1	-
425 µm (No. 40)	38.5	-
250 µm (No. 60)	28.3	-
150 µm (No. 100)	21.0	-
75 µm (No. 200)	16.2	-
32.7 (µm)	10.2	-
21.3 (µm)	7.7	-
12.5 (µm)	6.6	-
8.9 (µm)	5.8	-
6.3 (µm)	5.3	-
3.1 (µm)	3.9	-
1.4 (µm)	3.0	-



Soil Classification: SM Silty sand with gravel

Gravel (%):	25.2	**Sand (%):**	58.6	**Silt (%):**	11.5	**Clay (%):**	4.7		
D_{60} (µm):	1979.3	**D_{30} (µm):**	279.2	**D_{10} (µm):**	31.8	**C_u:**	62.24	**C_c:**	1.24

General

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BRAUN INTERTEC
The Science You Build On.

4511 West First Street
Suite 4
Duluth, MN 55807
Phone: 218-624-4967

Modified Proctor M-D Relationship

ASTM D1557

Report Date: 11/22/2024

Client:

Short Elliott Hendrickson, Inc.
3535 Vadnais Center Dr
Suite 200
Saint Paul, MN 55110

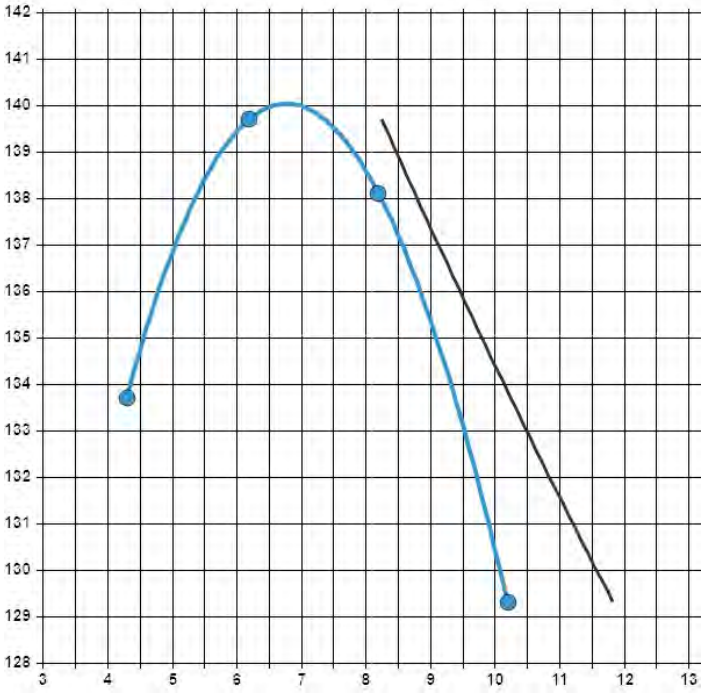
Project:

B2408391
Proposed DLH Taxiway A Phase 6
Duluth International Airport4701 Grinden Driv...
Duluth, MN 55811

Sample Information

Sample Number:	621641	**Depth (ft):**	3 to 6
Boring Number:	2	**Sampled By:**	Drill Crew
Sampling Method:	Auger Boring ASTM D1452		
Sample Date:	09/12/2024		
Received Date:	10/01/2024	**Lab:**	11001 Hampshire Ave S, Bloomington, MN
Tested Date:	10/02/2024	**Tested By:**	Vang, Yang

Laboratory Data



Proctor ID:	P-03-mod
Maximum Dry Density (pcf):	140.0
Optimum Moisture (%):	6.8
Corrected Maximum Dry Density (pcf):	141.5
Corrected Optimum Moisture (%):	6.3
Method:	Method B
Oversize Sieve:	3/8 Sieve
Dry Coarse Material (%):	7
Dry Fine Material (%):	93
Preparation Method:	Moist
Rammer Type:	Manual Round
Specific Gravity:	2.75
Specific Gravity Source:	Assumed

Passes #200 (%):	25.4	**Retained #200 (%):**	74.6
Retained On 3/4 (%):	1	**Retained On 3/8 (%):**	7
Retained On #4 (%):	19	**Passing #4 (%):**	81

Classification: SM Silty sand with gravel, fine to coarse grained, brown

General

Remarks: The % passing the #200 is for informational purposes only.

Uncertainty was not taken into account in determining whether the test results meet the requirements. The results included in this report relate only to the items inspected or tested. Sampled per project specifications or industry standards. Also, this report is for the exclusive use of the addressed parties. We assume no responsibility to other parties regarding this report. The information indicated in this report shall not be reproduced, except in full, without prior written approval.

BRAUN INTERTEC
The Science You Build On.

4511 West First Street
Suite 4
Duluth, MN 55807
Phone: 218-624-4967

Modified Proctor M-D Relationship

ASTM D1557

Report Date: 11/22/2024

Client:

Short Elliott Hendrickson, Inc.
3535 Vadnais Center Dr
Suite 200
Saint Paul, MN 55110

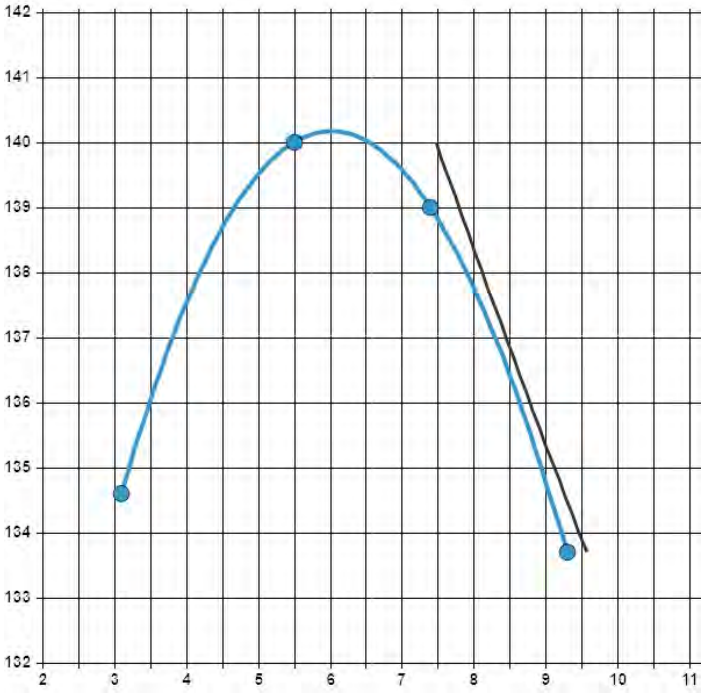
Project:

B2408391
Proposed DLH Taxiway A Phase 6
Duluth International Airport4701 Grinden Driv...
Duluth, MN 55811

Sample Information

Sample Number:	621643	**Depth (ft):**	3 to 6
Boring Number:	5	**Sampled By:**	Drill Crew
Sampling Method:	Auger Boring ASTM D1452		
Sample Date:	09/12/2024		
Received Date:	10/01/2024	**Lab:**	11001 Hampshire Ave S, Bloomington, MN
Tested Date:	10/02/2024	**Tested By:**	Vang, Yang

Laboratory Data



Proctor ID:	P-01-mod
Maximum Dry Density (pcf):	140.2
Optimum Moisture (%):	6.0
Corrected Maximum Dry Density (pcf):	143.9
Corrected Optimum Moisture (%):	5.0
Method:	Method B
Oversize Sieve:	3/8 Sieve
Dry Coarse Material (%):	17
Dry Fine Material (%):	83
Preparation Method:	Moist
Rammer Type:	Manual Round
Specific Gravity:	2.70
Specific Gravity Source:	Assumed

Passes #200 (%):	13.4	**Retained #200 (%):**	86.6
Retained On 3/4 (%):	8	**Retained On 3/8 (%):**	17
Retained On #4 (%):	30	**Passing #4 (%):**	70

Classification: SM Silty sand with gravel, fine to coarse grained, brown

General

Remarks: The % passing the #200 is for informational purposes only.

Uncertainty was not taken into account in determining whether the test results meet the requirements. The results included in this report relate only to the items inspected or tested. Sampled per project specifications or industry standards. Also, this report is for the exclusive use of the addressed parties. We assume no responsibility to other parties regarding this report. The information indicated in this report shall not be reproduced, except in full, without prior written approval.

BRAUN INTERTEC
The Science You Build On.

4511 West First Street
Suite 4
Duluth, MN 55807
Phone: 218-624-4967

Modified Proctor M-D Relationship

ASTM D1557

Report Date: 11/22/2024

Client:

Short Elliott Hendrickson, Inc.
3535 Vadnais Center Dr
Suite 200
Saint Paul, MN 55110

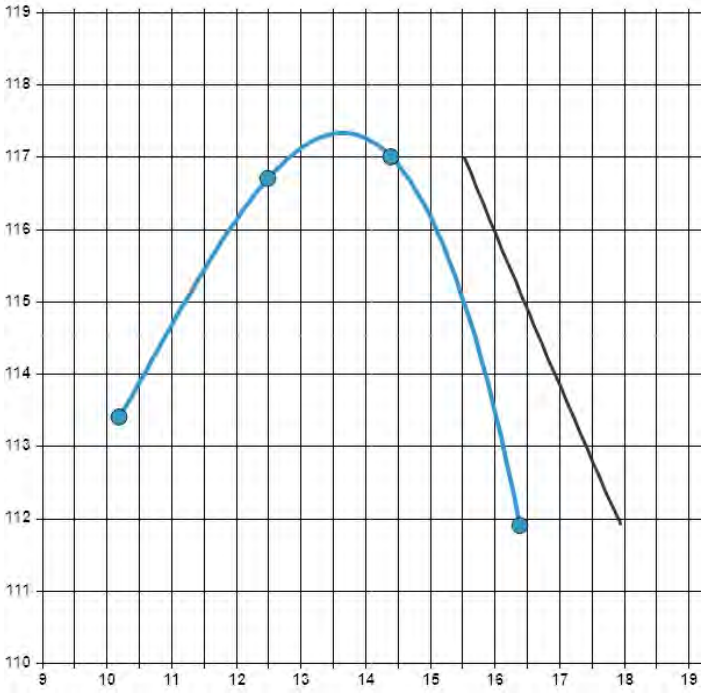
Project:

B2408391
Proposed DLH Taxiway A Phase 6
Duluth International Airport4701 Grinden Driv...
Duluth, MN 55811

Sample Information

Sample Number:	621644	**Depth (ft):**	2 to 5
Boring Number:	11	**Sampled By:**	Drill Crew
Sampling Method:	Auger Boring ASTM D1452		
Sample Date:	09/12/2024		
Received Date:	10/01/2024	**Lab:**	11001 Hampshire Ave S, Bloomington, MN
Tested Date:	10/02/2024	**Tested By:**	Vang, Yang

Laboratory Data



Proctor ID:	P-02-mod
Maximum Dry Density (pcf):	117.3
Optimum Moisture (%):	13.7
Method:	Method B
Total Retained:	4 % on 3/8 Sieve
Preparation Method:	Moist
Rammer Type:	Manual Round
Specific Gravity:	2.65
Specific Gravity Source:	Assumed

Passes #200 (%):	49.3	**Retained #200 (%):**	50.7
Retained On 3/4 (%):	2	**Retained On 3/8 (%):**	4
Retained On #4 (%):	8	**Passing #4 (%):**	92

Classification: SM Silty sand, fine to medium grained, dark brown

General

Remarks: The % passing the #200 is for informational purposes only.

Uncertainty was not taken into account in determining whether the test results meet the requirements. The results included in this report relate only to the items inspected or tested. Sampled per project specifications or industry standards. Also, this report is for the exclusive use of the addressed parties. We assume no responsibility to other parties regarding this report. The information indicated in this report shall not be reproduced, except in full, without prior written approval.

BRAUN INTERTEC
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Modified Proctor M-D Relationship

ASTM D1557

Report Date: 05/01/2025

4511 West First Street
Suite 4
Duluth, MN 55807
Phone: 218-624-4967

Client:

Short Elliott Hendrickson, Inc.
3535 Vadnais Center Dr
Suite 200
Saint Paul, MN 55110

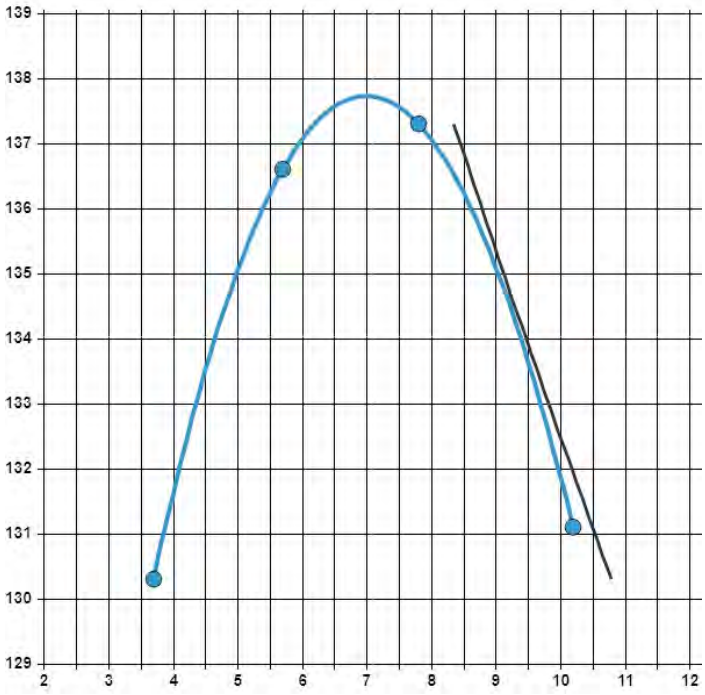
Project:

B2411434
Proposed DLH Taxiway A Phase 6
Duluth International Airport4701 Grinden Driv...
Duluth, MN 55811

Sample Information

Sample Number:	645149	**Depth (ft):**	3 to 6
Boring Number:	19	**Sampled By:**	Drill Crew
Sampling Method:	Auger Boring ASTM D1452		
Location:	Sub-grade		
Sample Date:	02/25/2025		
Received Date:	03/19/2025	**Lab:**	11001 Hampshire Ave S, Bloomington, MN
Tested Date:	03/19/2025	**Tested By:**	Vang, Yang

Laboratory Data



Proctor ID:	P-01-mod
Maximum Dry Density (pcf):	137.7
Optimum Moisture (%):	7.0
Corrected Maximum Dry Density (pcf):	140.8
Corrected Optimum Moisture (%):	6.1
Method:	Method B
Oversize Sieve:	3/8 Sieve
Dry Coarse Material (%):	13
Dry Fine Material (%):	87
Preparation Method:	Moist
Rammer Type:	Mechanical Round
Specific Gravity:	2.70
Specific Gravity Source:	Assumed

Passes #200 (%):	16.2	**Retained #200 (%):**	83.8
Retained On 3/4 (%):	3	**Retained On 3/8 (%):**	13
Retained On #4 (%):	25	**Passing #4 (%):**	75

Classification: SM Silty sand with gravel, fine to coarse grained, brown

General

Remarks: The % passing the #200 is for informational purposes only.

Uncertainty was not taken into account in determining whether the test results meet the requirements. The results included in this report relate only to the items inspected or tested. Sampled per project specifications or industry standards. Also, this report is for the exclusive use of the addressed parties. We assume no responsibility to other parties regarding this report. The information indicated in this report shall not be reproduced, except in full, without prior written approval.

California Bearing Ratio

ASTM D1883

Report Date: 11/22/2024

4511 West First Street
Suite 4
Duluth, MN 55807
Phone: 218-624-4967

Client:

Short Elliott Hendrickson, Inc.
3535 Vadnais Center Dr
Suite 200
Saint Paul, MN 55110

Project:

B2408391
Proposed DLH Taxiway A Phase 6
Duluth International Airport4701 Grinden Driv...
Duluth, MN 55811

Sample Information

Sample Number:	621641	**Depth (ft):**	3 to 6
Sampling Method:	Auger Boring ASTM D1452	**Sampled By:**	Drill Crew
Boring Number:	2		
Sample Date:	09/12/2024		
Received Date:	10/01/2024	**Lab:**	11001 Hampshire Ave S, Bloomington, MN
Tested Date:	11/05/2024	**Tested By:**	Vang, Yang

Laboratory Data

Soaked Or Unsoaked	Soaked
Method Of Preparation	ASTM D1557
Number Of Blows Per Lift	16
Surcharge (lbs)	10
Average Molding Moisture Content (%)	6.4
Dry Density Molded (pcf)	135.0
Percent Of Maximum Density	95.4
Swell (%)	0.0
Moisture Content Of Whole Specimen (%)	6.8
Moisture Content Of Top Inch (%)	9.6
Corrected Bearing Ratio At 0.1 inch	24.7
Corrected Bearing Ratio At 0.2 inch	23.1
Corrected Bearing Ratio At 0.3 inch	
Corrected Bearing Ratio At 0.4 inch	
Corrected Bearing Ratio At 0.5 inch	

See 621641.pdf in the documents section at the end of this report.

Minimum Specified

Final Bearing Ratio (%): 24.7

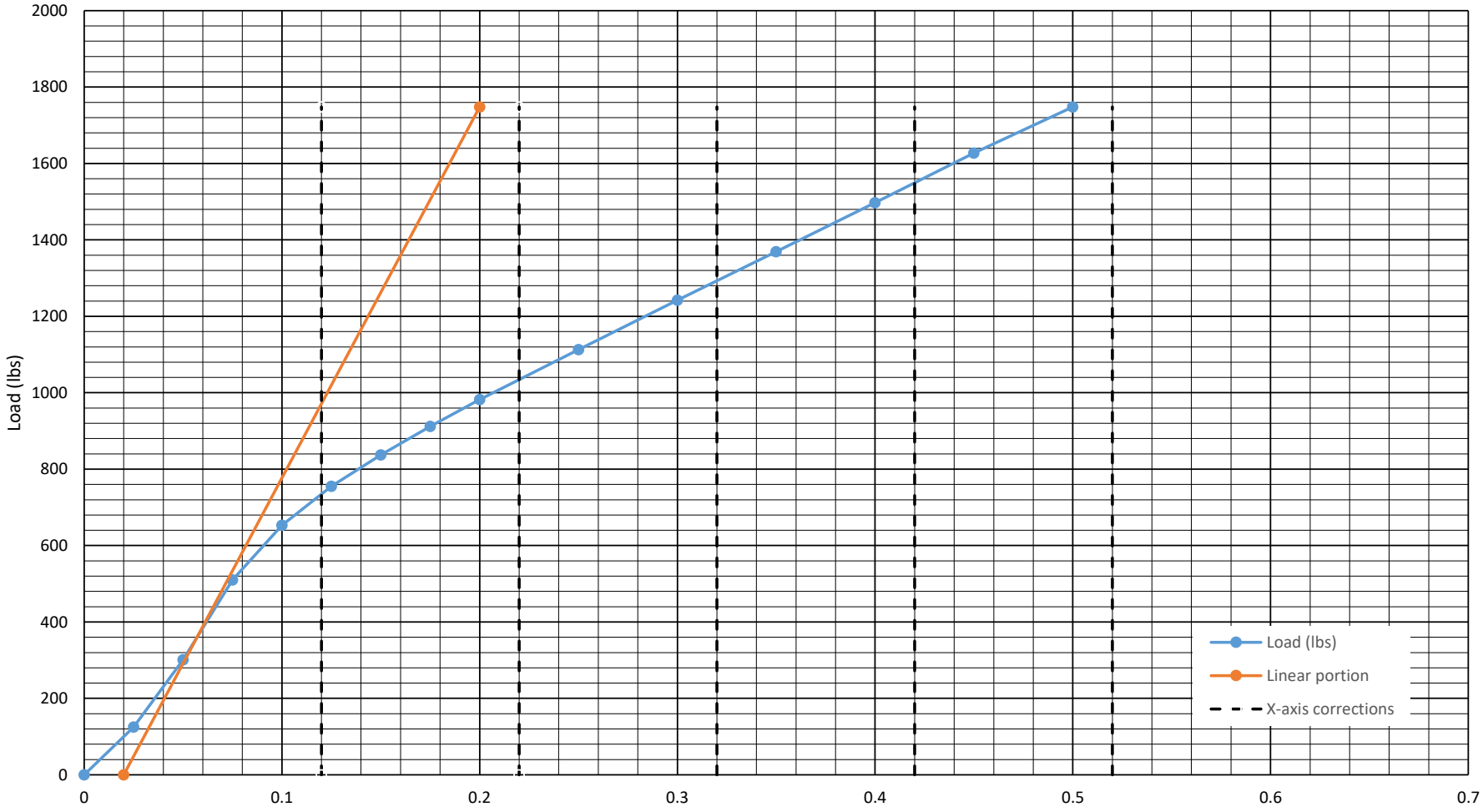
Soil Classification: SM Silty sand with gravel

General

Results: The test is for informational purposes.

Uncertainty was not taken into account in determining whether the test results meet the requirements. The results included in this report relate only to the items inspected or tested. Sampled per project specifications or industry standards. Also, this report is for the exclusive use of the addressed parties. We assume no responsibility to other parties regarding this report. The information indicated in this report shall not be reproduced, except in full, without prior written approval.

CBR Load Graph



BRAUN INTERTEC
The Science You Build On.

Project Number B2408391	% of Maximum 95.4	Classification
Sample Number 621641	Molding Moisture (%) 6.4	SM Silty sand with gravel, brown

California Bearing Ratio

ASTM D1883

Report Date: 11/22/2024

4511 West First Street
Suite 4
Duluth, MN 55807
Phone: 218-624-4967

Client:

Short Elliott Hendrickson, Inc.
3535 Vadnais Center Dr
Suite 200
Saint Paul, MN 55110

Project:

B2408391
Proposed DLH Taxiway A Phase 6
Duluth International Airport4701 Grinden Driv...
Duluth, MN 55811

Sample Information

Sample Number:	621643	**Depth (ft):**	3 to 6
Sampling Method:	Auger Boring ASTM D1452	**Sampled By:**	Drill Crew
Boring Number:	5		
Sample Date:	09/12/2024		
Received Date:	10/01/2024	**Lab:**	11001 Hampshire Ave S, Bloomington, MN
Tested Date:	11/13/2024	**Tested By:**	Vang, Yang

Laboratory Data

Soaked Or Unsoaked	Soaked
Method Of Preparation	ASTM D1557
Number Of Blows Per Lift	18
Surcharge (lbs)	10
Average Molding Moisture Content (%)	5.2
Dry Density Molded (pcf)	137.0
Percent Of Maximum Density	95.2
Swell (%)	0.0
Moisture Content Of Whole Specimen (%)	5.9
Moisture Content Of Top Inch (%)	7.5
Corrected Bearing Ratio At 0.1 inch	37.3
Corrected Bearing Ratio At 0.2 inch	46.8
Corrected Bearing Ratio At 0.3 inch	
Corrected Bearing Ratio At 0.4 inch	
Corrected Bearing Ratio At 0.5 inch	

See 621643.pdf in the documents section at the end of this report.

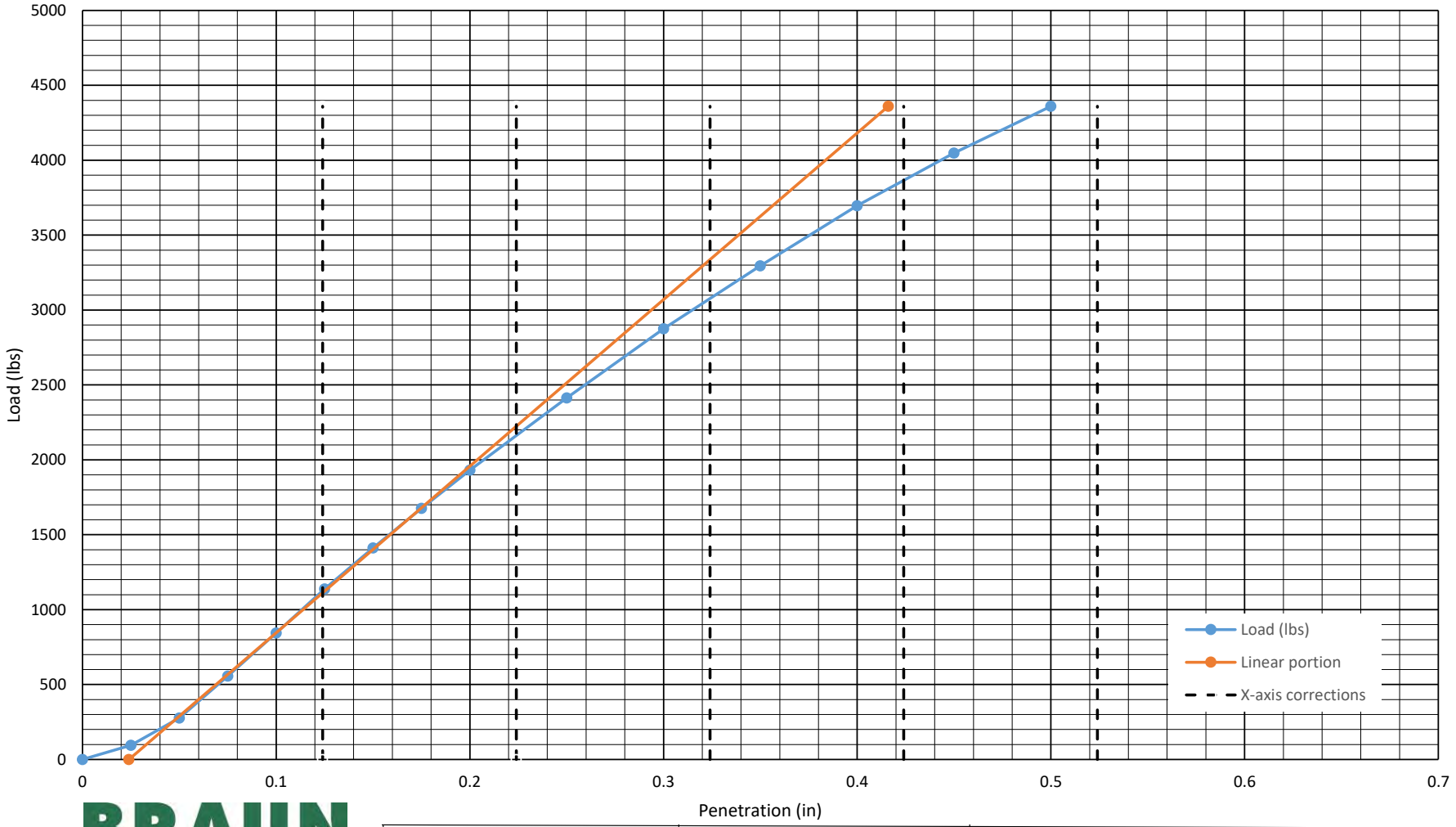
		Minimum Specified
Final Bearing Ratio (%):	46.8	
Soil Classification:	SM Silty sand with gravel	

General

Results: The test is for informational purposes.

Uncertainty was not taken into account in determining whether the test results meet the requirements. The results included in this report relate only to the items inspected or tested. Sampled per project specifications or industry standards. Also, this report is for the exclusive use of the addressed parties. We assume no responsibility to other parties regarding this report. The information indicated in this report shall not be reproduced, except in full, without prior written approval.

CBR Load Graph



BRAUN INTERTEC
The Science You Build On.

Project Number B2408391	% of Maximum 95.2	Classification
Sample Number 621643	Molding Moisture (%) 5.2	SM Silty sand with gravel, brown

California Bearing Ratio

ASTM D1883

Report Date: 11/22/2024

BRAUN INTERTEC
The Science You Build On.

4511 West First Street
Suite 4
Duluth, MN 55807
Phone: 218-624-4967

Client:

Short Elliott Hendrickson, Inc.
3535 Vadnais Center Dr
Suite 200
Saint Paul, MN 55110

Project:

B2408391
Proposed DLH Taxiway A Phase 6
Duluth International Airport4701 Grinden Driv...
Duluth, MN 55811

Sample Information

Sample Number:	621644	**Depth (ft):**	2 to 5
Sampling Method:	Auger Boring ASTM D1452	**Sampled By:**	Drill Crew
Boring Number:	11		
Sample Date:	09/12/2024		
Received Date:	10/01/2024	**Lab:**	11001 Hampshire Ave S, Bloomington, MN
Tested Date:	11/07/2024	**Tested By:**	Vang, Yang

Laboratory Data

Soaked Or Unsoaked	Soaked
Method Of Preparation	ASTM D1557
Number Of Blows Per Lift	12
Surcharge (lbs)	10
Average Molding Moisture Content (%)	14.0
Dry Density Molded (pcf)	111.7
Percent Of Maximum Density	95.2
Swell (%)	0.8
Moisture Content Of Whole Specimen (%)	15.4
Moisture Content Of Top Inch (%)	15.9
Corrected Bearing Ratio At 0.1 inch	6.0
Corrected Bearing Ratio At 0.2 inch	7.8
Corrected Bearing Ratio At 0.3 inch	
Corrected Bearing Ratio At 0.4 inch	
Corrected Bearing Ratio At 0.5 inch	

See 621644.pdf in the documents section at the end of this report.

Minimum Specified

Final Bearing Ratio (%): 7.8

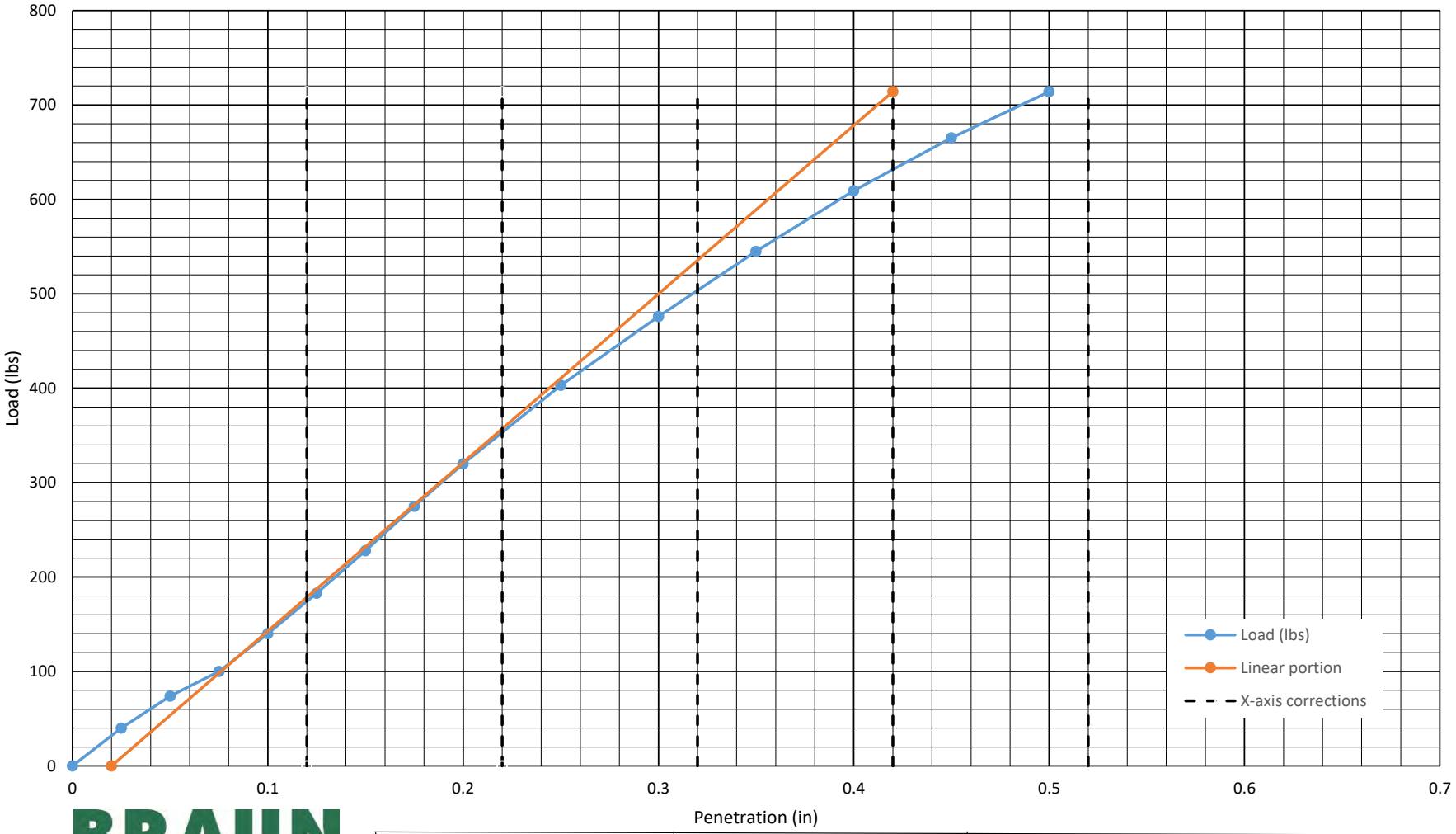
Soil Classification: SM Silty sand

General

Results: The test is for informational purposes.

Uncertainty was not taken into account in determining whether the test results meet the requirements. The results included in this report relate only to the items inspected or tested. Sampled per project specifications or industry standards. Also, this report is for the exclusive use of the addressed parties. We assume no responsibility to other parties regarding this report. The information indicated in this report shall not be reproduced, except in full, without prior written approval.

CBR Load Graph



BRAUN INTERTEC
The Science You Build On.

Project Number	B2408391	% of Maximum	95.2	Classification	
Sample Number	621644	Molding Moisture (%)	14.0	SM Silty sand, dark brown	

California Bearing Ratio

ASTM D1883

Report Date: 05/01/2025

4511 West First Street
Suite 4
Duluth, MN 55807
Phone: 218-624-4967

Client:

Short Elliott Hendrickson, Inc.
3535 Vadnais Center Dr
Suite 200
Saint Paul, MN 55110

Project:

B2411434
Proposed DLH Taxiway A Phase 6
Duluth International Airport4701 Grinden Driv...
Duluth, MN 55811

Sample Information

Sample Number:	645149	**Depth (ft):**	3 to 6
Sampling Method:	Auger Boring ASTM D1452	**Sampled By:**	Drill Crew
Boring Number:	19		
Location:	Sub-grade		
Sample Date:	02/25/2025		
Received Date:	03/19/2025	**Lab:**	11001 Hampshire Ave S, Bloomington, MN
Tested Date:	03/26/2025	**Tested By:**	Vang, Yang

Laboratory Data

Soaked Or Unsoaked	Soaked
Method Of Preparation	ASTM D1557
Number Of Blows Per Lift	20
Surcharge (lbs)	10
Average Molding Moisture Content (%)	6.5
Dry Density Molded (pcf)	133.8
Percent Of Maximum Density	95.0
Swell (%)	0.0
Moisture Content Of Whole Specimen (%)	7.6
Moisture Content Of Top Inch (%)	7.9
Corrected Bearing Ratio At 0.1 inch	50.0
Corrected Bearing Ratio At 0.2 inch	66.7
Corrected Bearing Ratio At 0.3 inch	
Corrected Bearing Ratio At 0.4 inch	
Corrected Bearing Ratio At 0.5 inch	

See 645149.pdf in the documents section at the end of this report.

Minimum Specified

Final Bearing Ratio (%): 66.7

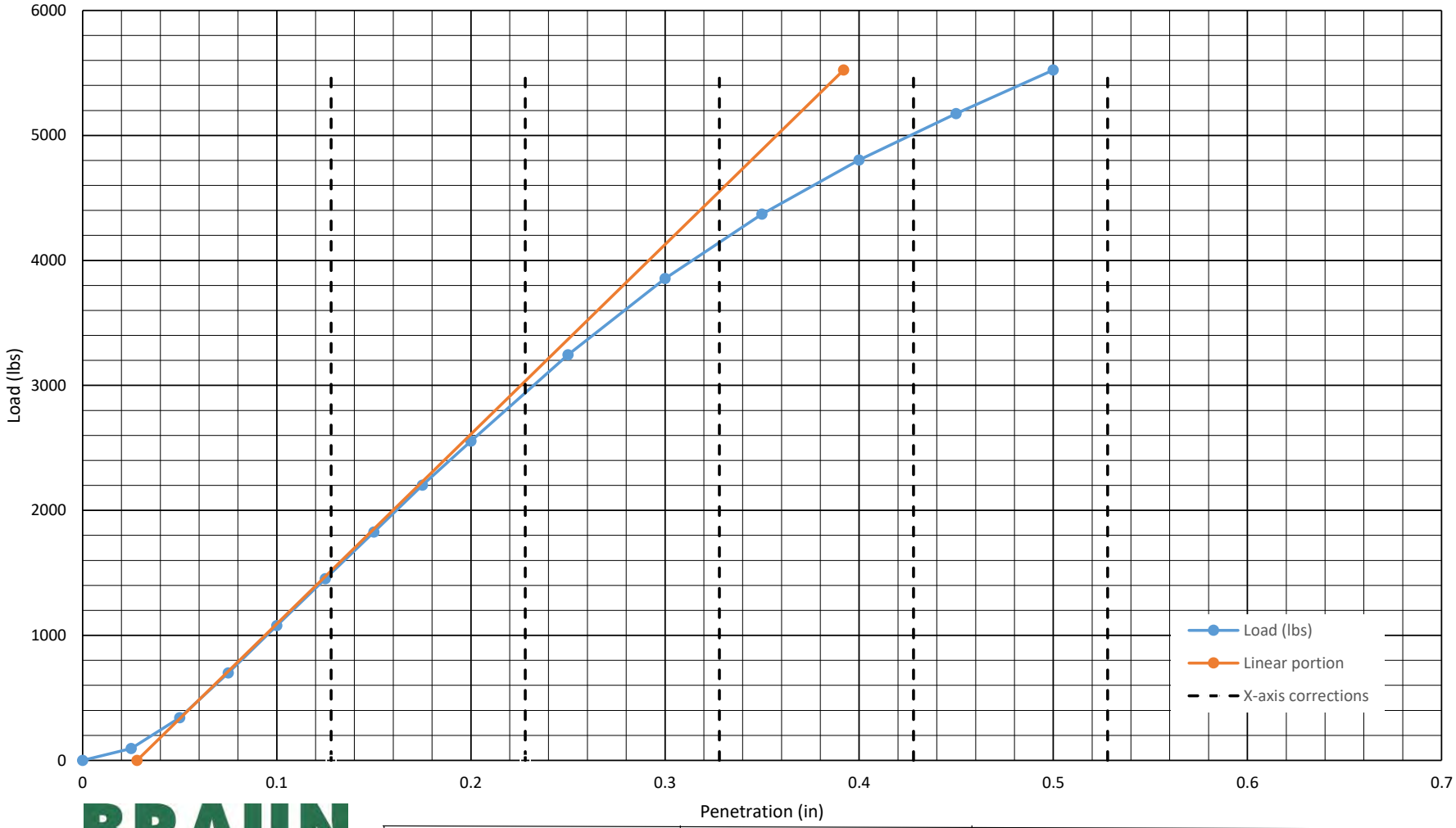
Soil Classification: SM Silty sand with gravel

General

Results: The test is for informational purposes.

Uncertainty was not taken into account in determining whether the test results meet the requirements. The results included in this report relate only to the items inspected or tested. Sampled per project specifications or industry standards. Also, this report is for the exclusive use of the addressed parties. We assume no responsibility to other parties regarding this report. The information indicated in this report shall not be reproduced, except in full, without prior written approval.

CBR Load Graph



BRAUN INTERTEC
The Science You Build On.

Project Number	B2411434	% of Maximum	95.0	Classification	
Sample Number	645149	Molding Moisture (%)	6.5	SM Silty sand with gravel, brown	

Appendix G

Phase I ESA Twy A

Phase I Environmental Site Assessment

Taxiway A Reconstruction - Phase 7

Duluth International Airport
Duluth, St. Louis County, Minnesota

DULIA 186683 | May 18, 2026

SEH

Building a Better World for All of Us®

Engineers | Architects | Planners | Scientists

Building a Better World for All of Us®

May 18, 2026

RE: Phase I Environmental Site Assessment
Taxiway A Reconstruction - Phase 7
Duluth International Airport
Duluth, St. Louis County, Minnesota
SEH No. DULIA 186683 4.00

Ryan Welch
Duluth Airport Authority
4701 Grinden Drive
Duluth, Minnesota 55811

Dear Mr. Welch:

Please find enclosed the Phase I Environmental Site Assessment (ESA) for the property associated with the Taxiway A Reconstruction – Phase 7 project located at the Duluth International Airport in Duluth, St. Louis County, Minnesota. Thank you for choosing SEH to complete this assessment. Please feel free to contact me at 651.318.0354 if you have any questions.

Sincerely,

Keri B. Aufdencamp

Keri Aufdencamp
Project Manager

jh/rh

x:\ae\d\dulai\186683\3-env-stdy-regs\30-env-doc\14-phase1\phase i esa - taxiway a reconstruction phase 7.docx

Certification

Phase I Environmental Site Assessment
Taxiway A Reconstruction - Phase 7
Duluth International Airport
Duluth, St. Louis County, Minnesota

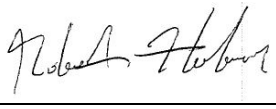
SEH No. DULIA 186683

May 18, 2026

Keri B. Aufdencamp

Keri Aufdencamp
Project Manager

Jack Hagley, PG (MN)
Environmental Scientist



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Executive Summary

Phase I Environmental Site Assessment

Short Elliott Hendrickson Inc. (SEH®) was retained by the Duluth Airport Authority (DAA) to conduct a Phase I Environmental Site Assessment (ESA) of the project areas associated with the proposed Taxiway A Reconstruction – Phase 7 project located at the Duluth International Airport (DLH) in Duluth, St. Louis County, Minnesota (herein referred to as "Subject Property").

This Phase I ESA was completed in general accordance with ASTM International (ASTM) Practice E1527-21 and in general accordance with All Appropriate Inquiries. The purpose of this Phase I ESA was to identify, to the extent feasible pursuant to the processes described in ASTM Practice E1527-21 and in a manner consistent with good commercial or customary practice, Recognized Environmental Conditions (RECs), Controlled RECs (CRECs) and Historical RECs (HRECs) in connection with the Subject Property.

The Subject Property includes three project areas that are identified as:

- Taxiway A Reconstruction Area
- Terminal Stormwater Pond Expansion Area
- and the Northern Stormwater Pond Dredge Area.

These three separate project areas are generally located in the western, southeastern, and northern parts of the DLH, respectively.

The Subject Property encompasses portions of St. Louis County parcel identification numbers (PINs) 010-2747-00160, 010-2747-00210, 010-2747-00220, 280-0031-00455, 280-0031-00456, 395-0010-00330, 395-0010-00348, 395-0010-00349, 395-0010-00350, and 395-0010-00550.

Taxiway A is the parallel taxiway for the Runway 9/27 serving DLH. The existing Taxiway A is approximately 10,700 feet in length and the reconstruction is proposed to be completed in nine phases. Phase 7 of the Taxiway A Reconstruction project, consists of an approximately 2,400-foot-long portion of the taxiway at its western end.

The Taxiway A Reconstruction Area was undeveloped and occupied by low-lying wetland on historic maps. By the 1930s, the Taxiway A Reconstruction Area was developed as farmland, and by the early 1950s, the eastern portion of the Taxiway A Reconstruction Area was developed as part of the DLH. Additional improvements to the DLH occurred through the 1960s with minimal changes observed through the present day.

The Terminal Stormwater Pond Expansion Area is located southeast of the terminal building serving DLH. The existing pond is located directly east of the southeastern corner of the large surface parking lot south of the terminal building. The Terminal Stormwater Pond Expansion Area is approximately 25,000 square feet in size and will expand the footprint of the existing stormwater pond to the west.

The Terminal Stormwater Pond Expansion portion of the Subject Property was undeveloped and occupied by low-lying wetland on historic maps. Although adjacent development of various portions of the DLH occurred as early as the late 1940s, the pond area remained undeveloped through the early 2020s. By the mid-2020s, the existing stormwater pond was constructed.

The Northern Stormwater Pond Dredge Area is located north of the airfield at the end of Warhawk Drive. The existing stormwater pond is located directly north of the end of Warhawk Drive and is accessed by a gravel access road. The Northern Stormwater Pond Dredge will consist of the removal of approximately 1,000 cubic yards of material from the existing pond to restore the storage capacity of the pond. The pond footprint will not be expanded.

The Northern Stormwater Pond Dredge Area was undeveloped and occupied by a drainage ditch since at least the late 1930s, and by the late 1980s, the existing pond was constructed. An air force complex was constructed approximately 1,000 feet southwest of the pond area in the 1950s.

The Subject Property was identified in numerous regulatory databases related to historic and current uses including Leak sites, spills, Resource Conservation Recovery Act (RCRA) hazardous waste generators, construction stormwater permits, and air emissions permits. Although the database report identified these listings for the Subject Property, a majority were located greater than 1,000 feet from the Subject Property areas with a select few located as close as 500 feet to the Subject Property areas.

Twelve regulated spills associated with the DLH were also identified as either unlocatable or as within the DLH property in the database reports. Although the exact location of these spills are unknown, it is not likely that all of these releases have affected the Subject Property. Given the use of the Taxiway A Reconstruction Area and surrounding area, it is likely that some spills related to fueling activities have occurred on or adjacent to the Taxiway A Reconstruction Area. Therefore, the previous releases with limited location information are considered a **CREC** for the Subject Property.

The remaining facilities included in the database report are unlikely to have current or former releases of hazardous substances or petroleum products with the potential to migrate to the Subject Property based on a variety of factors including, but not limited to: the overall setting in which the Subject Property is located, potential depth to groundwater and assumed groundwater flow direction, existing or past uses of the surrounding properties, the potential migration distance of hazardous substances and/or petroleum products in the area, and distance from the Subject Property.

The DLH includes the base of the Minnesota Air National Guards (ANG's) 148th Fighter Wing (FW). The 148th FW facilities are located on leased properties at several locations in the vicinity of the main east-west runway at the DLH and the main base is located on the eastern side of the DLH. The 148th FW base houses aircraft, vehicles, and equipment. Current and past operations at the base have involved the use of products such as fuels, oils, lubricants, paints, paint thinners, solvents, and aqueous film forming foam (AFFF). Based on a review of the 2019 and 2025 Five-Year Review Reports, the operable units (OUs) associated with the 148th FW base are not considered a REC for the Subject Property.

A base-wide per- and polyfluoroalkyl substances (PFAS) Remedial Investigation (RI) is currently on-going at the DLH as the Minnesota ANG is evaluating PFAS impacts through a similar process used under the Installation Restoration Program (IRP) and consistent with the provisions of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended. Based on a review of the interim results provided by the Minnesota ANG, several detections of perfluorooctanoic acid (PFOA) and perfluorodecanoic acid (PFDA) exceeding their respective Minnesota Pollution Control Agency (MPCA) Commercial/Industrial Soil Reference Values (ISRVs) and/or Residential/Recreational SRVs (RSRVs) were located either within or adjacent to the Taxiway

A Reconstruction Area and Northern Stormwater Pond Dredge Area and are considered a **REC** for the Subject Property.

Conclusions

We have performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E1527-21 of the property associated with the Taxiway A Reconstruction – Phase 7 project at the Duluth International Airport in Duluth, St. Louis County, Minnesota, the Subject Property. Any exceptions to, or deletions from, this practice are described in **Sections 1.4** and **8.0** of this report. This assessment has revealed the following RECs and CRECs in connection with the Subject Property.

- Detections of PFAS compounds exceeding their respective MPCA ISRVs and/or RSRVs at or adjacent to the Taxiway A Reconstruction Area and Northern Stormwater Pond Dredge Area; **REC**
- Previous spills with limited location information; **CREC**.

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Phase I Environmental Site Assessment

Taxiway A Reconstruction - Phase 7

Prepared for the Duluth Airport Authority

1 Introduction

Short Elliott Hendrickson Inc. (SEH) was retained by the Duluth Airport Authority (DAA) to conduct a Phase I Environmental Site Assessment (ESA) of the project areas associated with the proposed Taxiway A Reconstruction – Phase 7 project located at the Duluth International Airport (DLH) in Duluth, St. Louis County, Minnesota (herein referred to as "Subject Property"). The proposed project includes three project areas that are identified as the Taxiway A Reconstruction Area, the Terminal Stormwater Pond Expansion Area, and the Northern Stormwater Pond Dredge area. These project areas are all separated and are generally located in the western, southeastern, and northern parts of the DLH, respectively.

The Subject Property encompasses portions of St. Louis County parcel identification numbers (PINs) 010-2747-00160, 010-2747-00210, 010-2747-00220, 280-0031-00455, 280-0031-00456, 395-0010-00330, 395-0010-00348, 395-0010-00349, 395-0010-00350, and 395-0010-00550. The location of the Subject Property is depicted on **Figure 1.**

Taxiway A is the parallel taxiway for the main runway (Runway 9/27) serving DLH. The existing Taxiway A is approximately 10,700 feet in length and the reconstruction is proposed to be completed in nine phases. Phase 7 of the Taxiway A Reconstruction project, consists of an approximately 2,400-foot-long portion of the taxiway at its western end.

The Terminal Stormwater Pond Expansion Area is located southeast of the terminal building serving DLH. The existing pond is located directly east of the southeastern corner of the large surface parking lot south of the terminal building. The Terminal Stormwater Pond Expansion Area is approximately 25,000 square feet in size and will expand the footprint of the existing stormwater pond to the west.

The Northern Stormwater Pond Dredge Area is located north of the airfield at the end of Warhawk Drive. The existing stormwater pond is located directly north of the end of Warhawk Drive and is accessed by a gravel access road. The Northern Stormwater Pond Dredge will consist of the removal of approximately 1,000 cubic yards of material from the existing pond to restore the storage capacity of the pond. The pond footprint will not be expanded.

The proposed projects are described further in **Section 1.1** and the project areas are shown on **Figure 2**.

1.1 Background and Proposed Projects Scope of Work

1.1.1 Taxiway A Reconstruction – Phase 7

The overall reconstruction project includes realignment of the taxiway in the same general area as the existing Taxiway A. The Phase 7 project will also include the reconstruction and realignment of Taxiway A1 and Taxiway A2, which join Runway 9/27 with Taxiway A to meet current Federal Aviation Administration (FAA) design standards, which include having a right-angle intersection with the runway.

The proposed project scope of work includes removal of existing airfield pavements, completion of a soil correction below the proposed taxiway and connection pavement for placement of non-frost susceptible soil, concrete taxiway pavement installation, asphalt shoulder pavement construction, and storm sewer infrastructure and drainage improvements. Taxiway edge lighting, airfield signage, related airfield electrical circuits and turf establishment will also be completed with this project.

1.1.2 Terminal Stormwater Pond Expansion Area

The Terminal Stormwater Pond Expansion scope of work includes expanding the current pond footprint to the west approximately 80 feet. The project will also include regrading of the pond base sidewalls, placement of perforated drain tile and synthetic pond liner, and resetting of the existing riprap.

1.1.3 Northern Stormwater Pond Dredge Area

Additional stormwater capacity is needed at the stormwater pond located to the north of the active airfield. The existing pond is located north of Warhawk Drive and is accessed by a gravel road that runs north from Warhawk Drive. The southern portion of the pond will be dredged to restore required stormwater capacity. The dredge will consist of the removal of up to 3 feet of sediment from the southern portion of the existing pond.

1.2 Purpose

A SEH environmental professional completed the Phase I ESA in general accordance with ASTM International (ASTM) Practice E1527-21. This report was also completed in general accordance with the standards and practices established by the United States Environmental Protection Agency (EPA) for conducting all appropriate inquiries (AAI) and is intended to permit the user to satisfy certain landowner liability protections (LLPs) under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The purpose of the Phase I ESA is to identify, to the extent feasible pursuant to the processes described in ASTM Practice E1527-21 and in a manner consistent with good commercial or customary practice, Recognized Environmental Conditions (RECs), Controlled RECs (CRECs) and Historical RECs (HRECs) in connection with the Subject Property.

By ASTM definition, **REC** means " (1) the presence of hazardous substances or petroleum products in, on, or at the Subject Property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the Subject Property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the Subject Property under conditions that pose a material threat of a future release to the environment." ***De minimis*** conditions are not recognized environmental conditions.

The term **HREC** is defined by ASTM to mean "a previous release of hazardous substances or petroleum products affecting the Subject Property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by a regulatory authority or authorities without subjecting the property to any controls (for example, activity and use limitations or other property use limitations)."

The term **CREC** is defined by ASTM to mean "a recognized environmental condition affecting the Subject Property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, activity and use limitations or other property use limitations)."

The ASTM Practice E1527-21 defines migration as the "movement of hazardous substances or petroleum products in any form, including, for example, solid and liquid at the surface or subsurface, and vapor in the subsurface." Therefore, migration of soil vapor has been evaluated in determining RECs, HRECs, and CRECs for the Subject Property.

This Phase I ESA is being completed for the purpose of enrolling the proposed project into the Minnesota Pollution Control Agency (MPCA) Voluntary Brownfields Program.

1.3 Scope of Services

The Phase I ESA consists of the following four general tasks:

- **Records Review** – The purpose of the records review is to obtain and review reasonably ascertainable records from standard sources (including government records, physical setting sources, and historical use records) to assist in identifying RECs, HRECs and/or CRECs (all referred to as RECs in this section) in connection with the Subject Property. Publicly-available federal, tribal, state, county and/or city records are reviewed as appropriate to determine if the property has had a history of spills, leaks, hazardous waste storage, regulatory compliance and improper waste disposal practices. Reasonably ascertainable standard historical sources are reviewed as necessary to identify prior uses of the property from the time the property was first developed or 1940, whichever is earlier. Significant data gaps of greater than 5 years in property historical information are identified and discussed.
- **Site Reconnaissance** – The objective of the site reconnaissance is to observe the Subject Property to obtain information indicating the likelihood of RECs in connection with the Subject Property. As part of the site reconnaissance, SEH observes the property and structures, if any, located on the property for indications of RECs to the extent not obstructed by thick vegetation, bodies of water, stored materials or product, equipment, or other obstacles. Potential environmental concerns on the Subject Property and observable environmental concerns on adjoining properties that relate to improper waste storage and disposal, and hazardous materials are noted.
- **Interviews** – The purpose of conducting interviews is to obtain information indicating RECs in connection with the Subject Property. As appropriate, past and present owners, operators, employees and occupants of the facility, and government officials are interviewed regarding the property. If the Subject Property is abandoned, one or more owners or occupants of neighboring properties are interviewed.
- **Technical Report** – SEH prepares the technical report summarizing the compiled information, and offers findings, opinions and conclusions based on the available data. If significant data gaps are identified, they are discussed in the report. RECs, if any, identified

during performance of the Phase I ESA are described in the report. The report also includes SEH's opinion of the potential impact of each REC, if RECs are identified.

For the tasks listed above, records reviewed will be limited to information that is publicly available, obtainable from its source within reasonable time and cost constraints, is practically reviewable, and determined by the environmental professional to be useful in evaluating the condition of the property.

The Phase I ESA was conducted in accordance with an Agreement between SEH and DAA dated June 26, 2025.

The Phase I ESA does not include testing or sampling of materials (for example, soil, water, air or building materials).

This Phase I ESA does not include evaluation of the following non-scope considerations specified in Section 13.1.5 of ASTM Practice E1527-21:

1. Asbestos-containing building materials unrelated to releases to the environment;
2. Biological agents;
3. Cultural and historic resources;
4. Ecological resources;
5. Endangered species;
6. Health and safety;
7. Indoor air quality unrelated to releases of hazardous substances or petroleum products into the environment;
8. Industrial hygiene;
9. Lead-based paint unrelated to releases into the environment;
10. Lead in drinking water;
11. Mold or microbial growth conditions;
12. Polychlorinated biphenyl- (PCB-) containing building materials
13. Naturally occurring radon;
14. Regulatory compliance;
15. Substances not defined as hazardous substances, including some substances generally referred to as emerging contaminants; and
16. Wetlands.

1.4 Significant Assumptions

The following significant assumption has been incorporated into this report:

- Groundwater flow in the northern half of the DLH is expected to flow to the north, while groundwater flow in the southern half of the DLH is expected to flow to the south (EMR, Inc. [EMR], 2004).

1.5 Limitations and Exceptions

SEH was limited in conducting this Phase I ESA by the following:

- MPCA files for SA0020205, SA0020197, and LS0010249 were not available for review by the publication of this report.

- Interviews with all past and current owners of parcels within the Subject Property were not within the scope of this Phase I ESA.
- Information for the Subject Property was not identified between 1939 and 1948, between 1953 and 1961, between 1961 and 1969, and between 1981 and 1986.

SEH has considered the significance of the data gaps in affecting our ability to identify RECs for the Subject Property, and if identified, significant data gaps are discussed herein.

1.6 Special Terms and Conditions

SEH performed the Phase I ESA in general accordance with ASTM Practice E1527-21 and the Agreement between SEH and DAA. Performance of the Phase I ESA in general accordance with ASTM Practice E1527-21 is intended to reduce, but not eliminate, uncertainty regarding the existence of RECs, CRECs or HRECs in connection with the Subject Property.

Reasonably ascertainable, data was obtained and reviewed; however, the accuracy of the collected data is not the responsibility of SEH. Information provided to SEH by client representatives and site contacts has been accepted in good faith and is assumed to be accurate unless written documentation, available within the scope of this Phase I ESA, or visual observations contradicted it.

The Phase I ESA is not a comprehensive site characterization and should not be construed as such. The findings and conclusions of the Phase I ESA are based on information collected and observed at the time of the Phase I ESA and are not scientific certainties, but probabilities based on professional judgment regarding the significance and accuracy of the collected data. Because professional judgments incorporated into the report are based on limited evidence, there is inherent uncertainty in the conclusions drawn and reported. The client has determined that the level of effort and corresponding degree of uncertainty are acceptable for the client's purpose. The Phase I ESA may not include all environmental conditions that can materially impact the property and a finding of no RECs, CRECs, or HRECs is not a warranty or guarantee that a property remains free from contamination.

Laws and regulations, if referenced in this report, are provided for information purposes and should not be construed as legal opinion or recommendation.

1.7 User Reliance

The Phase I ESA and all reports, verbal and written, are solely for the use of DAA. Any third party may have different interests, purposes, and motives than DAA with regard to this assessment and report. Any reliance on the Phase I ESA by any other party shall be at such party's sole risk, unless that party has written authorization from SEH and DAA and is a party to the Agreement between SEH and DAA.

2 Subject Property Description

Subject Property Location	Taxiway A Reconstruction Area, the Terminal Stormwater Pond Expansion Area, and the Northern Stormwater Pond Dredge Area are generally located in the western, southeastern, and northern parts of the DLH respectively. (The extent of the project areas are depicted on **Figures 2** and **3**).
City, County, State	Duluth, St. Louis County, Minnesota
Parcel ID	Portions of PINS 010-2747-00160, 010-2747-00210, 010-2747-00220, 280-0031-00455, 280-0031-00456, 395-0010-00330, 395-0010-00348, 395-0010-00349, 395-0010-00350, and 395-0010-00550
Owner	City of Duluth
Subject Property Size	The Taxiway A Reconstruction - Phase 7 project area extends approximately 2,400 lineal feet. The Terminal Stormwater Pond Expansion project is approximately 25,000 square feet in size. The Northern Stormwater Pond Dredge project is to remove approximately 1,000 cubic yards of material.
Subject Property Township, Range, and Section	Township 50 North, Range 15 West, Sections 1, 2, and 3
Latitude/Longitude	46.840032; -92.198846 (approximate center of Subject Property)
Improvements	The Subject Property is developed with aircraft pavements, stormwater ponds , and maintained greenspace.
Subject Property Use	Commercial air traffic.

The location of the Subject Property is depicted on **Figure 1** and the approximate Subject Property boundary and features are shown on **Figure 2**.

3 User Provided Information

As specified under the ASTM standard, certain responsibilities generally lie with the user of this Phase I ESA. The user is the party seeking to use ASTM Practice E1527-21 to perform a Phase I ESA of a property. The user may include a purchaser of property, a potential tenant of property, an owner of property, a lender, or a property manager. For purposes of this Phase I ESA, the user is Duluth Airport Authority.

Information provided by the user is accepted in good faith and is assumed to be accurate and complete.

3.1 Title Records, Environmental Liens or Activity and Use Limitations

One of the user's responsibilities is to review land title records and judicial records for Environmental Liens and Activity Use Limitations (AULs). Environmental Liens and AULs can indicate a past or present release on the Subject Property. An Environmental Lien is a charge,

security, or encumbrance upon title to a property to secure the payment of a cost, damage, debt, obligation, or duty arising out of response actions, cleanup, or other remediation of hazardous substances or petroleum products upon a property, including (but not limited to) liens imposed pursuant to CERCLA 42 U.S.C. §§9607(1) & 9607(r) and similar state or local laws. AULs are legal or physical restrictions or limitations on the use of, or access to a site or facility intended to limit potential exposure to hazardous substances or petroleum products or prevent certain activities that could interfere with the effectiveness of a response action.

The user did not provide land title records for the Subject Property. We assume the user is evaluating this information outside of this Phase I ESA.

SEH reviewed the MPCA's online registry of institutional controls to determine if AULs are associated with the Subject Property. In addition, SEH reviewed the regulatory database report provided by Environmental Risk Information Services (ERIS), which included a search for facilities with federal and state institutional controls and federal engineering controls. The Subject Property was not identified in the institutional or engineering controls databases.

3.2 User Questionnaire

As part of the Phase I ESA, SEH requested the user provide a completed user questionnaire providing information regarding environmental liens, specialized knowledge, relationship of purchase price to fair market value, commonly known or reasonably ascertainable information, and obvious indicators of contamination.

The questionnaire completed by the DAA is included as **Appendix A**.

3.2.1 Environmental Cleanup Liens and AULs

The user indicated they are not aware of environmental cleanup liens or AULs associated with the Subject Property.

3.2.2 Specialized Knowledge

The user did not have specialized knowledge or experience related to the property or nearby properties.

3.2.3 Relationship of Purchase Price to Fair Market Value

Because the Subject Property is not being sold, the fair market value has not been established.

3.2.4 Commonly Known or Reasonably Ascertainable Information

The user indicated that previous investigations have been completed at the project site. See **Section 4.2.3** for a summary of the previously completed investigations.

3.2.5 Obvious Indicators of Contamination

The user indicated that the site was previously investigated for the presence of per- and polyfluoroalkyl substances (PFAS) in soils and that previously completed investigations have identified the presence of soil contamination. See **Section 4.2.3** for a summary of the previously completed investigations.

3.3 Reason for Performing the Phase I ESA

The Phase I ESA is being performed to identify, to the extent feasible pursuant to the processes described in ASTM Practice E1527-21 and in a manner consistent with good commercial and customary practice, RECs, CRECs and HRECs in connection with the Subject Property. We further understand the DAA intends to enroll the Taxiway A Reconstruction – Phase 7 project into the MPCA Voluntary Brownfields Program. We assume the purpose of the Phase I ESA is to qualify for a landowner liability protection to CERCLA liability.

4 Records Review

The records review was performed to obtain and review reasonably ascertainable records from standard sources (including government records, physical setting sources, and historical use records) to assist in identifying RECs in connection with the Subject Property. SEH reviewed historical records of aerial photographs, topographic maps, city directories and fire insurance maps where available and deemed necessary to minimize data gaps.

4.1 Physical Setting

SEH reviewed the physical setting of the Subject Property from various sources.

4.1.1 Topography

For the Taxiway A Reconstruction Area the paved portions of the Taxiway A are at a higher elevation than the remainder of the Subject Property, at an approximate elevation of 1420 feet above mean sea level (amsl). The taxiway gently slopes to the southeast and low areas are located north and south of the taxiway and between the taxiway and the runway, at an approximate elevation of 1412 feet amsl (MnTOPO, 2026).

For the Terminal Stormwater Pond Expansion Area the existing stormwater pond is located in a generally flat portion of the Subject Property, at an approximate elevation of 1375 feet amsl. The existing pond overflows to the east and drains to the southeast towards a low spot at an approximate elevation of 1370 feet amsl (MnTOPO, 2026).

For the Northern Stormwater Pond Dredge Area the existing stormwater pond is located in a low lying portion of the Subject Property, at an approximate elevation of 1395 feet amsl. The existing pond drains to the west and follows the drainage channel that flows northwest (MnTOPO, 2026).

4.1.2 Surficial Soils

Published geology indicates native deposits in this area are glacial lake deposits of the Cromwell Formation of the Wrenshall Member of the Michigan Sub-episode and consist of brown silt and clay with minor sand (Minnesota Geological Survey [MGS], 2009).

4.1.3 Bedrock Geology

The uppermost bedrock unit is the Gabbroic Zone of the Duluth Complex at approximately 1320 to 1370 feet amsl or around 50 to 100 feet below ground surface (bgs). The Gabbroic zone of the Duluth Complex is described as medium-grained, intergranular, foliated and locally layered olivine oxide gabbro. The Gabbroic Zone of the Duluth Complex ranges from 2,300 to 5,000 feet thick (MGS, 2008).

4.1.4 Hydrogeology

According to the 2004 Site Research Report (EMR, 2004), the DLH is situated on a groundwater mound. Groundwater flow in the northern half of the DLH is to the north, while groundwater flow in the southern half of the DLH is to the south.

Depth to groundwater is variable across the DLH. Well records obtained through the Minnesota Department of Health's (MDH's) Minnesota Well Index (MWI) online mapping tool indicate groundwater in the southwestern portion of the DLH (near the Taxiway A Reconstruction Area) is at approximately 8 feet bgs (approximate elevation of 1403 feet amsl), and groundwater in the southeastern portion of the DLH (near the Terminal Pond Expansion portion of the Subject Property) is at approximately 10 feet bgs (approximate elevation of 1377 feet amsl). Standing water was observed in both the Terminal Stormwater Pond (approximate elevation of 1370 feet amsl) and North Stormwater Pond Dredge Area (approximate elevation of 1395 feet amsl) portions of the Subject Property during the site reconnaissance.

4.1.5 Water Wells and Wellhead Protection Areas

SEH reviewed the MDH's MWI online mapping tool to evaluate if wells were located on the Subject Property.

No wells were mapped on the Subject Property; however, one monitoring well was observed within the Terminal Stormwater Pond Expansion Area during the site reconnaissance. See **Section 5.2.8.3**.

According to the MPCA Petroleum Remediation Program (PRP) and MDH MWI online mapping programs, the Subject Property does not fall within a wellhead protection area.

4.2 Regulatory Records Review

SEH completed a standard environmental record search of available state and federal environmental databases. The search included review of a database report provided by a third party, as well as a search of additional state, county and/or federal database websites.

4.2.1 Environmental Database Report

ERIS performed an electronic database search of files from Federal and State environmental records databases within minimum search distances as specified in ASTM Practice E1527-21. A summary of all records retrieved by the search, the minimum search distances, and the date that source information was last updated is included in the environmental database report in **Appendix B**. A list of data sources is also provided in the report.

The environmental database report review did not include a comprehensive, exhaustive review of all records.

SEH reviewed the environmental database report to identify listings with documented or potential releases of hazardous substances or petroleum products that have the potential to impact the Subject Property. The following listings were identified in the environmental database report for further review.

The FINDS/FRS listing stands for Facility Index System/Facility Registry Service, which are EPA databases that consolidate facility information from various environmental regulatory programs.

These listings identify facilities that are regulated or tracked by environmental agencies, but do not necessarily indicate that any hazardous substance release or environmental concern has occurred. A FINDS/FRS listing is not considered a Recognized Environmental Condition (REC) because it simply reflects the facility's presence in regulatory databases, rather than documenting evidence of contamination or potential risk to human health or the environment.

4.2.1.1 Subject Property Listings (Taxiway A Reconstruction Area)

The Subject Property (Taxiway A Reconstruction Area) was included in the following databases.

Site Name	Database	Listing Description
Duluth International Airport/DLH - Duluth Intl (Multiple Name Variations)	- Formerly Used Defense Sites (FUDS) - Air Facility System (AFS) -Integrated Compliance Information System (ICIS) - Facility Registry Service/Facility Index (FINDS/FRS) - MPCA Agency Interests (MPCA AI) - MPCA Remediation Leak Sites (LST REM SITE) - Historical Leak Sites (HIST LEAKSITES) - Spills reported to the Pollution Control Agency (SPILLS) - Historic spills reported to the Pollution Control Agency (HIST SPL) - Emergency Response Notification System (ERNS) - RCRA Very Small Quantity Generators List (RCRA VSQG) - Delisted Storage Tanks (DELISTED TANK) -Underground Storage Tanks (UST) - MPCA Site Assessment and	The DLH property is listed under FUDS ID# E05MN0033, which encompasses a number of sites located throughout the DLH. FUDS are properties that the Department of Defense (DoD) once owned or used but no longer control. See **Section 4.2.3** for a review of the Subject Property in relation to the FUDS listing. The AFS/ICIS listings are related to permitted air emissions at the DLH. An air emissions listing only indicates that the DLH has or had a source of air pollution that requires a permit or registration from the state or federal agency. The listings do not imply that a release has occurred. Therefore, the listings are not considered a REC for the Subject Property. A total of 11 FINDS/FRS and 16 MPCA AI listings were identified in the database report for the DLH property. These listings identify facilities that are regulated or tracked by environmental agencies, but do not necessarily indicate that a release of hazardous substances or petroleum products has occurred; therefore, these listings are not considered a REC for the Subject Property. The LST REM SITE/HIST LEAKSITE listings are related to MPCA Leak Site LS0004479, which is located at the main terminal facility, approximately 7,500 feet east of the Taxiway A Reconstruction Area. Given the distance of this listing from the Subject Property, these listings are not considered a REC for the Subject Property. The following SPILLS/HIST SPILL/ERNS listings were identified in the Database report for the DLH property: - 100 gallons of aviation gas in June 1999 - 40 gallons of jet fuel in November 1998 - 40 gallons of jet fuel in January 1999 - 35 gallons of aviation gas in January 1999 - 90 gallons of jet fuel in November 2003 - 15 gallons of transformer oil in April 2020 The exact location of these releases was not specified; however, each release was contained,

	Emergency Response Sites (SITE ASSESSMENT)	cleaned, and has received regulatory closure. While it is not likely that all of these releases occurred within the Taxiway A Reconstruction Area, given the use of the Taxiway A Reconstruction Area and surrounding area, it is likely that some releases related to fueling activities have occurred on or adjacent to the Taxiway A Reconstruction Area. Therefore, the previous releases with limited location information are considered a **CREC** for the Subject Property. The database report identified two RCRA VSQG listings for the DLH property, the exact locations of these facilities within the overall DLH property was not specified; however, the only listed compliance monitoring and enforcement (violation) records consist of a letter of warning in May 2002. These listings do not indicate that a release of hazardous substances or petroleum products has occurred; therefore, these listings are not considered a REC for the Subject Property. The DELISTED TANK/UST listings identified 12 removed USTs ranging in size between 500 and 50,000 gallons. Contents included diesel, gasoline, fuel oil, and aviation gasoline. The exact location of the USTs were not specified; however, it is assumed that the USTs were located near operational areas of DLH and not within the Taxiway A Reconstruction Area. This listing is not considered a REC for the Subject Property. The SITE ASSESSMENT listing is associated with MPCA ID SA0000367. The exact location of this listing was not specified; however, details obtained through the MPCA WIMN dashboard indicate that no investigation/remedial actions were completed. The listing was opened and referred to the MPCA Petroleum Remediation program in June 2017. This listing is not considered a REC for the Subject Property.
Delta Airlines Inc. Duluth Ramp	- Aboveground Storage Tanks (AST)	The AST listing identified 2 active ASTs ranging in size between 1,000 and 6,650 gallons. Contents include gasoline blends and unspecified chemicals. The exact location of the ASTs are not specified; however, it is assumed that the ASTs are located near operational areas of DLH and not within the Taxiway A Reconstruction Area. This listing is not considered a REC for the Subject Property.
Duluth Internation Airport Block 3	- Petroleum Brownfields Program Sites (BROWNFIELDS) - Voluntary Investigation and Cleanup Program List (VIC)	This listing is related to MPCA ID VP15240 and is within the overall DLH property; however, it is located over 1,700 feet southeast of the Taxiway A Reconstruction Area. Given the distance of this listing from the Subject Property, these listings are not considered a REC for the Subject Property.

Former Fueling Station/ Duluth International Airport Maintenance Garage	- Delisted Leaking Storage Tanks (DELISTED LST) - LST REM SITE	This listing is related to MPCA IDs LS0003496, LS0020250, and LS0020226. These listings are within the overall DLH property; however, are located over 1,700 feet southeast of the Taxiway A Reconstruction Area. Given the distance of these listings from the Subject Property, these listings are not considered a REC for the Subject Property.
DAA Air National Gurad (ANG) Fire Station Phase 3	- MPCA AI - Permitted Solid Waste Facilities (SWF/LF)	These listings are associated with an MPCA Construction Stormwater Permit. These listings do not indicate that a release of hazardous substances or petroleum products has occurred; therefore, these listings are not considered a REC for the Subject Property.

4.2.1.2 Surrounding Listings (Taxiway A Reconstruction Area)

The remaining facilities included in the database for the Taxiway A Reconstruction Area are unlikely to have current or former releases of hazardous substances or petroleum products with the potential to migrate to the Subject Property based on a variety of factors including, but not limited to: the anticipated scope of work for the reconstruction project, the overall setting in which the Taxiway A Reconstruction Area is located, potential depth to groundwater and assumed groundwater flow direction, existing or past uses of the surrounding properties, the potential migration distance of hazardous substances and/or petroleum products in the area, and distance from the Subject Property.

4.2.1.3 Subject Property (Terminal Stormwater Pond Expansion Area) Listings

The Subject Property (Terminal Stormwater Pond Expansion Area) was included in the following databases.

Site Name	Database	Listing Description
Duluth International Airport	- FUDS	The DLH property is listed under FUDS ID# E05MN0033, which encompasses a number of sites located throughout the DLH. FUDS are properties that the Department of Defense (DoD) once owned or used but no longer control. See **Section 4.2.3** for a review of the Subject Property in relation to the FUDS listing.

4.2.1.4 Surrounding Listings (Terminal Stormwater Pond Expansion Area)

The following listings were identified in the environmental database report and required further review.

Site Name	Address	Database	Listing Description
Delta Global Services	4701 Airport Drive – Located approximately 1,000 feet northwest of the Subject Property	- RCRA Non-Generators (RCRA NON GEN)	This facility is located within the overall DLH property; however, the exact location was not specified. There are no compliance monitoring and enforcement (violation) records associated with this listing; therefore, this listing is not considered a REC for the Subject Property.

Duluth International Airport/DLH - Duluth Intl (Multiple Name Variations)	4701 Grinden Drive – Located adjacent to the northwest of the Terminal Stormwater Pond Expansion Area	- AFS - ICIS - FINDS/FRS - MPCA AI - LST REM SITE - HIST LEAKSITES - SPILLS - HIST SPL - ERNS - RCRA VSQG - DELISTED TANK - UST - SITE ASSESSMENT	The AFS/ICIS listing is related to permitted air emissions at the DLH. An air emissions listing only indicates that the DLH has or had a source of air pollution that requires a permit or registration from the state or federal agency. The listing does not imply that a release has occurred. Therefore, this listing is not considered a REC for the Subject Property. A total of 13 FINDS/FRS and 16 MPCA AI listings were identified in the database report for the DLH property. These listings identify facilities that are regulated or tracked by environmental agencies, but do not necessarily indicate that a release of hazardous substances or petroleum products has occurred; therefore, these listings are not considered a REC for the Subject Property. The DELISTED TANK/UST listings identified 12 removed USTs ranging in size between 500 and 50,000 gallons. Contents included diesel, gasoline, fuel oil, and aviation gasoline. The exact location of the USTs were not specified; however, it is assumed that the USTs were located near operational areas of DLH and not near the Terminal Stormwater Pond Expansion Area. This listing is not considered a REC for the Subject Property. The LST REM SITE/HIST LEAKSITE listings are related to MPCA Leak Site LS0004479, which is located at the main terminal gates, over 700 feet northwest of the Terminal Stormwater Pond Expansion Area. Given the distance of this listing from the Subject Property, this listing is not considered a REC for the Subject Property. The following SPILLS/HIST SPILL/ERNS listings were identified in the Database report for the Terminal Stormwater Pond Expansion Area: - 100 gallons of aviation gas in June 1999 - 40 gallons of jet fuel in November 1998 - 40 gallons of jet fuel in January 1999 - 35 gallons of aviation gas in January 1999 - 90 gallons of jet fuel in November 2003 - 15 gallons of transformer oil in April 2020 The exact location of these releases was not specified; however, each release was contained, cleaned, and has received regulatory closure. It is not likely that these releases occurred within the Terminal

Site Name	Address	Database	Listing Description
			Stormwater Pond Expansion Area given the use of the area and surrounding area. Therefore, these listings are not considered a REC for the Subject Property. The database report identified two RCRA VSQG listings for the DLH property, the exact locations of these facilities within the overall DLH property was not specified; however, the only listed compliance monitoring and enforcement (violation) records consist of a letter of warning in May 2002. These listings do not indicate that a release of hazardous substances or petroleum products has occurred; therefore, these listings are not considered a REC for the Subject Property. The SITE ASSESSMENT listing is associated with MPCA ID SA0000367. The exact location of this listing was not specified; however, details obtained through the MPCA WIMN dashboard indicate that no investigation/remedial actions were completed. The listing was opened and referred to the MPCA Petroleum Remediation program in June 2017. This listing is not considered a REC for the Subject Property.
Delta Airlines Inc. Duluth Ramp	4701 Grinden Drive – Located adjacent to the northwest of the Terminal Stormwater Pond Expansion Area	- AST	The AST listing identified 2 active ASTs ranging in size between 1,000 and 6,650 gallons. Contents include gasoline blends and unspecified chemicals. The exact location of the ASTs are not specified; however, it is assumed that the ASTs are located near operational areas of DLH and not near the Terminal Stormwater Pond Expansion Area. This listing is not considered a REC for the Subject Property.
Duluth International Airport Block 3	4701 Grinden Drive – Located adjacent to the northwest of the Terminal Stormwater Pond Expansion Area	- BROWNFIELDS - VIC	This listing is related to MPCA ID VP15240 and is within the overall DLH property; however, it is located approximately 6,000 feet west of the Terminal Stormwater Pond Expansion Area. Given the distance of this listing from the Subject Property, this listing is not considered a REC for the Subject Property.
Former Fueling Station/ Duluth International Airport Maintenance Garage	4701 Grinden Drive – Located adjacent to the northwest of the Terminal Stormwater Pond Expansion Area	- DELISTED LST - LST REM SITE - HIST LEAKSITE - FINDS/FRS	These listings are related to MPCA IDs LS0003496, LS0020250, and LS0020226. These listings are within the overall DLH property; however, are located over 3,000 feet west of the Terminal Stormwater Pond Expansion Area. Given the distance of these listings from the Subject Property, these listings are not considered a REC for the Subject Property.

Site Name	Address	Database	Listing Description
Case Power and Equipment	6501 Haines Road – Located adjacent to the southeast of the Terminal Stormwater Pond Expansion Area	- FINDS/FRS	FINDS/FRS listings identify facilities that are regulated or tracked by environmental agencies, but do not necessarily indicate that a release of hazardous substances or petroleum products has occurred; therefore, these listings are not considered a REC for the Subject Property.
Northwest Airlines Inc	4701 Grinden Drive – Located adjacent to the northwest of the Terminal Stormwater Pond Expansion Area	- FINDS/FRS - SPILLS - Toxics Release Inventory (TRI) Program (TRIS)	These listings are associated with a release of 300 gallons of aviation gas in October 1995. The exact location of this release was not specified; however, the release has received regulatory closure. It is not likely that these releases occurred within the Terminal Stormwater Pond Expansion Area given the use of the area and surrounding area. Therefore, these listings are not considered a REC for the Subject Property.
HK Enterprises Inc Hertz Syst	4701 Airport Drive – Located adjacent to the northwest of the Terminal Stormwater Pond Expansion Area	- FINDS/FRS	FINDS/FRS listings identify facilities that are regulated or tracked by environmental agencies, but do not necessarily indicate that a release of hazardous substances or petroleum products has occurred; therefore, these listings are not considered a REC for the Subject Property.
Delta Global Services	4701 Airport Drive – Located adjacent to the northwest of the Terminal Stormwater Pond Expansion Area	- FINDS/FRS	FINDS/FRS listings identify facilities that are regulated or tracked by environmental agencies, but do not necessarily indicate that a release of hazardous substances or petroleum products has occurred; therefore, these listings are not considered a REC for the Subject Property.
Avis Rent a Car	4701 Airport Road – Located adjacent to the northwest of the Terminal Stormwater Pond Expansion Area	- FINDS/FRS - HIST LEAKSITES - LST REM SITE - UST	These listings are related to MPCA ID LS0005937. This listing is within the overall DLH property; however, it is located over 5,700 feet west of the Terminal Stormwater Pond Expansion Area. Given the distance of these listings from the Subject Property, these listings are not considered a REC for the Subject Property.
Hallmark Business Connections/ Hallmark Parking Lot Reconstruction	4444 Haines Road – Located adjacent to the southeast of the Subject Property	- MPCA AI - RCRA NON-GEN	These listings are associated with the facilities handling of RCRA hazardous waste. There are no compliance monitoring and enforcement (violation) records associated with this listing; therefore, this listing is not considered a REC for the Subject Property.

The remaining facilities included in the database for the Terminal Stormwater Pond Expansion Area are unlikely to have current or former releases of hazardous substances or petroleum products with the potential to migrate to the Subject Property based on a variety of factors

including, but not limited to: the anticipated scope of work for the reconstruction project, the overall setting in which the Terminal Stormwater Pond Expansion Area is located, potential depth to groundwater and assumed groundwater flow direction, existing or past uses of the surrounding properties, the potential migration distance of hazardous substances and/or petroleum products in the area, and distance from the Subject Property.

4.2.1.5 Subject Property (Northern Stormwater Pond Dredge Area) Listings

The Subject Property (Northern Stormwater Pond Dredge Area) was included in the following databases.

Site Name	Database	Listing Description
Duluth International Airport/DLH - Duluth Intl (Multiple Name Variations)	- FUDS	The DLH property is listed under FUDS ID# E05MN0033, which encompasses a number of sites located throughout the DLH. FUDS are properties that the Department of Defense (DoD) once owned or used but no longer control. See **Section 4.2.3** for a review of the Subject Property in relation to the FUDS listing.

4.2.1.6 Surrounding Listings (Northern Stormwater Pond Dredge Area)

The following listings were identified in the environmental database report and required further review.

Site Name	Address	Database	Listing Description
MN Air National Guard Building 520	4619 Warhawk Drive – Located approximately 1,000 feet southwest of the Subject Property	- MPCA AI - HIST LEAKSITES - FINDS/FRS - LST REM SITE	These listings are related to MPCA ID#s LS0007944 and LS0007907. These listings are within the overall DLH property; however, are located over 1,500 feet southwest of the Northern Stormwater Pond Dredge Area. Given the distance of these listings from the Subject Property, these listings are not considered a REC for the Subject Property.

The remaining facilities included in the database for the Northern Stormwater Pond Dredge Area are unlikely to have current or former releases of hazardous substances or petroleum products with the potential to migrate to the Subject Property based on a variety of factors including, but not limited to: the anticipated scope of work for the reconstruction project, the overall setting in which the Northern Stormwater Pond Dredge Area is located, potential depth to groundwater and assumed groundwater flow direction, existing or past uses of the surrounding properties, the potential migration distance of hazardous substances and/or petroleum products in the area, and distance from the Subject Property.

4.2.1.7 Unplottable Sites – Taxiway A Reconstruction Area

The regulatory database report includes, if present, “unplottable” or unlocatable listings, which could not be specifically located because of poor address information or other limitations. A total of 30 unplottable listings are identified in the environmental database report.

SEH attempted to identify unplottable listings that were potentially located within or adjoining the Subject Property or could impact the Subject Property based on site name, address, and available resources. The focus of this search is placed on sites that may pose the greatest potential for environmental impacts to the Subject Property. It is not within the scope of this Phase I ESA to conduct an exhaustive investigation to verify the locations of all unplottable site listings.

The following unplottable listings appear to be associated with the Subject Property or have the potential to impact the Subject Property were identified.

Site Name	Address	Database	Listing Description
Duluth International Airport	Airport Road, Site 102	HIST SPL	On March 21, 1990, a release of 20 gallons of an unspecified petroleum product due to overfilling was reported. Cleanup activities were not described, and the spill was closed on January 1, 1996.
148th Fighter Group	Airport Duluth	HIST SPL	On March 21, 1990, a release of 20 gallons of an unspecified petroleum product due to overfilling was reported. Cleanup activities were not described, and the spill was closed on January 1, 1996.
Commercial	Duluth International Airport	HIST SPL	On December 19, 1998, a release of 30 gallons of a high-octane aviation gas during a fuel transfer was reported. The cleanup activities were not described, and the spill was closed on December 19, 1998.
National Guard Minnesota Air	Airport Duluth	HIST SPL	On November 22, 1989, a release of 1 pound of an unspecified substance was reported. The cause of the spill and the cleanup activities were not described, and the spill was closed on January 1, 1996.
Duluth International Airport	Gate 3	HIST SPL	On April 2, 2004, a release of 20 gallons of kerosene based jet fuel due to a broken line on a fuel truck was reported. The spill was contained and placed into containers for disposal. The spill was closed on April 2, 2004.
Duluth International Airport	Gate 1	HIST SPL	On June 18, 1997, a release of 100 gallons of jet fuel to a concrete apron due to a malfunctioning transfer valve was reported. The cleanup activities were not described, and the spill was closed on June 18, 1997.

Although the exact location of these spills are unknown, and it is not likely that all of these unplottable releases have affected the Subject Property, given the use of the Subject Property

and surrounding area, it is likely that some spills related to fueling activities have occurred on or adjacent to the Taxiway A Reconstruction Area. Therefore, the previous releases with limited location information are considered a **CREC** for the Subject Property.

4.2.1.8 Unplottable Sites – Terminal Stormwater Pond Expansion Area

The regulatory database report includes, if present, “unplottable” or unlocatable listings, which could not be specifically located because of poor address information or other limitations. A total of 38 unplottable listings are identified in the environmental database report.

SEH attempted to identify unplottable listings that were potentially located within or adjoining the Subject Property or could impact the Subject Property based on site name, address, and available resources. The focus of this search is placed on sites that may pose the greatest potential for environmental impacts to the Subject Property. It is not within the scope of this Phase I ESA to conduct an exhaustive investigation to verify the locations of all unplottable site listings.

Unplottable listings associated with the Terminal Stormwater Pond Expansion Area or with the potential to impact the Terminal Stormwater Pond Expansion Arae were not identified.

4.2.1.9 Unplottable Sites – Northern Stormwater Pond Dredge A

The regulatory database report includes, if present, “unplottable” or unlocatable listings, which could not be specifically located because of poor address information or other limitations. A total of one unplottable listings are identified in the environmental database report.

SEH attempted to identify unplottable listings that were potentially located within or adjoining the Subject Property or could impact the Subject Property based on site name, address, and available resources. The focus of this search is placed on sites that may pose the greatest potential for environmental impacts to the Subject Property. It is not within the scope of this Phase I ESA to conduct an exhaustive investigation to verify the locations of all unplottable site listings.

Unplottable listings associated with the Northern Stormwater Pond Dredge Area or with the potential to impact the Northern Stormwater Pond Dredge Area were not identified.

4.2.2 Additional Record Sources

SEH reviewed additional environmental record sources, including the MPCA *What’s in My Neighborhood* interactive mapping program, Minnesota Department of Agriculture (MDA) County Spill Records, the MDA *What’s in My Neighborhood* interactive mapping program, the MPCA *Petroleum Remediation Program Maps Online, MPCA Landfill Cleanup Act Participants,* MPCA *Minnesota Groundwater Contamination Atlas,* the MPCA *VIC Site Online Search for Sites with Institutional Controls*, the MPCA Spills database, the *National Pipeline Mapping System, and the US Air Force Civil Engineer Center (AFCEC) Administrative Record Search*.

The following listings were identified for further review.

Name	Address	Database	Listing Description
Duluth International Airport - Site 102	Duluth International Airport	MPCA WIMN	This facility includes MPCA ID#s SA0001662, VP14730, VP14731, and VP21050. The MPCA digital files for these listings indicate the site is located approximately 3,000 feet southeast of the Taxiway A Reconstruction Area. These listings do not represent a REC for the Subject Property.
Defense Revitalization And Marketing	4997 Airport Rd	MPCA WIMN	This facility includes MPCA ID# LS0010249. The MPCA digital files for this list was not received as of the issuance of this report; however, the WIMN dashboard indicates the site is located approximately 500 feet southeast of the Taxiway A Reconstruction Area. A release of fuel oil occurred in June 1997. No groundwater contamination occurred as a result of the release. This listing does not represent a REC for the Subject Property.
Duluth International Airport USAF	Duluth International Airport	MPCA WIMN	This facility includes MPCA ID#s LS0004092 and LS0006647. The MPCA digital files for these listings indicate the site is located over 3,000 feet west of the Terminal Pond Expansion portion of the Subject Property. These listings do not represent a REC for the Subject Property.
-	-	MDA WIMN	This facility includes MDA ID# FY82I097. The MDA digital file indicates this listing is related to the disposal of various waste materials during the closure of a structure located within the air force portion of the DLH property, located over 2,500 feet north of the Terminal Pond Expansion portion of the Subject Property. Documentation for this listing consisted of an inventory of various wastes. No investigative or remedial activities were completed. This listing does not represent a REC for the Subject Property.

4.2.3 Regulatory File Requests

Some database listings warranted an additional file review to evaluate if RECs, CRECs, or HRECs are present at the Subject Property in connection with the listing.

The following regulatory files were requested for review. Relevant information is presented in below and copies of reviewed reports are attached as **Appendix C**.

Type	Database ID	Site Name	Address	Status
Leak Site	LS0005937	Avis Rent a Car	4701 Airport Rd	Reviewed
Leak Site	LS0010276	Northwest Storage Area Duluth Iap	4701 Airport Rd	Reviewed
VIC	VP14731	Duluth International Airport - Site 102	Duluth International Airport	Reviewed
VIC	VP14730			Reviewed

Type	Database ID	Site Name	Address	Status
VIC	VP21050			Reviewed
Site Assessment	SA0001665			Reviewed
Site Assessment	SA0020197			*Not received*
Brownfield	BF0003081	Duluth Air Force Base	4680 Viper Street	Reviewed
CERCLIS	MN7570024284			Reviewed
RCRA Remediation	MND000773341			Reviewed
RCRA Remediation	MND000773341-01			Reviewed
Site Assessment	SA0020205			Reviewed
Superfund	SR0000320			Reviewed
Superfund	SR0000368			Reviewed
Superfund	SR0000258			Reviewed
Superfund	SR0000355			Reviewed
Superfund	SR0000321			Reviewed
Superfund	SR0000270			Reviewed
Superfund	SR0000254			Reviewed
Superfund	SR0000252			Reviewed
Superfund	SR0000367			Reviewed
Superfund	SR0000269			Reviewed
Superfund	SR0000260			Reviewed
Superfund	SR0000257			Reviewed
Superfund	SR0000259			Reviewed
Superfund	SR0000253			Reviewed
Superfund	SR0000356			Reviewed
Superfund	SR0000256			Reviewed
Superfund	SR0000366			Reviewed
Superfund	SR0000255			Reviewed
Superfund	SR0000267			Reviewed
Superfund	SR0000271			Reviewed
Superfund	SR0000354			Reviewed
Superfund	SR0001459			Reviewed
Superfund	SR0000095			Reviewed
VIC	VP15240	Duluth Internation Airport	4701 Grinden Drive	Reviewed
Leak Site	LS0020226			Reviewed
Leak Site	LS0020250			Reviewed
Leak Site	LS0004479			Reviewed
Leak Site	LS0003496			Reviewed
Site Assessment	SA0000367			*Not received*

Type	Database ID	Site Name	Address	Status
Leak Site	LS0006647	Duluth International Airport Usaf	Duluth International Airport	Reviewed
Leak Site	LS0004092			Reviewed
Leak Site	LS0009527	Duluth Intl Airport Radar Tower	See location description	Reviewed
Leak Site	LS0006182	Duluth International Airport	See location description	Reviewed
Leak Site	LS0007907	Mn Air National Guard	148 Fighter Group Bldg 521 Tank 18	Reviewed
Leak Site	LS0007944	MN Air National Guard Bldg 520	4619 Warhawk Dr	Reviewed
Leak Site	LS0010249	Defense Revitalization And Marketing	4997 Airport Rd	*Not received*
Emergency Incidents	FY82I097	-	-	Reviewed
FUDS	E05MN0033	Duluth Internation Airport	Duluth, Minnesota	Reviewed

Duluth International Airport - 4701 Grinden Drive (FUDS ID# E05MN0033)

The DLH was formerly jointly operated by the United State Air Force (USAF), the Minnesota ANG, and the City of Duluth. Following World War II, the USAF began constructing facilities south of Runway 9/27 on land leases from the City of Duluth. The USAF ceased operations at the DLH in 1982; however, the USAF continues to have ongoing responsibilities for managing the restoration of sites they operated at the airfield through the FUDS program. Several areas of concern (AOCs), as designated by the FUDS program, are located throughout the DLH. A Site Research Report (EMR, 2004) completed for the USACE identified various ANG operational areas throughout the DLH, including a potential former salvage yard located approximately 500 feet southeast of the Taxiway A Reconstruction Area. Although the area was identified in the Site Research Report, no further details were provided and the area was not designated as a proposed additional FUDS site. The remaining existing/former site features identified in association with the FUDs listing are unlikely to have impacted the Subject Property. A copy of the 2004 Site Research Report is included as **Appendix C**.

Duluth Air Force Base – DLH (Various Listings)

Although the site was listed under numerous listings across several regulatory programs including Superfund, CERCLIS, and RCRA Remediation, the MPCA's *Minnesota Groundwater Contamination Atlas* identifies the site as the Duluth Airforce Base (MPCA ID# SR0000095). The Duluth Airforce Base listing encompasses multiple Installation Restoration Program (IRP) Sites throughout the DLH and surrounding area. Each IRP Site was identified through former military uses and are categorized as storage sites, disposal sites, radiation sites, and miscellaneous sites. Information associated with the Duluth Air Force Base site was available for review through the *AFCEC Administrative Record Search,* with the most recent site wide publication being the *Installation Restoration Program, Final, Five-Year Review Report* (MN ANG, 2025).

The DLH includes the base of the Minnesota ANG's 148th Fighter Wing (FW). The 148th FW facilities are located on leased properties at several locations in the vicinity of the main east-west runway at the DLH and the main base is located on the eastern side of the DLH. The 148th FW base houses aircraft, vehicles, and equipment. Current and past operations at the base have involved the use of products such as fuels, oils, lubricants, paints, paint thinners, solvents, and aqueous film forming foam (AFFF). Based on a review of the 2019 and 2025 Five-Year Review Reports, all Operable Units (OU's) associated with the listings are greater than 700 feet from the Subject Property, with exception of IRP 22 which is located approximately 500 feet southeast of the Taxiway A Reconstruction Area. IRP Site 22 consists of two septic tank systems. Both systems have been abandoned and previously received sanitary wastewater from the former building's toilets, sinks, and wash basins. Several contaminants including toluene, total petroleum hydrocarbons (TPHs), and metals were detected in soil samples collected at the site at depths ranging from 3 to 6 feet bgs, however, a risk assessment completed for the site concluded that the contaminants detected do not pose a current or future threat to human health or the environment. This determination was based on the fact that it is unlikely that base personnel, local residents, or wildlife will ever be exposed to residual soil contamination at IRP Site 22 due to the subsurface nature of the contamination, the industrial nature of the site, the restricted access to the site, and the lack of plans for current or future excavation activities at the site. IRP Site 22 was deemed as protective of human health and the environment in the 2019 Five Year Report. IRP Site 22 is not considered a REC for the Subject Property. The 2025 Final Five-Year Review Report is included as **Appendix C.**

Minnesota ANG PFAS Investigation

A base-wide Per- and Polyfluoroalkyl Substances (PFAS) Remedial Investigation (RI) is currently on-going at the DLH. The Minnesota ANG currently considers PFAS to be an emerging contaminant and are evaluating it through a similar process used under the IRP and consistent with the provisions of CERCLA, as amended.

A formal report for the ongoing PFAS investigations has not been issued; however, the Minnesota ANG has provided interim results and figures associated with the investigation.

- *Taxiway A Reconstruction Area:* Four soil sample locations (BGSL-09 through BGSL-12) are located within the Taxiway A Reconstruction Area. Detections of various PFAS compounds were reported above their respective reporting limits with detections of perfluorooctanoic acid (PFOA - up to 0.00046 milligrams per kilogram [mg/kg]) exceeding the MPCA Residential/Recreational Soil Reference Value (RSRV – 0.00036 mg/kg), and perfluorodecanoic acid (PFDA – up to 0.000085 mg/kg) exceeding the RSRV (0.000027 mg/kg) in sample BGSL-11 at 0 to 0.5 feet bgs. All soil sample analytical results were below their respective Commercial/Industrial SRVs (ISRV).

- Northern Stormwater Pond Dredge Area: Two surficial sediment sample locations (SWSD-01 and SWSD-02) are located adjacent to the Northern Stormwater Pond Dredge Area portion of the Subject Property. Detections of various PFAS compounds were reported above their respective reporting limits with detections of PFOA (up to 0.096 mg/kg) exceeding the MPCA ISRV (0.002 mg/kg), and PFDA (up to 0.00059 mg/kg) exceeding the ISRV (0.00036 mg/kg) in both samples.

- Terminal Stormwater Pond Expansion Area: One groundwater monitoring well (BBW-MW08) is located within the Terminal Stormwater Pond Expansion Area; however, analytical results for this well were not available for review as of the issuance of this report.

Based on a review of the interim results, the detections of PFAS compounds exceeding their respective MPCA ISRVs at or adjacent to the Taxiway A Reconstruction Area and Northern Stormwater Pond Dredge Area are considered a **REC** for the Subject Property. Applicable MN ANG sample locations are depicted on **Figure 3**. Please note, that information provided by the Minnesota ANG regarding the on-going site-wide PFAS investigation is interim and has not been finalized. Figures showing select sample locations, as provided by the Minnesota ANG is included in **Appendix C**. The analytical summaries provided were in excel format and therefore, are not included as an appendix to this report, but are available upon request.

4.2.4 Prior Assessments

As part of this Phase I ESA, SEH requested the client provide copies of previous environmental reports for the Subject Property.

The Client did not provide previous investigation reports for the Subject Property.

4.3 Historical Use of the Subject Property and Surrounding Properties

A historical review of the Subject Property and surrounding area was conducted to identify obvious previous uses of the Subject Property and surrounding area in order to help assess whether past uses may have led to RECs, CRECs or HRECs in connection with the Subject Property. According to ASTM Practice E1527-21 standard, the uses of the property shall be identified “at five-year intervals back to property’s first developed use or back to 1940 (whichever is earlier)”. The historical review was completed by examining historic aerial photographs, topographic maps, city directories and fire insurance maps where available.

4.3.1 Sources

The following sources were used to compile the history of the Subject Property and adjacent properties.

4.3.1.1 Aerial Photographs

Reasonably ascertainable historical aerial photographs showing the project corridor and surrounding areas were obtained for review from the years 1939, 1948, 1951, 1953, 1961, 1972, 1978, 1981, 1989, 1991, 1997, 2003, 2008, 2013, 2017, 2021, and 2015. Due to the scale and quality of some of the photographs, it is difficult to determine minor activities that may have occurred on the project corridor. Copies of the photographs reviewed are included as **Appendix D**.

4.3.1.2 Topographic Maps

The following historical maps were obtained and reviewed:

- USGS, 1895 and 1953, *Duluth, MN*, 15 Minute Topographic Map.
- USGS, 1953, 1969, 1975, 1981, 1993, 2013, 2016, and 2019, *Duluth Heights, MN*, 7.5 Minute Topographic Map.

Copies of topographic maps reviewed are included as **Appendix E**.

4.3.1.3 Fire Insurance Maps

Sanborn, Rascher, Fire Underwriter Bureau and other fire Insurance maps consist of a uniform series of large-scale detailed maps, dating from 1867 through 1969 and depict the commercial,

industrial, and residential sections of urban areas. The maps were designed to assist fire insurance agents in determining the degree of hazard associated with a particular property. These maps illustrate, in outline form, structural details such as the size, shape, and construction and building material of dwellings, commercial buildings, and factories.

According to Historical Information Gatherers (HIG), fire insurance map coverage is not available for the Subject Property (see **Appendix F**).

4.3.1.4 City Directories

City directories provide a means to investigate the past use of a site by reviewing information for a specific address in incorporated areas. City directories were obtained and reviewed for the Subject Property for the following streets and years:

- Lavaque Road: 1981, 1986, 1991, 1996, 2001, 2006, 2009, 2013, 2018, and 2023
- Haines Road: 1981, 1986, 1991, 1996, 2001, 2006, 2009, 2013, 2018, and 2023
- Grinden Drive: 2001, 2006, 2009, 2013, 2018, and 2023

Significant information is incorporated into **Section 4.3.2**. Copies of city directories are included as **Appendix G.**

4.3.2 History of the Subject Property and Surrounding Properties

The following history of the Subject Property and surrounding properties was compiled from information contained in the resources listed in **Section 4.3.1**.

Taxiway A Reconstruction Area

From	To	Past Use and History	Source
1895	1948	The Subject Property was undeveloped and marked as a swamp on topographic maps from 1895. The Subject Property was bisected by Lavaque Road, running north/south, through the center of the site. By 1935 the Subject Property and adjacent properties were developed as farm land. A larger highway is constructed to the south of the adjacent properties.	Historical Aerials, Topographic Maps
1951	1953	The eastern portion of the Subject Property and the adjoining properties to the east and northeast were developed as part of the Duluth Municipal Airport in the early 1950s. The main runway sat just directly to the northeast of the Subject Property, with the end of the taxiway crossing the eastern portion of the Subject Property. The remaining western portion of the Subject Property and adjacent properties remained vacant and vegetated, with the north/south road still bisecting the area.	Historical Aerials, Topographic Maps

From	To	Past Use and History	Source
1951	1961	The eastern portion of the Subject Property and the adjoining properties to the east and northeast were developed as part of the Duluth Municipal Airport in the early 1950s. The main runway sat just directly to the northeast of the Subject Property, with the end of the taxiway crossing the eastern portion of the Subject Property. A drainage ditch ran from the end of the runway across the eastern portion of the Subject Property. The remaining western portion of the Subject Property and adjacent properties remained vacant, with the north/south road still bisecting the area.	Historical Aerials, Topographic Maps
1969	1981	With the expansion of the airport, now renamed to the Duluth International Airport, the runway to the north of the Subject Property was extended to the west. The Subject Property was cleared and graded to allow for the new runway alignment. The north/south road that bisected the site previously was removed. The adjacent properties to the north and west were also cleared and graded as part of the active airfield. The adjacent properties to the south remained vegetated, with the north/south road still bisecting that area.	Historical Aerials, Topographic Maps
1989	Present	By the late 1980s Taxiway A was extended through Subject Property. Taking the end of Taxiway A from the eastern portion of the Subject Property to the end of the runway just north of the western portion of the Subject Property. The adjacent properties remained the same. With the runway located north of the Subject Property, cleared airspace area to the east and west of the Subject property, and vegetated areas to the south of the Subject property.	Historical Aerials, Topographic Maps, City Directories

Terminal Stormwater Pond Expansion Area

From	To	Past Use and History	Source
1895	1939	The Subject Property was undeveloped and marked as a swamp on topographic maps from 1895. The Subject Property was adjoined to the west by a road running north/south. By 1939 the Subject Property and adjacent properties to the north, west, and east were cleared. The adjacent properties to the south remained vacant and vegetated.	Historical Aerials, Topographic Maps
1948	1972	An additional road was constructed directly to the south of the Subject Property by the late 1940s. The Subject Property remained cleared and vacant. The area to the northwest was developed as the Duluth Municipal Airport with runways and taxiways present by 1948. Adjacent properties to the east and south remained vacant.	Historical Aerials, Topographic Maps

From	To	Past Use and History	Source
1975	2008	In the mid-1970s the Duluth International Airport terminal was built in the area to the northwest of the Subject Property. As part of the terminal construction the terminal access road, Grinden Drive, was built along the western and southern edge of the Subject Property. The Subject Property remained cleared and vacant. Maintenance vehicles and outdoor storage can be seen on aerial photographs of the adjacent property to the west. Adjacent properties to the east and south remained vacant. Commercial buildings were constructed in the area to the southeast of the Subject Property.	Historical Aerials, Topographic Maps, City Directories
2013	Present	With the reconstruction of the terminal building in the early 2010s, and new surface parking lot was built on the adjacent property to the west of the Subject Property. The maintenance area was relocated with the construction of the new parking lot. The Subject Property remained cleared and vacant. Adjacent properties to the east and south remained vacant. Additional commercial buildings were constructed in the area to the southeast of the Subject Property.	Historical Aerials, Topographic Maps, City Directories

Northern Stormwater Pond Dredge Area

From	To	Past Use and History	Source
1895	1953	The Subject Property was undeveloped and bisected by a stream running east to west through the 1950s. The stream came from an area further south that would be developed as the airport by the 1950s. Adjacent properties to the north, west, and east were vacant and consisted of low lying swamp and forest. A road ran through the area to the southwest of the Subject Property, with multiple residences.	Historical Aerials, Topographic Maps
1957	1981	By the late 1950s the road and residences were removed from the area to the southwest. An air force complex was constructed in the area, with multiple structures used to store munitions. The Subject Property and immediately adjacent properties remained unchanged and vacant.	Historical Aerials, Topographic Maps
1989	Present	By the late 1980s a stormwater pond was constructed in the central portion of the Subject Property. The was constructed in the flow line of the stream, with the inflow coming from the southeast and the pond outlet continuing to the northwest. An access road was constructed along the western side of the Subject Property back towards the airport. The remainder of the Subject Property and adjacent properties remained vacant and wooded.	Historical Aerials, Topographic Maps

5 Subject Property Reconnaissance

SEH personnel, Jack Hagley and Robert Hawkins conducted a site reconnaissance of the Subject Property and surrounding properties on April 20 and 21, 2026. At the time of the site reconnaissance, badged SEH personnel permitted to access the DLH airfield, were unaccompanied. Select photographs of the Subject Property are included in **Appendix H**.

5.1 Methodology and Limiting Conditions

The reconnaissance included a site visit to visually observe the Subject Property.

SEH conducted observations of the Subject Property by walking across the Subject Property. Adjacent property observations were made from public road right-of-ways, other publicly-accessible areas, and Subject Property boundaries.

5.2 Subject Property

SEH made the following general site reconnaissance observations.

5.2.1 Current Uses of the Subject Property

The Taxiway A Reconstruction Area is currently occupied by paved surfaces and maintained green space. This area is used for the movement of aircrafts at the DLH.

Both the Terminal Stormwater Pond Expansion Area and Northern Stormwater Drainage Pond area are occupied by pond structures and are used to drain surface water from the DLH property. The Northern Stormwater Drainage Pond is connected to a drainage ditch channel that drains a majority of the northwestern portion of the DLH property. The Terminal Stormwater Pond Expansion Area drains stormwater from the southeastern portion of the DLH property.

5.2.2 Observable Past Uses of the Subject Property

Indications of past uses of the Subject Property were not observed.

5.2.3 Geologic, Hydrogeologic, Hydrologic, and Topographic Conditions

The topography of the Taxiway A Reconstruction Area gently slopes to the southeast.

The Terminal Stormwater Pond Expansion Area gently slopes to the east. The existing pond is approximately 7 feet deep with a drainage outlet located in the southeastern portion of the pond. Inlet structures and rip-rap were located at the western, northern, and eastern sides of the pond.

The Northern Stormwater Drainage Pond portion of the Subject Property is relatively flat. The existing pond is approximately 9 feet deep with the existing outlet structure located at the western end of the pond. The existing drainage ditch enters on the southeastern portion of the pond.

5.2.4 General Description of Structures

No structures are currently located on the Subject Property.

5.2.5 Roads

No roadways were observed intersecting the Subject Property.

The main DLH east-west runway (Runway 9/27) is located adjacent to the north of the Taxiway A Reconstruction Area.

The Northern Stormwater Drainage Pond portion of the Subject Property is accessed by an unnamed unpaved roadway to the south of the pond.

The Terminal Stormwater Pond Expansion Area is bound by Grinden Drive to the south and Haines Road the east.

5.2.6 Potable Water Supply

Indications of a potable water supply were not observed at the time of the site reconnaissance as no strcutres were located within the Subject Property. Structures located within the DLH property are serviced by the municipal water system.

5.2.7 Sewage Disposal System

Indications of a sewage disposal system were not observed at the time of the site reconnaissance as no strcutres were located within the Subject Property. Structures located within the DLH property are serviced by the municipal sewage system

5.2.8 Subject Property Reconnaissance Observations

During the Subject Property reconnaissance, the following were observed, and if observed, are described in the following sections.

Feature or Condition	Observed
Storage Tanks	No
Strong, Pungent or Noxious Odors	No
Pools of Liquids	No
Drums, Totes, or Other Containers	No
Polychlorinated biphenyl- (PCB-) Containing Items	No
Heating/Cooling Systems	No
Stains or Corrosions on Floors, Walls, or Ceilings apart from Water Staining	No
Drains or Sumps	No
Pits, Ponds or Lagoons	Yes
Stained Soil or Pavement	No
Stressed Vegetation (from something other than insufficient water)	No
Solid Waste	No
Water/Wastewater Discharges	Yes
Wells	Yes
Septic Systems of Cesspools	No
Other	No

5.2.8.1 Pits, Ponds, or Lagoons

A stormwater/surface water drainage pond occupies both the northern and eastern portions of the Subject Property. See **Section 5.2.3** for a description of the existing conditions of the ponds as observed during the site reconnaissance.

5.2.8.2 Water or Wastewater Discharges

The Terminal Stormwater Pond Expansion Area includes a drainage outlet located in the southeastern portion of the pond.

The Northern Stormwater Drainage Pond portion of the Subject Property includes an outlet structure along the western end of the pond.

No water or wastewater discharges were observed within the Taxiway A Reconstruction Area.

5.2.8.3 Wells

An at grade monitoring well was observed along the northern bank of the existing stormwater pond. The MDH unique well identification number was not observed. The location of the well is depicted on **Figure 3** and photograph of the well is included in **Appendix H**.

5.3 Adjoining Properties

5.3.1 Current Uses of Adjoining Properties - Taxiway A Reconstruction Area

The Subject Property is located in a commercial area in Duluth, Minnesota.

Based on information obtained from the site reconnaissance, interviews and historical records, current uses of adjoining properties were identified. Currently, properties surrounding the site include the following:

North	Maintained greenspace, followed by Runway 9/27.
East	Taxiway A and associated maintained greenspace continues east of the Subject Property.
South	Maintained greenspace, followed by the airport perimeter road.
West	Maintained greenspace continues west of the Subject Property.

5.3.2 Observable Past Uses of Adjoining Properties - Taxiway A Reconstruction Area

Past uses of the adjoining properties were not observed.

5.3.3 Current Uses of Adjoining Properties – Terminal Stormwater Pond Expansion Area

The Subject Property is located in a commercial area in Duluth, Minnesota.

Based on information obtained from the site reconnaissance, interviews and historical records, current uses of adjoining properties were identified. Currently, properties surrounding the site include the following:

North	Maintained greenspace, followed by Grinden Drive.
East	Haines Road, followed by vegetated vacant property.
South	Grinden Drive, followed by vegetated vacant property.
West	Surface parking lot for the nearby Duluth International Airport Terminal.

5.3.4 Observable Past Uses of Adjoining Properties - Terminal Stormwater Pond Expansion Area

Past uses of the adjoining properties were not observed.

5.3.5 Current Uses of Adjoining Properties – Northern Stormwater Pond Dredge Area

The Subject Property is located in a commercial area in Duluth, Minnesota.

Based on information obtained from the site reconnaissance, interviews and historical records, current uses of adjoining properties were identified. Currently, properties surrounding the site include the following:

North	Vegetated vacant property.
East	Vegetated vacant property and wetlands.
South	Vegetated vacant property, followed by a controlled air force facility.
West	Vegetated vacant property with the pond outflow stream.

5.3.6 Observable Past Uses of Adjoining Properties - Taxiway A Reconstruction Area

Past uses of the adjoining properties were not observed.

6 Interviews

Interviews were conducted with persons familiar with the Subject Property to obtain information regarding the presence or possible presence of RECs, CRECs or HRECs in connection with the Subject Property.

6.1 Interview with Subject Property Representative

Subject Property Representative	Years Familiar with the Subject Property	Response
Ryan Welch	13	SEH interviewed Mr. Welch on April 8, 2026. Mr. Welch provided information on scope of work for the proposed project, provided contact information for obtaining documentation related to environmental activities completed at the DLH. Information provided is incorporated throughout this report.

6.2 Inquiry with Local Government Officials

Government Official	Response
St. Louis County	On May 8, 2026, SEH requested an interview with various St. Louis County departments including Environmental Services, the Public Works Department and the St. Louis County Public Records. A response was received from Steve Pellinen with Environmental Services and Marie Bourget with Public Records; however, neither response provided information related to the identification of RECs, CRECs, or HRECs in connection with the Subject Property.
City of Duluth	On May 8, 2026, SEH requested an interview with various City of Duluth departments including the Property and Faciliteis Management Department, Fire Department, Police Department, and Engineering Department. A response was received from Melissa Garrick with the City of Duluth Fire Department; however, Melissa was unable to provide information related to the identification of RECs, CRECs, or HRECs in connection with the Subject Property.

6.3 Interview with Others

6.3.1 MPCA

SEH interviewed Mark Elliot, Hydrologist with the MPCA on April 1, 2026. Mark provided documentation related to previous investigative activities completed at the DLH through the Minnesota Air National Guard (ANG) and contact information for the local ANG Environmental Manager.

6.3.2 Minnesota ANG

SEH interviewed Mikah Inkawhich, Environmental Manager with the ANG 148th Fighter Wing on April 14, 2026. Mikah provided interim results for an ongoing PFAS investigation being completed at the DLH through the 148th Fighter Wing and MPCA. Mikah also provided access to an Air Force Administrative Record Viewer in order to obtain and review applicable reporting.

7 Additional Services

Per the agreed upon Scope of Services, non-scope considerations specified in Section 13.1.5 of ASTM Practice E1527-21 were not evaluated.

8 Findings and Opinions

SEH has completed this Phase I ESA, and based on the information presented above, the following findings and opinions are summarized below. Select features are mapped on **Figure 2**.

8.1 General Overview

The Subject Property includes three project areas that are identified as the Taxiway A Reconstruction Area, the Terminal Stormwater Pond Expansion Area, and the Northern Stormwater Pond Dredge Area. These project areas are all separated and are generally located in the western, southeastern, and northern parts of the DLH, respectively.

The Subject Property encompasses portions of St. Louis County PINs 010-2747-00160, 010-2747-00210, 010-2747-00220, 280-0031-00455, 280-0031-00456, 395-0010-00330, 395-0010-00348, 395-0010-00349, 395-0010-00350, and 395-0010-00550.

Taxiway A is the parallel taxiway for the Runway 9/27 serving DLH. The existing Taxiway A is approximately 10,700 feet in length and the reconstruction is proposed to be completed in nine phases. Phase 7 of the Taxiway A Reconstruction project, consists of an approximately 2,400-foot-long portion of the taxiway at its western end.

The Taxiway A Area was undeveloped and occupied by low-lying wetland on historic maps. By the 1930s, the Taxiway A Reconstruction Area was developed as farmland, and by the early 1950s, the eastern portion of the Taxiway A Reconstruction Area was developed as part of the DLH. Additional improvements to the DLH occurred through the 1960s with minimal changes observed through the present day.

The Terminal Stormwater Pond Expansion Area is located southeast of the terminal building serving DLH. The existing pond is located directly east of the southeastern corner of the large surface parking lot south of the terminal building. The Terminal Stormwater Pond Expansion Area is approximately 25,000 square feet in size and will expand the footprint of the existing stormwater pond to the west.

The Terminal Stormwater Pond Expansion Area was undeveloped and occupied by low-lying wetland on historic maps. Although adjacent development of various portions of the DLH occurred as early as the late 1940s, the pond area remained undeveloped through the early 2020s. By the mid-2020s, the existing stormwater pond was constructed.

The Northern Stormwater Pond Dredge Area is located north of the airfield at the end of Warhawk Drive. The existing stormwater pond is located directly north of the end of Warhawk Drive and is accessed by a gravel access road. The Northern Stormwater Pond Dredge will consist of the removal of approximately 1,000 cubic yards of material from the existing pond to restore the storage capacity of the pond. The pond footprint will not be expanded.

The Northern Stormwater Pond Dredge Area was undeveloped and occupied by a drainage ditch since at least the late 1930s, and by the late 1980s, the existing pond was constructed. An air

force complex was constructed approximately 1,000 feet southwest of the pond area in the 1950s.

The Subject Property was identified in numerous regulatory databases related to historic and current uses including Leak sites, spills, RCRA hazardous waste generators, construction stormwater permits, and air emissions permits. Although the database report identified these listings for the Subject Property, a majority were located greater than 1,000 feet from the Subject Property areas with a select few located as close as 500 feet to the Subject Property areas.

Twelve regulated spills associated with the DLH were also identified as either unlocatable or as within the DLH property in the database reports. Although the exact location of these spills are unknown, it is not likely that all of these releases have affected the Subject Property. Given the use of the Taxiway A Reconstruction Area and surrounding area, it is likely that some spills related to fueling activities have occurred on or adjacent to the Taxiway A Reconstruction Area. Therefore, the previous releases with limited location information are considered a **CREC** for the Subject Property.

The remaining facilities included in the database report are unlikely to have current or former releases of hazardous substances or petroleum products with the potential to migrate to the Subject Property based on a variety of factors including, but not limited to: the overall setting in which the Subject Property is located, potential depth to groundwater and assumed groundwater flow direction, existing or past uses of the surrounding properties, the potential migration distance of hazardous substances and/or petroleum products in the area, and distance from the Subject Property.

The DLH includes the base of the Minnesota ANG's 148th FW. The 148th FW facilities are located on leased properties at several locations in the vicinity of the main east-west runway at the DLH and the main base is located on the eastern side of the DLH. The 148th FW base houses aircraft, vehicles, and equipment. Current and past operations at the base have involved the use of products such as fuels, oils, lubricants, paints, paint thinners, solvents, and AFFF. Based on a review of the 2019 and 2025 Five-Year Review Reports, the OUs associated with the 148th FW base are not considered a REC for the Subject Property.

A base-wide PFAS RI is currently on-going at the DLH as the Minnesota ANG is evaluating PFAS impacts through a similar process used under the IRP and consistent with the provisions of CERCLA, as amended. Based on a review of the interim results provided by the Minnesota ANG, several detections of PFOA and PFDA exceeding their respective MPCA ISRVs and/or RSRVs were located either within or adjacent to the Taxiway A Reconstruction Area and Northern Stormwater Pond Dredge Area and are considered a **REC** for the Subject Property.

8.2 Data Gaps and Data Failures

The following data gaps or data failures were identified in completion of the ESA. The significance of the data gaps has been evaluated by the environmental professional as follows:

- MPCA files for SA0020205, SA0020197, and LS0010249 were not available for review by the publication of this report. Based on factors including the proposed scope of work for the project, the potential depth to groundwater and assumed groundwater flow direction, the potential migration distance of hazardous substances and/or petroleum products in the area, and distance from the Subject Property this data gap does not appear to be significant to the Phase I ESA.

- Interviews with all past and current owners of parcels within the Subject Property were not within the scope of this Phase I ESA. The history of the Subject Property and prior assessments provided adequate information to complete the Phase I ESA. This is not a significant data gap.
- Information for the Subject Property was not identified between 1939 and 1948, between 1953 and 1961, between 1961 and 1969, and between 1981 and 1986. However, based on the lack of land use change, these data failures are not considered significant data gap.

9 Conclusions

SEH has performed a Phase I Environmental Site Assessment in general conformance with the scope and limitations of ASTM Practice E1527-21 of the property associated with the Taxiway A Reconstruction – Phase 7 project at the Duluth International Airport in Duluth, St. Louis County, Minnesota, the Subject Property. Any exceptions to, or deletions or deviations from, this practice are described in **Sections 1.4** and **10.0** of this report. This assessment has revealed the following RECs, CRECs or significant data gaps in connection with the Subject Property.

- Detections of PFAS compounds exceeding their respective MPCA ISRVs and/or RSRVs at or adjacent to the Taxiway A Reconstruction Area and Northern Stormwater Pond Dredge Area; **REC**
- Previous spills with limited location information; **CREC**.

10 Deviations

Other than the limitations and exceptions listed in **Section 1.4** and **Section 8.0**, there were no substantial deletions, deviations, or additions from this practice.

11 Limitations and Standard of Care

This ESA was completed in general accordance with ASTM Practice E1527-21, *Standard Practice for Environmental Assessments* and SEH's agreement with Duluth Airport Authority . The findings and conclusions of this report are not scientific certainties, but probabilities based on professional judgment regarding the significance and accuracy of the collected data. When reasonably ascertainable, environmental data was obtained and reviewed. However, the accuracy of the sources and collected data is not the responsibility of SEH.

When a Phase I ESA is completed without subsurface exploration or chemical analyses of the soil and/or groundwater at the site, no statement of scientific certainty can be made regarding the environmental or subsurface conditions resulting from either onsite or offsite pollutant sources. The possibility always exists for contaminants to migrate from one property to another via surface water, groundwater or soil. The ability to accurately assess the environmental risk associated with the transport of pollutants through these media to the site is beyond the scope of this Phase I ESA.

This Phase I ESA report was prepared for the exclusive use of the Duluth Airport Authority. The negotiated scope of work imposed limitations on the collection and interpretation of evidence, consistent with the ASTM Standard, resulting in a commensurate uncertainty as to the conclusions drawn. The degree of uncertainty was deemed acceptable by the Duluth Airport Authority. Any third party interested in using or relying upon this report must first secure written

authorization from the Duluth Airport Authority and SEH, and agree to accept SEH's terms and conditions respecting indemnification and agreed upon limitations of liability.

SEH's services were conducted in a manner consistent with the level of care and skill standard to the industry. The conclusions and recommendations contained in this report were arrived at in accordance with generally accepted professional practice at this time and location. Other than this, no warranty is implied or intended.

12 References

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MPCA Institutional Controls online database, Institutional Controls in Minnesota (arcgis.com)

MPCA *Closed Landfill Program Sites*, http://mpca.maps.arcgis.com/apps/Solutions/s2.html?appid=6470bb44bd83497993da5836333d1cb3

MPCA Minnesota Groundwater Contamination Atlas, https://www.pca.state.mn.us/data/minnesota-groundwater-contamination-atlas

MPCA *Petroleum Remediation Program Maps* online, Petroleum Remediation Program Maps Online (arcgis.com)

MPCA *Vapor Intrusion Site-Specific Information* Site-specific information | Minnesota Pollution Control Agency (state.mn.us)

MPCA *What's in My Neighborhood* online database, What's in My Neighborhood (arcgis.com)

Pipeline and Hazardous Materials Safety Administration (PHMSA), 2012, *National Pipeline Mapping System Public Map Viewer,* https://www.npms.phmsa.dot.gov/PublicViewer/composite.jsf

US Air Force Civil Engineer Center (AFCEC) Administrative Record Search, Administrative Record Search

13 Signature of Environmental Professional

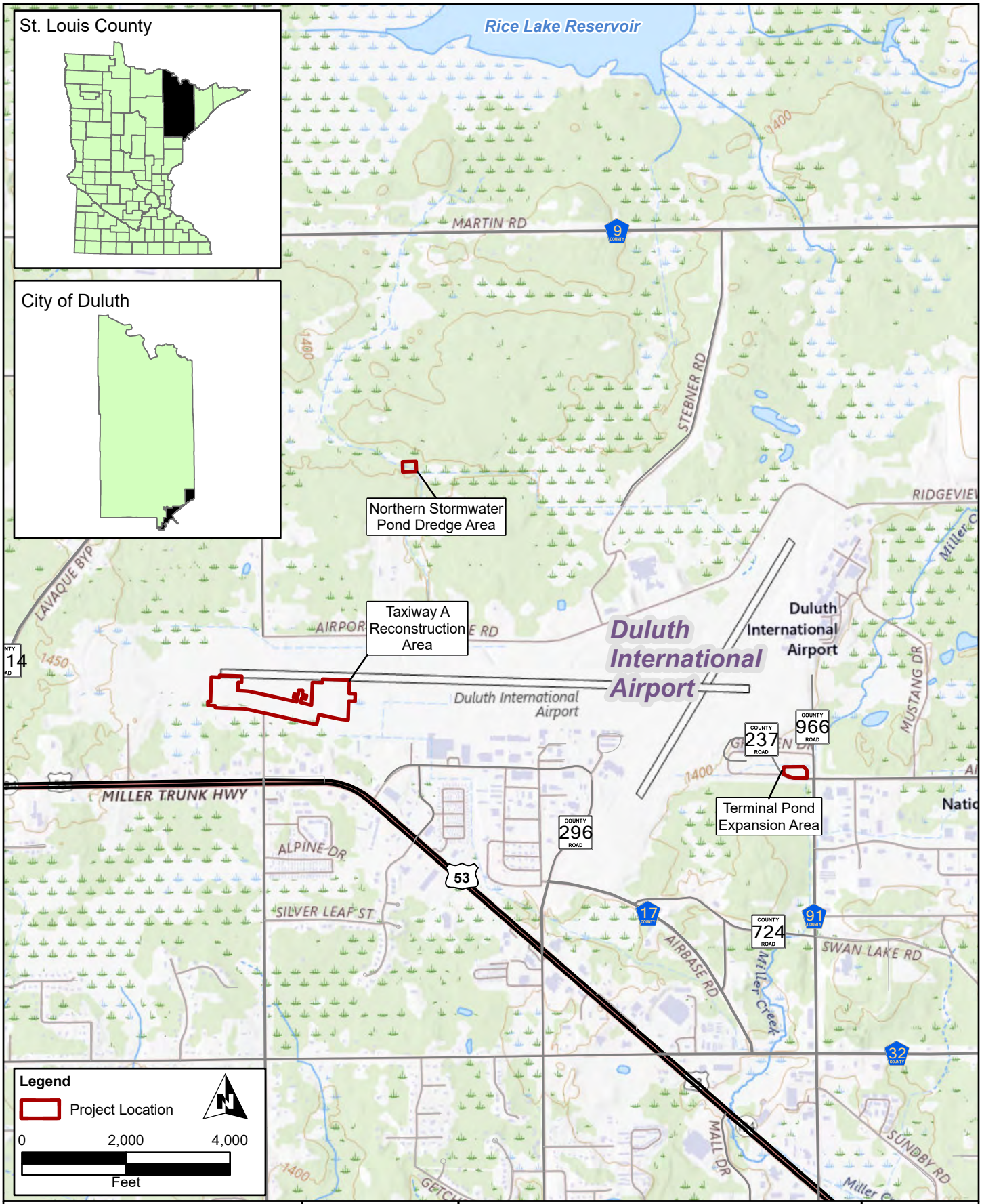
I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental professional as defined in §312.10 of 40 CFR 312 (**Appendix I**).

I have the specific qualification based on education, training, and experience to assess a property of the nature, history, and setting of the Subject Property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in §312.10 of 40 CFR 312.

Keri Aufdencamp
Project Manager

Figures

Figure 1 – Subject Property Location
Figure 2 – Subject Property Areas
Figure 3 – Subject Property Features



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Project: DULAI 186683
Print Date: 5/15/2026

User Name: rhawkins
Projection: UTM NAD 83 Zone 15N
Source: ESRI, MnDOT, SEH Digi, St. Louis County

Subject Property Location

Phase I Environmental Site Assessment
Taxiway A Reconstruction - Phase 7
Duluth, St. Louis County, Minnesota

Figure 1

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SEH

3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110
PHONE: (651) 490-2000
FAX: (888) 908-8166
TF: (800) 325-2055
www.sehinc.com

Project: DULAI 186683
Print Date: 5/15/2026

User Name: rhawkins
Projection: NAD 1983 HARN Adj MN St. Louis (US Feet)
Source: ESRI, SEH Digi, St. Louis County

Subject Property Areas

Taxiway A Reconstruction - Phase 7
Duluth International Airport
Duluth, St. Louis County, Minnesota

Figure 2

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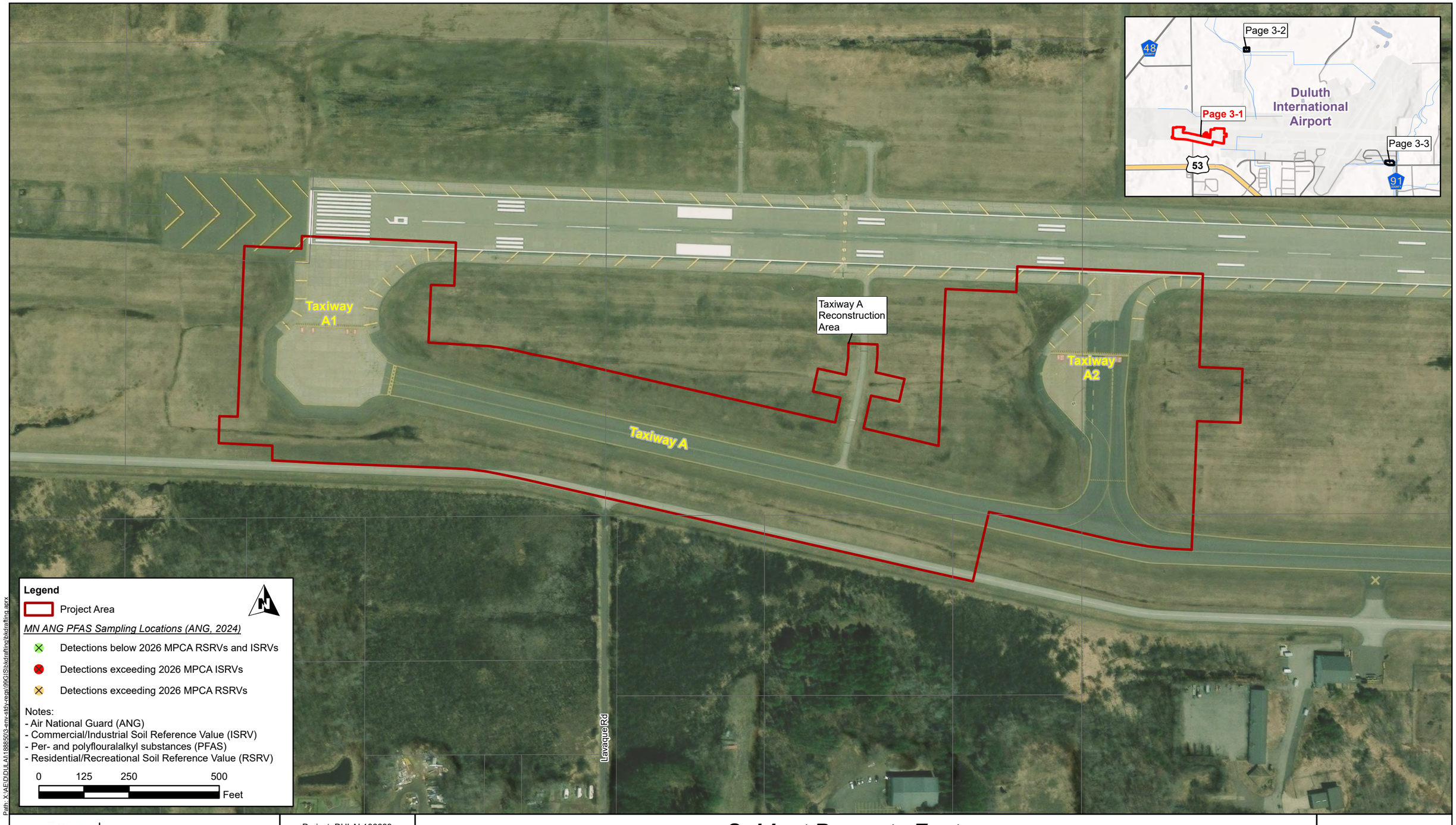

Legend

Project Area

MN ANG PFAS Sampling Locations (ANG, 2024)

- Detections below 2026 MPCA RSRVs and ISRVs
- Detections exceeding 2026 MPCA ISRVs
- Detections exceeding 2026 MPCA RSRVs

Notes:
- Air National Guard (ANG)
- Commercial/Industrial Soil Reference Value (ISRV)
- Per- and polyflouralalkyl substances (PFAS)
- Residential/Recreational Soil Reference Value (RSRV)

0 125 250 500 Feet

Path: X:\AE\D\DULAI\186850\3-env-std\+reps\99GIS\bkdrafting\bkdrafting.aprx

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Print Date: 5/18/2026

User Name: rhawkins
Projection: NAD 1983 HARN Adj MN St. Louis (US Feet)
Source: ESRI, SEH Digi, St. Louis County

Subject Property Features

Phase I Environmental Site Assessment
Taxiway A Reconstruction - Phase 7
Duluth, St. Louis County, Minnesota

Figure 3-1

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources listed on this map and is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.

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Project: DULAI 186683
Print Date: 5/18/2026

User Name: rhawkins
Projection: NAD 1983 HARN Adj MN St. Louis (US Feet)
Source: ESRI, SEH Digi, St. Louis County

Subject Property Features

Phase I Environmental Site Assessment
Taxiway A Reconstruction - Phase 7
Duluth, St. Louis County, Minnesota

Figure 3-2

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources listed on this map and is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.

Path: X:\AE\D\DULAI\186850\3-env-sitdy-revs\99GIS\bkdrafting\bkdrafting.aprx

SEH
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TF: (800) 325-2055
www.sehinc.com

Project: DULAI 186683
Print Date: 5/18/2026

User Name: rhawkins
Projection: NAD 1983 HARN Adj MN St. Louis (US Feet)
Source: ESRI, SEH Digi, St. Louis County

Subject Property Features

Phase I Environmental Site Assessment
Taxiway A Reconstruction - Phase 7
Duluth, St. Louis County, Minnesota

Figure 3-3

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Appendix A

User Provided Documents

PHASE I ENVIRONMENTAL SITE ASSESSMENT
USER QUESTIONNAIRE

Taxiway A Reconstruction Phase 7
SEH No. 186683

The Phase I ESA standard ASTM 1527-21 identified certain User responsibilities. This intent of this User Questionnaire is to assist the user and the environmental professional in gathering information from the User that may be material to identifying recognized environmental conditions. The "All Appropriate Inquiries" Final Rule (40 CFR Part 312) requires that these tasks be performed by or on behalf of a party seeking to qualify for an LLP to CERCLA liability.

Question	Comment
Environmental cleanup liens that are filed or recorded against the site (40 CFR 312.25). Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state, or local law? ☐ **Yes** ☒ **No**	
Activity and land use limitations (AULs) that are in place on the site or that have been filed or recorded in a registry (40 CFR 312.26). Are you aware of any AULs such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law? ☐ **Yes** ☒ **No**	
Specialized knowledge or experience of the person seeking to qualify for the LLP (40 CFR 312.28). As the user of this ESA do you have any specialized knowledge of experience related to the property or nearby properties? For example, are involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business? ☐ **Yes** ☒ **No**	
Relationship of the purchase price to the fair market value of the property if it were not contaminated (40 CFR 312.29). Does the purchase price being paid for this property reasonably reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property? ☐ **Yes** ☐ **No**	Not applicable

Commonly known or reasonably ascertainable information about the property (40CFR 312.30).

Question	Answer
Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? ☒ **Yes** ☐ **No**	Soils testing results have been collected in recent years from the project site.
Do you know of any past uses of the property? ☐ **Yes** ☒ **No**	
Do you know of specific chemicals that were present or once were present at the property? ☒ **Yes** ☐ **No**	PFAS chemicals have been observed at the project site through Duluth Air National Guard Base airfield site investigation
Do you know of any spills or chemical releases that have taken place at the property? ☐ **Yes** ☒ **No**	
Do you know of any environmental cleanups that have taken place at the property? ☐ **Yes** ☒ **No**	

The degree of obviousness of the presence or likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).

Question	Answer
As the user of this ESA, based on your knowledge and experience related to the property are there any obvious indications that point to the presence or likely presence of contamination at this property? ☒ **Yes** ☐ **No**	PFAS chemicals have been observed at the project site through Duluth Air National Guard Base airfield site investigation

Please answer these additional questions if applicable.

Question	Answer
Reason for the Phase I ESA?	An airfield taxiway pavement reconstruction and stormwater pond dredging project will be performed at this site, including excavation of potentially contaminated soils.
Type of property and type of property transaction?	City of Duluth property on airfield at international airport. Taxiway pavement reconstruction and pond dredging is proposed for this site.
Complete and correct address and/or parcel identification numbers for the property?	Parcel ID Numbers: 010-2747-00210, 010-2747-00220, 395-0010-00330, 395-0010-00348, 395-0010-00349, 395-0010-00350, 280-0031-00455, 280-0031-00456
Identify all parties, or “users,” who will rely on the Phase I ESA Report?	Duluth Airport Authority
Name and contact information for the site contact to coordinate the site reconnaissance?	Ryan Welch, Director of Operations Duluth Airport Authority 218-625-7767 rwelch@duluthairport.com
Name and contact information for the current owner/occupant/manager of the property?	Ryan Welch, Director of Operations Duluth Airport Authority 218-625-7767 rwelch@duluthairport.com
Name and contact information for past owners/occupants/managers of the property?	Duluth Airport Authority

Please also provide any existing documentation that would assist in identifying environmental conditions and historical use of the property (ex. title records, previous environmental assessments or investigations).

Do you have any of the following documents relevant to the Phase I ESA?	
■ **Yes** ☐ **No**	Environmental site assessment reports
☐ **Yes** ■ **No**	Environmental compliance audit reports
■ **Yes** ☐ **No**	Environmental permits (for example, solid waste disposal permits, hazardous waste disposal permits, wastewater permits, NPDES permits, underground injection permits)
☐ **Yes** ■ **No**	Registrations for underground and above-ground storage tanks
☐ **Yes** ■ **No**	Registrations for underground injection systems
☐ **Yes** ■ **No**	Material safety data sheets
☐ **Yes** ■ **No**	Community right-to-know plan
■ **Yes** ☐ **No**	Safety plans; preparedness and prevention plans; spill prevention, countermeasure, and control plans; facility response plans, etc.
■ **Yes** ☐ **No**	Reports regarding hydrogeologic conditions on the property or surrounding area,
☐ **Yes** ■ **No**	Notices or other correspondence from any government agency relating to past or current violations of environmental laws with respect to the property or relating to environmental liens encumbering the property
☐ **Yes** ■ **No**	Hazardous waste generator notices or reports
■ **Yes** ☐ **No**	Geotechnical studies
☐ **Yes** ■ **No**	Risk assessments
☐ **Yes** ■ **No**	Recorded AULs

Ryan Welch	Ryan Welch Digitally signed by Ryan Welch Date: 2026.04.08 13:40:28 -05'00'	4/8/46
Name (printed)	Signature	Date
Duluth Airport Authority	Director of Operations, Planning, and Construction	
Affiliation	Position	

Appendix B

Environmental Database

DATABASE REPORT

Project Property:	*Taxiway A Reconstruction Phase 7* *Southwest Parcel* *Duluth MN*
Project No:	*2097200*
Report Type:	*Database Report*
Order No:	*26040200817*
Requested by:	*Historical Information Gatherers*
Date Completed:	*April 6, 2026*

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

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Executive Summary

Property Information:

Project Property: *Taxiway A Reconstruction Phase 7 Southwest Parcel Duluth MN*

Project No: *2097200*

Coordinates:

Latitude:	*46.84109308*
Longitude:	*-92.21530462*
UTM Northing:	*5,187,804.49*
UTM Easting:	*559,833.44*
UTM Zone:	*15T*

Elevation: *1,411 FT*

Order Information:

Order No:	*26040200817*
Date Requested:	*April 2, 2026*
Requested by:	*Historical Information Gatherers*
Report Type:	*Database Report*

Historicals/Products:

Executive Summary: Report Summary

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
Standard Environmental Records								
Federal								
NPL	Y	1	0	0	0	0	0	0
PROPOSED NPL	Y	1	0	0	0	0	0	0
DELETED NPL	Y	0.5	0	0	0	0	-	0
SEMS	Y	0.5	0	0	0	0	-	0
ODI	Y	0.5	0	0	0	0	-	0
SEMS ARCHIVE	Y	0.5	0	0	0	0	-	0
CERCLIS	Y	0.5	0	0	0	0	-	0
IODI	Y	0.5	0	0	0	0	-	0
CERCLIS NFRAP	Y	0.5	0	0	0	0	-	0
CERCLIS LIENS	Y	PO	0	-	-	-	-	0
RCRA CORRACTS	Y	1	0	0	0	0	0	0
RCRA TSD	Y	0.5	0	0	0	**1**	-	**1**
RCRA LQG	Y	0.25	0	0	0	-	-	0
RCRA SQG	Y	0.25	0	0	**1**	-	-	**1**
RCRA VSQG	Y	0.25	**2**	0	**7**	-	-	**9**
RCRA NON GEN	Y	0.25	0	0	**4**	-	-	**4**
RCRA CONTROLS	Y	0.5	0	0	0	0	-	0
FED ENG	Y	0.5	0	0	0	0	-	0
FED INST	Y	0.5	0	0	0	0	-	0
LUCIS	Y	0.5	0	0	0	0	-	0
NPL IC	Y	0.5	0	0	0	0	-	0
ERNS 1982 TO 1986	Y	PO	0	-	-	-	-	0
ERNS 1987 TO 1989	Y	PO	0	-	-	-	-	0
ERNS	Y	PO	**4**	-	-	-	-	**4**
FED BROWNFIELDS	Y	0.5	0	0	0	0	-	0
FEMA UST	Y	0.25	0	0	0	-	-	0
FRP	Y	0.25	0	0	0	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
DELISTED FRP	Y	0.25	0	0	0	-	-	0
HIST GAS STATIONS	Y	0.25	0	0	0	-	-	0
REFN	Y	0.25	0	0	0	-	-	0
BULK TERMINAL	Y	0.25	0	0	0	-	-	0
SEMS LIEN	Y	PO	0	-	-	-	-	0
SUPERFUND ROD	Y	1	0	0	0	0	**1**	**1**
State								
PLP	Y	1	0	0	0	0	**1**	**1**
DEL PLP	Y	1	0	0	0	0	**2**	**2**
SHWS	Y	0.5	0	0	**2**	**2**	-	**4**
SITE ASSESSMENT	Y	0.25	**1**	0	**1**	-	-	**2**
SWF/LF	Y	0.5	**1**	0	0	0	-	**1**
LCP	Y	0.5	0	0	0	0	-	0
UNPERMITTED LF	Y	0.5	0	0	0	0	-	0
RECYCLING	Y	0.5	0	0	0	0	-	0
HIST LUST	Y	0.5	0	0	**1**	**3**	-	**4**
DEL LUST	Y	0.5	0	0	0	0	-	0
HIST LAST	Y	0.5	0	0	**1**	**2**	-	**3**
HIST LEAKSITES	Y	0.5	**1**	0	**5**	**8**	-	**14**
LST REM SITE	Y	0.5	**4**	0	**4**	**16**	-	**24**
LST INCIDENT	Y	0.5	0	0	0	**2**	-	**2**
DELISTED LST	Y	0.5	**1**	0	0	**3**	-	**4**
UST	Y	0.25	**1**	0	**6**	-	-	**7**
AST	Y	0.25	**1**	0	0	-	-	**1**
HIST TANK	Y	0.25	0	0	0	-	-	0
DELISTED TANK	Y	0.5	**1**	0	0	**2**	-	**3**
INST	Y	0.5	0	0	0	0	-	0
AG CONTINGENCY	Y	0.125	0	0	-	-	-	0
BROWNFIELDS	Y	0.5	**1**	0	**2**	**7**	-	**10**
VIC	Y	0.5	**1**	0	**1**	**3**	-	**5**
POTENTIAL VIC	Y	0.5	0	0	0	0	-	0
MPCA AI	Y	0.5	**17**	0	**148**	**48**	-	**213**
Tribal								
INDIAN LUST	Y	0.5	0	0	0	0	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
INDIAN UST	Y	0.25	0	0	0	-	-	0
DELISTED INDIAN LST	Y	0.5	0	0	0	0	-	0
DELISTED INDIAN UST	Y	0.25	0	0	0	-	-	0
County	***No County standard environmental record sources available for this State.***							
Additional Environmental Records								
Federal								
PFAS GHG	Y	0.5	0	0	0	0	-	0
OSC RESPONSE	Y	0.125	0	0	-	-	-	0
FINDS/FRS	Y	PO	**11**	-	-	-	-	**11**
TRIS	Y	PO	0	-	-	-	-	0
PFAS NPL	Y	0.5	0	0	0	0	-	0
PFAS FED SITES	Y	0.5	0	0	0	0	-	0
PFAS SSEHRI	Y	0.5	0	0	0	0	-	0
PFAS ERNS	Y	0.5	0	0	0	0	-	0
PFAS NPDES	Y	0.5	0	0	0	0	-	0
PFAS TRI	Y	0.5	0	0	0	0	-	0
PFAS WATER	Y	0.5	0	0	0	0	-	0
PFAS TSCA	Y	0.5	0	0	0	0	-	0
PFAS E-MANIFEST	Y	0.5	0	0	0	0	-	0
PFAS IND	Y	0.5	0	0	0	0	-	0
HMIRS	Y	0.125	0	0	-	-	-	0
NCDL	Y	0.125	0	0	-	-	-	0
TSCA	Y	0.125	0	0	-	-	-	0
HIST TSCA	Y	0.125	0	0	-	-	-	0
FTTS ADMIN	Y	PO	0	-	-	-	-	0
FTTS INSP	Y	PO	0	-	-	-	-	0
PRP	Y	PO	0	-	-	-	-	0
SCRD DRYCLEANER	Y	0.5	0	0	0	0	-	0
ICIS	Y	PO	**1**	-	-	-	-	**1**
FED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED FED DRY	Y	0.25	0	0	0	-	-	0
FUDS	Y	1	**1**	0	0	0	0	**1**
FUDS MRS	Y	1	0	0	0	0	0	0
FORMER NIKE	Y	1	0	0	0	0	0	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
PIPELINE INCIDENT	Y	PO	0	-	-	-	-	0
MLTS	Y	PO	0	-	-	-	-	0
HIST MLTS	Y	PO	0	-	-	-	-	0
MINES	Y	0.25	0	0	0	-	-	0
SMCRA	Y	1	0	0	0	0	0	0
MRDS	Y	1	0	0	0	0	0	0
LM SITES	Y	1	0	0	0	0	0	0
ALT FUELS	Y	0.25	0	0	0	-	-	0
CONSENT DECREES	Y	0.25	0	0	0	-	-	0
AFS	Y	PO	**1**	-	-	-	-	**1**
SSTS	Y	0.25	0	0	0	-	-	0
PCBT	Y	0.5	0	0	0	0	-	0
PCB	Y	0.5	0	0	0	0	-	0
POWER PLANTS	Y	0.125	0	0	-	-	-	0
HIST RISK	Y	0.125	0	0	-	-	-	0
NPDES BIOSOLIDS	Y	PO	0	-	-	-	-	0
State								
SPILLS	Y	0.125	**8**	0	-	-	-	**8**
AG SPILLS	Y	0.125	0	0	-	-	-	0
HIST SPL	Y	0.125	**5**	0	-	-	-	**5**
DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
PFAS GW	Y	0.5	0	0	0	0	-	0
PFAS LANDFILL	Y	0.5	0	0	0	0	-	0
CDL	Y	PO	0	-	-	-	-	0
FEEDLOTS	Y	0.5	0	0	0	0	-	0
TIER 2	Y	0.125	0	0	-	-	-	0
BULK STORAGE	Y	0.25	0	0	0	-	-	0
Tribal	***No Tribal additional environmental record sources available for this State.***							
County	***No County additional environmental record sources available for this State.***							
Total:			***63***	*0*	***183***	***97***	***4***	***347***

**** PO – Property Only***

**** 'Property and adjoining properties' database search radii are set at 0.25 miles.***

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
1	FUDS	DULUTH INTERNATIONAL AIRPORT	DULUTH MN ***FUDS Property No:*** *E05MN0033*	SW	0.00 / 0.00	0	72
2	AFS	DULUTH INTERNATIONAL AIRPORT (DAA)	4701 GRINDEN DR DULUTH MN 55811	SSE	0.00 / 0.00	0	73
2	AST	Delta Airlines Inc Duluth Ramp	4701 Grinden Rd Duluth MN 55811 ***Tank ID | Tank Status:*** *130799-EQUI0000000001 | Active, 130799-EQUI0000000002 | Active*	SSE	0.00 / 0.00	0	73
2	BROWNFIELDS	Duluth International Airport - Block 3	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	0	75
2	DELISTED LST	Former Fueling Station	4701 Grinden Dr Duluth MN	SSE	0.00 / 0.00	0	77
2	DELISTED TANK	Duluth International Airport	4701 Grinden Dr Duluth MN 55811-1578	SSE	0.00 / 0.00	0	77
2	ERNS		4701 GRINDEN DRIVE DULUTH MN 55811 ***NRC Report No:*** *468284*	SSE	0.00 / 0.00	0	78
2	ERNS		4701 GRINDEN DRIVE GATE 3 DULUTH MN 55811 ***NRC Report No:*** *463985*	SSE	0.00 / 0.00	0	80
2	ERNS		4701 GRINDEN DRIVE GATE NO.3 DULUTH MN 55811 ***NRC Report No:*** *471404*	SSE	0.00 / 0.00	0	82
2	ERNS		4701 GRINDEN DRIVE DULUTH MN 55811 ***NRC Report No:*** *488617*	SSE	0.00 / 0.00	0	84
2	FINDS/FRS	DULUTH INTERNATIONAL AIRPORT (DAA)	4701 GRINDEN DR DULUTH MN 55811 ***Registry ID:*** *110008799979*	SSE	0.00 / 0.00	0	86
2	FINDS/FRS	DULUTH AIRPORT RUNWAY 21SAFET	4701 GRINDEN DR HERMANTOWN MN 55811 ***Registry ID:*** *110068202233*	SSE	0.00 / 0.00	0	86
2	FINDS/FRS	NEW PASSANGER TERMINAL BP 2C	4701 GRINDEN DRIVE DULUTH MN 55811 ***Registry ID:*** *110067735008*	SSE	0.00 / 0.00	0	87

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
2	FINDS/FRS	DELTA AIR LINES GLOBAL SERVIC	4701 GRINDEN DR DULUTH MN 55811 ***Registry ID:*** *110069151358*	SSE	0.00 / 0.00	0	88
2	FINDS/FRS	NORTH PERIMETER ROAD GRADING	4701 GRINDEN DR HERMANTOWN MN 55811 ***Registry ID:*** *110069111160*	SSE	0.00 / 0.00	0	88
2	FINDS/FRS	DELTA AIRLINES INC DULUTH RAMP	4701 GRINDEN RD HERMANTOWN MN 55811 ***Registry ID:*** *110067981447*	SSE	0.00 / 0.00	0	89
2	FINDS/FRS	KRENZEN CORPORATION	4701 GRINDEN DR DULUTH MN 55811 ***Registry ID:*** *110071476644*	SSE	0.00 / 0.00	0	89
2	FINDS/FRS	SONJU ENTERPRISES INC	4701 GRINDEN DR BOX 161830 DULUTH MN 55816 ***Registry ID:*** *110071475201*	SSE	0.00 / 0.00	0	90
2	FINDS/FRS	OVERLAND WEST INC	4701 GRINDEN DR DULUTH MN 55811 ***Registry ID:*** *110071496157*	SSE	0.00 / 0.00	0	91
2	FINDS/FRS	2020 COMMERCIAL SERVICE APRON	4701 GRINDEN DR DULUTH MN 55811-1578 ***Registry ID:*** *110071496659*	SSE	0.00 / 0.00	0	91
2	FINDS/FRS	2024 MIDFIELD RAMP REPAIR DUL	4701 GRINDEN DR DULUTH MN 55811-1578 ***Registry ID:*** *110071851503*	SSE	0.00 / 0.00	0	92
2	HIST LEAKSITES	Duluth International Airport	4701 Grinden Dr Duluth MN 55811 ***Complete Site Closure Date | Leaksite Type Desc:*** *05/09/1995 00:00:00 | Leak Site*	SSE	0.00 / 0.00	0	92
2	HIST SPL	DULUTH INTERNATIONAL AIRPORT	4701 Grinden Dr Duluth MN 55811 ***Program Int ID:*** *188492*	SSE	0.00 / 0.00	0	94
2	HIST SPL	NWA	4701 Grinden Dr Duluth MN 55811 ***Program Int ID:*** *186795*	SSE	0.00 / 0.00	0	95
2	HIST SPL	Northwest Airlines	4701 Grinden Dr. Duluth MN ***Program Int ID:*** *187716*	SSE	0.00 / 0.00	0	96
2	HIST SPL	AIRPORT	4701 Grinden Dr Duluth MN 55811 ***Program Int ID:*** *186807*	SSE	0.00 / 0.00	0	97
2	HIST SPL	Northwest Airlines - Duluth Intl Airport - ramp	4701 Grinden Dr Duluth MN 55811 ***Program Int ID:*** *259244*	SSE	0.00 / 0.00	0	98
2	ICIS	DULUTH INTERNATIONAL AIRPORT (DAA)	4701 GRINDEN DR DULUTH MN 55811	SSE	0.00 / 0.00	0	99

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
			Registry ID: *110008799979*				
2	LST REM SITE	Duluth International Airport	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	0	99
2	LST REM SITE	Duluth Airport - Former Fueling Station	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	0	100
2	LST REM SITE	Duluth International Airport Maintenance Garage	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	0	102
2	LST REM SITE	Former Fueling Station	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	0	103
2	MPCA AI	DAA ANG Fire Station Phase 3	4701 Grinden Dr Duluth MN 55803	SSE	0.00 / 0.00	0	104
2	MPCA AI	TSA at Duluth International Airport	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	0	105
2	MPCA AI	Duluth Airport Runway 21Safety Area Imp	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	0	107
2	MPCA AI	New Passanger Terminal BP 2C Civil	4701 Grinden Drive Duluth MN 55811	SSE	0.00 / 0.00	0	109
2	MPCA AI	North Perimeter Road Grading Drainage	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	0	111
2	MPCA AI	Delta Air Lines Global Services (DLH)	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	0	113
2	MPCA AI	Delta Airlines Inc Duluth Ramp	4701 Grinden Rd Duluth MN 55811	SSE	0.00 / 0.00	0	115
2	MPCA AI	Duluth International Airport	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	0	116
2	MPCA AI	Runway 9/27 Reconstruction, Phase 1	Duluth Airport 4701 Grinden Dr. Duluth MN 55811	SSE	0.00 / 0.00	0	118
2	MPCA AI	Duluth Airport Authority	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	0	120

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
2	MPCA AI	Duluth Airport Runway 9-27 Reconstruction	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	0	121
2	MPCA AI	Sonju Enterprises Inc	4701 Grinden Dr Box 161830 Duluth MN 55816	SSE	0.00 / 0.00	0	123
2	MPCA AI	Krenzen Corporation	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	0	125
2	MPCA AI	2020 Commercial Service Apron Expansion	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	0	126
2	MPCA AI	Overland West Inc	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	0	128
2	MPCA AI	2024 Midfield Ramp Repair Duluth Airport	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	0	129
2	MPCA AI	TAXIWAY A RECONSTRUCTION - PHASE 5 IFC AT THE DULUTH INTERNATIONAL AIRPORT (D	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	0	131
2	RCRA VSQG	TSA AT DULUTH INTERNATIONAL AIRPORT	4701 GRINDEN DR DULUTH MN 55811-1578	SSE	0.00 / 0.00	0	133
			Handler ID | Recycler Activity?: *MNS000105817 | NO*				
2	RCRA VSQG	DULUTH AIRPORT AUTHORITY	4701 GRINDEN DR DULUTH MN 55811-1578	SSE	0.00 / 0.00	0	135
			Handler ID | Recycler Activity?: *MNR000023143 | NO*				
2	SITE ASSESSMENT	Duluth Airport	4701 Grinden Drive Duluth MN	SSE	0.00 / 0.00	0	138
2	SPILLS	NORTHWEST ARILINES	4701 Grinden Dr MN 55811 Duluth MN 55811	SSE	0.00 / 0.00	0	139
			Incident ID | Incident Status: *29734 | Closed or Completed*				
2	SPILLS	DULUTH AIRPORT AUTHORITY	4701 Grinden Dr MN 55811 Duluth MN 55811	SSE	0.00 / 0.00	0	140
			Incident ID | Incident Status: *29432 | Closed or Completed*				
2	SPILLS	NORTHWEST AIRLINES	4701 Grinden Dr MN 55811 Duluth MN 55811	SSE	0.00 / 0.00	0	140
			Incident ID | Incident Status: *29747 | Closed or Completed*				
2	SPILLS	Northwest Airlines	4701 Grinden Dr MN 55811 Duluth MN	SSE	0.00 / 0.00	0	141
			Incident ID | Incident Status: *58578 | Closed or Completed*				

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
2	SPILLS	AIR NATIONAL GUARD FD	4701 Grinden Dr. MN Duluth MN 55812	SSE	0.00 / 0.00	0	141
			Incident ID | Incident Status: *30713 | Closed or Completed*				
2	SPILLS	Minnesota Power Inc-General Office	4701 Grinden Drive Duluth MN 558022191	SSE	0.00 / 0.00	0	142
			Incident ID | Incident Status: *194261 | Closed or Completed*				
2	SPILLS	Duluth International Airport	4701 Grinden Drive Duluth MN 558111578	SSE	0.00 / 0.00	0	142
			Incident ID | Incident Status: *204931 | Closed or Completed*				
2	SPILLS		4701 Grinden Dr Duluth MN	SSE	0.00 / 0.00	0	142
			Incident ID | Incident Status: *215386 | Closed or Completed*				
2	SWF/LF	DAA ANG Fire Station Phase 3	4701 Grinden Dr Duluth MN 55803	SSE	0.00 / 0.00	0	143
2	UST	Duluth International Airport	4701 Grinden Dr Duluth MN 55811-1578	SSE	0.00 / 0.00	0	143
			Tank ID | Tank Status: *638-EQUI0000000003 | Removed, 638-EQUI0000000005 | Removed, 638-EQUI0000000009 | Removed, 638-EQUI0000000007 | Removed, 638-EQUI0000000014 | , 638-EQUI0000000002 | Removed, 638-EQUI0000000004 | Removed, 638-EQUI0000000016 | Removed, 638-EQUI0000000008 | Removed, 638-EQUI0000000006 | Removed, 638-EQUI0000000010 | Removed, 638-EQUI0000000011 | Removed, 638-EQUI0000000012 | Removed, 638-EQUI0000000015 | Removed, 638-EQUI0000000001 | Removed, 638-EQUI0000000013 |*				
2	VIC	Duluth International Airport - Block 3	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	0	152

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
3	HIST LEAKSITES	Spotted Eagle Elementary School	Address Unknown Duluth MN 55811	SW	0.13 / 661.25	8	153
			***Complete Site Closure Date	Leaksite Type Desc:*** 03/26/1996 00:00:00 | Leak Site			
3	HIST LUST	Bristol & Colelillo Utility Work	Address Unknown Duluth MN 55811	SW	0.13 / 661.25	8	155
			***Complete Site Closure Date	Leaksite Type Desc:*** 05/05/2004 00:00:00 | Leak Site			
4	MPCA AI	Cindy Voigt	Duluth MN 55811	SW	0.13 / 698.45	8	156
4	MPCA AI	Kenwood Village	Duluth MN 55811	SW	0.13 / 698.45	8	158
4	MPCA AI	Kolar MTA Parking Lot	Address Unknown Hermantown MN 55811	SW	0.13 / 698.45	8	160
4	MPCA AI	Richard Ave & Lindgren Rd Reconstruction	Richard Ave, Lindgren Rd, Sam's Way, Evee Drive in Hermantown, MN Hermantown MN 55811	SW	0.13 / 698.45	8	162
4	SITE ASSESSMENT	Duluth International Airport - AOC C	Duluth International Airport Duluth MN 55811	SW	0.13 / 698.45	8	164
4	UST	Federal Aviation Admin Asr/rtr	Old Terminal Building 2nd Floor Duluth MN 55811 ***Tank ID	Tank Status:*** 111127-EQUI0000000001 | Removed, 111127-EQUI0000000002 | Removed, 111127-EQUI0000000003 | Removed	SW	0.13 / 698.45	8	165
4	UST	Federal Aviation Admin Dlh/vortac	Old Terminal Building 2nd Floor Duluth MN 55811 ***Tank ID	Tank Status:*** 111129-EQUI0000000001 | Removed	SW	0.13 / 698.45	8	166
4	UST	Federal Aviation Admin Rcag	Old Terminal Building 2nd Floor Duluth MN 55811 ***Tank ID	Tank Status:*** 111130-EQUI0000000001 | Removed	SW	0.13 / 698.45	8	167
4	UST	Zuck Property	Island Beach Ln Duluth MN 55811	SW	0.13 / 698.45	8	168
			***Tank ID	Tank Status:*** 126921-EQUI0000000001 | Removed			
5	SHWS	MN Air National Guard	See location description Duluth MN 55811	ESE	0.16 / 826.55	0	169

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
6	MPCA AI	MN Army National Guard	See location description Duluth MN 55811	ESE	0.16 / 827.32	0	170
7	MPCA AI	Taxilane, Aviation Apron, GA Hangers	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	171
7	MPCA AI	Duluth Technology Park I	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	173
7	MPCA AI	Lavaque Rd Bypass Storage Buildings	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	175
7	MPCA AI	Fountain Gate Townhomes	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	177
7	MPCA AI	Air National Guard By-pass Taxi	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	179
7	MPCA AI	Cedar Ridge Dr Const. Homesites	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	180
7	MPCA AI	TH 53 Commercial Devel	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	182
7	MPCA AI	SP 6925-118 (TH 61)	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	184
7	MPCA AI	Vineyard Church - New Facility	Address Unknown Duluth MN 55811	WSW	0.16 / 827.41	9	186
7	MPCA AI	CR 266 - Laine Rd	Address Unknown Duluth MN 55811	WSW	0.16 / 827.41	9	188
7	MPCA AI	SP 6915-125 (TH53)	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	189
7	MPCA AI	Swanson & Youngdale, Inc	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	191

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
7	MPCA AI	Hermantown Sanitary Imp District 426	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	193
7	MPCA AI	Country Inn & Suites Hermantown	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	195
7	MPCA AI	Rehabilitation of Taxiway A	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	197
7	MPCA AI	Hermantown Trunk Sewer Phase I	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	198
7	MPCA AI	Runway 9/27 Paved Shoulder Recon. Ph 1	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	200
7	MPCA AI	SP 6915-122 (TH53)	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	202
7	MPCA AI	Saint Scholastica West Parking Lot	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	204
7	MPCA AI	Aarons Valley-Chambersburg Dr	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	206
7	MPCA AI	Saturn of Hermantown	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	207
7	MPCA AI	SP 6917-102 (TH 53)	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	209
7	MPCA AI	Richard McNutt Fill Site	Address Unknown Hermantown MN 55811	WSW	0.16 / 827.41	9	211
7	MPCA AI	Federal Aviation Admin Asr/rtr	Old Terminal Building 2nd Floor Duluth MN 55811	WSW	0.16 / 827.41	9	213
7	MPCA AI	Timber Trails Estates	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	215

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
7	MPCA AI	SP 8821-34 (TH 61)	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	216
7	MPCA AI	SP 69-598-031 - CR 694	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	218
7	MPCA AI	North Country Aviation	Hangar 1 Duluth Intl Airport Duluth MN 55811	WSW	0.16 / 827.41	9	220
7	MPCA AI	Duluth 2005 Street Imp SW3	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	222
7	MPCA AI	Pike Lake Elementary	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	224
7	MPCA AI	Allete-MN Power-HSC Imp.	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	225
7	MPCA AI	Hermantown Imp. Districts #425 & 308	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	227
7	MPCA AI	Hermantown Sanitary Sewer Dist #429	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	229
7	MPCA AI	National Bank of Commerce - Hermantown	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	231
7	MPCA AI	Airport Road Parking Lot	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	233
7	MPCA AI	Oppidan Investment Co	Todd Dr Hermantown MN 55811	WSW	0.16 / 827.41	9	234
7	MPCA AI	5533-3783 Lindahl Road - Canosia	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	236
7	MPCA AI	Matthew Addition	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	238

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
7	MPCA AI	Green Acres	Address Unknown Hermantown MN 55811	WSW	0.16 / 827.41	9	240
7	MPCA AI	Residence Inn - Duluth	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	242
7	MPCA AI	Federal Aviation Admin Rcag	Old Terminal Building 2nd Floor Duluth MN 55811	WSW	0.16 / 827.41	9	243
7	MPCA AI	SP 6917-105 (TH 53)	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	245
7	MPCA AI	Sackette Addition	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	247
7	MPCA AI	Edgewood Vista	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	249
7	MPCA AI	Timber Ridge Townhomes Phase II	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	251
7	MPCA AI	SP 69-613-28; CP 8256 - CSAH 13	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	252
7	MPCA AI	Hermantown Sanitary Sewer Imp Dist 416	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	254
7	MPCA AI	SP 6908-56 and SP 6932-13	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	256
7	MPCA AI	CSAH 43	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	258
7	MPCA AI	Cirrus Design Corp Expansion	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	260
7	MPCA AI	SP 3806-57	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	261

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
7	MPCA AI	SP 6917-112 TH 53	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	263
7	MPCA AI	CSAH 7 - Industrial Rd	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	265
7	MPCA AI	SP 6917-101 TH 53	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	267
7	MPCA AI	Mesaba Energy	Address Unknown Duluth MN 55811	WSW	0.16 / 827.41	9	269
7	MPCA AI	SP 69-616-043 CSAH 16	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	270
7	MPCA AI	Krenzen Honda	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	272
7	MPCA AI	SP 6917-107 (TH 53)	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	274
7	MPCA AI	The Woods At Hermantown	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	275
7	MPCA AI	Saint Lawrence Church Disposal Site	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	277
7	MPCA AI	Maple Grove Acres	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	279
7	MPCA AI	Schneiderman's Furniture - Duluth	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	281
7	MPCA AI	Runway 9/27	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	283
7	MPCA AI	Coffee Creek Park Development	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	284

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
7	MPCA AI	Entrance Rd Realignment - MnANG	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	286
7	MPCA AI	Bishop Woods 1st Addition Utility/Road	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	288
7	MPCA AI	Suites of Miller Hill	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	290
7	MPCA AI	2000 Stebner Park Project	NW1/4, Sec 24, T 50N, R 15 Hermantown MN 55811	WSW	0.16 / 827.41	9	292
7	MPCA AI	Iron Workers Apprenticeship Training Fac	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	293
7	MPCA AI	Grouse Ridge	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	295
7	MPCA AI	Pine View	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	297
7	MPCA AI	Keene Creek Townhomes	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	299
7	MPCA AI	Stebner Rd MSA 103 SAP 202-103-05	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	301
7	MPCA AI	Reserve Branch Line	Address Unknown Duluth MN 55811	WSW	0.16 / 827.41	9	302
7	MPCA AI	Arrowhead 345 KV Substation	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	304
7	MPCA AI	SAP 69-643-14, CP 8214 CSAH 43	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	306
7	MPCA AI	Perimeter Fence Phase II	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	308

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
7	MPCA AI	SP 3806-52 (TH 61)	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	310
7	MPCA AI	North Country Aviation	Duluth International Airport Duluth MN 55811	WSW	0.16 / 827.41	9	311
7	MPCA AI	SP 69-601-001, CP 8293	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	313
7	MPCA AI	Houland Lane	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	315
7	MPCA AI	UMD Sports/Health Ctr Building	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	317
7	MPCA AI	Jackson Estates - Phase II	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	319
7	MPCA AI	Township Road 5641 - Esker Trail	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	320
7	MPCA AI	Trunk Sewer Phase II - Hermantown	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	322
7	MPCA AI	Butternut Ave - Maple Ridge Development	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	324
7	MPCA AI	Administrative Services Addition	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	326
7	MPCA AI	Bluff's Ridge Estates	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	328
7	MPCA AI	Joe Ogston Property Fill	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	329
7	MPCA AI	MSAS 199 - Airport Road Reconstruction	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	331

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
7	MPCA AI	LaVaque Road (CSAH 48) SAP 69-648-22	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	333
7	MPCA AI	Hermantown Community Church	E of Stebner Rd along Maple Grove Rd Hermantown MN 55811	WSW	0.16 / 827.41	9	335
7	MPCA AI	Stebner Park Soccer Complex - Hermantown	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	337
7	MPCA AI	Prime Properties Commercial Development	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	338
7	MPCA AI	US Customs & Border Patrol - Duluth	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	340
7	MPCA AI	Bishop Woods	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	342
7	MPCA AI	Federal Aviation Admin Dlh/vortac	Old Terminal Building 2nd Floor Duluth MN 55811	WSW	0.16 / 827.41	9	344
7	MPCA AI	SP 6928-25 TH 73	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	346
7	MPCA AI	Andrews Division 1st	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	348
7	MPCA AI	Fed Ex Express	Airport Approach Rd Duluth MN 55811	WSW	0.16 / 827.41	9	349
7	MPCA AI	Mahoney Property	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	351
7	MPCA AI	Curtis Oil Company Inc Site Expansion	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	353
7	MPCA AI	Duluth Dump Site #1 Final Closure	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	355

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
7	MPCA AI	Foxborrow 1st Phase 2	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	357
7	MPCA AI	Miller Dwan Hospice House	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	358
7	MPCA AI	Runway 9-27 Paved Shoulder Reconstruct	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	360
7	MPCA AI	Hermantown Sanitary Sewer District 406	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	362
7	MPCA AI	Hermantown Trunk Sewer Phase 3	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	364
7	MPCA AI	Bruno's Old World Foods	Address Unknown Duluth MN 55811	WSW	0.16 / 827.41	9	366
7	MPCA AI	Saint Louis County Public Safety Building	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	367
7	MPCA AI	SCS Aircraft Interiors - Duluth	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	369
7	MPCA AI	SP 69-619-12	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	371
7	MPCA AI	CSAH 48	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	373
7	MPCA AI	Hermantown Sanitary Sewer Imp 418	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	375
7	MPCA AI	Timber Ridge Townhomes Phase III	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	376
7	MPCA AI	Village at Maple Ridge	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	378

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
7	MPCA AI	Walsh's Addition - Basswood Ave	See location description Duluth MN 55811	WSW	0.16 / 827.41	9	380
7	MPCA AI	Forest Ridge Estates	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	382
7	MPCA AI	Sterling Pond Estates	See location description Hermantown MN 55811	WSW	0.16 / 827.41	9	384
8	HIST LAST	MN Air National Guard	See location description Duluth MN 55811	ESE	0.16 / 828.46	0	385
			Tank Site | Active?: 13038 | No ***Complete Site Closure Date | Leaksite Type Desc:*** 05/15/2000 00:00:00 | Million Gal Plus Fac. Leaksite				
9	MPCA AI	Lake State dba Turbo Diesel	5043 Miller Trunk Hwy Duluth MN 55811	SSE	0.17 / 909.79	22	387
9	RCRA VSQG	LAKE STATE DBA TURBO DIESEL	5043 MILLER TRUNK HIGHWAY DULUTH MN 55811 ***Handler ID | Recycler Activity?:*** MND981782592 | NO	SSE	0.17 / 909.79	22	389
10	MPCA AI	IRP Site 4	Former 148th FW ANG POL, Airport Road Duluth MN 55811	ESE	0.17 / 912.05	1	392
11	HIST LEAKSITES	Miner's Incorporated	5065 Miller Trunk Highway Hermantown MN 55811	SSE	0.18 / 931.57	19	394
			Complete Site Closure Date | Leaksite Type Desc: 04/08/1997 00:00:00 | Leak Site				
11	LST REM SITE	Miner's Incorporated	5065 Miller Trunk Highway Hermantown MN 55811	SSE	0.18 / 931.57	19	396
11	MPCA AI	Miners Inc	5065 Miller Trunk Hwy Hermantown MN 55811	SSE	0.18 / 931.57	19	397
11	RCRA SQG	MINERS INC	5065 MILLER TRUNK HWY HERMANTOWN MN 55811-1442 ***Handler ID | Recycler Activity?:*** MNS000334848 | NO	SSE	0.18 / 931.57	19	398
11	UST	Miners Inc	5065 Miller Trunk Hwy Hermantown MN 55811-1442	SSE	0.18 / 931.57	19	401
			Tank ID | Tank Status: 112450-EQUI0000000002 | Removed, 112450-EQUI0000000003 | Removed, 112450-EQUI0000000001 | Removed				
12	MPCA AI	AT & T Wireless	5051 Miller Trunk Hwy Hermantown MN 55811	SSE	0.18 / 973.42	21	403

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
12	MPCA AI	Duluth Electric Contracting	5051 Miller Trunk Hwy Hermantown MN 55811	SSE	0.18 / 973.42	21	404
12	RCRA NON GEN	AT & T WIRELESS	5051 MILLER TRUNK HIGHWAY DULUTH MN 55804 ***Handler ID*	*Recycler Activity?:*** MNR000116095 | NO	SSE	0.18 / 973.42	21	406
12	RCRA VSQG	DULUTH ELECTRIC CONTRACTING	5051 MILLER TRUNK HWY HERMANTOWN MN 55811 ***Handler ID*	*Recycler Activity?:*** MNS000143511 | NO	SSE	0.18 / 973.42	21	408
13	MPCA AI	Site 4 Remedial Action - 148th FW MN ANG	Airport rd Duluth MN 55811	ESE	0.19 / 989.02	1	411
14	HIST LEAKSITES	Defense Revitilization And Marketing	4997 Airport Rd Duluth MN 55811 ***Complete Site Closure Date*	*Leaksite Type Desc:*** 01/14/1998 00:00:00 | Leak Site	ESE	0.19 / 1,016.67	6	413
14	LST REM SITE	Defense Revitilization And Marketing	4997 Airport Rd Duluth MN 55811	ESE	0.19 / 1,016.67	6	414
14	MPCA AI	Defense Revitilization And Marketing	4997 Airport Rd Duluth MN 55811	ESE	0.19 / 1,016.67	6	415
15	MPCA AI	National Weather Service	5027 Miller Trunk Highway Duluth MN 55811	SE	0.20 / 1,038.31	16	417
15	RCRA VSQG	NATIONAL WEATHER SERVICE	5027 MILLER TRUNK HIGHWAY DULUTH MN 55811 ***Handler ID*	*Recycler Activity?:*** MNR000108498 | NO	SE	0.20 / 1,038.31	16	419
16	MPCA AI	Todd Signs LLC	5147 Miller Trunk Highway Duluth MN 55811	SW	0.20 / 1,065.41	17	422
16	RCRA VSQG	TODD SIGN	5147 MILLER TRUNK HWY DULUTH MN 55811 ***Handler ID*	*Recycler Activity?:*** MND985730183 | NO	SW	0.20 / 1,065.41	17	423
16	SHWS	Todd Signs	5147 Miller Trunk Highway Duluth MN 55811	SW	0.20 / 1,065.41	17	427
17	MPCA AI	OReilly Auto Parts 5993	5029 Miller Trunk Hwy Hermantown MN 55811	SE	0.20 / 1,075.16	22	428

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
17	RCRA VSQG	OREILLY AUTO PARTS 5993	5029 MILLER TRUNK HWY HERMANTOWN MN 55811	SE	0.20 / 1,075.16	22	430
			Handler ID* | *Recycler Activity?: MNS000334592 | NO				
18	MPCA AI	Lorentz-Marchand-Offices	5071 Miller Trunk Highway Hermantown MN 55811	S	0.20 / 1,079.30	9	432
18	UST	Lorentz-Marchand-Offices	5071 Miller Trunk Highway Hermantown MN 55811	S	0.20 / 1,079.30	9	434
			Tank ID* | *Tank Status: 105349-EQUI0000000001 | Removed				
19	MPCA AI	Johnson Supply Co	5083 Miller Trunk Hwy Hermantown MN 55811	S	0.20 / 1,080.87	11	435
19	RCRA VSQG	JOHNSON SUPPLY CO	5083 MILLER TRUNK HWY HERMANTOWN MN 55811-1442	S	0.20 / 1,080.87	11	437
			Handler ID* | *Recycler Activity?: MN0000199562 | NO				
20	MPCA AI	Happy Campers Rv Specialists	5085 Miller Trunk Hwy Duluth MN 55811	SSW	0.21 / 1,086.69	12	441
21	MPCA AI	Hermantown Radiator Repair	5087 Miller Trunk Highway Hermantown MN 55811	SSW	0.21 / 1,092.92	12	442
21	RCRA NON GEN	HERMANTOWN RADIATOR REPAIR	5087 MILLER TRUNK HIGHWAY HERMANTOWN MN 55811	SSW	0.21 / 1,092.92	12	444
			Handler ID* | *Recycler Activity?: MND985706431 | NO				
22	HIST LEAKSITES	Hermantown Service Center	5097 Miller Trunk Highway Duluth MN 55811	SSW	0.21 / 1,094.74	13	446
			Complete Site Closure Date* | *Leaksite Type Desc: 11/10/1997 00:00:00 | Leak Site				
22	LST REM SITE	Hermantown Service Center	5097 Miller Trunk Highway Duluth MN 55811	SSW	0.21 / 1,094.74	13	448
22	MPCA AI	Richard Johnson dba Hermantown Service Center	5097 Miller Trunk Highway Hermantown MN 55811	SSW	0.21 / 1,094.74	13	449
22	MPCA AI	Hermantown Service Center	5097 Miller Trunk Highway Duluth MN 55811	SSW	0.21 / 1,094.74	13	451
22	RCRA VSQG	HERMANTOWN SERVICE CENTER	5097 MILLER TRUNK HIGHWAY HERMANTOWN MN 55811	SSW	0.21 / 1,094.74	13	453

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
			***Handler ID	Recycler Activity?:*** MND985680131 | NO			
23	HIST LEAKSITES	Pella Windows And Doors	5033 Miller Trunk Highway Duluth MN 55802	SSE	0.21 / 1,118.54	21	455
			***Complete Site Closure Date	Leaksite Type Desc:*** 02/07/2000 00:00:00 | Leak Site			
23	LST REM SITE	Pella Windows And Doors	5033 Miller Trunk Highway Duluth MN 55802	SSE	0.21 / 1,118.54	21	457
23	MPCA AI	Pella Windows And Doors	5033 Miller Trunk Highway Duluth MN 55802	SSE	0.21 / 1,118.54	21	458
24	MPCA AI	SP 8821-290 District Wide Culvert repairs/replacements	SP 8821-290 located on TH 61,53,33,2,73,18,23,35,and 70 in Aitkin,Carlton,Pine and St. Louis Co Duluth MN 55811	SE	0.23 / 1,227.50	13	460
25	BROWNFIELDS	JD Sports and Repair	5040 and 5070 Miller Trunk Highway Hermantown MN 55811	S	0.24 / 1,272.80	20	462
25	BROWNFIELDS	J.D. Sports and Repair	5040 and 5070 Miller Trunk Highway Hermantown MN 55811	S	0.24 / 1,272.80	20	463
25	MPCA AI	JD Sports and Repair	5040 and 5070 Miller Trunk Highway Hermantown MN 55811	S	0.24 / 1,272.80	20	464
25	VIC	J.D. Sports and Repair	5040 and 5070 Miller Trunk Highway Hermantown MN 55811	S	0.24 / 1,272.80	20	465
26	MPCA AI	Navy Operational Support Center	5019 Airport Rd Duluth MN 55811	SE	0.24 / 1,278.61	9	466
26	RCRA NON GEN	NAVY OPERATIONAL SUPPORT CENTER	5019 AIRPORT RD DULUTH MN 55811	SE	0.24 / 1,278.61	9	468
			***Handler ID	Recycler Activity?:*** MNS000121459 | NO			
27	MPCA AI	MAC Hermantown	5155 Miller Trunk Hwy Hermantown MN 55811	SW	0.25 / 1,294.87	17	470
28	MPCA AI	5169 Miller Trunk Fill Project	5169 Miller Trunk Highway Hermantown MN 55811	WSW	0.25 / 1,304.46	14	472

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
29	MPCA AI	Hermantown Service	5105 Miller Trunk Highway Hermantown MN 55811	SSW	0.25 / 1,312.78	16	474
29	MPCA AI	Db Enterprises	5105 Miller Trunk Hwy Duluth MN 55811	SSW	0.25 / 1,312.78	16	476
29	RCRA NON GEN	HERMANTOWN SERVICE	5105 MILLER TRUNK HIGHWAY HERMANTOWN MN 55811-1250 ***Handler ID	Recycler Activity?:*** MND982607194 | NO	SSW	0.25 / 1,312.78	16	478
30	HIST LAST	Northside Truck Sales	5040 Miller Trunk Hwy Hermantown MN 55811 ***Tank Site	Active?:*** 7380 | No ***Complete Site Closure Date	Leaksite Type Desc:*** 01/12/1996 00:00:00 | Leak Site	SSE	0.25 / 1,327.64	21	480
30	LST REM SITE	Northside Truck Sales	5040 Miller Trunk Hwy Hermantown MN 55811	SSE	0.25 / 1,327.64	21	482
30	MPCA AI	Northside Truck Sales & Service Inc	5040 Miller Trunk Hwy Hermantown MN 55811	SSE	0.25 / 1,327.64	21	483
30	MPCA AI	JD's Sports & Repair	5040 Miller Trunk Hwy Hermantown MN 55811	SSE	0.25 / 1,327.64	21	484
31	HIST LEAKSITES	Airbase Convenience Store	3220 Miller Trunk Highway Duluth MN 55811 ***Complete Site Closure Date	Leaksite Type Desc:*** 10/08/1998 00:00:00 | Leak Site	SSW	0.25 / 1,345.68	16	486
31	LST REM SITE	Airbase Convenience Store	3220 Miller Trunk Highway Duluth MN 55811	SSW	0.25 / 1,345.68	16	488
31	MPCA AI	Airbase Convenience Store	3220 Miller Trunk Highway Duluth MN 55811	SSW	0.25 / 1,345.68	16	489
32	MPCA AI	Hermantown Square	5094 Miller Trunk Hwy Hermantown MN 55811	SSW	0.26 / 1,359.33	17	491
33	MPCA AI	ASP Mechanical Inc.	5028 Miller Trunk Hwy Hermantown MN 55811	SE	0.26 / 1,369.98	21	493
33	MPCA AI	Valerie Tillman	5028 Miller Trunk Hwy Hermantown MN 55811	SE	0.26 / 1,369.98	21	494

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
34	MPCA AI	Former MANG Tank Farm	4977 Airport Rd Duluth MN 55811	ESE	0.26 / 1,385.47	1	495
35	SHWS	DULUTH AIR FORCE BASE Site 32 - MANG AOC C	See location description Duluth MN 55811	ESE	0.27 / 1,403.89	0	497
36	DELISTED TANK	U Of Duluth - Nrri Building	5013 Miller Trunk Highway 3151 Miller Trunk Hwy Duluth MN 55811	ESE	0.28 / 1,463.32	7	498
36	HIST LUST	University of MN Duluth Sage Building	5013 Miller Trunk Highway 3151 Miller Trunk Hwy Duluth MN 55811 ***Complete Site Closure Date | Leaksite Type Desc:*** 11/22/2011 00:00:00 | Leak Site	ESE	0.28 / 1,463.32	7	499
36	LST REM SITE	University of MN Duluth Sage Building	5013 Miller Trunk Highway 3151 Miller Trunk Hwy Duluth MN 55811	ESE	0.28 / 1,463.32	7	500
36	MPCA AI	NRRI- Sage Building-University of Duluth	5013 Miller Trunk Highway 3151 Miller Trunk Hwy Duluth MN 55811	ESE	0.28 / 1,463.32	7	502
36	MPCA AI	U of M - NRRI	5013 Miller Trunk Hwy Hermantown MN 55811	ESE	0.28 / 1,463.32	7	503
36	MPCA AI	Natural Resources Research Institute	5013 Miller Trunk Hwy Duluth MN 55811	ESE	0.28 / 1,463.32	7	505
36	MPCA AI	Thomas J Malterer	5013 Miller Trunk Hwy. Duluth MN 55811	ESE	0.28 / 1,463.32	7	506
36	MPCA AI	UMD NRRI Upper Lot Resurvacing	5013 Miller Trunk Hwy Hermantown MN 55811	ESE	0.28 / 1,463.32	7	507
37	MPCA AI	Hermantown Molding & Millwork	5191 Miller Trunk Highway Hermantown MN 55811	WSW	0.28 / 1,465.50	9	509
38	MPCA AI	Stephen G Dahlgren DDS	5086 Miller Trunk Hwy Ste 1 Hermantown MN 55811	S	0.28 / 1,481.35	17	511
38	MPCA AI	Miller Trunk Family Dentistry	5086 Miller Trunk Hwy Hermantown MN 55811	S	0.28 / 1,481.35	17	513

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
39	DELISTED LST	Kolar Garage	5020 Miller Trunk Highway Hermantown MN	SE	0.28 / 1,504.51	12	514
39	HIST LEAKSITES	Kolar Garage	5020 Miller Trunk Highway Hermantown MN 55811	SE	0.28 / 1,504.51	12	515
			Complete Site Closure Date | Leaksite Type Desc: 10/14/1998 00:00:00 | Leak Site				
39	LST REM SITE	Kolar Garage	5020 Miller Trunk Highway Hermantown MN 55811	SE	0.28 / 1,504.51	12	517
39	MPCA AI	Xtreme Auto Inc	5020 Miller Trunk Highway Hermantown MN 55811	SE	0.28 / 1,504.51	12	518
39	MPCA AI	Skyline Motors Inc	5020 Miller Trunk Hwy Duluth MN 55811	SE	0.28 / 1,504.51	12	519
40	MPCA AI	Dennis Eckstrom Fill Site - Hermantown	See location description Hermantown MN 55811	WSW	0.29 / 1,526.54	10	521
41	MPCA AI	Bulldog Collision	5082 Miller Trunk Hwy Hermantown MN 55811	S	0.29 / 1,526.68	18	523
42	HIST LEAKSITES	Hermantown Federal Credit Union	5116 Miller Trunk Highway Hermantown MN 55811	SW	0.29 / 1,529.42	13	525
			Complete Site Closure Date | Leaksite Type Desc: 08/17/1994 00:00:00 | Leak Site				
42	LST REM SITE	Hermantown Federal Credit Union	5116 Miller Trunk Highway Hermantown MN 55811	SW	0.29 / 1,529.42	13	526
42	MPCA AI	Hermantown Federal Credit Union	5116 Miller Trunk Highway Hermantown MN 55811	SW	0.29 / 1,529.42	13	528
43	MPCA AI	Miller Trunk Auto Inc	5014 Miller Trunk Highway Hermantown MN 55811	SE	0.29 / 1,547.22	10	529
43	SHWS	BULLYAN HOMES (SF)	5014 Miller Trunk Highway Hermantown MN 55811	SE	0.29 / 1,547.22	10	531
44	BROWNFIELDS	Hawks Landing	5106 Miller Trunk Highway Hermantown MN 55811	SSW	0.29 / 1,555.33	18	532

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
44	BROWNFIELDS	Hawks Landing BP	5106 Miller Trunk Hwy Hermantown MN 55811	SSW	0.29 / 1,555.33	18	533
44	BROWNFIELDS	Midwest Golf Cars	5106 Miller Trunk Hwy Hermantown MN 55811	SSW	0.29 / 1,555.33	18	534
44	BROWNFIELDS	Midwest Golf Cars 2	5106 Miller Trunk Hwy Hermantown MN 55811	SSW	0.29 / 1,555.33	18	535
44	DELISTED LST	Hawk's Landing BP	5106 Miller Trunk Hwy Hermantown MN	SSW	0.29 / 1,555.33	18	536
44	HIST LUST	Spur No 5054	5106 Miller Trunk Highway Hermantown MN 55811	SSW	0.29 / 1,555.33	18	537
			Complete Site Closure Date | Leaksite Type Desc: 01/23/2003 00:00:00 | Leak Site				
44	LST REM SITE	Spur No 5054	5106 Miller Trunk Highway Hermantown MN 55811	SSW	0.29 / 1,555.33	18	538
44	LST REM SITE	Hawk's Landing BP	5106 Miller Trunk Hwy Hermantown MN 55811	SSW	0.29 / 1,555.33	18	539
44	MPCA AI	Hawk's Landing BP	5106 Miller Trunk Hwy Hermantown MN 55811	SSW	0.29 / 1,555.33	18	540
44	MPCA AI	Hermantown Service Ctr	5106 Miller Trunk Highway Duluth MN 55811	SSW	0.29 / 1,555.33	18	542
44	VIC	Hawks Landing BP	5106 Miller Trunk Hwy Hermantown MN 55811	SSW	0.29 / 1,555.33	18	544
44	VIC	Midwest Golf Cars 2	5106 Miller Trunk Hwy Hermantown MN 55811	SSW	0.29 / 1,555.33	18	545
45	LST REM SITE	Billman Construction Company	5010 Miller Trunk Highway Hermantown MN 55811	SE	0.33 / 1,756.34	10	546
45	MPCA AI	Billmans Construction	5010 Miller Trunk Highway Hermantown MN 55811	SE	0.33 / 1,756.34	10	547
45	MPCA AI	Billman Home Center	5010 Miller Trunk Hwy Duluth MN 55811	SE	0.33 / 1,756.34	10	549

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
45	MPCA AI	Billman Construction Company	5010 Miller Trunk Highway Hermantown MN 55811	SE	0.33 / 1,756.34	10	551
45	MPCA AI	Billman Construction, Inc.	5010 Miller Trunk Hwy Hermantown MN 55811	SE	0.33 / 1,756.34	10	553
45	MPCA AI	Michael D Billman	5010 Miller Trunk Hermantown MN 55811	SE	0.33 / 1,756.34	10	554
45	MPCA AI	Billman Construction Inc	5010 Miller Trunk Hwy Duluth MN 55811	SE	0.33 / 1,756.34	10	555
46	MPCA AI	Centricity Credit Union	4477 Lavaque Rd Hermantown MN 55811	SSW	0.33 / 1,759.67	20	556
47	MPCA AI	AD Shrine Facility	5152 Miller Trunk Highway Duluth MN 55811	SW	0.34 / 1,772.02	11	558
48	HIST LUST	Billman Construction Company	5010 Miller Trunk Highway Hermantown MN 55811	SE	0.36 / 1,882.63	9	560
			***Complete Site Closure Date	Leaksite Type Desc:*** 10/07/2002 00:00:00	Leak Site		
49	DELISTED TANK	Curtis Oil & Tire and Propane Co	4995 Miller Trunk Highway Hermantown MN 55811	SE	0.37 / 1,927.41	8	562
49	HIST LAST	Curtis Oil Bulk Facility	4995 Miller Trunk Highway Hermantown MN 55811	SE	0.37 / 1,927.41	8	562
			***Tank Site	Active?:*** 8660	No		
			***Complete Site Closure Date	Leaksite Type Desc:*** 04/11/2011 00:00:00	Leak Site		
49	LST REM SITE	Curtis Oil Bulk Facility	4995 Miller Trunk Highway Hermantown MN 55811	SE	0.37 / 1,927.41	8	564
49	MPCA AI	Curtis Oil & Tire and Propane Co	4995 Miller Trunk Highway Hermantown MN 55811	SE	0.37 / 1,927.41	8	565
49	MPCA AI	Pro Tire	4995 Miller Trunk Highway Hermantown MN 55811	SE	0.37 / 1,927.41	8	567
50	HIST LEAKSITES	Food N Fuel	4997 Miller Trunk Highway Duluth MN 55811	SE	0.37 / 1,950.88	7	569
			***Complete Site Closure Date	Leaksite Type Desc:*** 02/07/2000 00:00:00	Leak Site		

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
50	HIST LEAKSITES	Food And Fuel	4997 Miller Trunk Highway Hermantown MN 55811	SE	0.37 / 1,950.88	7	570
			***Complete Site Closure Date	Leaksite Type Desc:*** 08/06/1998 00:00:00	Leak Site		
50	LST REM SITE	Food N Fuel	4997 Miller Trunk Highway Duluth MN 55811	SE	0.37 / 1,950.88	7	572
50	LST REM SITE	Food And Fuel	4997 Miller Trunk Highway Hermantown MN 55811	SE	0.37 / 1,950.88	7	573
50	MPCA AI	Food N Fuel	4997 Miller Trunk Highway Duluth MN 55811	SE	0.37 / 1,950.88	7	574
50	MPCA AI	Food And Fuel	4997 Miller Trunk Highway Hermantown MN 55811	SE	0.37 / 1,950.88	7	576
51	MPCA AI	Midnight Sun	5197 Miller Trunk Highway Hermantown MN 55811	WSW	0.37 / 1,967.19	29	578
52	MPCA AI	Cirrus Design Corp aka Cirrus Aircraft	4515 Taylor Cir Hermantown MN 55811	ESE	0.39 / 2,048.31	0	579
52	MPCA AI	Cirrus Design Corp/ Duluth Proj 8976SA96	4515 Taylor Cir Duluth MN 55811	ESE	0.39 / 2,048.31	0	581
52	RCRA TSD	CIRRUS DESIGN CORP	4515 TAYLOR CIR HERMANTOWN MN 55811-1548	ESE	0.39 / 2,048.31	0	583
			***Handler ID	Recycler Activity?:*** MN0000275115	YES		
53	DELISTED LST	Curtis Convenience Store	4991 Miller Trunk Highway Hermantown MN	SE	0.40 / 2,110.40	4	603
53	HIST LEAKSITES	Miller Trunk Food N Fuel	4991 Miller Trunk Highway Hermantown MN 55811	SE	0.40 / 2,110.40	4	603
			***Complete Site Closure Date	Leaksite Type Desc:*** 09/14/1998 00:00:00	Leak Site		
53	LST INCIDENT	Curtis Oil	4991 MILLER TRUNK Highway MN Duluth MN 55811	SE	0.40 / 2,110.40	4	605
			***Incident ID	Incident Status:*** 76795	Closed or Completed		
53	LST REM SITE	Miller Trunk Food N Fuel	4991 Miller Trunk Highway Hermantown MN 55811	SE	0.40 / 2,110.40	4	605

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
53	LST REM SITE	Curtis Convenience Store	4991 Miller Trunk Highway Hermantown MN 55811	SE	0.40 / 2,110.40	4	606
53	MPCA AI	Curtis Convenience Store	4991 Miller Trunk Highway Hermantown MN 55811	SE	0.40 / 2,110.40	4	607
54	MPCA AI	Curtis Oil	4985 Miller Trunk Highway Hermantown MN 55811	ESE	0.41 / 2,147.61	0	609
55	MPCA AI	Plating Specialties Inc	4505 Taylor Cir Duluth MN 55811	ESE	0.41 / 2,183.07	0	611
56	LST REM SITE	Duluth Air Force Base	Duluth International Airport Duluth MN 55811	E	0.43 / 2,259.47	8	613
57	BROWNFIELDS	Kwik Trip Store 220	4978 Miller Trunk Highway Hermantown MN 55811	SE	0.43 / 2,273.22	5	614
57	BROWNFIELDS	Kwik Trip #220 Carwash Addition	4978 Miller Trunk Highway Hermantown MN 55811	SE	0.43 / 2,273.22	5	615
57	BROWNFIELDS	Kwik Trip Store 220	4978 Miller Trunk Highway Hermantown MN 55811	SE	0.43 / 2,273.22	5	616
57	LST INCIDENT	Kwik Trip #220	4978 Miller Trunk Highway Hermantown MN 55811	SE	0.43 / 2,273.22	5	617
			Incident ID* | *Incident Status: 188817 | Closed or Completed				
57	MPCA AI	Kwik Trip Store 220	4978 Miller Trunk Highway Hermantown MN 55811	SE	0.43 / 2,273.22	5	618
57	VIC	Kwik Trip Store 220	4978 Miller Trunk Highway Hermantown MN 55811	SE	0.43 / 2,273.22	5	619
58	MPCA AI	Hk Enterprises Inc Hertz System Lic	4701 Airport Dr Duluth MN 55811	E	0.46 / 2,440.76	5	621
58	MPCA AI	Delta Global Services	4701 Airport Dr Duluth MN 55811	E	0.46 / 2,440.76	5	623
58	MPCA AI	Northwest Storage Area Duluth Iap	4701 Airport Rd Duluth MN 55802	E	0.46 / 2,440.76	5	624

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
58	MPCA AI	Avis Rent a Car	4701 Airport Rd Duluth MN 55811	E	0.46 / 2,440.76	5	626
59	HIST LEAKSITES	Duluth International Airport	See location description Duluth MN 55811	E	0.49 / 2,591.56	3	628
			Complete Site Closure Date | Leaksite Type Desc: 03/03/1994 00:00:00 | Leak Site				
59	HIST LEAKSITES	Duluth Intl Airport Radar Tower	See location description Duluth MN 55811	E	0.49 / 2,591.56	3	630
			Complete Site Closure Date | Leaksite Type Desc: 01/28/1999 00:00:00 | Leak Site				
59	LST REM SITE	Duluth International Airport	See location description Duluth MN 55811	E	0.49 / 2,591.56	3	631
59	LST REM SITE	Duluth Intl Airport Radar Tower	See location description Duluth MN 55811	E	0.49 / 2,591.56	3	632
59	MPCA AI	Duluth Intl Airport Radar Tower	See location description Duluth MN 55811	E	0.49 / 2,591.56	3	633
59	MPCA AI	Duluth International Airport	See location description Duluth MN 55811	E	0.49 / 2,591.56	3	635
60	DEL PLP	Arrowhead Refinery	See location description Hermantown MN 55810	W	0.94 / 4,942.32	10	637
61	DEL PLP	DULUTH AIR FORCE BASE Site 29 - (FUDS)Site 102 TCE	Lots 2 and 3 Block 4 and 5 of the Airport Division Duluth MN 55811	E	0.95 / 5,027.01	14	637
62	PLP	ARROWHEAD REFINERY CO.	5315 Hwy 53 Hermantown MN 55811	W	0.98 / 5,177.67	10	638
62	SUPERFUND ROD	ARROWHEAD REFINERY CO.	NW CORNER HWY 53 & UGSTAD ROAD HERMANTOWN MN 5581	W	0.98 / 5,177.67	10	640

Executive Summary: Summary by Data Source

Standard

Federal

RCRA TSD - RCRA non-CORRACTS TSD Facilities

A search of the RCRA TSD database, dated Nov 30, 2025 has found that there are 1 RCRA TSD site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
CIRRUS DESIGN CORP	4515 TAYLOR CIR HERMANTOWN MN 55811-1548	ESE	0.39 / 2,048.31	52
	Handler ID **|** ***Recycler Activity?****: MN0000275115*	*YES*		

RCRA SQG - RCRA Small Quantity Generators List

A search of the RCRA SQG database, dated Nov 30, 2025 has found that there are 1 RCRA SQG site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
MINERS INC	5065 MILLER TRUNK HWY HERMANTOWN MN 55811-1442	SSE	0.18 / 931.57	11
	Handler ID **|** ***Recycler Activity?****: MNS000334848*	*NO*		

RCRA VSQG - RCRA Very Small Quantity Generators List

A search of the RCRA VSQG database, dated Nov 30, 2025 has found that there are 9 RCRA VSQG site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
DULUTH AIRPORT AUTHORITY	4701 GRINDEN DR DULUTH MN 55811-1578	SSE	0.00 / 0.00	2
	Handler ID **|** ***Recycler Activity?****: MNR000023143*	*NO*		
TSA AT DULUTH INTERNATIONAL AIRPORT	4701 GRINDEN DR DULUTH MN 55811-1578	SSE	0.00 / 0.00	2
	Handler ID **|** ***Recycler Activity?****: MNS000105817*	*NO*		
LAKE STATE DBA TURBO DIESEL	5043 MILLER TRUNK HIGHWAY DULUTH MN 55811	SSE	0.17 / 909.79	9
	Handler ID **|** ***Recycler Activity?****: MND981782592*	*NO*		
DULUTH ELECTRIC CONTRACTING	5051 MILLER TRUNK HWY HERMANTOWN MN 55811	SSE	0.18 / 973.42	12
	Handler ID **|** ***Recycler Activity?****: MNS000143511*	*NO*		
NATIONAL WEATHER SERVICE	5027 MILLER TRUNK HIGHWAY DULUTH MN 55811	SE	0.20 / 1,038.31	15

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
	***Handler ID | Recycler Activity?**: MNR000108498 | NO*			
TODD SIGN	5147 MILLER TRUNK HWY DULUTH MN 55811	SW	0.20 / 1,065.41	16
	***Handler ID | Recycler Activity?**: MND985730183 | NO*			
OREILLY AUTO PARTS 5993	5029 MILLER TRUNK HWY HERMANTOWN MN 55811	SE	0.20 / 1,075.16	17
	***Handler ID | Recycler Activity?**: MNS000334592 | NO*			
JOHNSON SUPPLY CO	5083 MILLER TRUNK HWY HERMANTOWN MN 55811-1442	S	0.20 / 1,080.87	19
	***Handler ID | Recycler Activity?**: MN0000199562 | NO*			
HERMANTOWN SERVICE CENTER	5097 MILLER TRUNK HIGHWAY HERMANTOWN MN 55811	SSW	0.21 / 1,094.74	22
	***Handler ID | Recycler Activity?**: MND985680131 | NO*			

RCRA NON GEN - RCRA Non-Generators

A search of the RCRA NON GEN database, dated Nov 30, 2025 has found that there are 4 RCRA NON GEN site(s) within approximately 0.25miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
AT & T WIRELESS	5051 MILLER TRUNK HIGHWAY DULUTH MN 55804	SSE	0.18 / 973.42	12
	***Handler ID | Recycler Activity?**: MNR000116095 | NO*			
HERMANTOWN RADIATOR REPAIR	5087 MILLER TRUNK HIGHWAY HERMANTOWN MN 55811	SSW	0.21 / 1,092.92	21
	***Handler ID | Recycler Activity?**: MND985706431 | NO*			
NAVY OPERATIONAL SUPPORT CENTER	5019 AIRPORT RD DULUTH MN 55811	SE	0.24 / 1,278.61	26
	***Handler ID | Recycler Activity?**: MNS000121459 | NO*			
HERMANTOWN SERVICE	5105 MILLER TRUNK HIGHWAY HERMANTOWN MN 55811-1250	SSW	0.25 / 1,312.78	29
	***Handler ID | Recycler Activity?**: MND982607194 | NO*			

ERNS - Emergency Response Notification System

A search of the ERNS database, dated Feb 8, 2026 has found that there are 4 ERNS site(s) within approximately 0.02miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
	4701 GRINDEN DRIVE GATE NO.3 DULUTH MN 55811	SSE	0.00 / 0.00	2
	***NRC Report No**: 471404*			
	4701 GRINDEN DRIVE DULUTH MN 55811	SSE	0.00 / 0.00	2

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
	***NRC Report No**: 488617*			
	4701 GRINDEN DRIVE GATE 3 DULUTH MN 55811	SSE	0.00 / 0.00	2
	***NRC Report No**: 463985*			
	4701 GRINDEN DRIVE DULUTH MN 55811	SSE	0.00 / 0.00	2
	***NRC Report No**: 468284*			

SUPERFUND ROD - Superfund Decision Documents

A search of the SUPERFUND ROD database, dated Jan 30, 2026 has found that there are 1 SUPERFUND ROD site(s) within approximately 1.00miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
ARROWHEAD REFINERY CO.	NW CORNER HWY 53 & UGSTAD ROAD HERMANTOWN MN 5581	W	0.98 / 5,177.67	62

State

PLP - Minnesota Permanent List of Priorities

A search of the PLP database, dated Feb 26, 2026 has found that there are 1 PLP site(s) within approximately 1.00miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
ARROWHEAD REFINERY CO.	5315 Hwy 53 Hermantown MN 55811	W	0.98 / 5,177.67	62

DEL PLP - Delisted Permanent List of Priorities (PLP)

A search of the DEL PLP database, dated Feb 26, 2026 has found that there are 2 DEL PLP site(s) within approximately 1.00miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Arrowhead Refinery	See location description Hermantown MN 55810	W	0.94 / 4,942.32	60
DULUTH AIR FORCE BASE Site 29 - (FUDS)Site 102 TCE	Lots 2 and 3 Block 4 and 5 of the Airport Division Duluth MN 55811	E	0.95 / 5,027.01	61

SHWS - Minnesota Site Remediation Section Database

A search of the SHWS database, dated Feb 26, 2026 has found that there are 4 SHWS site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
MN Air National Guard	See location description Duluth MN 55811	ESE	0.16 / 826.55	5
Todd Signs	5147 Miller Trunk Highway Duluth MN 55811	SW	0.20 / 1,065.41	16
DULUTH AIR FORCE BASE Site 32 - MANG AOC C	See location description Duluth MN 55811	ESE	0.27 / 1,403.89	35
BULLYAN HOMES (SF)	5014 Miller Trunk Highway Hermantown MN 55811	SE	0.29 / 1,547.22	43

SITE ASSESSMENT - MPCA Site Assessment and Emergency Response Sites

A search of the SITE ASSESSMENT database, dated Feb 26, 2026 has found that there are 2 SITE ASSESSMENT site(s) within approximately 0.25miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Duluth Airport	4701 Grinden Drive Duluth MN	SSE	0.00 / 0.00	2
Duluth International Airport - AOC C	Duluth International Airport Duluth MN 55811	SW	0.13 / 698.45	4

SWF/LF - Permitted Solid Waste Facilities

A search of the SWF/LF database, dated Mar 3, 2026 has found that there are 1 SWF/LF site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
DAA ANG Fire Station Phase 3	4701 Grinden Dr Duluth MN 55803	SSE	0.00 / 0.00	2

HIST LUST - Historical Leaking Underground Storage Tanks

A search of the HIST LUST database, dated Nov 1, 2016 has found that there are 4 HIST LUST site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Bristol & Colelillo Utility Work	Address Unknown Duluth MN 55811	SW	0.13 / 661.25	3
	***Complete Site Closure Date | Leaksite Type Desc**: 05/05/2004 00:00:00 | Leak Site*			

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
University of MN Duluth Sage Building	5013 Miller Trunk Highway 3151 Miller Trunk Hwy Duluth MN 55811 ***Complete Site Closure Date | Leaksite Type Desc**: 11/22/2011 00:00:00 | Leak Site*	ESE	0.28 / 1,463.32	36
Spur No 5054	5106 Miller Trunk Highway Hermantown MN 55811 ***Complete Site Closure Date | Leaksite Type Desc**: 01/23/2003 00:00:00 | Leak Site*	SSW	0.29 / 1,555.33	44
Billman Construction Company	5010 Miller Trunk Highway Hermantown MN 55811 ***Complete Site Closure Date | Leaksite Type Desc**: 10/07/2002 00:00:00 | Leak Site*	SE	0.36 / 1,882.63	48

HIST LAST - Historical Leaking Aboveground Storage Tanks

A search of the HIST LAST database, dated Nov 1, 2016 has found that there are 3 HIST LAST site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
MN Air National Guard	See location description Duluth MN 55811 ***Tank Site | Active?**: 13038 | No* ***Complete Site Closure Date | Leaksite Type Desc**: 05/15/2000 00:00:00 | Million Gal Plus Fac. Leaksite*	ESE	0.16 / 828.46	8
Northside Truck Sales	5040 Miller Trunk Hwy Hermantown MN 55811 ***Tank Site | Active?**: 7380 | No* ***Complete Site Closure Date | Leaksite Type Desc**: 01/12/1996 00:00:00 | Leak Site*	SSE	0.25 / 1,327.64	30
Curtis Oil Bulk Facility	4995 Miller Trunk Highway Hermantown MN 55811 ***Tank Site | Active?**: 8660 | No* ***Complete Site Closure Date | Leaksite Type Desc**: 04/11/2011 00:00:00 | Leak Site*	SE	0.37 / 1,927.41	49

HIST LEAKSITES - Historical Leak Sites

A search of the HIST LEAKSITES database, dated Nov 1, 2016 has found that there are 14 HIST LEAKSITES site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Duluth International Airport	4701 Grinden Dr Duluth MN 55811 ***Complete Site Closure Date | Leaksite Type Desc**: 05/09/1995 00:00:00 | Leak Site*	SSE	0.00 / 0.00	2
Spotted Eagle Elementary School	Address Unknown Duluth MN 55811 ***Complete Site Closure Date | Leaksite Type Desc**: 03/26/1996 00:00:00 | Leak Site*	SW	0.13 / 661.25	3
Miner's Incorporated	5065 Miller Trunk Highway Hermantown MN 55811 ***Complete Site Closure Date | Leaksite Type Desc**: 04/08/1997 00:00:00 | Leak Site*	SSE	0.18 / 931.57	11
Defense Revitilization And Marketing	4997 Airport Rd Duluth MN 55811	ESE	0.19 / 1,016.67	14

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
	***Complete Site Closure Date | Leaksite Type Desc**: 01/14/1998 00:00:00 | Leak Site*			
Hermantown Service Center	5097 Miller Trunk Highway Duluth MN 55811	SSW	0.21 / 1,094.74	22
	***Complete Site Closure Date | Leaksite Type Desc**: 11/10/1997 00:00:00 | Leak Site*			
Pella Windows And Doors	5033 Miller Trunk Highway Duluth MN 55802	SSE	0.21 / 1,118.54	23
	***Complete Site Closure Date | Leaksite Type Desc**: 02/07/2000 00:00:00 | Leak Site*			
Airbase Convenience Store	3220 Miller Trunk Highway Duluth MN 55811	SSW	0.25 / 1,345.68	31
	***Complete Site Closure Date | Leaksite Type Desc**: 10/08/1998 00:00:00 | Leak Site*			
Kolar Garage	5020 Miller Trunk Highway Hermantown MN 55811	SE	0.28 / 1,504.51	39
	***Complete Site Closure Date | Leaksite Type Desc**: 10/14/1998 00:00:00 | Leak Site*			
Hermantown Federal Credit Union	5116 Miller Trunk Highway Hermantown MN 55811	SW	0.29 / 1,529.42	42
	***Complete Site Closure Date | Leaksite Type Desc**: 08/17/1994 00:00:00 | Leak Site*			
Food N Fuel	4997 Miller Trunk Highway Duluth MN 55811	SE	0.37 / 1,950.88	50
	***Complete Site Closure Date | Leaksite Type Desc**: 02/07/2000 00:00:00 | Leak Site*			
Food And Fuel	4997 Miller Trunk Highway Hermantown MN 55811	SE	0.37 / 1,950.88	50
	***Complete Site Closure Date | Leaksite Type Desc**: 08/06/1998 00:00:00 | Leak Site*			
Miller Trunk Food N Fuel	4991 Miller Trunk Highway Hermantown MN 55811	SE	0.40 / 2,110.40	53
	***Complete Site Closure Date | Leaksite Type Desc**: 09/14/1998 00:00:00 | Leak Site*			
Duluth International Airport	See location description Duluth MN 55811	E	0.49 / 2,591.56	59
	***Complete Site Closure Date | Leaksite Type Desc**: 03/03/1994 00:00:00 | Leak Site*			
Duluth Intl Airport Radar Tower	See location description Duluth MN 55811	E	0.49 / 2,591.56	59
	***Complete Site Closure Date | Leaksite Type Desc**: 01/28/1999 00:00:00 | Leak Site*			

LST REM SITE - MPCA Remediation Leak Sites

A search of the LST REM SITE database, dated Feb 26, 2026 has found that there are 24 LST REM SITE site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Duluth International Airport	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	2

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Duluth Airport - Former Fueling Station	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	2
Duluth International Airport Maintenance Garage	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	2
Former Fueling Station	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	2
Miner's Incorporated	5065 Miller Trunk Highway Hermantown MN 55811	SSE	0.18 / 931.57	11
Defense Revitilization And Marketing	4997 Airport Rd Duluth MN 55811	ESE	0.19 / 1,016.67	14
Hermantown Service Center	5097 Miller Trunk Highway Duluth MN 55811	SSW	0.21 / 1,094.74	22
Pella Windows And Doors	5033 Miller Trunk Highway Duluth MN 55802	SSE	0.21 / 1,118.54	23
Northside Truck Sales	5040 Miller Trunk Hwy Hermantown MN 55811	SSE	0.25 / 1,327.64	30
Airbase Convenience Store	3220 Miller Trunk Highway Duluth MN 55811	SSW	0.25 / 1,345.68	31
University of MN Duluth Sage Building	5013 Miller Trunk Highway 3151 Miller Trunk Hwy Duluth MN 55811	ESE	0.28 / 1,463.32	36
Kolar Garage	5020 Miller Trunk Highway Hermantown MN 55811	SE	0.28 / 1,504.51	39
Hermantown Federal Credit Union	5116 Miller Trunk Highway Hermantown MN 55811	SW	0.29 / 1,529.42	42
Spur No 5054	5106 Miller Trunk Highway Hermantown MN 55811	SSW	0.29 / 1,555.33	44

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Hawk's Landing BP	5106 Miller Trunk Hwy Hermantown MN 55811	SSW	0.29 / 1,555.33	44
Billman Construction Company	5010 Miller Trunk Highway Hermantown MN 55811	SE	0.33 / 1,756.34	45
Curtis Oil Bulk Facility	4995 Miller Trunk Highway Hermantown MN 55811	SE	0.37 / 1,927.41	49
Food N Fuel	4997 Miller Trunk Highway Duluth MN 55811	SE	0.37 / 1,950.88	50
Food And Fuel	4997 Miller Trunk Highway Hermantown MN 55811	SE	0.37 / 1,950.88	50
Miller Trunk Food N Fuel	4991 Miller Trunk Highway Hermantown MN 55811	SE	0.40 / 2,110.40	53
Curtis Convenience Store	4991 Miller Trunk Highway Hermantown MN 55811	SE	0.40 / 2,110.40	53
Duluth Air Force Base	Duluth International Airport Duluth MN 55811	E	0.43 / 2,259.47	56
Duluth International Airport	See location description Duluth MN 55811	E	0.49 / 2,591.56	59
Duluth Intl Airport Radar Tower	See location description Duluth MN 55811	E	0.49 / 2,591.56	59

LST INCIDENT - MPCA Tank Incidents

A search of the LST INCIDENT database, dated Feb 23, 2026 has found that there are 2 LST INCIDENT site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Curtis Oil	4991 MILLER TRUNK Highway MN Duluth MN 55811	SE	0.40 / 2,110.40	53
	Incident ID* | *Incident Status: *76795 | Closed or Completed*			
Kwik Trip #220	4978 Miller Trunk Highway Hermantown MN 55811	SE	0.43 / 2,273.22	57

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
	Incident ID* | *Incident Status: *188817* | *Closed or Completed*			

DELISTED LST - Delisted Leaking Storage Tanks

A search of the DELISTED LST database, dated Feb 26, 2026 has found that there are 4 DELISTED LST site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Former Fueling Station	4701 Grinden Dr Duluth MN	SSE	0.00 / 0.00	2
Kolar Garage	5020 Miller Trunk Highway Hermantown MN	SE	0.28 / 1,504.51	39
Hawk's Landing BP	5106 Miller Trunk Hwy Hermantown MN	SSW	0.29 / 1,555.33	44
Curtis Convenience Store	4991 Miller Trunk Highway Hermantown MN	SE	0.40 / 2,110.40	53

UST - Underground Storage Tanks

A search of the UST database, dated Feb 25, 2026 has found that there are 7 UST site(s) within approximately 0.25miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Duluth International Airport	4701 Grinden Dr Duluth MN 55811-1578	SSE	0.00 / 0.00	2
	Tank ID* | *Tank Status: *638-EQUI0000000003* | *Removed, 638-EQUI0000000005* | *Removed, 638-EQUI0000000009* | *Removed, 638-EQUI0000000007* | *Removed, 638-EQUI0000000014* | *, 638-EQUI0000000002* | *Removed, 638-EQUI0000000004* | *Removed, 638-EQUI0000000016* | *Removed, 638-EQUI0000000008* | *Removed, 638-EQUI0000000006* | *Removed, 638-EQUI0000000010* | *Removed, 638-EQUI0000000011* | *Removed, 638-EQUI0000000012* | *Removed, 638-EQUI0000000015* | *Removed, 638-EQUI0000000001* | *Removed, 638-EQUI0000000013* |			
Federal Aviation Admin Asr/rtr	Old Terminal Building 2nd Floor Duluth MN 55811	SW	0.13 / 698.45	4
	Tank ID* | *Tank Status: *111127-EQUI0000000001* | *Removed, 111127-EQUI0000000002* | *Removed, 111127-EQUI0000000003* | *Removed*			
Federal Aviation Admin Dlh/vortac	Old Terminal Building 2nd Floor Duluth MN 55811	SW	0.13 / 698.45	4
	Tank ID* | *Tank Status: *111129-EQUI0000000001* | *Removed*			
Federal Aviation Admin Rcag	Old Terminal Building 2nd Floor Duluth MN 55811	SW	0.13 / 698.45	4
	Tank ID* | *Tank Status: *111130-EQUI0000000001* | *Removed*			
Zuck Property	Island Beach Ln Duluth MN 55811	SW	0.13 / 698.45	4

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
	Tank ID* | *Tank Status: *126921-EQUI0000000001* | *Removed*			
Miners Inc	5065 Miller Trunk Hwy Hermantown MN 55811-1442	SSE	0.18 / 931.57	11
	Tank ID* | *Tank Status: *112450-EQUI0000000002* | *Removed, 112450-EQUI0000000003* | *Removed, 112450-EQUI0000000001* | *Removed*			
Lorentz-Marchand-Offices	5071 Miller Trunk Highway Hermantown MN 55811	S	0.20 / 1,079.30	18
	Tank ID* | *Tank Status: *105349-EQUI0000000001* | *Removed*			

AST - Minnesota Above Ground Storage Tanks

A search of the AST database, dated Feb 23, 2026 has found that there are 1 AST site(s) within approximately 0.25miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Delta Airlines Inc Duluth Ramp	4701 Grinden Rd Duluth MN 55811	SSE	0.00 / 0.00	2
	Tank ID* | *Tank Status: *130799-EQUI0000000001* | *Active, 130799-EQUI0000000002* | *Active*			

DELISTED TANK - Delisted Storage Tanks

A search of the DELISTED TANK database, dated Feb 26, 2026 has found that there are 3 DELISTED TANK site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Duluth International Airport	4701 Grinden Dr Duluth MN 55811-1578	SSE	0.00 / 0.00	2
U Of Duluth - Nrri Building	5013 Miller Trunk Highway 3151 Miller Trunk Hwy Duluth MN 55811	ESE	0.28 / 1,463.32	36
Curtis Oil & Tire and Propane Co	4995 Miller Trunk Highway Hermantown MN 55811	SE	0.37 / 1,927.41	49

BROWNFIELDS - Petroleum Brownfields Program Sites

A search of the BROWNFIELDS database, dated Feb 26, 2026 has found that there are 10 BROWNFIELDS site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Duluth International Airport - Block 3	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	2
JD Sports and Repair	5040 and 5070 Miller Trunk Highway Hermantown MN 55811	S	0.24 / 1,272.80	25

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
J.D. Sports and Repair	5040 and 5070 Miller Trunk Highway Hermantown MN 55811	S	0.24 / 1,272.80	25
Hawks Landing	5106 Miller Trunk Highway Hermantown MN 55811	SSW	0.29 / 1,555.33	44
Hawks Landing BP	5106 Miller Trunk Hwy Hermantown MN 55811	SSW	0.29 / 1,555.33	44
Midwest Golf Cars	5106 Miller Trunk Hwy Hermantown MN 55811	SSW	0.29 / 1,555.33	44
Midwest Golf Cars 2	5106 Miller Trunk Hwy Hermantown MN 55811	SSW	0.29 / 1,555.33	44
Kwik Trip Store 220	4978 Miller Trunk Highway Hermantown MN 55811	SE	0.43 / 2,273.22	57
Kwik Trip #220 Carwash Addition	4978 Miller Trunk Highway Hermantown MN 55811	SE	0.43 / 2,273.22	57
Kwik Trip Store 220	4978 Miller Trunk Highway Hermantown MN 55811	SE	0.43 / 2,273.22	57

VIC - Voluntary Investigation and Cleanup Program List

A search of the VIC database, dated Feb 26, 2026 has found that there are 5 VIC site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Duluth International Airport - Block 3	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	2
J.D. Sports and Repair	5040 and 5070 Miller Trunk Highway Hermantown MN 55811	S	0.24 / 1,272.80	25
Hawks Landing BP	5106 Miller Trunk Hwy Hermantown MN 55811	SSW	0.29 / 1,555.33	44

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Midwest Golf Cars 2	5106 Miller Trunk Hwy Hermantown MN 55811	SSW	0.29 / 1,555.33	44
Kwik Trip Store 220	4978 Miller Trunk Highway Hermantown MN 55811	SE	0.43 / 2,273.22	57

MPCA AI - MPCA Agency Interests

A search of the MPCA AI database, dated Jan 27, 2026 has found that there are 213 MPCA AI site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
DAA ANG Fire Station Phase 3	4701 Grinden Dr Duluth MN 55803	SSE	0.00 / 0.00	2
TSA at Duluth International Airport	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	2
Duluth Airport Runway 21Safety Area Imp	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	2
New Passanger Terminal BP 2C Civil	4701 Grinden Drive Duluth MN 55811	SSE	0.00 / 0.00	2
North Perimeter Road Grading Drainage	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	2
Delta Air Lines Global Services (DLH)	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	2
Duluth International Airport	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	2
Runway 9/27 Reconstruction, Phase 1	Duluth Airport 4701 Grinden Dr. Duluth MN 55811	SSE	0.00 / 0.00	2
Duluth Airport Authority	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	2
Duluth Airport Runway 9-27 Reconstruction	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	2

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Sonju Enterprises Inc	4701 Grinden Dr Box 161830 Duluth MN 55816	SSE	0.00 / 0.00	2
Krenzen Corporation	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	2
2020 Commercial Service Apron Expansion	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	2
Overland West Inc	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	2
2024 Midfield Ramp Repair Duluth Airport	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	2
TAXIWAY A RECONSTRUCTION - PHASE 5 IFC AT THE DULUTH INTERNATIONAL AIRPORT (D	4701 Grinden Dr Duluth MN 55811	SSE	0.00 / 0.00	2
Delta Airlines Inc Duluth Ramp	4701 Grinden Rd Duluth MN 55811	SSE	0.00 / 0.00	2
Cindy Voigt	Duluth MN 55811	SW	0.13 / 698.45	4
Kenwood Village	Duluth MN 55811	SW	0.13 / 698.45	4
Kolar MTA Parking Lot	Address Unknown Hermantown MN 55811	SW	0.13 / 698.45	4
Richard Ave & Lindgren Rd Reconstruction	Richard Ave, Lindgren Rd, Sam's Way, Evee Drive in Hermantown, MN Hermantown MN 55811	SW	0.13 / 698.45	4
MN Army National Guard	See location description Duluth MN 55811	ESE	0.16 / 827.32	6
Taxilane, Aviation Apron, GA Hangers	See location description Duluth MN 55811	WSW	0.16 / 827.41	7

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Duluth Technology Park I	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Lavaque Rd Bypass Storage Buildings	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
Fountain Gate Townhomes	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Air National Guard By-pass Taxi	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Cedar Ridge Dr Const. Homesites	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
TH 53 Commercial Devel	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
SP 6925-118 (TH 61)	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Vineyard Church - New Facility	Address Unknown Duluth MN 55811	WSW	0.16 / 827.41	7
CR 266 - Laine Rd	Address Unknown Duluth MN 55811	WSW	0.16 / 827.41	7
SP 6915-125 (TH53)	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Swanson & Youngdale, Inc	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Hermantown Sanitary Imp District 426	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
Country Inn & Suites Hermantown	See location description Duluth MN 55811	WSW	0.16 / 827.41	7

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Rehabilitation of Taxiway A	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Hermantown Trunk Sewer Phase I	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
Runway 9/27 Paved Shoulder Recon. Ph 1	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
SP 6915-122 (TH53)	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Hermantown Sanitary Sewer Imp Dist 416	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
SP 6908-56 and SP 6932-13	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
CSAH 43	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Cirrus Design Corp Expansion	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
SP 3806-57	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Saint Scholastica West Parking Lot	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Aarons Valley-Chambersburg Dr	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Saturn of Hermantown	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
SP 6917-102 (TH 53)	See location description Duluth MN 55811	WSW	0.16 / 827.41	7

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Richard McNutt Fill Site	Address Unknown Hermantown MN 55811	WSW	0.16 / 827.41	7
Federal Aviation Admin Asr/rtr	Old Terminal Building 2nd Floor Duluth MN 55811	WSW	0.16 / 827.41	7
Timber Trails Estates	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
SP 8821-34 (TH 61)	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
SP 69-598-031 - CR 694	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
North Country Aviation	Hangar 1 Duluth Intl Airport Duluth MN 55811	WSW	0.16 / 827.41	7
Duluth 2005 Street Imp SW3	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Pike Lake Elementary	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Allete-MN Power-HSC Imp.	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Hermantown Imp. Districts #425 & 308	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
Hermantown Sanitary Sewer Dist #429	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
National Bank of Commerce - Hermantown	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
Airport Road Parking Lot	See location description Duluth MN 55811	WSW	0.16 / 827.41	7

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Oppidan Investment Co	Todd Dr Hermantown MN 55811	WSW	0.16 / 827.41	7
5533-3783 Lindahl Road - Canosia	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Matthew Addition	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
Green Acres	Address Unknown Hermantown MN 55811	WSW	0.16 / 827.41	7
Residence Inn - Duluth	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Federal Aviation Admin Rcag	Old Terminal Building 2nd Floor Duluth MN 55811	WSW	0.16 / 827.41	7
SP 6917-105 (TH 53)	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Sackette Addition	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Edgewood Vista	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
Timber Ridge Townhomes Phase II	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
SP 69-613-28; CP 8256 - CSAH 13	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
SP 6917-112 TH 53	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
CSAH 7 - Industrial Rd	See location description Duluth MN 55811	WSW	0.16 / 827.41	7

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
SP 6917-101 TH 53	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Mesaba Energy	Address Unknown Duluth MN 55811	WSW	0.16 / 827.41	7
SP 69-616-043 CSAH 16	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Krenzen Honda	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
SP 6917-107 (TH 53)	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
The Woods At Hermantown	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
Saint Lawrence Church Disposal Site	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Maple Grove Acres	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
Schneiderman's Furniture - Duluth	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Runway 9/27	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Coffee Creek Park Development	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Entrance Rd Realignment - MnANG	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
Bishop Woods 1st Addition Utility/Road	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Suites of Miller Hill	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
2000 Stebner Park Project	NW1/4, Sec 24, T 50N, R 15 Hermantown MN 55811	WSW	0.16 / 827.41	7
Iron Workers Apprenticeship Training Fac	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
Grouse Ridge	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
Pine View	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
Keene Creek Townhomes	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
Stebner Rd MSA 103 SAP 202-103-05	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
Reserve Branch Line	Address Unknown Duluth MN 55811	WSW	0.16 / 827.41	7
Arrowhead 345 KV Substation	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
SAP 69-643-14, CP 8214 CSAH 43	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Perimeter Fence Phase II	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
SP 3806-52 (TH 61)	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
North Country Aviation	Duluth International Airport Duluth MN 55811	WSW	0.16 / 827.41	7

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Houland Lane	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
UMD Sports/Health Ctr Building	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Jackson Estates - Phase II	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Township Road 5641 - Esker Trail	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Trunk Sewer Phase II - Hermantown	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
Butternut Ave - Maple Ridge Development	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Administrative Services Addition	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
Bluff's Ridge Estates	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Joe Ogston Property Fill	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
MSAS 199 - Airport Road Reconstruction	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
LaVaque Road (CSAH 48) SAP 69-648-22	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
Hermantown Community Church	E of Stebner Rd along Maple Grove Rd Hermantown MN 55811	WSW	0.16 / 827.41	7
Stebner Park Soccer Complex - Hermantown	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Prime Properties Commercial Development	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
SP 69-601-001, CP 8293	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
US Customs & Border Patrol - Duluth	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Bishop Woods	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
Federal Aviation Admin Dlh/vortac	Old Terminal Building 2nd Floor Duluth MN 55811	WSW	0.16 / 827.41	7
SP 6928-25 TH 73	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Andrews Division 1st	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Fed Ex Express	Airport Approach Rd Duluth MN 55811	WSW	0.16 / 827.41	7
Mahoney Property	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Curtis Oil Company Inc Site Expansion	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Duluth Dump Site #1 Final Closure	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Foxborrow 1st Phase 2	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Miller Dwan Hospice House	See location description Duluth MN 55811	WSW	0.16 / 827.41	7

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Runway 9-27 Paved Shoulder Reconstruct	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Hermantown Sanitary Sewer District 406	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
Hermantown Trunk Sewer Phase 3	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
Bruno's Old World Foods	Address Unknown Duluth MN 55811	WSW	0.16 / 827.41	7
Saint Louis County Public Safety Building	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
SCS Aircraft Interiors - Duluth	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
SP 69-619-12	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
CSAH 48	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Hermantown Sanitary Sewer Imp 418	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
Timber Ridge Townhomes Phase III	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
Village at Maple Ridge	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
Walsh's Addition - Basswood Ave	See location description Duluth MN 55811	WSW	0.16 / 827.41	7
Forest Ridge Estates	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Sterling Pond Estates	See location description Hermantown MN 55811	WSW	0.16 / 827.41	7
Lake State dba Turbo Diesel	5043 Miller Trunk Hwy Duluth MN 55811	SSE	0.17 / 909.79	9
IRP Site 4	Former 148th FW ANG POL, Airport Road Duluth MN 55811	ESE	0.17 / 912.05	10
Miners Inc	5065 Miller Trunk Hwy Hermantown MN 55811	SSE	0.18 / 931.57	11
AT & T Wireless	5051 Miller Trunk Hwy Hermantown MN 55811	SSE	0.18 / 973.42	12
Duluth Electric Contracting	5051 Miller Trunk Hwy Hermantown MN 55811	SSE	0.18 / 973.42	12
Site 4 Remedial Action - 148th FW MN ANG	Airport rd Duluth MN 55811	ESE	0.19 / 989.02	13
Defense Revitilization And Marketing	4997 Airport Rd Duluth MN 55811	ESE	0.19 / 1,016.67	14
National Weather Service	5027 Miller Trunk Highway Duluth MN 55811	SE	0.20 / 1,038.31	15
Todd Signs LLC	5147 Miller Trunk Highway Duluth MN 55811	SW	0.20 / 1,065.41	16
OReilly Auto Parts 5993	5029 Miller Trunk Hwy Hermantown MN 55811	SE	0.20 / 1,075.16	17
Lorentz-Marchand-Offices	5071 Miller Trunk Highway Hermantown MN 55811	S	0.20 / 1,079.30	18
Johnson Supply Co	5083 Miller Trunk Hwy Hermantown MN 55811	S	0.20 / 1,080.87	19

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Happy Campers Rv Specialists	5085 Miller Trunk Hwy Duluth MN 55811	SSW	0.21 / 1,086.69	20
Hermantown Radiator Repair	5087 Miller Trunk Highway Hermantown MN 55811	SSW	0.21 / 1,092.92	21
Richard Johnson dba Hermantown Service Center	5097 Miller Trunk Highway Hermantown MN 55811	SSW	0.21 / 1,094.74	22
Hermantown Service Center	5097 Miller Trunk Highway Duluth MN 55811	SSW	0.21 / 1,094.74	22
Pella Windows And Doors	5033 Miller Trunk Highway Duluth MN 55802	SSE	0.21 / 1,118.54	23
SP 8821-290 District Wide Culvert repairs/replacements	SP 8821-290 located on TH 61,53,33,2,73,18,23,35,and 70 in Aitkin, Carlton,Pine and St. Louis Co Duluth MN 55811	SE	0.23 / 1,227.50	24
JD Sports and Repair	5040 and 5070 Miller Trunk Highway Hermantown MN 55811	S	0.24 / 1,272.80	25
Navy Operational Support Center	5019 Airport Rd Duluth MN 55811	SE	0.24 / 1,278.61	26
MAC Hermantown	5155 Miller Trunk Hwy Hermantown MN 55811	SW	0.25 / 1,294.87	27
5169 Miller Trunk Fill Project	5169 Miller Trunk Highway Hermantown MN 55811	WSW	0.25 / 1,304.46	28
Hermantown Service	5105 Miller Trunk Highway Hermantown MN 55811	SSW	0.25 / 1,312.78	29
Db Enterprises	5105 Miller Trunk Hwy Duluth MN 55811	SSW	0.25 / 1,312.78	29
Northside Truck Sales & Service Inc	5040 Miller Trunk Hwy Hermantown MN 55811	SSE	0.25 / 1,327.64	30

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
JD's Sports & Repair	5040 Miller Trunk Hwy Hermantown MN 55811	SSE	0.25 / 1,327.64	30
Airbase Convenience Store	3220 Miller Trunk Highway Duluth MN 55811	SSW	0.25 / 1,345.68	31
Hermantown Square	5094 Miller Trunk Hwy Hermantown MN 55811	SSW	0.26 / 1,359.33	32
ASP Mechanical Inc.	5028 Miller Trunk Hwy Hermantown MN 55811	SE	0.26 / 1,369.98	33
Valerie Tillman	5028 Miller Trunk Hwy Hermantown MN 55811	SE	0.26 / 1,369.98	33
Former MANG Tank Farm	4977 Airport Rd Duluth MN 55811	ESE	0.26 / 1,385.47	34
NRRI- Sage Building- University of Duluth	5013 Miller Trunk Highway 3151 Miller Trunk Hwy Duluth MN 55811	ESE	0.28 / 1,463.32	36
U of M - NRRI	5013 Miller Trunk Hwy Hermantown MN 55811	ESE	0.28 / 1,463.32	36
Natural Resources Research Institute	5013 Miller Trunk Hwy Duluth MN 55811	ESE	0.28 / 1,463.32	36
Thomas J Malterer	5013 Miller Trunk Hwy. Duluth MN 55811	ESE	0.28 / 1,463.32	36
UMD NRRI Upper Lot Resurvacing	5013 Miller Trunk Hwy Hermantown MN 55811	ESE	0.28 / 1,463.32	36
Hermantown Molding & Millwork	5191 Miller Trunk Highway Hermantown MN 55811	WSW	0.28 / 1,465.50	37
Stephen G Dahlgren DDS	5086 Miller Trunk Hwy Ste 1 Hermantown MN 55811	S	0.28 / 1,481.35	38

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Miller Trunk Family Dentistry	5086 Miller Trunk Hwy Hermantown MN 55811	S	0.28 / 1,481.35	38
Xtreme Auto Inc	5020 Miller Trunk Highway Hermantown MN 55811	SE	0.28 / 1,504.51	39
Skyline Motors Inc	5020 Miller Trunk Hwy Duluth MN 55811	SE	0.28 / 1,504.51	39
Dennis Eckstrom Fill Site - Hermantown	See location description Hermantown MN 55811	WSW	0.29 / 1,526.54	40
Bulldog Collision	5082 Miller Trunk Hwy Hermantown MN 55811	S	0.29 / 1,526.68	41
Hermantown Federal Credit Union	5116 Miller Trunk Highway Hermantown MN 55811	SW	0.29 / 1,529.42	42
Miller Trunk Auto Inc	5014 Miller Trunk Highway Hermantown MN 55811	SE	0.29 / 1,547.22	43
Hawk's Landing BP	5106 Miller Trunk Hwy Hermantown MN 55811	SSW	0.29 / 1,555.33	44
Hermantown Service Ctr	5106 Miller Trunk Highway Duluth MN 55811	SSW	0.29 / 1,555.33	44
Billmans Construction	5010 Miller Trunk Highway Hermantown MN 55811	SE	0.33 / 1,756.34	45
Billman Home Center	5010 Miller Trunk Hwy Duluth MN 55811	SE	0.33 / 1,756.34	45
Billman Construction Company	5010 Miller Trunk Highway Hermantown MN 55811	SE	0.33 / 1,756.34	45
Billman Construction, Inc.	5010 Miller Trunk Hwy Hermantown MN 55811	SE	0.33 / 1,756.34	45

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Michael D Billman	5010 Miller Trunk Hermantown MN 55811	SE	0.33 / 1,756.34	45
Billman Construction Inc	5010 Miller Trunk Hwy Duluth MN 55811	SE	0.33 / 1,756.34	45
Centricity Credit Union	4477 Lavaque Rd Hermantown MN 55811	SSW	0.33 / 1,759.67	46
AD Shrine Facility	5152 Miller Trunk Highway Duluth MN 55811	SW	0.34 / 1,772.02	47
Curtis Oil & Tire and Propane Co	4995 Miller Trunk Highway Hermantown MN 55811	SE	0.37 / 1,927.41	49
Pro Tire	4995 Miller Trunk Highway Hermantown MN 55811	SE	0.37 / 1,927.41	49
Food N Fuel	4997 Miller Trunk Highway Duluth MN 55811	SE	0.37 / 1,950.88	50
Food And Fuel	4997 Miller Trunk Highway Hermantown MN 55811	SE	0.37 / 1,950.88	50
Midnight Sun	5197 Miller Trunk Highway Hermantown MN 55811	WSW	0.37 / 1,967.19	51
Cirrus Design Corp aka Cirrus Aircraft	4515 Taylor Cir Hermantown MN 55811	ESE	0.39 / 2,048.31	52
Cirrus Design Corp/ Duluth Proj 8976SA96	4515 Taylor Cir Duluth MN 55811	ESE	0.39 / 2,048.31	52
Curtis Convenience Store	4991 Miller Trunk Highway Hermantown MN 55811	SE	0.40 / 2,110.40	53
Curtis Oil	4985 Miller Trunk Highway Hermantown MN 55811	ESE	0.41 / 2,147.61	54

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Plating Specialties Inc	4505 Taylor Cir Duluth MN 55811	ESE	0.41 / 2,183.07	55
Kwik Trip Store 220	4978 Miller Trunk Highway Hermantown MN 55811	SE	0.43 / 2,273.22	57
Hk Enterprises Inc Hertz System Lic	4701 Airport Dr Duluth MN 55811	E	0.46 / 2,440.76	58
Delta Global Services	4701 Airport Dr Duluth MN 55811	E	0.46 / 2,440.76	58
Northwest Storage Area Duluth Iap	4701 Airport Rd Duluth MN 55802	E	0.46 / 2,440.76	58
Avis Rent a Car	4701 Airport Rd Duluth MN 55811	E	0.46 / 2,440.76	58
Duluth Intl Airport Radar Tower	See location description Duluth MN 55811	E	0.49 / 2,591.56	59
Duluth International Airport	See location description Duluth MN 55811	E	0.49 / 2,591.56	59

Non Standard

Federal

FINDS/FRS - Facility Registry Service/Facility Index

A search of the FINDS/FRS database, dated Jan 1, 2026 has found that there are 11 FINDS/FRS site(s) within approximately 0.02miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
NORTH PERIMETER ROAD GRADING	4701 GRINDEN DR HERMANTOWN MN 55811 ***Registry ID**: 110069111160*	SSE	0.00 / 0.00	2
2024 MIDFIELD RAMP REPAIR DUL	4701 GRINDEN DR DULUTH MN 55811-1578 ***Registry ID**: 110071851503*	SSE	0.00 / 0.00	2

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
2020 COMMERCIAL SERVICE APRON	4701 GRINDEN DR DULUTH MN 55811-1578 ***Registry ID**: 110071496659*	SSE	0.00 / 0.00	2
DULUTH AIRPORT RUNWAY 21SAFET	4701 GRINDEN DR HERMANTOWN MN 55811 ***Registry ID**: 110068202233*	SSE	0.00 / 0.00	2
DULUTH INTERNATIONAL AIRPORT (DAA)	4701 GRINDEN DR DULUTH MN 55811 ***Registry ID**: 110008799979*	SSE	0.00 / 0.00	2
NEW PASSANGER TERMINAL BP 2C	4701 GRINDEN DRIVE DULUTH MN 55811 ***Registry ID**: 110067735008*	SSE	0.00 / 0.00	2
DELTA AIR LINES GLOBAL SERVIC	4701 GRINDEN DR DULUTH MN 55811 ***Registry ID**: 110069151358*	SSE	0.00 / 0.00	2
DELTA AIRLINES INC DULUTH RAMP	4701 GRINDEN RD HERMANTOWN MN 55811 ***Registry ID**: 110067981447*	SSE	0.00 / 0.00	2
KRENZEN CORPORATION	4701 GRINDEN DR DULUTH MN 55811 ***Registry ID**: 110071476644*	SSE	0.00 / 0.00	2
SONJU ENTERPRISES INC	4701 GRINDEN DR BOX 161830 DULUTH MN 55816 ***Registry ID**: 110071475201*	SSE	0.00 / 0.00	2
OVERLAND WEST INC	4701 GRINDEN DR DULUTH MN 55811 ***Registry ID**: 110071496157*	SSE	0.00 / 0.00	2

ICIS - Integrated Compliance Information System (ICIS)

A search of the ICIS database, dated Oct 18, 2025 has found that there are 1 ICIS site(s) within approximately 0.02miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
DULUTH INTERNATIONAL AIRPORT (DAA)	4701 GRINDEN DR DULUTH MN 55811 ***Registry ID**: 110008799979*	SSE	0.00 / 0.00	2

FUDS - Formerly Used Defense Sites

A search of the FUDS database, dated May 15, 2023 has found that there are 1 FUDS site(s) within approximately 1.00miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
DULUTH INTERNATIONAL AIRPORT	DULUTH MN	SW	0.00 / 0.00	1
	***FUDS Property No**: E05MN0033*			

AFS - Air Facility System

A search of the AFS database, dated Oct 17, 2014 has found that there are 1 AFS site(s) within approximately 0.02miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
DULUTH INTERNATIONAL AIRPORT (DAA)	4701 GRINDEN DR DULUTH MN 55811	SSE	0.00 / 0.00	2

State

SPILLS - Spills reported to the Pollution Control Agency

A search of the SPILLS database, dated Feb 23, 2026 has found that there are 8 SPILLS site(s) within approximately 0.12miles of the project property.

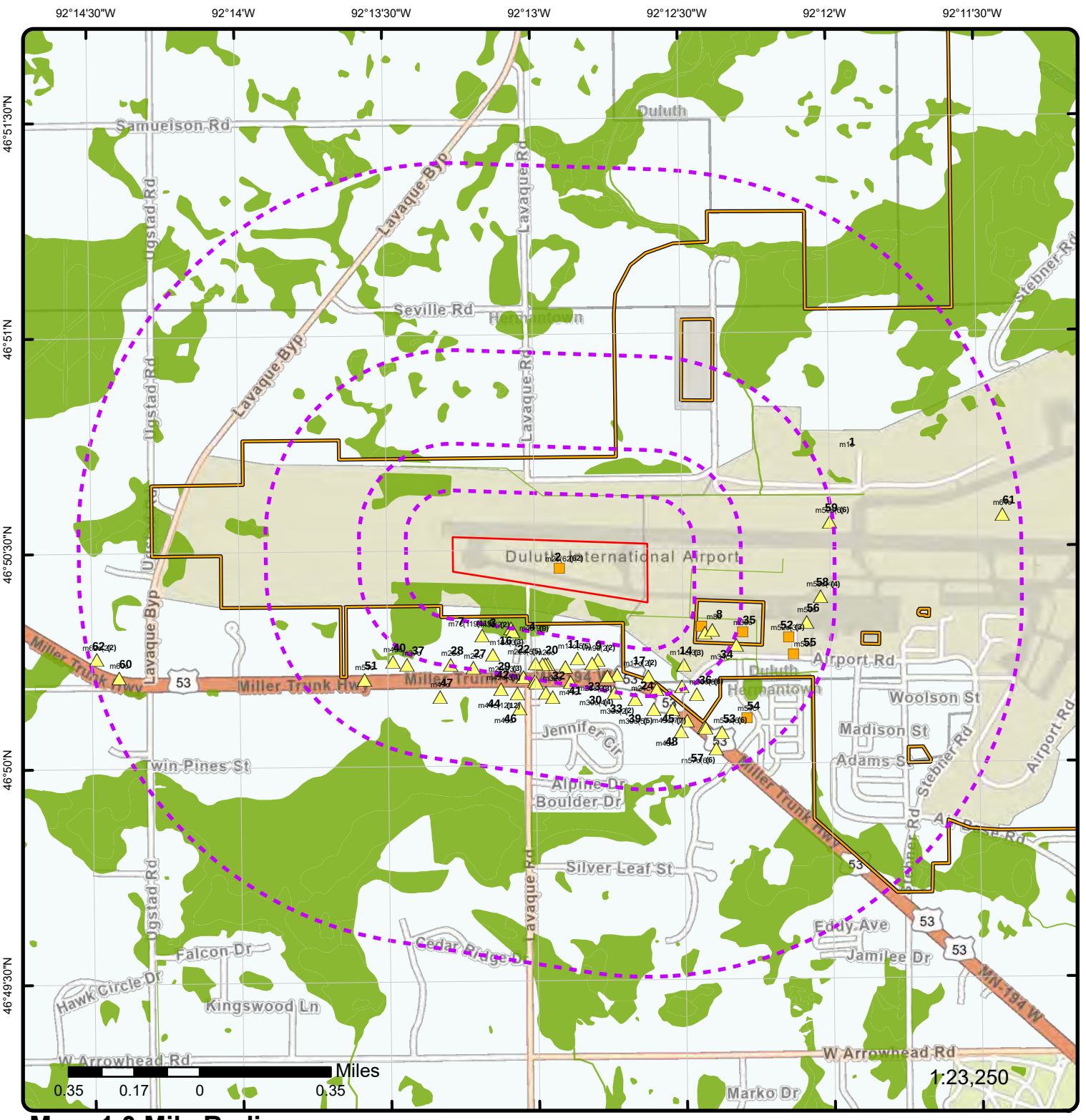
Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Duluth International Airport	4701 Grinden Drive Duluth MN 558111578	SSE	0.00 / 0.00	2
	***Incident ID* | *Incident Status**: 204931	Closed or Completed*		
	4701 Grinden Dr Duluth MN	SSE	0.00 / 0.00	2
	***Incident ID* | *Incident Status**: 215386	Closed or Completed*		
Minnesota Power Inc- General Office	4701 Grinden Drive Duluth MN 558022191	SSE	0.00 / 0.00	2
	***Incident ID* | *Incident Status**: 194261	Closed or Completed*		
AIR NATIONAL GUARD FD	4701 Grinden Dr. MN Duluth MN 55812	SSE	0.00 / 0.00	2
	***Incident ID* | *Incident Status**: 30713	Closed or Completed*		
Northwest Airlines	4701 Grinden Dr MN 55811 Duluth MN	SSE	0.00 / 0.00	2
	***Incident ID* | *Incident Status**: 58578	Closed or Completed*		
NORTHWEST ARILINES	4701 Grinden Dr MN 55811 Duluth MN 55811	SSE	0.00 / 0.00	2
	***Incident ID* | *Incident Status**: 29734	Closed or Completed*		
DULUTH AIRPORT AUTHORITY	4701 Grinden Dr MN 55811 Duluth MN 55811	SSE	0.00 / 0.00	2
	***Incident ID* | *Incident Status**: 29432	Closed or Completed*		
NORTHWEST AIRLINES	4701 Grinden Dr MN 55811 Duluth MN 55811	SSE	0.00 / 0.00	2

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
	Incident ID* | *Incident Status: *29747 | Closed or Completed*			

HIST SPL - Historic spills reported to the Pollution Control Agency

A search of the HIST SPL database, dated Nov 1, 2016 has found that there are 5 HIST SPL site(s) within approximately 0.12miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
DULUTH INTERNATIONAL AIRPORT	4701 Grinden Dr Duluth MN 55811 ***Program Int ID***: *188492*	SSE	0.00 / 0.00	2
Northwest Airlines - Duluth Intl Airport - ramp	4701 Grinden Dr Duluth MN 55811 ***Program Int ID***: *259244*	SSE	0.00 / 0.00	2
AIRPORT	4701 Grinden Dr Duluth MN 55811 ***Program Int ID***: *186807*	SSE	0.00 / 0.00	2
Northwest Airlines	4701 Grinden Dr. Duluth MN ***Program Int ID***: *187716*	SSE	0.00 / 0.00	2
NWA	4701 Grinden Dr Duluth MN 55811 ***Program Int ID***: *186795*	SSE	0.00 / 0.00	2



Map: 1.0 Mile Radius

Order Number: 26040200817

Address: Southwest Parcel, Duluth, MN

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

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Map: 0.5 Mile Radius

Order Number: 26040200817

Address: Southwest Parcel, Duluth, MN

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

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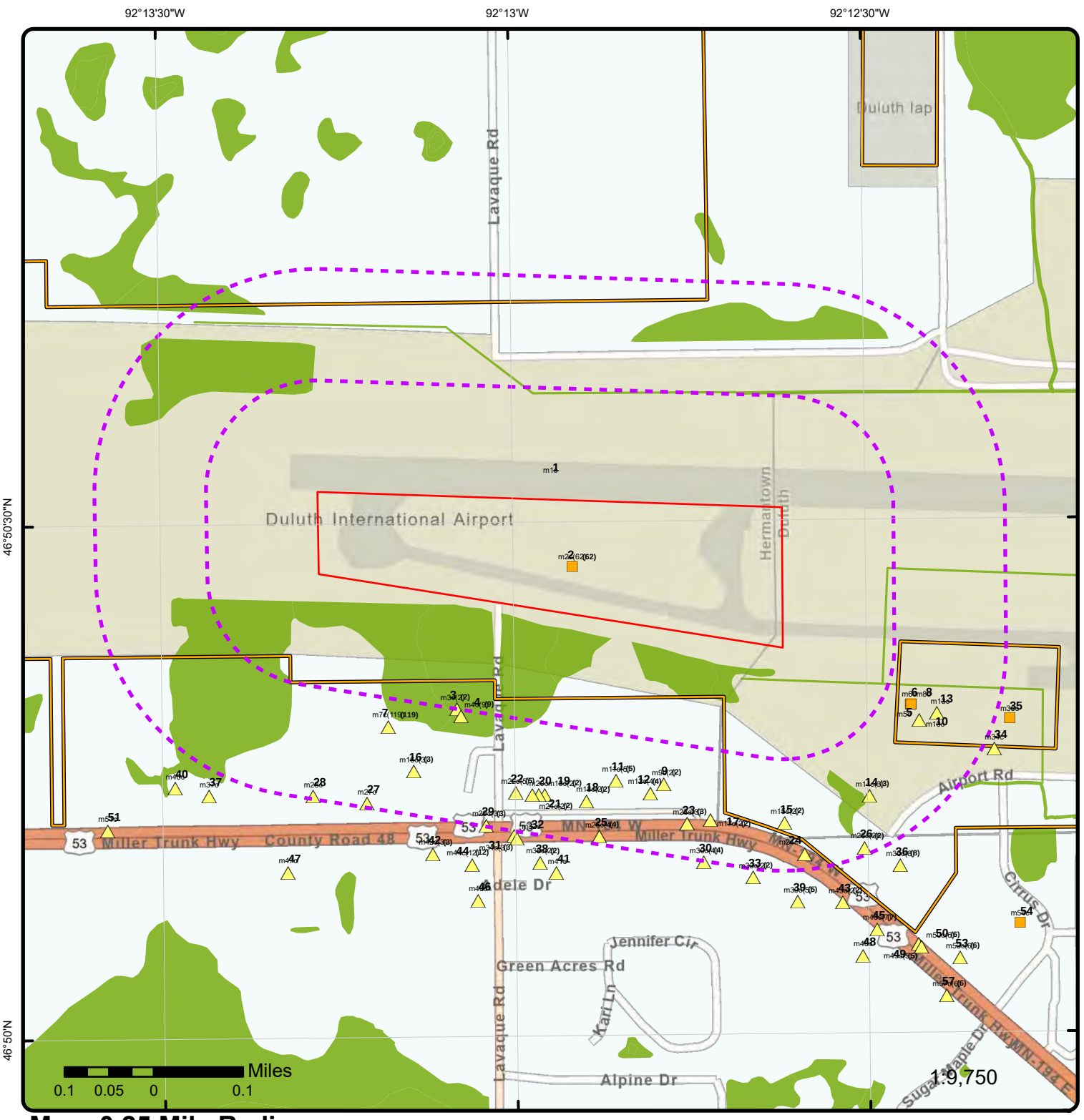

Map: 0.25 Mile Radius

Order Number: 26040200817

Address: Southwest Parcel, Duluth, MN

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

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Aerial **Year: 2025**

Address: Southwest Parcel, Duluth, MN

Source: ESRI World Imagery

Order Number: 26040200817

ERIS

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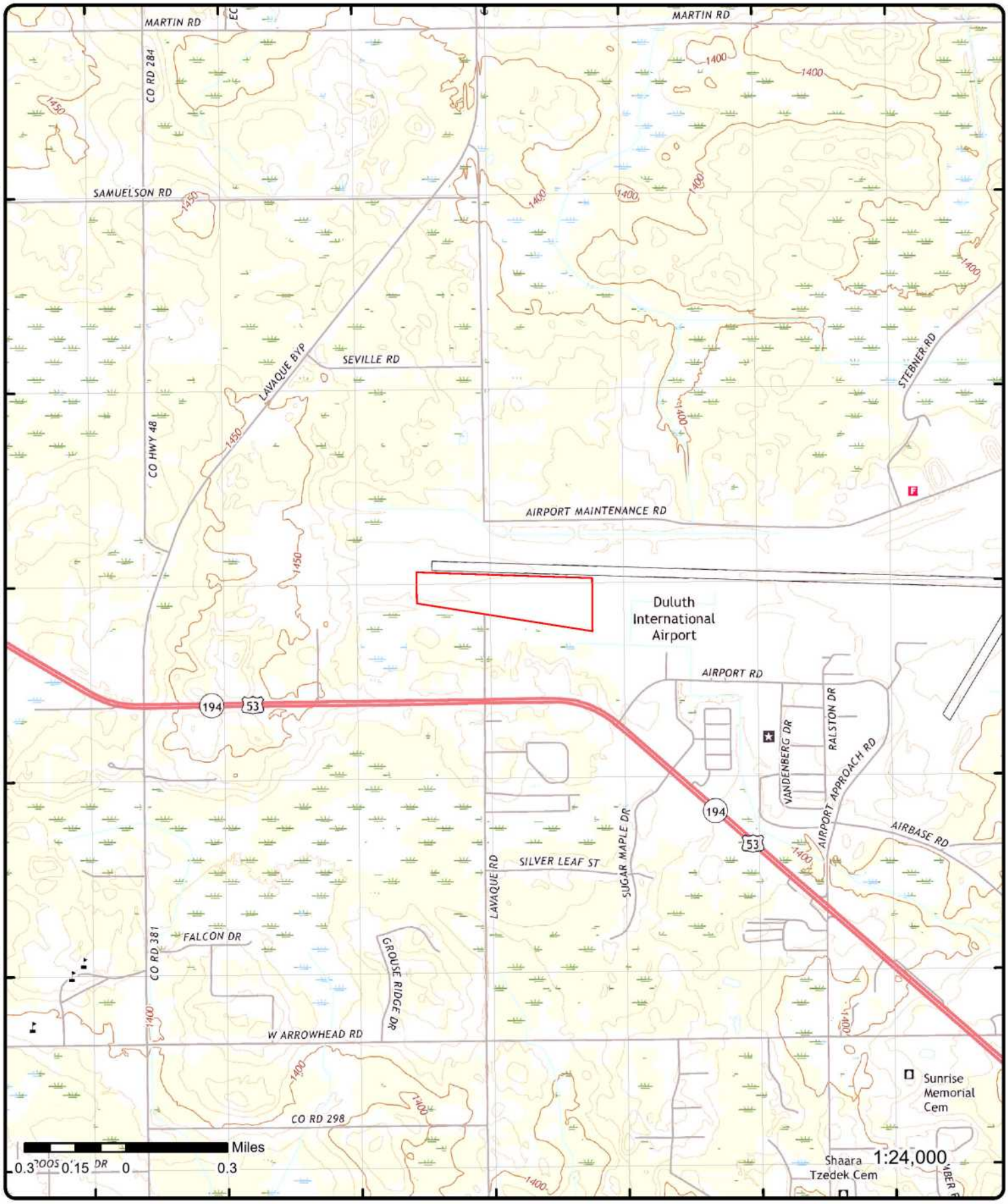

Topographic Map

Year: 2022

Order Number: 26040200817

Address: Southwest Parcel, MN

Quadrangle(s): Duluth Heights MN, Adolph MN

Source: USGS Topographic Map

ERIS

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Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	1 of 1	SW	0.00 / 0.00	1,410.45 / 0	DULUTH INTERNATIONAL AIRPORT DULUTH MN	FUDS

FUDS Property No: E05MN0033
EMS Map Link: https://fudsportal.usace.army.mil/ems/inventory/map?id=55056
FUDS INST ID: MN59799F237400
Status: Properties with projects
SDS ID:
NPL Status Code: Not Listed
Eligibility: Eligible
Site Eligib: Eligible
Current Owner: Local Government
Has Project: Yes
DOD FUDS Pro:
Project Required:
No Further Action:
Congressional District: 08
Congressional Dist 117: 08
Media ID:
Metadata ID:
Feature Desc:
EPA Region: 05
County: ST LOUIS
Latitude: 46.84194444
Longitude: -92.19361111
Fiscal year: 2020
USACE Division: nwd
USACE District: nwo
Centroid Lat:
Centroid Long:
Se Anno Cad Data:
Shape Length: 0.274871256485517
Shape Area: 0.00096364444575224
Shape Len: .27487126
X:
Y:
Data Source: U.S. Army Corps of Engineers Geospatial Open Data
Property History:

The former Duluth Air Force Base was established in the early 1950's during the Korean War era. The site closed in 1982. Some of the major functions of the base included the operation and maintenance of Bomarc anti-aircraft missiles, Goose Decoy missiles, fighter aircraft, interceptors, and SAFE radar/communications. The base served to support the Duluth Missile Site near the French River, Minnesota, and the Finland Air Force Radar Station in Finland, Minnesota. The property was conveyed to the City, the Airport Authority, and to the National Guard. It is being used as an airport, for commercial and industrial purposes, and for National Guard training. Tanks, petroleum and building demolition are the subjects of the FUDS Program involvement.

Feature Description:

The former Duluth Air Force Base was established in the early 1950's during the Korean War era. The site closed in 1982. Some of the major functions of the base included the operation and maintenance of Bomarc anti-aircraft missiles, Goose Decoy missiles, fighter aircraft, interceptors, and SAFE radar/communications. The base served to support the Duluth Missile Site near the French River, Minnesota, and the Finland Air Force Radar Station in Finland, Minnesota. The property was conveyed to the City, the Airport Authority, and to the National Guard. It is being used as an airport, for commercial and industrial purposes, and for National Guard training. Tanks, petroleum and building demolition are the subjects of the FUDS Program involvement.

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	1 of 62	SSE	0.00 / 0.00	1,410.27 / 0	DULUTH INTERNATIONAL AIRPORT (DAA) 4701 GRINDEN DR DULUTH MN 55811	AFS

Afs ID: 2713700074
Plant ID: 1031237
Epa Region: 05
Plant County: Saint Louis
State No: 27
Primary Sic Code: 4581
Secondary Sic Code:
Naics Code: 488111
Afs Gov Facility Des: PRIVATELY OWNED/OPERATED
Operating Status Def: Operating
Epa Classification Des: Potential uncontrolled emissions <100 tons/year
Epa Compliance Status: In Compliance - Inspection
State Compliance Status: In Compliance - Inspection

Fed Reportable: No
Current Hpv:
Loc Contrl Region:
Afs Gov Fac Code: 0
Operating Status: O
Epa Class Code: B
Epa Complian Stat: 3
State Comp Status: 3

Actions

Plant ID: 1031237
Anu1: 1
Date Achieved: 20041005
Penalty Amount: 0
Record Updated Dt: 20050207
Creation Date:
Key Action No:
Regional Data Element:
National Action Desc: STATE NOV ISSUED
All Air Program Def: 0-SIP Source
Result Def:
Pollutant Def:
All Violating Poll Def:
All Violation Type Def:

National Actn Type: 7C
All Air Prog Codes: 0
Result Code:
Pollutant Code:
Violating Poll Cds:
Violation Type Cds:

Historical Compliance - Air Program Level

Air Program Code: 0
Air Program Code Ref: SIP Source
Historical Compliance Date: 0604, 0701, 0702, 0703, 0704, 0801, 0802, 0803, 0804, 0901, 0902, 0903, 0904, 1001, 1002, 1003, 1004, 1101, 1102, 1103, 1104, 1201, 1202, 1203, 1204, 1301, 1302, 1303, 1304, 1401, 1402, 1403
Historical Compliance Status: 3
Historical Compliance Stat Ref: In Compliance - Inspection

Air Program

Plant ID: 1031237
Air Program Code: 0
Air Program Status: O
Pollutant Code: OT
Chemical Abstract Service Nmbr:
Air Program Code Subparts:
Air Program Code Ref: SIP Source
Epa Classification Code Ref: Potential uncontrolled emissions <100 tons/year
Epa Compliance Status Ref: In Compliance - Inspection
Pollutant Code Ref:
Pollutant Classification Ref: Potential uncontrolled emissions <100 tons/year
Pollutant Complian Status Ref: In Compliance - Inspection

Poll Classificatn: B
Poll Compli Status: 3
Epa Class Code: B
Epa Compli Status: 3

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	2 of 62	SSE	0.00 / 0.00	1,410.27 / 0	Delta Airlines Inc Duluth Ramp 4701 Grinden Rd Duluth MN 55811	AST

Agency Interest ID:	130799	**AI Name (Map):**	Delta Airlines Inc Duluth Ramp
Tank Type:	Aboveground Storage Tank	**Address1 (Map):**	4701 Grinden Rd
AI Name:	Delta Airlines Inc Duluth Ramp	**Address2 (Map):**	
Address1:	4701 Grinden Rd	**City (Map):**	Duluth
Address2:		**State (Map):**	MN
Address3:		**Zip (Map):**	55811
City:	Duluth	**Owner:**	Delta Air Lines Inc
County:	St. Louis	**Owner Address:**	Dept 885 PO Box 20706
State:	MN	**Owner City:**	Atlanta
Zip:	55811	**Owner State:**	GA
Location Description:		**Owner Zip:**	303206001
Data Source:	Minnesota Pollution Control Agency Tank Sites; Minnesota Pollution Control Agency Regulated Tank Systems		

Tank Information

Tank Site ID:	TS0125282	**Latitude:**	46.83778688
Tank ID:	130799-EQUI0000000001	**Longitude:**	-92.17481925
Tank Status:	Active	**Contractor of Tank:**	
Install Date:		**Tribal Land:**	
Status Change Date:			
Primary Naics:			
Primary Sic:			
Subject Item Description:			
Tanks URL:	https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0125282		
Coord Collect Meth Desc:	Address Matching House Number		
On Tribal Land:	N		

Compartment Information

Compartment ID:	130799-EQUI0000000001-1	**Programs:**	AT
Compartment No:	1	**Capacity (gal):**	6650
Tank Wall Type:	Single	**Cathodic Prot Sys:**	
Tank Material:	Plastic (PVC, Flexible Plastic, etc.)	**Special Use Desc:**	
Subject Item Designation:	1011		
Overfill Prevention System:	AST None		

Pipe Information

Pipe Wall Type:		**Stored Product:**	Gasoline Blends (E1-E49)
Pipe Leak Detection:		**Tank Leak Detection:**	
Pipe Material:		**Vapor Recovery Flag:**	
Pipe Corrosion Protection:			

Tank Information

Tank Site ID:	TS0125282	**Latitude:**	46.83778689
Tank ID:	130799-EQUI0000000002	**Longitude:**	-92.17481925
Tank Status:	Active	**Contractor of Tank:**	
Install Date:		**Tribal Land:**	
Status Change Date:			
Primary Naics:			
Primary Sic:			
Subject Item Description:			
Tanks URL:	https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0125282		
Coord Collect Meth Desc:	Address Matching House Number		
On Tribal Land:	N		

Compartment Information

Compartment ID:	130799-EQUI0000000002-1	**Programs:**	AT
Compartment No:	1	**Capacity (gal):**	1000
Tank Wall Type:	Single	**Cathodic Prot Sys:**	
Tank Material:	Carbon steel	**Special Use Desc:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Subject Item Designation: 1012
Overfill Prevention System: AST None

Pipe Information

Pipe Wall Type:
Pipe Leak Detection:
Pipe Material:
Pipe Corrosion Protection:
Stored Product: Chemical Other Or Unspecified
Tank Leak Detection:
Vapor Recovery Flag:

MPCA Map Regulated Tank Systems

Item ID: 130799-EQUI0000000002
Int Doc ID: 0
Spatial ID:
SI Type: ABOV
SI Cat: EQUI
SI ID: 2
SI Cat Desc: Equipment
SI Type Desc: Aboveground Storage Tank
SI Designation: 1012
Status Desc: Active / Existing
Status Dt: 2010-02-19 12:15:13 UTC
Install Dt:
AI Prg Code: AT
AI Program: Aboveground Tanks
Compartments:
Substance: Chemical Other Or Unspecified
Capacity: 1000
County: St. Louis
Latitude: 46.83778689
Longitude: -92.17481925
Point X: -92.1748192503103
Point Y: 46.83778688994398
Description:
Overfill Prevent Desc: AST None
Loc Desc:
CTU Name: Duluth
Cong Dist: 8
House Dist: 8B
Senate Dist: 8
Huc 8: 04010201
Huc 8 Name: St. Louis River
Huc10: 0401020116
Huc12: 040102011604
Huc12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
TRDSQQ:
Pls Twsp:
Range :
Range Dir:
Section:
Quarters:
Method Desc: Address Matching House Number
Ref Desc: General Location

MPCA Map Regulated Tank Systems

Item ID: 130799-EQUI0000000001
Int Doc ID: 0
Spatial ID:
SI Type: ABOV
SI Cat: EQUI
SI ID: 1
SI Cat Desc: Equipment
SI Type Desc: Aboveground Storage Tank
SI Designation: 1011
Status Desc: Active / Existing
Status Dt: 2010-02-19 12:13:20 UTC
Install Dt:
AI Prg Code: AT
AI Program: Aboveground Tanks
Compartments:
Substance: Gasoline Blends (E1-E49)
Capacity: 6650
County: St. Louis
Latitude: 46.837786879999996
Longitude: -92.17481925
Point X: -92.1748192503103
Point Y: 46.83778688011186
Description:
Overfill Prevent Desc: AST None
Loc Desc:
CTU Name: Duluth
Cong Dist: 8
House Dist: 8B
Senate Dist: 8
Huc 8: 04010201
Huc 8 Name: St. Louis River
Huc10: 0401020116
Huc12: 040102011604
Huc12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
TRDSQQ:
Pls Twsp:
Range :
Range Dir:
Section:
Quarters:
Method Desc: Address Matching House Number
Ref Desc: General Location

2	3 of 62	SSE	0.00 / 0.00	1,410.27 / 0	Duluth International Airport - Block 3	BROWNFIELDS

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

4701 Grinden Dr
Duluth MN 55811

Item ID:	638-AREA0000000001	**Federal Reg:**	
Project ID:	VP15240	**Fed State Reg:**	
Project Type:	Brownfield Site	**Non Reg:**	
Project ID (RAP):	VP15240	**SEMS?:**	
Project Type (RAP):	Brownfield Site	**NPL:**	
Site Status:	Closed	**Unpermitted Dump?:**	
Perm List of Prior?:		**Latitude:**	46.83633804
Petrol Brownfield?:		**Longitude:**	-92.17481995
VIC Site?:	Yes	**County (RAP):**	St. Louis
Sf Voluntary:		**Latitude (RAP):**	46.83633804
Inst Controls?:		**Longitude (RAP):**	-92.17481995
State Reg:	Yes		

Project Name:	Duluth International Airport - Block 3
Site Address 1:	4701 Grinden Dr
Site Address 2:	
Site City:	Duluth
Site State:	MN
Site Zip:	55811
Site County:	St. Louis
Project Name(RAP):	Duluth International Airport - Block 3
Address1 (RAP):	4701 Grinden Dr
Address2(RAP):	
City (RAP):	Duluth
State (RAP):	MN
Zip (RAP):	55811
Project Managers:	Jane Mosel (no longer at MPCA)
Data Source:	MPCA Remediation Sites; MPCA Remediation Sites with RAP approvals

Remediation Sites Details

Activity ID:	638	**DWSMA Name:**	
AI Name:	Duluth International Airport	**Cong Dist:**	8
SI ID:	1	**House Dist:**	3B
SI Cat:	AREA	**Senate Dis:**	3
SI Type:	BROW	**HUC 8:**	04010201
Site Type:	CON	**HUC 10:**	0401020116
Acreage:	4.25	**HUC 12:**	040102011604
HRS Score:		**DWSMA Code:**	
Score Year:		**Method Des:**	DOQ - Digital Orthophoto Quad
MNTBA:			

Loc Desc:	Lots 4 and 5
HUC 8 Name:	St. Louis River
HUC 12 Name:	Saint Louis River
Hydrologist:	Mike Bares (no longer at MPCA)
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/638

Remediation Sites with RAP Approval

Activity ID:	638	**Rap Date:**	
No Assoc Date:		**Site Start:**	11/29/2001
No Assoc Letter:	No	**Rap Approved:**	
Has Rp:	Yes	**Rap Completed:**	2/7/2002
Coord Collect Methd:	DOQ - Digital Orthophoto Quad	**Site Closed:**	8/9/2002
Parcels:			

WIMN:	https://webapp.pca.state.mn.us/wimn/site/638
AI Name:	Duluth International Airport
Rp Names:	Duluth Airport Authority , Duluth International Airport (DAA), John Grinden

Spatial Remediation Activity

AI ID:	638	**Site Start:**	2001-11-29 00:00:00
Site ID:	VP15240	**Remedy Imp:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

SI ID:	1	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	2001-11-29 00:00:00
Site Close:	2002-08-09 00:00:00	**NPL List:**	
Leak Discovered:		**NPL Delete:**	
Leak Reported:		**PLP List:**	
Leak Reopened:		**PLP Delist:**	
Activity No:	1	**Staff Assi:**	2001-11-29 00:00:00
Activity ID:	SIW20010001	**FF Aproved:**	
Activity Type:	Brownfield Site	**FF Closed:**	
Activity Code:	SIW	**Inv Comple:**	
Activity Year:	2001	**App Comple:**	2001-11-29 00:00:00
Discovered:		**Er Site Ev:**	

2	**4 of 62**	**SSE**	**0.00 / 0.00**	**1,410.27 / 0**	**Former Fueling Station** **4701 Grinden Dr** **Duluth MN**	**DELISTED LST**

Delisted MPCA Remediation Leak Sites

Item ID:	638-AREA0000000004	**Perm List of Prio?:**	
Project ID:	LS0020226	**Petrol Brownfield?:**	
Project Type:	Leak Site	**VIC Site?:**	
Project Name:	Former Fueling Station	**Sf Volunta:**	
Site Address 1:	4701 Grinden Dr	**Inst Controls?:**	
Site Address 2:		**SEMS?:**	
Site City:	Duluth	**Unpermitted Dump?:**	
Site State:	MN	**State Reg:**	
Site ZIP:	55811	**Federal Re:**	Yes
Site Status:	Closed	**Fed State:**	
Project ID (RAP):		**Non Reg:**	
Project Type (RAP):		**NPL:**	
Project Name(RAP):		**Site County:**	St. Louis
Address1 (RAP):		**County (RAP):**	
Address2(RAP):		**Latitude (RAP):**	
City (RAP):		**Longitude (RAP):**	
State (RAP):		**Latitude:**	46.83778689
ZIP (RAP):		**Longitude:**	-92.17481925
Project Manager:	Lauralin Kania (former)		
Data Source:	MPCA Remediation Sites		
Original Source:	LSTR		
Record Date:	08-JUN-2022		

2	**5 of 62**	**SSE**	**0.00 / 0.00**	**1,410.27 / 0**	**Duluth International Airport** **4701 Grinden Dr** **Duluth MN 55811-1578**	**DELISTED TANK**

Delisted Underground Storage Tanks

Tank Site ID:	TS0021164	**Owner:**	Duluth Airport Authority
AI ID:	638	**Owner Address:**	4701 Grinden Dr
Tank Type:	Underground Storage Tank System	**Owner City:**	Duluth
Address2:		**Owner State:**	MN
Address3:		**Owner Zip:**	558111578
County:	St. Louis		
Zip(Map):			
State(Map):			
City(Map):			
Address2(Map):			
Address1(Map):			
Data Source:			
AI Name(Map):			
Longitude(Map):			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Latitude(Map):
County(Map):
County Code(Map):
Location Description:
Tanks URL: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0021164
Original Source: UST
Record Date: 04-SEP-2020

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	6 of 62	SSE	0.00 / 0.00	1,410.27 / 0	4701 GRINDEN DRIVE DULUTH MN 55811	ERNS

NRC Report No: 468284
Type of Incident: AIRCRAFT
Incident Cause: EQUIPMENT FAILURE
Incident Date: 19-Dec-1998 20:40:00
Incident Location:
Incident Dtg: OCCURRED
Distance from City:
Distance Units:
Direction from City:
Location County: ST. LOUIS
Potential Flag:
Year: Year 1998 Reports
Latitude Degrees:
Latitude Minutes:
Latitude Seconds:
Longitude Degrees:
Longitude Minutes:
Longitude Seconds:
Lat Quad:
Long Quad:
Location Section:
Location Township:
Location Range:
Description of Incident: AIRCRAFT FUEL TANK/ DURING TRANSFER, DISCOVERED LEAK OUT OF WING TIP.

Material Spill Information

Chris Code: JPO
CAS No:
UN No:
Name of Material: JET FUEL: JP-1 (KEROSENE)
Amount of Material: 10
Unit of Measure: GALLON(S)
If Reached Water: YES
Amount in Water: 0
Unit Reach Water: NONE

Calls Information

Date Time Received: 19-Dec-1998 22:44:51
Date Time Complete: 19-Dec-1998 22:49:40
Call Type: INC
Resp Company: NORTHWEST AIRLINES
Resp Org Type: PRIVATE ENTERPRISE
Responsible City: DULUTH
Responsible State: MN
Responsible Zip: 55811
Source: UNAVAILABLE

Incident Information

Tank ID:
Tank Regulated: U
Tank Regulated By:
Capacity of Tank:
Capacity Tank Units:
Description of Tank:
Actual Amount:
Actual Amount Units:
Tank Above Ground: ABOVE
NPDES:
NPDES Compliance: U
Init Contin Rel No:
Contin Rel Permit:
Contin Release Type:
Aircraft ID:
Aircraft Runway No:
Aircraft Spot No:
Aircraft Type: UNKNOWN
Aircraft Model:
Aircraft Fuel Cap:
Aircraft Fuel Cap U:
Building ID:
Location Area ID:
Location Block ID:
OCSG No:
OCSP No:
State Lease No:
Pier Dock No:
Berth Slip No:
Brake Failure: N
Airbag Deployed:
Transport Contain: U
Location Subdiv:
Platform Rig Name:
Platform Letter:
Allision: N
Type of Structure:
Structure Name:
Structure Oper: Y
Transit Bus Flag:
Date Time Norm Serv:
Serv Disrupt Time:

Aircraft Fuel on Brd:		**Serv Disrupt Units:**	
Aircraft Fuel OB U:		**CR Begin Date:**	
Aircraft Hanger:		**CR End Date:**	
Road Mile Marker:		**CR Change Date:**	
Power Gen Facility:	U	**FBI Contact:**	
Generating Capacity:		**FBI Contact Dt Tm:**	
Type of Fixed Obj:	UNKNOWN	**Passenger Handling:**	
Type of Fuel:		**Passenger Route:**	XXX
DOT Crossing No:		**Passenger Delay:**	XXX
DOT Regulated:	U	**Sub Part C Test Req:**	XXX
Pipeline Type:	UNKNOWN	**No of Conductor Tested:**	
Pipeline Abv Ground:	ABOVE	**No of Engineer Tested:**	
Pipeline Covered:	U	**No of Trainman Tested:**	
Exposed Underwater:	U	**No of Yard Foreman Tested:**	
Railroad Hotline:	No	**No of RCL Operator Tested:**	
Railroad Milepost:	UNKNOWN	**No of Brakeman Tested:**	
Grade Crossing:	N	**No of Train Dispat Tested:**	
Crossing Device Ty:		**No of Signalman Tested:**	
Ty Vehicle Involved:	UNKNOWN	**No of Other Emp Tested:**	
Device Operational:	Y	**No of Unknown Emp Tested:**	

Incident Details Information

Release Secured:	U	**State Agen Report No:**	
Release Rate:		**State Agen on Scene:**	
Release Rate Unit:		**State Agen Notified:**	
Release Rate Rate:		**Fed Agency Notified:**	
Est Duration of Rel:		**Oth Agency Notified:**	
Desc Remedial Act:	STOPPED FUEL TRANSFER. CLEAN UP CREW AND FIRE & RESCUE ARE ON SCENE.	**Body of Water:**	
Fire Involved:	N	**Tributary of:**	
Fire Extinguished:	U	**Near River Mile Make:**	
Any Evacuations:	N	**Near River Mile Mark:**	
No Evacuated:		**Offshore:**	N
Who Evacuated:		**Weather Conditions:**	
Radius of Evac:		**Air Temperature:**	
Any Injuries:	U	**Wind Direction:**	
No. Injured:		**Wind Speed:**	
No. Hospitalized:		**Wind Speed Unit:**	
No. Fatalities:		**Water Supp Contam:**	U
Any Fatalities:	U	**Water Temperature:**	
Any Damages:	N	**Wave Condition:**	
Damage Amount:		**Current Speed:**	
Air Corridor Closed:	N	**Current Direction:**	
Air Corridor Desc:		**Current Speed Unit:**	
Air Closure Time:		**EMPL Fatality:**	
Waterway Closed:	N	**Pass Fatality:**	
Waterway Desc:		**Community Impact:**	N
Waterway Close Time:		**Passengers Transfer:**	UNK
Road Closed:	N	**Passenger Injuries:**	
Road Desc:		**Employee Injuries:**	
Road Closure Time:		**Occupant Fatality:**	
Road Closure Units:		**Sheen Size:**	
Closure Direction:		**Sheen Size Units:**	
Major Artery:	No	**Sheen Size Length:**	
Track Closed:	N	**Sheen Size Length U:**	
Track Desc:		**Sheen Size Width:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Track Closure Time:		**Sheen Size Width U:**	
Track Closure Units:		**Sheen Color:**	
Track Close Dir:		**Dir of Sheen Travel:**	
Media Interest:		**Sheen Odor Desc:**	
Medium Desc:	LAND	**Duration Unit:**	
Addl Medium Info:	CONCRETE	**Additional Info:**	SIZE OF AREA AFFECTED:6FT SQ. O/S WX: CLEAR, CALM.

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	7 of 62	SSE	0.00 / 0.00	1,410.27 / 0	4701 GRINDEN DRIVE GATE 3 DULUTH MN 55811	ERNS

NRC Report No:	463985	**Latitude Degrees:**	
Type of Incident:	UNKNOWN SHEEN	**Latitude Minutes:**	
Incident Cause:	OTHER	**Latitude Seconds:**	
Incident Date:	15-Nov-1998 05:15:00	**Longitude Degrees:**	
Incident Location:		**Longitude Minutes:**	
Incident Dtg:	OCCURRED	**Longitude Seconds:**	
Distance from City:		**Lat Quad:**	
Distance Units:		**Long Quad:**	
Direction from City:		**Location Section:**	
Location County:	ST. LOUIS	**Location Township:**	
Potential Flag:		**Location Range:**	
Year:	Year 1998 Reports		

Description of Incident: DURING A TRUCK TO AIRCRAFT FUEL TRANSFER A SPILL OCCURRED / VENDORSUPPLYING:NORTH COUNTRY AVIATION, 218-727-2911,CAUSE BEING INVESTIGATED

Material Spill Information

Chris Code:	OTH	**Unit of Measure:**	GALLON(S)
CAS No:		**If Reached Water:**	YES
UN No:		**Amount in Water:**	0
Name of Material:	JET A FUEL	**Unit Reach Water:**	NONE
Amount of Material:	40		

Calls Information

Date Time Received:	15-Nov-1998 08:29:53	**Responsible City:**	DULUTH
Date Time Complete:	15-Nov-1998 08:38:42	**Responsible State:**	MN
Call Type:	INC	**Responsible Zip:**	55811
Resp Company:	NORTHWEST AIRLINES	**Source:**	UNAVAILABLE
Resp Org Type:	PRIVATE ENTERPRISE		

Incident Information

Tank ID:		**Building ID:**	
Tank Regulated:	U	**Location Area ID:**	
Tank Regulated By:		**Location Block ID:**	
Capacity of Tank:		**OCSG No:**	
Capacity Tank Units:		**OCSP No:**	
Description of Tank:		**State Lease No:**	
Actual Amount:		**Pier Dock No:**	
Actual Amount Units:		**Berth Slip No:**	
Tank Above Ground:	ABOVE	**Brake Failure:**	N
NPDES:		**Airbag Deployed:**	
NPDES Compliance:	U	**Transport Contain:**	U
Init Contin Rel No:		**Location Subdiv:**	
Contin Rel Permit:		**Platform Rig Name:**	
Contin Release Type:		**Platform Letter:**	
Aircraft ID:		**Allision:**	N
Aircraft Runway No:		**Type of Structure:**	
Aircraft Spot No:		**Structure Name:**	
Aircraft Type:	UNKNOWN	**Structure Oper:**	Y
Aircraft Model:		**Transit Bus Flag:**	
Aircraft Fuel Cap:		**Date Time Norm Serv:**	
Aircraft Fuel Cap U:		**Serv Disrupt Time:**	

Aircraft Fuel on Brd:		***Serv Disrupt Units:***	
Aircraft Fuel OB U:		***CR Begin Date:***	
Aircraft Hanger:		***CR End Date:***	
Road Mile Marker:		***CR Change Date:***	
Power Gen Facility:	U	***FBI Contact:***	
Generating Capacity:		***FBI Contact Dt Tm:***	
Type of Fixed Obj:	UNKNOWN	***Passenger Handling:***	
Type of Fuel:		***Passenger Route:***	XXX
DOT Crossing No:		***Passenger Delay:***	XXX
DOT Regulated:	U	***Sub Part C Test Req:***	XXX
Pipeline Type:	UNKNOWN	***No of Conductor Tested:***	
Pipeline Abv Ground:	ABOVE	***No of Engineer Tested:***	
Pipeline Covered:	U	***No of Trainman Tested:***	
Exposed Underwater:	U	***No of Yard Foreman Tested:***	
Railroad Hotline:	No	***No of RCL Operator Tested:***	
Railroad Milepost:	UNKNOWN	***No of Brakeman Tested:***	
Grade Crossing:	N	***No of Train Dispat Tested:***	
Crossing Device Ty:		***No of Signalman Tested:***	
Ty Vehicle Involved:	UNKNOWN	***No of Other Emp Tested:***	
Device Operational:	Y	***No of Unknown Emp Tested:***	

Incident Details Information

Release Secured:	U	***State Agen Report No:***	
Release Rate:		***State Agen on Scene:***	
Release Rate Unit:		***State Agen Notified:***	
Release Rate Rate:		***Fed Agency Notified:***	
Est Duration of Rel:		***Oth Agency Notified:***	
Desc Remedial Act:	CONTAINED / WILL EVAPORATE / SOURCE HAS BEEN SECURED / FIRE DEPTRESPONDED	***Body of Water:***	
Fire Involved:	N	***Tributary of:***	
Fire Extinguished:	U	***Near River Mile Make:***	
Any Evacuations:	N	***Near River Mile Mark:***	
No Evacuated:		***Offshore:***	Y
Who Evacuated:		***Weather Conditions:***	
Radius of Evac:		***Air Temperature:***	
Any Injuries:	U	***Wind Direction:***	
No. Injured:		***Wind Speed:***	
No. Hospitalized:		***Wind Speed Unit:***	
No. Fatalities:		***Water Supp Contam:***	U
Any Fatalities:	U	***Water Temperature:***	
Any Damages:	N	***Wave Condition:***	
Damage Amount:		***Current Speed:***	
Air Corridor Closed:	N	***Current Direction:***	
Air Corridor Desc:		***Current Speed Unit:***	
Air Closure Time:		***EMPL Fatality:***	
Waterway Closed:	N	***Pass Fatality:***	
Waterway Desc:		***Community Impact:***	N
Waterway Close Time:		***Passengers Transfer:***	UNK
Road Closed:	N	***Passenger Injuries:***	
Road Desc:		***Employee Injuries:***	
Road Closure Time:		***Occupant Fatality:***	
Road Closure Units:		***Sheen Size:***	
Closure Direction:		***Sheen Size Units:***	
Major Artery:	No	***Sheen Size Length:***	
Track Closed:	N	***Sheen Size Length U:***	
Track Desc:		***Sheen Size Width:***	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Track Closure Time:		**Sheen Size Width U:**	
Track Closure Units:		**Sheen Color:**	
Track Close Dir:		**Dir of Sheen Travel:**	
Media Interest:		**Sheen Odor Desc:**	
Medium Desc:	LAND	**Duration Unit:**	
Addl Medium Info:	CONCRETE	**Additional Info:**	IT IS UNKNOWN EXACTLY FROM WHERE THE SPILL OCCURRED MEANING EITHER THETRUCK OR OVERFLOW FROM THE AIRCRAFT

2	8 of 62	SSE	0.00 / 0.00	1,410.27 / 0	4701 GRINDEN DRIVE GATE NO.3 DULUTH MN 55811	ERNS

NRC Report No:	471404	**Latitude Degrees:**	
Type of Incident:	AIRCRAFT	**Latitude Minutes:**	
Incident Cause:	UNKNOWN	**Latitude Seconds:**	
Incident Date:	22-Jan-1999 05:10:00	**Longitude Degrees:**	
Incident Location:		**Longitude Minutes:**	
Incident Dtg:	OCCURRED	**Longitude Seconds:**	
Distance from City:		**Lat Quad:**	
Distance Units:		**Long Quad:**	
Direction from City:		**Location Section:**	
Location County:	ST. LOUIS	**Location Township:**	
Potential Flag:		**Location Range:**	
Year:	Year 1999 Reports		
Description of Incident:	AIRCRAFT "A320" / CAUSE UNKNOWN / RELEASED JPE ON RAMP		

Material Spill Information

Chris Code:	JPE	**Unit of Measure:**	GALLON(S)
CAS No:		**If Reached Water:**	YES
UN No:		**Amount in Water:**	0
Name of Material:	JET FUEL: JP-8	**Unit Reach Water:**	NONE
Amount of Material:	40		

Calls Information

Date Time Received:	22-Jan-1999 08:31:45	**Responsible City:**	DULUTH
Date Time Complete:	22-Jan-1999 08:38:26	**Responsible State:**	MN
Call Type:	INC	**Responsible Zip:**	55811
Resp Company:	NORTHWEST AIRLINES	**Source:**	UNAVAILABLE
Resp Org Type:	PRIVATE ENTERPRISE		

Incident Information

Tank ID:		**Building ID:**	
Tank Regulated:	U	**Location Area ID:**	
Tank Regulated By:		**Location Block ID:**	
Capacity of Tank:		**OCSG No:**	
Capacity Tank Units:		**OCSP No:**	
Description of Tank:		**State Lease No:**	
Actual Amount:		**Pier Dock No:**	
Actual Amount Units:		**Berth Slip No:**	
Tank Above Ground:	ABOVE	**Brake Failure:**	N
NPDES:		**Airbag Deployed:**	
NPDES Compliance:	U	**Transport Contain:**	U
Init Contin Rel No:		**Location Subdiv:**	
Contin Rel Permit:		**Platform Rig Name:**	
Contin Release Type:		**Platform Letter:**	
Aircraft ID:		**Allision:**	N
Aircraft Runway No:		**Type of Structure:**	
Aircraft Spot No:		**Structure Name:**	
Aircraft Type:	UNKNOWN	**Structure Oper:**	Y
Aircraft Model:		**Transit Bus Flag:**	
Aircraft Fuel Cap:		**Date Time Norm Serv:**	

Aircraft Fuel Cap U:		***Serv Disrupt Time:***	
Aircraft Fuel on Brd:		***Serv Disrupt Units:***	
Aircraft Fuel OB U:		***CR Begin Date:***	
Aircraft Hanger:		***CR End Date:***	
Road Mile Marker:		***CR Change Date:***	
Power Gen Facility:	U	***FBI Contact:***	
Generating Capacity:		***FBI Contact Dt Tm:***	
Type of Fixed Obj:	UNKNOWN	***Passenger Handling:***	
Type of Fuel:		***Passenger Route:***	XXX
DOT Crossing No:		***Passenger Delay:***	XXX
DOT Regulated:	U	***Sub Part C Test Req:***	XXX
Pipeline Type:	UNKNOWN	***No of Conductor Tested:***	
Pipeline Abv Ground:	ABOVE	***No of Engineer Tested:***	
Pipeline Covered:	U	***No of Trainman Tested:***	
Exposed Underwater:	U	***No of Yard Foreman Tested:***	
Railroad Hotline:	No	***No of RCL Operator Tested:***	
Railroad Milepost:	UNKNOWN	***No of Brakeman Tested:***	
Grade Crossing:	N	***No of Train Dispat Tested:***	
Crossing Device Ty:		***No of Signalman Tested:***	
Ty Vehicle Involved:	UNKNOWN	***No of Other Emp Tested:***	
Device Operational:	Y	***No of Unknown Emp Tested:***	

Incident Details Information

Release Secured:	U	***State Agen Report No:***	
Release Rate:		***State Agen on Scene:***	
Release Rate Unit:		***State Agen Notified:***	
Release Rate Rate:		***Fed Agency Notified:***	
Est Duration of Rel:		***Oth Agency Notified:***	
Desc Remedial Act:	SPILL CONTAINED WITH BOOMS AND ABSORBENT / SPILL SECURED	***Body of Water:***	
Fire Involved:	N	***Tributary of:***	
Fire Extinguished:	U	***Near River Mile Make:***	
Any Evacuations:	N	***Near River Mile Mark:***	
No Evacuated:		***Offshore:***	N
Who Evacuated:		***Weather Conditions:***	
Radius of Evac:		***Air Temperature:***	
Any Injuries:	U	***Wind Direction:***	
No. Injured:		***Wind Speed:***	
No. Hospitalized:		***Wind Speed Unit:***	
No. Fatalities:		***Water Supp Contam:***	U
Any Fatalities:	U	***Water Temperature:***	
Any Damages:	N	***Wave Condition:***	
Damage Amount:		***Current Speed:***	
Air Corridor Closed:	N	***Current Direction:***	
Air Corridor Desc:		***Current Speed Unit:***	
Air Closure Time:		***EMPL Fatality:***	
Waterway Closed:	N	***Pass Fatality:***	
Waterway Desc:		***Community Impact:***	N
Waterway Close Time:		***Passengers Transfer:***	UNK
Road Closed:	N	***Passenger Injuries:***	
Road Desc:		***Employee Injuries:***	
Road Closure Time:		***Occupant Fatality:***	
Road Closure Units:		***Sheen Size:***	
Closure Direction:		***Sheen Size Units:***	
Major Artery:	No	***Sheen Size Length:***	
Track Closed:	N	***Sheen Size Length U:***	
Track Desc:		***Sheen Size Width:***	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Track Closure Time:		**Sheen Size Width U:**	
Track Closure Units:		**Sheen Color:**	
Track Close Dir:		**Dir of Sheen Travel:**	
Media Interest:		**Sheen Odor Desc:**	
Medium Desc:	LAND	**Duration Unit:**	
Addl Medium Info:	AIRPORT RAMP	**Additional Info:**	TEMP: 28F / CLOUD COVER: CLOUDY / WIND: NORTH

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	9 of 62	SSE	0.00 / 0.00	1,410.27 / 0	4701 GRINDEN DRIVE DULUTH MN 55811	ERNS

NRC Report No:	488617	**Latitude Degrees:**	
Type of Incident:	AIRCRAFT	**Latitude Minutes:**	
Incident Cause:	EQUIPMENT FAILURE	**Latitude Seconds:**	
Incident Date:	23-Jun-1999 21:05:00	**Longitude Degrees:**	
Incident Location:		**Longitude Minutes:**	
Incident Dtg:	OCCURRED	**Longitude Seconds:**	
Distance from City:		**Lat Quad:**	
Distance Units:		**Long Quad:**	
Direction from City:		**Location Section:**	
Location County:	ST. LOUIS	**Location Township:**	
Potential Flag:		**Location Range:**	
Year:	Year 1999 Reports		
Description of Incident:	ARJ AIRCRAFT / MECHANICAL FAILURE		

Material Spill Information

Chris Code:	JPE	**Unit of Measure:**	GALLON(S)
CAS No:		**If Reached Water:**	YES
UN No:		**Amount in Water:**	0
Name of Material:	JET FUEL: JP-8 (JET-A)	**Unit Reach Water:**	NONE
Amount of Material:	50		

Calls Information

Date Time Received:	23-Jun-1999 23:18:59	**Responsible City:**	DULUTH
Date Time Complete:	23-Jun-1999 23:22:33	**Responsible State:**	MN
Call Type:	INC	**Responsible Zip:**	55811
Resp Company:	NORTHWEST AIRLINES	**Source:**	UNAVAILABLE
Resp Org Type:	PRIVATE ENTERPRISE		

Incident Information

Tank ID:		**Building ID:**	
Tank Regulated:	U	**Location Area ID:**	
Tank Regulated By:		**Location Block ID:**	
Capacity of Tank:		**OCSG No:**	
Capacity Tank Units:		**OCSP No:**	
Description of Tank:		**State Lease No:**	
Actual Amount:		**Pier Dock No:**	
Actual Amount Units:		**Berth Slip No:**	
Tank Above Ground:	ABOVE	**Brake Failure:**	N
NPDES:		**Airbag Deployed:**	
NPDES Compliance:	U	**Transport Contain:**	U
Init Contin Rel No:		**Location Subdiv:**	
Contin Rel Permit:		**Platform Rig Name:**	
Contin Release Type:		**Platform Letter:**	
Aircraft ID:		**Allision:**	N
Aircraft Runway No:		**Type of Structure:**	
Aircraft Spot No:		**Structure Name:**	
Aircraft Type:	UNKNOWN	**Structure Oper:**	Y
Aircraft Model:		**Transit Bus Flag:**	
Aircraft Fuel Cap:		**Date Time Norm Serv:**	
Aircraft Fuel Cap U:		**Serv Disrupt Time:**	
Aircraft Fuel on Brd:		**Serv Disrupt Units:**	

Aircraft Fuel OB U:		**CR Begin Date:**	
Aircraft Hanger:		**CR End Date:**	
Road Mile Marker:		**CR Change Date:**	
Power Gen Facility:	U	**FBI Contact:**	
Generating Capacity:		**FBI Contact Dt Tm:**	
Type of Fixed Obj:	UNKNOWN	**Passenger Handling:**	
Type of Fuel:		**Passenger Route:**	XXX
DOT Crossing No:		**Passenger Delay:**	XXX
DOT Regulated:	U	**Sub Part C Test Req:**	XXX
Pipeline Type:	UNKNOWN	**No of Conductor Tested:**	
Pipeline Abv Ground:	ABOVE	**No of Engineer Tested:**	
Pipeline Covered:	U	**No of Trainman Tested:**	
Exposed Underwater:	U	**No of Yard Foreman Tested:**	
Railroad Hotline:	No	**No of RCL Operator Tested:**	
Railroad Milepost:	UNKNOWN	**No of Brakeman Tested:**	
Grade Crossing:	N	**No of Train Dispat Tested:**	
Crossing Device Ty:		**No of Signalman Tested:**	
Ty Vehicle Involved:	UNKNOWN	**No of Other Emp Tested:**	
Device Operational:	Y	**No of Unknown Emp Tested:**	

Incident Details Information

Release Secured:	U	**State Agen Report No:**	
Release Rate:		**State Agen on Scene:**	
Release Rate Unit:		**State Agen Notified:**	
Release Rate Rate:		**Fed Agency Notified:**	
Est Duration of Rel:		**Oth Agency Notified:**	
Desc Remedial Act:	CONTAINED AND CLEANED UP	**Body of Water:**	
Fire Involved:	N	**Tributary of:**	
Fire Extinguished:	U	**Near River Mile Make:**	
Any Evacuations:	N	**Near River Mile Mark:**	
No Evacuated:		**Offshore:**	N
Who Evacuated:		**Weather Conditions:**	
Radius of Evac:		**Air Temperature:**	
Any Injuries:	U	**Wind Direction:**	
No. Injured:		**Wind Speed:**	
No. Hospitalized:		**Wind Speed Unit:**	
No. Fatalities:		**Water Supp Contam:**	U
Any Fatalities:	U	**Water Temperature:**	
Any Damages:	N	**Wave Condition:**	
Damage Amount:		**Current Speed:**	
Air Corridor Closed:	N	**Current Direction:**	
Air Corridor Desc:		**Current Speed Unit:**	
Air Closure Time:		**EMPL Fatality:**	
Waterway Closed:	N	**Pass Fatality:**	
Waterway Desc:		**Community Impact:**	N
Waterway Close Time:		**Passengers Transfer:**	UNK
Road Closed:	N	**Passenger Injuries:**	
Road Desc:		**Employee Injuries:**	
Road Closure Time:		**Occupant Fatality:**	
Road Closure Units:		**Sheen Size:**	
Closure Direction:		**Sheen Size Units:**	
Major Artery:	No	**Sheen Size Length:**	
Track Closed:	N	**Sheen Size Length U:**	
Track Desc:		**Sheen Size Width:**	
Track Closure Time:		**Sheen Size Width U:**	
Track Closure Units:		**Sheen Color:**	
Track Close Dir:		**Dir of Sheen Travel:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Media Interest: | **Sheen Odor Desc:**
Medium Desc: LAND | **Duration Unit:**
Addl Medium Info: TARMACK | **Additional Info:** AREA AFFECTED: 45 SQ FTALSO NOTIFIED: AIR NATIONAL GUARD FIRE RESCUE

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	10 of 62	SSE	0.00 / 0.00	1,410.27 / 0	DULUTH INTERNATIONAL AIRPORT (DAA) 4701 GRINDEN DR DULUTH MN 55811	FINDS/FRS

Registry ID: 110008799979
FIPS Code: 27137
HUC Code: 04010201
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 01-MAR-00
Update Date: 01-JUN-17
Interest Types: AIR EMISSIONS CLASSIFICATION UNKNOWN, AIR MINOR, AIR MONITORING SITE, STATE MASTER, UNSPECIFIED UNIVERSE, VSQG
SIC Codes: 4512, 4581, 9621
SIC Code Descriptions: AIR TRANSPORTATION, SCHEDULED, AIRPORTS, FLYING FIELDS, AND AIRPORT TERMINAL SERVICES, REGULATION AND ADMINISTRATION OF TRANSPORTATION PROGRAMS
NAICS Codes: 481111, 488111, 926120
NAICS Code Descriptions: AIR TRAFFIC CONTROL., REGULATION AND ADMINISTRATION OF TRANSPORTATION PROGRAMS., SCHEDULED PASSENGER AIR TRANSPORTATION.
Conveyor: FRS-GEOCODE
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 08
Census Block Code: 271370003001011
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude: 46.83798
Longitude: -92.17768
Reference Point: ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value: 50
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110008799979
Program Acronyms:

AIR:MN0000002713700074, AIRS/AFS:2713700074, AIRS/AQS:8306, EIS:6238111, MN-TEMPO:215002, MN-TEMPO:229212, MN-TEMPO:638, MN-TEMPO:83391, RCRAINFO:MN7570024284, RCRAINFO:MNR000023143, RCRAINFO:MNS000105817

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	11 of 62	SSE	0.00 / 0.00	1,410.27 / 0	DULUTH AIRPORT RUNWAY 21SAFET 4701 GRINDEN DR HERMANTOWN MN 55811	FINDS/FRS

Registry ID: 110068202233
FIPS Code: 27137
HUC Code: 04010201
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 02-JUN-16
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

NAICS Code Descriptions:
Conveyor: FRS-GEOCODE
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 08
Census Block Code: 271370003001011
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude: 46.83798
Longitude: -92.17768
Reference Point: ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value: 50
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068202233
Program Acronyms:

MN-TEMPO:89268

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	12 of 62	SSE	0.00 / 0.00	1,410.27 / 0	NEW PASSANGER TERMINAL BP 2C 4701 GRINDEN DRIVE DULUTH MN 55811	FINDS/FRS

Registry ID: 110067735008
FIPS Code: 27137
HUC Code: 04010201
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 02-JUN-16
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor: FRS-GEOCODE
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 08
Census Block Code: 271370003001011
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude: 46.83798
Longitude: -92.17768
Reference Point: ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value: 50
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110067735008
Program Acronyms:

MN-TEMPO:143543

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	13 of 62	SSE	0.00 / 0.00	1,410.27 / 0	DELTA AIR LINES GLOBAL SERVIC 4701 GRINDEN DR DULUTH MN 55811	FINDS/FRS

Registry ID:	110069151358
FIPS Code:	27137
HUC Code:	04010201
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	03-JUN-16
Update Date:	
Interest Types:	STATE MASTER
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	FRS-GEOCODE
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	08
Census Block Code:	271370003001011
EPA Region Code:	05
County Name:	ST. LOUIS
US/Mexico Border Ind:	
Latitude:	46.83798
Longitude:	-92.17768
Reference Point:	ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method:	ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value:	50
Datum:	NAD83
Source:	
Frs Facility Detail Report URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110069151358
Program Acronyms:	

MN-TEMPO:130367

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	14 of 62	SSE	0.00 / 0.00	1,410.27 / 0	NORTH PERIMETER ROAD GRADING 4701 GRINDEN DR HERMANTOWN MN 55811	FINDS/FRS

Registry ID:	110069111160
FIPS Code:	27137
HUC Code:	04010201
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	03-JUN-16
Update Date:	
Interest Types:	STATE MASTER
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	FRS-GEOCODE
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	08
Census Block Code:	271370003001011
EPA Region Code:	05

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

County Name:	ST. LOUIS
US/Mexico Border Ind:	
Latitude:	46.83798
Longitude:	-92.17768
Reference Point:	ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method:	ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value:	50
Datum:	NAD83
Source:	
Frs Facility Detail Report URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110069111160
Program Acronyms:	

MN-TEMPO:85161

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	*15 of 62*	*SSE*	*0.00 / 0.00*	*1,410.27 / 0*	***DELTA AIRLINES INC DULUTH RAMP*** ***4701 GRINDEN RD*** ***HERMANTOWN MN 55811***	***FINDS/FRS***

Registry ID:	110067981447
FIPS Code:	27137
HUC Code:	04010201
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	02-JUN-16
Update Date:	
Interest Types:	STATE MASTER
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	FRS-GEOCODE
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	08
Census Block Code:	271370003001011
EPA Region Code:	05
County Name:	ST. LOUIS
US/Mexico Border Ind:	
Latitude:	46.83798
Longitude:	-92.17768
Reference Point:	ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method:	ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value:	50
Datum:	NAD83
Source:	
Frs Facility Detail Report URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110067981447
Program Acronyms:	

MN-TEMPO:130799

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	*16 of 62*	*SSE*	*0.00 / 0.00*	*1,410.27 / 0*	***KRENZEN CORPORATION*** ***4701 GRINDEN DR*** ***DULUTH MN 55811***	***FINDS/FRS***

Registry ID:	110071476644
FIPS Code:	27137
HUC Code:	04010201
Site Type Name:	
Location Description:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Supplemental Location:
Create Date: 04-OCT-23
Update Date:
Interest Types:
SIC Codes: 5511
SIC Code Descriptions: MOTOR VEHICLE DEALERS (NEW AND USED)
NAICS Codes: 441110
NAICS Code Descriptions: NEW CAR DEALERS.
Conveyor: FRS-GEOCODE
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 08
Census Block Code: 271370003001011
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude: 46.83798
Longitude: -92.17768
Reference Point: ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value: 50
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110071476644
Program Acronyms:

MN-TEMPO:235672

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	17 of 62	SSE	0.00 / 0.00	1,410.27 / 0	SONJU ENTERPRISES INC 4701 GRINDEN DR BOX 161830 DULUTH MN 55816	FINDS/FRS

Registry ID: 110071475201
FIPS Code: 27137
HUC Code: 04010201
Site Type Name:
Location Description:
Supplemental Location:
Create Date: 04-OCT-23
Update Date:
Interest Types:
SIC Codes: 5511
SIC Code Descriptions: MOTOR VEHICLE DEALERS (NEW AND USED)
NAICS Codes: 441110
NAICS Code Descriptions: NEW CAR DEALERS.
Conveyor: FRS-GEOCODE
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 08
Census Block Code: 271370003001011
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude: 46.83798
Longitude: -92.17768
Reference Point: ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value: 50
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110071475201
Program Acronyms:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

MN-TEMPO:235247

2	18 of 62	SSE	0.00 / 0.00	1,410.27 / 0	OVERLAND WEST INC 4701 GRINDEN DR DULUTH MN 55811	FINDS/FRS

Registry ID:	110071496157
FIPS Code:	27137
HUC Code:	04010201
Site Type Name:	
Location Description:	
Supplemental Location:	
Create Date:	04-OCT-23
Update Date:	
Interest Types:	
SIC Codes:	5511
SIC Code Descriptions:	MOTOR VEHICLE DEALERS (NEW AND USED)
NAICS Codes:	441110
NAICS Code Descriptions:	NEW CAR DEALERS.
Conveyor:	FRS-GEOCODE
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	08
Census Block Code:	271370003001011
EPA Region Code:	05
County Name:	ST. LOUIS
US/Mexico Border Ind:	
Latitude:	46.83798
Longitude:	-92.17768
Reference Point:	ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method:	ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value:	50
Datum:	NAD83
Source:	
Frs Facility Detail Report URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110071496157
Program Acronyms:	

MN-TEMPO:235464

2	19 of 62	SSE	0.00 / 0.00	1,410.27 / 0	2020 COMMERCIAL SERVICE APRON 4701 GRINDEN DR DULUTH MN 55811-1578	FINDS/FRS

Registry ID:	110071496659
FIPS Code:	27137
HUC Code:	04010201
Site Type Name:	
Location Description:	
Supplemental Location:	
Create Date:	04-OCT-23
Update Date:	
Interest Types:	
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	FRS-GEOCODE
Federal Facility Code:	
Federal Agency Name:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 08
Census Block Code: 271370003001011
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude: 46.83798
Longitude: -92.17768
Reference Point: ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value: 50
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110071496659
Program Acronyms:

MN-TEMPO:235791

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	20 of 62	SSE	0.00 / 0.00	1,410.27 / 0	2024 MIDFIELD RAMP REPAIR DUL 4701 GRINDEN DR DULUTH MN 55811-1578	FINDS/FRS

Registry ID: 110071851503
FIPS Code: 27137
HUC Code: 04010201
Site Type Name:
Location Description: DULUTH AIRPORT
Supplemental Location:
Create Date: 09-OCT-24
Update Date:
Interest Types:
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor: FRS-GEOCODE
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 08
Census Block Code: 271370003001011
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude: 46.83798
Longitude: -92.17768
Reference Point: ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value: 50
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110071851503
Program Acronyms:

MN-TEMPO:260965

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	21 of 62	SSE	0.00 / 0.00	1,410.27 / 0	Duluth International Airport 4701 Grinden Dr Duluth MN 55811	HIST LEAKSITES

Prog Int ID:	217187	***Address Source:***	CORE
Site ID:	780	***Township Name:***	
State County Code:	69	***County Name:***	St. Louis
Country:	USA	***Lat/Long ID:***	73296
Interest Type Cd:	LS	***Interest Type Dsc:***	Leak Site
ADDR ID:	1321	***Lat Degrees:***	46
Tank Site:	4479	***Lat Minutes:***	50
Interest Phone:	NO CORE PI PH.	***Lat Seconds:***	10.81
Interest Start Dt:	08/11/1997 00:00:00	***Long Degrees:***	-92
Interest End Dt:	04/14/2011 14:53:48	***Long Minutes:***	10
Active?:	No	***Long Seconds:***	29.35
Timestamp Added:	03/23/2006 13:20:59	***Lat/Long Source:***	CORE
Timestamp Updt:	11/10/2014 08:17:05	***Lat/Long Site ID:***	780
Staff ID Updt:	RGAGLE	***Lat/Long Spatial ID:***	51063947
Source:	CORE	***Collection Date:***	03/14/2003 00:00:00
Coord Src Type:	2	***Map Scale Code:***	T
Coord Src Desc:		***Org Name Source:***	MPCA
Foreign State:		***Foreign Zone:***	
FIPS County Cd1:	137		

Addr Timestmp Add:	06/11/1996 20:16:00
Addr Timestamp Lst Updt:	08/01/2007 21:43:45
Addr Updater Staff ID:	SYSTEM
Lat/Long Timestamp Added:	03/20/2003 11:44:14
Lat/Long Tmstmp Last Upd:	07/14/2004 22:03:07
Lat/Long Updater Staff ID:	BOMAN
Lat/Long Desc:	
Coord Coll Method Desc:	DOQ - Digital Orthophoto Quad
Coord Coll Method Code:	D3
Comments:	

Leak Site

Complete Site Closure Date:	05/09/1995 00:00:00
Cond Closure Date:	
Release Discovered Date:	07/23/1991 00:00:00
Leaksite Type Code:	1
Leaksite Type Desc:	Leak Site
Leak Report Date:	07/23/1991 00:00:00
Tank Reg Status Code:	U
TMSP Added:	12/04/1999 14:03:46
TMSP Last Updt:	02/07/2012 16:02:31
CU Yds Excavated Qty:	75
ENF Action Begin Date:	09/13/1991 00:00:00
Residence Type Code:	
File Archive Box:	59
File Archive Lot:	97/296
Soil Digout Date:	07/22/1991 00:00:00
Staff ID Last Updt:	KMUSTON
Std Letter Response Date:	
VPIC Acres:	
VPIC Application Date:	
Contam Soils Remaining Flag:	Y
Indoor Air Collected Flag:	
LUST Trust Eligible Flag:	No
Offsite Contam Flag:	U
REIMB Awarded Flag:	No
Release From AST Flag:	No
Release From UST Flag:	No
Soil Gas Action Level Flag:	
Soil Gas Data Collected Flag:	
Sub Slab Sample Collected Flag:	
Surface Water Impact Flag:	U
Utility Project Flag:	No
Vapor Intrusion Action Flag:	
Vapor Intrusion Checked Flag:	
Leaksite Type Defn:	Leak site (tank and petroleum contamination).
Soil Gas Data Comments:	

Vapor Intrusion Comments:

Leak Product Rls

Product Rls Seq ID: 403276
Leak Product Desc: Fuel Oil 4 & 6
Leak Product Defn: The product is fuel oil 4 & 6.

Leak GW Info

Well Type Code:
Affected Non Res Props:
Affected Residential Props:
Staff ID Last Updt: RSUCHAN
Staff ID Wellhead Area Assess:
TMSP Added: 12/04/1999 14:07:30
TMSP Last Updt: 11/04/2003 12:57:07
Water Supply Exceeds Ral Flag:
Cleanup Goal Achieved Flag:
DW Supply Contam Flag:
Free Product at Close Flag:
Free Product Observed Flag:
Free Product Thickness:
Ground Water Contam Flag: N
GW Cleanup Goal: 0
GW Exceeds Cleanup Goal Flag:
Impacted Aquifer Code:
MTBE High Level Date:
MTBE High Ug Per Liter Char:
MTBE High Ug Per Liter Numb:
MTBE Present Historically Flag:
MTBE Present Now Flag:
Protected Area Flag:
PWS Well Impacted Flag:
Sensitive Area Flag:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	22 of 62	SSE	0.00 / 0.00	1,410.27 / 0	DULUTH INTERNATIONAL AIRPORT 4701 Grinden Dr Duluth MN 55811	HIST SPL

Program Int ID: 188492
Site ID: 0
Interest Type: Spill Site
Preferred ID: 29432
Active?:
Interest Start: 11/16/1998 10:10:32
Interest End:
Comments: ERROR IN FILLING AIRCRAFT. ALL CONTAINED AND CLEANED UP.

Tmsp Added: 11/16/1998 10:10:32
TMSP Update: 11/04/2003 15:23:07
Prgm Int Source: TALES
Address Source: TALES
Interest Phone:
Township:
County: St. Louis

Spill Site

Spill Site Closure Date: 11/15/1998 00:00:00
Spill Date: 11/15/1998 00:00:00
Spill Reported Date: 11/15/1998 00:00:00
Priority Code: 3
MPCA Involvement:
Initial Cause: HUMAN ERROR
Initial Source: Truck/Vehicle Fuel
Public Safety Spill ID:
Duty Officer Report Number:
Spill Reported by: HANK STORMS, DULUTH INTERNATIONAL AIRPORT

Report Taken By Initials: 3297
Rpt Taken by Duty Officer Flag:
MPCA Project Manager: 3094
Tmsp Added: 11/16/1998 10:10:32
Tmsp Last Updt: 04/11/2007 08:23:03
Staff ID Last Updt: RSUCHAN
Rep Name:
Rep Phone:
Archive Lot:
Archive Box:
Response Desc:

Spill Released Product

Spill Product: Aviation Gas (High Octane)
Spill Released Quantity: 40
Spill Qty Units: Gallons
Spill Incident Accuracy: Estimated
Date Added: 11/16/1998 10:10:32
Last Update: 05/04/2002 07:36:36
Staff ID Last Update: TANKS

Spill Incident Affected

Spill Incident Affect: Street, Parking Lot
Date Added: 11/16/1998 10:10:32
Last Update: 05/04/2002 07:36:36
Staff ID Last Update: TANKS

Spill Action

Spill Action: None, No File
Spill Action Person:
Date Added: 11/16/1998 10:10:32
Last Update: 05/04/2002 07:36:36
Staff ID Last Update: TANKS

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2 | ***23 of 62*** | ***SSE*** | ***0.00 / 0.00*** | ***1,410.27 / 0*** | ***NWA***
4701 Grinden Dr
Duluth MN 55811 | ***HIST SPL***

Program Int ID: 186795
Site ID: 0
Interest Type: Spill Site
Preferred ID: 29734
Active?:
Interest Start: 01/22/1999 13:12:07
Interest End:
Tmsp Added: 01/22/1999 13:12:07
TMSP Update: 10/09/2006 10:11:15
Prgm Int Source: TALES
Address Source: TALES
Interest Phone:
Township:
County: St. Louis
Comments: RELEASED JPE ON RAMP, CAUSE UNKNOWN. SPILL CONTAINED WITH BOOMS\n\nAND SORBENT.

Spill Site

Spill Site Closure Date: 01/22/1999 00:00:00
Spill Date: 01/22/1999 00:00:00
Spill Reported Date: 01/22/1999 00:00:00
Priority Code: 3
MPCA Involvement:
Initial Cause: EQUIPMENT FAILURE
Initial Source: Unknown
Public Safety Spill ID:
Duty Officer Report Number:
Spill Reported by: NORTHWEST AIRLINES, RIA MOLITOR
Report Taken By Initials: 3297

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Rpt Taken by Duty Officer Flag:
MPCA Project Manager: 3094
Tmsp Added: 01/22/1999 13:12:07
Tmsp Last Updt: 04/11/2007 08:23:02
Staff ID Last Updt: RSUCHAN
Rep Name:
Rep Phone:
Archive Lot:
Archive Box:
Response Desc:

Spill Released Product

Spill Product: Aviation Gas (High Octane)
Spill Released Quantity: 40
Spill Qty Units: Gallons
Spill Incident Accuracy: Known
Date Added: 01/22/1999 13:12:07
Last Update: 05/04/2002 07:31:12
Staff ID Last Update: TANKS

Spill Incident Affected

Spill Incident Affect: Street, Parking Lot
Date Added: 01/22/1999 13:12:07
Last Update: 05/04/2002 07:31:12
Staff ID Last Update: TANKS

Spill Action

Spill Action: None, No File
Spill Action Person:
Date Added: 01/22/1999 13:12:07
Last Update: 05/04/2002 07:31:12
Staff ID Last Update: TANKS

2	24 of 62	SSE	0.00 / 0.00	1,410.27 / 0	Northwest Airlines 4701 Grinden Dr. Duluth MN	HIST SPL

Program Int ID: 187716
Site ID: 0
Interest Type: Spill Site
Preferred ID: 30713
Active?:
Interest Start: 06/24/1999 09:23:04
Interest End:
Tmsp Added: 06/24/1999 09:23:04
TMSP Update: 02/05/2009 13:10:48
Prgm Int Source: TALES
Address Source: TALES
Interest Phone:
Township:
County: St. Louis
Comments: VALVE STUCK WHILE FUELING NW AIRCRAFT. FD CONTAINED & CLEANING UP\n\nAIRPORT WILL DISPOSE. CLEAN UP DONE.

Spill Site

Spill Site Closure Date: 06/23/1999 00:00:00
Spill Date: 06/23/1999 00:00:00
Spill Reported Date: 06/23/1999 00:00:00
Priority Code: 3
MPCA Involvement:
Initial Cause: EQUIPMENT FAILURE
Initial Source: Other
Public Safety Spill ID:
Duty Officer Report Number:
Spill Reported by: CARL ANDERSON, AIR NATIONAL GUARD FD
Report Taken By Initials: 3297

Rpt Taken by Duty Officer Flag:
MPCA Project Manager: 3094
Tmsp Added: 06/24/1999 09:23:04
Tmsp Last Updt: 04/11/2007 08:23:02
Staff ID Last Updt: RSUCHAN
Rep Name:
Rep Phone:
Archive Lot:
Archive Box:
Response Desc:

Spill Released Product

Spill Product: Aviation Gas (High Octane)
Spill Released Quantity: 100
Spill Qty Units: Gallons
Spill Incident Accuracy: Known
Date Added: 06/24/1999 09:23:04
Last Update: 05/04/2002 07:34:09
Staff ID Last Update: TANKS

Spill Incident Affected

Spill Incident Affect: Street, Parking Lot
Date Added: 06/24/1999 09:23:04
Last Update: 05/04/2002 07:34:09
Staff ID Last Update: TANKS

Spill Action

Spill Action: None, No File
Spill Action Person:
Date Added: 06/24/1999 09:23:04
Last Update: 05/04/2002 07:34:09
Staff ID Last Update: TANKS

2	25 of 62	SSE	0.00 / 0.00	1,410.27 / 0	AIRPORT 4701 Grinden Dr Duluth MN 55811	HIST SPL

Program Int ID: 186807
Site ID: 0
Interest Type: Spill Site
Preferred ID: 29747
Active?:
Interest Start: 01/25/1999 11:51:20
Interest End:
Tmsp Added: 01/25/1999 11:51:20
TMSP Update: 11/04/2003 15:23:06
Prgm Int Source: TALES
Address Source: TALES
Interest Phone:
Township:
County: St. Louis
Comments: FUELING AIRCRAFT, PUMP MALFUNCTIONED OR WAS LEFT ON. FIRE DEPT.\n\nRESPONDED IMMEDIATELY. PADS AROUND DRAINS. NOTHING TO SEWER. JETA

Spill Site

Spill Site Closure Date: 01/22/1999 00:00:00
Spill Date: 01/22/1999 00:00:00
Spill Reported Date: 01/22/1999 00:00:00
Priority Code: 3
MPCA Involvement:
Initial Cause: EQUIPMENT FAILURE
Initial Source: Other
Public Safety Spill ID:
Duty Officer Report Number:
Spill Reported by: HANK STORMS, DULUTH INT'L AIRPORT
Report Taken By Initials: 3297

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Rpt Taken by Duty Officer Flag:
MPCA Project Manager: 3094
Tmsp Added: 01/25/1999 11:51:20
Tmsp Last Updt: 04/11/2007 08:23:02
Staff ID Last Updt: RSUCHAN
Rep Name:
Rep Phone:
Archive Lot:
Archive Box:
Response Desc:

Spill Released Product

Spill Product: Aviation Gas (High Octane)
Spill Released Quantity: 35
Spill Qty Units: Gallons
Spill Incident Accuracy: Known
Date Added: 01/25/1999 11:51:20
Last Update: 05/04/2002 07:31:14
Staff ID Last Update: TANKS

Spill Incident Affected

Spill Incident Affect: Street, Parking Lot
Date Added: 01/25/1999 11:51:20
Last Update: 05/04/2002 07:31:14
Staff ID Last Update: TANKS

Spill Action

Spill Action: None, No File
Spill Action Person:
Date Added: 01/25/1999 11:51:20
Last Update: 05/04/2002 07:31:14
Staff ID Last Update: TANKS

2	26 of 62	SSE	0.00 / 0.00	1,410.27 / 0	Northwest Airlines - Duluth Intl Airport - ramp 4701 Grinden Dr Duluth MN 55811	HIST SPL

Program Int ID: 259244
Site ID: 0
Interest Type: Spill Site
Preferred ID: 58578
Active?:
Interest Start: 03/05/2003 16:17:01
Interest End:
Tmsp Added: 03/05/2003 16:17:01
TMSP Update: 09/22/2005 10:24:09
Prgm Int Source: TALES
Address Source: TALES
Interest Phone:
Township:
County: St. Louis
Comments: **No File**\n\nSpill occurred during an internal transfer of fuel from one wing to the other in a Northwest DC-9. Duluth Air National Guard responded and contained with pads. Clean-up is almost complete, Air National Guard has 3 - 55 gallon drums of clean-up material. Caller stated that in the past the Air National Guard has handled disposal, caller will be checking with them shortly if that will be the case again. SUPPLEMENTAL Report indicated that airport will handle disposal.

Spill Site

Spill Site Closure Date: 02/21/2003 00:00:00
Spill Date: 02/21/2003 00:00:00
Spill Reported Date: 02/21/2003 03:00:00
Priority Code:
MPCA Involvement: None
Initial Cause:
Initial Source: Other

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Public Safety Spill ID:
Duty Officer Report Number:
Spill Reported by: Shawn Germolus
Report Taken By Initials:
Rpt Taken by Duty Officer Flag: Yes
MPCA Project Manager: 3094
Tmsp Added: 03/05/2003 16:17:02
Tmsp Last Updt: 04/11/2007 08:23:06
Staff ID Last Updt: RSUCHAN
Rep Name: Shawn Germolus
Rep Phone: 2187272968
Archive Lot:
Archive Box:
Response Desc:

Spill Released Product

Spill Product: Jet Fuel (Kerosene Based)
Spill Released Quantity: 90
Spill Qty Units: Gallons
Spill Incident Accuracy: Estimated
Date Added: 03/05/2003 16:17:02
Last Update: 03/05/2003 16:17:02
Staff ID Last Update: SLEPPAL

Spill Incident Affected

Spill Incident Affect: Paved, Not Street
Date Added: 03/05/2003 16:17:02
Last Update: 03/05/2003 16:17:02
Staff ID Last Update: SLEPPAL

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	27 of 62	SSE	0.00 / 0.00	1,410.27 / 0	DULUTH INTERNATIONAL AIRPORT (DAA) 4701 GRINDEN DR DULUTH MN 55811	ICIS

EPA Region: 05
Registry ID: 110008799979
Pgm Sys ID: MN0000002713700074
Pgm Sys Acrnm: AIR
Permit Type:
Federal Fac ID:
Tribal Land Code:
County: St. Louis
Latitude 83: 46.836338
Longitude 83: -92.17482

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	28 of 62	SSE	0.00 / 0.00	1,410.27 / 0	Duluth International Airport 4701 Grinden Dr Duluth MN 55811	LST REM SITE

Item ID: 638-AREA0000000003
Project ID: LS0004479
Project Type: Leak Site
Project ID (RAP):
Project Type (RAP):
Site Status: Closed
Perm List of Prio?:
Petrol Brownfield?:
VIC Site?:
Sf Voluntary:
Inst Controls?:
SEMS?:
Project Name: Duluth International Airport
Project Managers: Steve Leppala (no longer at MPCA)
Site Address 1: 4701 Grinden Dr
Site Address 2:
Site City: Duluth
Site State: MN
Unpermitted Dump?:
State Reg:
Federal Reg:
Fed State Reg:
Non Reg:
NPL:
Site County: St. Louis
County (RAP):
Latitude: 46.83921119
Longitude: -92.17977601
Latitude (RAP):
Longitude (RAP):

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Site ZIP: 55811
Project Name(RAP):
Address1 (RAP):
Address2 (RAP):
City (RAP):
State (RAP):
ZIP (RAP):
Data Source: MPCA Remediation Sites

Remediation Sites Details

Activity ID: 638
SI ID: 3
Si Cat: AREA
SI Type: LEAK
Site Type: CON
Acreage:
HRS Score:
Score Year:
DWSMA Code:
AI Name: Duluth International Airport
DWSMA Name:
Hydrologists:
Huc 8 Name: St. Louis River
Huc12 Name: Saint Louis River
Method Desc: Digitized - MPCA internal map
Loc Desc:
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/638

Object ID: 6557
Cong Dist: 8
House Dist: 8B
Senate Dis: 8
HUC 8: 04010201
HUC 10: 0401020116
HUC 12: 040102011604
Gdb Geomattr Data:
MNTBA:

Spatial Remediation Activity

AI ID: 638
Site ID: LS0004479
SI ID: 3
SI Cat: AREA
NFA Decisi:
Site Start: 1991-07-23 00:00:00
Site Close: 1995-05-09 00:00:00
Leak Discovered: 1991-07-23 00:00:00
Leak Reported: 1991-07-23 00:00:00
Leak Reopened:
Activity No: 1
Activity ID: SIW19910001
Activity Type: Leak Site Investigation
Activity Code: SIW
Activity Year: 1991
Discovered:

Object ID: 420
Remedy Imp:
Remedy Sel:
ASMT Compl:
Received:
NPL List:
NPL Delete:
PLP List:
PLP Delist:
Staff Assi:
FF Aproved:
FF Closed:
Inv Comple:
App Comple:
Er Site Ev:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	29 of 62	SSE	0.00 / 0.00	1,410.27 / 0	Duluth Airport - Former Fueling Station 4701 Grinden Dr Duluth MN 55811	LST REM SITE

Item ID: 638-AREA0000000005
Project ID: LS0020250
Project Type: Leak Site
Project ID (RAP): LS0020250
Project Type (RAP): Leak Site
Site Status: Closed
Perm List of Prio?:
Petrol Brownfield?:
VIC Site?:
Sf Voluntary:
Inst Controls?:
SEMS?:
Project Name: Duluth Airport - Former Fueling Station

Unpermitted Dump?:
State Reg:
Federal Reg: Yes
Fed State Reg:
Non Reg:
NPL:
Site County: St. Louis
County (RAP): St. Louis
Latitude: 46.83740176
Longitude: -92.19066252
Latitude (RAP): 46.83740176
Longitude (RAP): -92.19066252

Project Managers:	Lauralin Kania (former)
Site Address 1:	4701 Grinden Dr
Site Address 2:	
Site City:	Duluth
Site State:	MN
Site ZIP:	55811
Project Name(RAP):	Duluth Airport - Former Fueling Station
Address1 (RAP):	4701 Grinden Dr
Address2 (RAP):	
City (RAP):	Duluth
State (RAP):	MN
ZIP (RAP):	55811
Data Source:	MPCA Remediation Sites; MPCA Remediation Sites with RAP approvals

Remediation Sites Details

Activity ID:	638	***Object ID:***	29425
SI ID:	5	***Cong Dist:***	8
Si Cat:	AREA	***House Dist:***	8B
SI Type:	LEAK	***Senate Dis:***	8
Site Type:	CON	***HUC 8:***	04010201
Acreage:		***HUC 10:***	0401020116
HRS Score:		***HUC 12:***	040102011604
Score Year:		***Gdb Geomattr Data:***	
DWSMA Code:		***MNTBA:***	
AI Name:	Duluth International Airport		
DWSMA Name:			
Hydrologists:	Sara Nelson (former)		
Huc 8 Name:	St. Louis River		
Huc12 Name:	Saint Louis River		
Method Desc:	Digitized - MPCA internal map		
Loc Desc:			
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/638		

Remediation Sites with RAP Approval

Activity ID:	638	***Rap Date:***	
No Assoc Date:		***Rap Approved:***	
No Assoc Letter:	No	***Rap Completed:***	
Parcels:		***Site Closed:***	
Has RP:	Yes	***Site Start:***	
RP Names:	Duluth International Airport (DAA), Steven Wabrowetz		
AI Name:	Duluth International Airport		
Coord Collect Methd:	Digitized - MPCA internal map		
WIMN:	https://webapp.pca.state.mn.us/wimn/site/638		

Spatial Remediation Activity

AI ID:	638	***Object ID:***	424
Site ID:	LS0020250	***Remedy Imp:***	
SI ID:	5	***Remedy Sel:***	
SI Cat:	AREA	***ASMT Compl:***	
NFA Decisi:		***Received:***	
Site Start:	2016-10-24 00:00:00	***NPL List:***	
Site Close:	2018-02-23 00:00:00	***NPL Delete:***	
Leak Discovered:	2016-10-21 00:00:00	***PLP List:***	
Leak Reported:	2016-10-24 00:00:00	***PLP Delist:***	
Leak Reopened:		***Staff Assi:***	
Activity No:	2	***FF Aproved:***	
Activity ID:	SIW20160002	***FF Closed:***	
Activity Type:	Leak Site Investigation	***Inv Comple:***	
Activity Code:	SIW	***App Comple:***	
Activity Year:	2016	***Er Site Ev:***	
Discovered:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	30 of 62	SSE	0.00 / 0.00	1,410.27 / 0	Duluth International Airport Maintenance Garage 4701 Grinden Dr Duluth MN 55811	LST REM SITE

Item ID:	638-AREA0000000002	**Unpermitted Dump?:**	
Project ID:	LS0003496	**State Reg:**	
Project Type:	Leak Site	**Federal Reg:**	Yes
Project ID (RAP):		**Fed State Reg:**	
Project Type (RAP):		**Non Reg:**	
Site Status:	Closed	**NPL:**	
Perm List of Prio?:		**Site County:**	St. Louis
Petrol Brownfield?:		**County (RAP):**	
VIC Site?:		**Latitude:**	46.83697621
Sf Voluntary:		**Longitude:**	-92.19075034
Inst Controls?:		**Latitude (RAP):**	
SEMS?:		**Longitude (RAP):**	

Project Name:	Duluth International Airport Maintenance Garage
Project Managers:	James Joslyn (no longer at MPCA)
Site Address 1:	4701 Grinden Dr
Site Address 2:	
Site City:	Duluth
Site State:	MN
Site ZIP:	55811
Project Name(RAP):	
Address1 (RAP):	
Address2 (RAP):	
City (RAP):	
State (RAP):	
ZIP (RAP):	
Data Source:	MPCA Remediation Sites

Remediation Sites Details

Activity ID:	638	**Object ID:**	4357
SI ID:	2	**Cong Dist:**	8
Si Cat:	AREA	**House Dist:**	8B
SI Type:	LEAK	**Senate Dis:**	8
Site Type:	CON	**HUC 8:**	04010201
Acreage:		**HUC 10:**	0401020116
HRS Score:		**HUC 12:**	040102011604
Score Year:		**Gdb Geomattr Data:**	
DWSMA Code:		**MNTBA:**	

AI Name:	Duluth International Airport
DWSMA Name:	
Hydrologists:	
Huc 8 Name:	St. Louis River
Huc12 Name:	Saint Louis River
Method Desc:	Digitized - MPCA internal map
Loc Desc:	
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/638

Spatial Remediation Activity

AI ID:	638	**Object ID:**	419
Site ID:	LS0003496	**Remedy Imp:**	
SI ID:	2	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	
Site Start:	1990-10-29 00:00:00	**NPL List:**	
Site Close:	1994-09-27 00:00:00	**NPL Delete:**	
Leak Discovered:	1990-10-29 00:00:00	**PLP List:**	
Leak Reported:	1990-10-29 00:00:00	**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	
Activity No:	1	**FF Aproved:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Activity ID:	SIW19900001		**FF Closed:**		
Activity Type:	Leak Site Investigation		**Inv Comple:**		
Activity Code:	SIW		**App Comple:**		
Activity Year:	1990		**Er Site Ev:**		
Discovered:					

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	31 of 62	SSE	0.00 / 0.00	1,410.27 / 0	Former Fueling Station 4701 Grinden Dr Duluth MN 55811	LST REM SITE

Item ID:	638-AREA0000000004	**Unpermitted Dump?:**	
Project ID:	LS0020226	**State Reg:**	
Project Type:	Leak Site	**Federal Reg:**	Yes
Project ID (RAP):		**Fed State Reg:**	
Project Type (RAP):		**Non Reg:**	
Site Status:	Closed	**NPL:**	
Perm List of Prio?:		**Site County:**	St. Louis
Petrol Brownfield?:		**County (RAP):**	
VIC Site?:		**Latitude:**	46.83778689
Sf Voluntary:		**Longitude:**	-92.17481925
Inst Controls?:		**Latitude (RAP):**	
SEMS?:		**Longitude (RAP):**	
Project Name:	Former Fueling Station		
Project Managers:	Lauralin Kania (former)		
Site Address 1:	4701 Grinden Dr		
Site Address 2:			
Site City:	Duluth		
Site State:	MN		
Site ZIP:	55811		
Project Name(RAP):			
Address1 (RAP):			
Address2 (RAP):			
City (RAP):			
State (RAP):			
ZIP (RAP):			
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

Activity ID:	638	**Object ID:**	29358
SI ID:	4	**Cong Dist:**	8
Si Cat:	AREA	**House Dist:**	8B
SI Type:	LEAK	**Senate Dis:**	8
Site Type:	CON	**HUC 8:**	04010201
Acreage:		**HUC 10:**	0401020116
HRS Score:		**HUC 12:**	040102011604
Score Year:		**Gdb Geomattr Data:**	
DWSMA Code:		**MNTBA:**	
AI Name:	Duluth International Airport		
DWSMA Name:			
Hydrologists:	Sara Nelson (former)		
Huc 8 Name:	St. Louis River		
Huc12 Name:	Saint Louis River		
Method Desc:	Address Matching House Number		
Loc Desc:			
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/638		

Spatial Remediation Activity

AI ID:	638	**Object ID:**	422
Site ID:	LS0020226	**Remedy Imp:**	
SI ID:	4	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	
Site Start:	2016-09-27 00:00:00	**NPL List:**	
Site Close:	2017-05-18 00:00:00	**NPL Delete:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Leak Discovered:	2016-09-27 00:00:00	**PLP List:**	
Leak Reported:	2016-09-27 00:00:00	**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	
Activity No:	1	**FF Aproved:**	
Activity ID:	SIW20160001	**FF Closed:**	
Activity Type:	Leak Site Investigation	**Inv Comple:**	
Activity Code:	SIW	**App Comple:**	
Activity Year:	2016	**Er Site Ev:**	
Discovered:			

2	32 of 62	SSE	0.00 / 0.00	1,410.27 / 0	DAA ANG Fire Station Phase 3 4701 Grinden Dr Duluth MN 55803	MPCA AI

Agency Interest ID:	108560
Name (Map):	DAA ANG Fire Station Phase 3
Address (Map):	4701 Grinden Dr
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55803
Latitude (Map):	47.03751595
Longitude (Map):	-92.10876654
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	DAA ANG Fire Station Phase 3
Address (Site):	4701 Grinden Dr
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55803
Latitude (Site):	47.03751595
Longitude (Site):	-92.10876654
County (Site):	St. Louis
Name (Req):	DAA ANG Fire Station Phase 3
Address (Req):	4701 Grinden Dr
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55803
Loc Desc (Req):	
Latitude (Req):	47.03751595
Longitude (Req):	-92.10876654
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	108560-AISI0000108560	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2008-08-08 06:53:00	**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	108560
CTU Code:	664284	**SI Cat Desc:**	Agency Interest
CTU Name:	Gnesen Township	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	10/2/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	51480882	**User Updt:**	geo_nc
Name:	DAA ANG Fire Station Phase 3		
Program List:	CS, SW		
HUC 8:	04010202		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 8 Name: Cloquet River
HUC 10: 0401020204
HUC 12: 040102020404
HUC 12 Name: Island Lake Reservoir
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA: No
MPCA ID: C00020121
Program Co: ST; SW
Program Name: Multiple Programs
Address: MN
Addr ZIP: 55803
City: Gnesen Township
County: St. Louis
Activity: Multiple Activities
Addr St: 4701 Grinden Dr
Addr City: Duluth
MPCA ID List: C00020121
Program 1: Stormwater; Solid Waste
Name: DAA ANG Fire Station Phase 3
Watershed : Cloquet River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater; Solid Waste
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/108560

HUC 8: 04010202
Cong Distr: 8
Senate Dis: 3
House Dist: 3B
IC Flag: No
Coord Coll: Q2
Latitude: 47.03751595
Longitude: -92.10876654

Agency Interests: File Request Details

Item ID: 108560-AISI0000108560
Status: Inactive
Status Date: 8/8/2008
Program: Multiple Programs
CTU Code: 664284
CTU Name: Gnesen Township
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 6/30/2016
Tmsp Created: 10/2/2006
User Created: DELTA_M_R1
Tmsp Updt: 6/30/2016
Spatial ID: 51480882
Name: DAA ANG Fire Station Phase 3
Program List: CS, SW
HUC 8: 4010202
HUC 8 Name: Cloquet River
HUC 10: 401020204
HUC 10 Name: Island Lake Reservoir-Cloquet River
HUC 12: 40102020404
HUC 12 Name: Island Lake Reservoir
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 108560
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc

2	33 of 62	SSE	0.00 / 0.00	1,410.27 / 0	TSA at Duluth International Airport 4701 Grinden Dr Duluth MN 55811	MPCA AI

Agency Interest ID:	83391
Name (Map):	TSA at Duluth International Airport
Address (Map):	4701 Grinden Dr
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8389587
Longitude (Map):	-92.1797798
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	TSA at Duluth International Airport
Address (Site):	4701 Grinden Dr
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811-1578
Latitude (Site):	46.8389587
Longitude (Site):	-92.1797798
County (Site):	St. Louis
Name (Req):	TSA at Duluth International Airport
Address (Req):	4701 Grinden Dr
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8389587
Longitude (Req):	-92.1797798
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	83391-AISI0000083391	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Hazardous Waste	***SI ID:***	83391
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	8B
Quarters:		***Senate Dist:***	8
Collection Date:		***TRDSQQ:***	
Tmsp Created:	8/12/2004	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	3/30/2017	***Verified:***	No
Spatial ID:	96618	***User Updt:***	RSP

Name:	TSA at Duluth International Airport
Program List:	HW
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	DM
Method Desc:	Digitized - MPCA internal map

My Neighborhood Site Details

Active FLA:	Yes	***HUC 8:***	04010201
MPCA ID:	MNS000105817	***Cong Distr:***	8

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program Co:	HW	**Senate Dis:**	8
Program Name:	Hazardous Waste	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-1578	**Coord Coll:**	DM
City:	Duluth	**Latitude:**	46.8389587
County:	St. Louis	**Longitude:**	-92.1797798
Activity:	Hazardous Waste, Very small quantity generator		
Addr St:	4701 Grinden Dr		
Addr City:	Duluth		
MPCA ID List:	MNS000105817		
Program 1:	Hazardous Waste		
Name:	TSA at Duluth International Airport		
Watershed :	St. Louis River		
Coord Co 1:	Digitized - MPCA internal map		
Activity L:	Hazardous Waste, Very small quantity generator		
Industrial:	Regulation and Administration of Transportation Programs		
Site URL:	https://webapp.pca.state.mn.us/wimn/site/83391		

Agency Interests: File Request Details

Item ID:	83391-AISI0000083391	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	83391
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:		**Ref Code:**	GEN
Tmsp Created:	8/12/2004	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	3/30/2017	**User Updt:**	RSP
Spatial ID:	96618		
Name:	TSA at Duluth International Airport		
Program List:	HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	34 of 62	SSE	0.00 / 0.00	1,410.27 / 0	Duluth Airport Runway 21Safety Area Imp 4701 Grinden Dr Duluth MN 55811	MPCA AI

Agency Interest ID:	89268
Name (Map):	Duluth Airport Runway 21Safety Area Imp
Address (Map):	4701 Grinden Dr
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8365273
Longitude (Map):	-92.1751518
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Duluth Airport Runway 21Safety Area Imp

Address (Site):	4701 Grinden Dr
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8365273
Longitude (Site):	-92.1751518
County (Site):	St. Louis
Name (Req):	Duluth Airport Runway 21Safety Area Imp
Address (Req):	4701 Grinden Dr
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8365273
Longitude (Req):	-92.1751518
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	89268-AISI0000089268	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2005-09-13 10:44:58	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	89268
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	11/13/2002	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	87309	**User Updt:**	spatial_
Name:	Duluth Airport Runway 21Safety Area Imp		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00009266	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Hermantown	**Latitude:**	46.8365273
County:	St. Louis	**Longitude:**	-92.1751518
Activity:	Construction Stormwater		
Addr St:	4701 Grinden Dr		
Addr City:	Duluth		
MPCA ID List:	C00009266		
Program 1:	Stormwater		
Name:	Duluth Airport Runway 21Safety Area Imp		
Watershed :	St. Louis River		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Coord Co 1: Address Matching House Number
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/89268

Agency Interests: File Request Details

Item ID:	89268-AISI0000089268	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	9/13/2005	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	89268
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	11/13/2002	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	87309		

Name: Duluth Airport Runway 21Safety Area Imp
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	35 of 62	SSE	0.00 / 0.00	1,410.27 / 0	**New Passanger Terminal BP 2C Civil** **4701 Grinden Drive** **Duluth MN 55811**	MPCA AI

Agency Interest ID: 143543
Name (Map): New Passanger Terminal BP 2C Civil
Address (Map): 4701 Grinden Drive
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83778689
Longitude (Map): -92.17481925
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): New Passanger Terminal BP 2C Civil
Address (Site): 4701 Grinden Drive
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83778689
Longitude (Site): -92.17481925
County (Site): St. Louis
Name (Req): New Passanger Terminal BP 2C Civil
Address (Req): 4701 Grinden Drive
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):

Latitude (Req):	46.83778689
Longitude (Req):	-92.17481925
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	143543-AISI0000143543	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	143543
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:	050	**Description:**	
Range :	15	**SI Designation:**	
Range Dir:	W	**Cong Dist:**	8
Section:	01	**House Dist:**	8B
Quarters:	dd	**Senate Dist:**	8
Collection Date:	3/3/2017	**TRDSQQ:**	05015201dd
Tmsp Created:	7/16/2012	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	3/3/2017	**Verified:**	No
Spatial ID:		**User Updt:**	geo_nc
Name:	New Passanger Terminal BP 2C Civil		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00034247	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	8
Program Name:	Stormwater	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Duluth	**Latitude:**	46.83778689
County:	St. Louis	**Longitude:**	-92.17481925
Activity:	Construction Stormwater		
Addr St:	4701 Grinden Drive		
Addr City:	Duluth		
MPCA ID List:	C00034247		
Program 1:	Stormwater		
Name:	New Passanger Terminal BP 2C Civil		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/143543		

Agency Interests: File Request Details

Item ID:	143543-AISI0000143543	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	143543
CTU Code:	239456	**SI Cat Desc:**	Agency Interest

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

CTU Name:	Duluth	**Description:**	
PLS Twsp:	50	**SI Designation:**	
Range :	15	**Cong Dist:**	8
Range Dir:	W	**House Dist:**	8B
Section:	1	**Senate Dist:**	8
Quarters:	dd	**TRDSQQ:**	05015201dd
Collection Date:	3/3/2017	**Ref Code:**	GEN
Tmsp Created:	7/16/2012	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	3/3/2017	**User Updt:**	geo_nc
Spatial ID:			
Name:	New Passanger Terminal BP 2C Civil		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

2	36 of 62	SSE	0.00 / 0.00	1,410.27 / 0	North Perimeter Road Grading Drainage 4701 Grinden Dr Duluth MN 55811	MPCA AI

Agency Interest ID:	85161
Name (Map):	North Perimeter Road Grading Drainage
Address (Map):	4701 Grinden Dr
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8365273
Longitude (Map):	-92.1751518
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	North Perimeter Road Grading Drainage
Address (Site):	4701 Grinden Dr
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8365273
Longitude (Site):	-92.1751518
County (Site):	St. Louis
Name (Req):	North Perimeter Road Grading Drainage
Address (Req):	4701 Grinden Dr
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8365273
Longitude (Req):	-92.1751518
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	85161-AISI0000085161	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2007-09-12 14:32:37	**SI Cat:**	AISI

Program:	Const Stormwater	**SI ID:**	85161
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	12/8/2004	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	98608	**User Updt:**	spatial_

Name: North Perimeter Road Grading Drainage
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00014195	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Hermantown	**Latitude:**	46.8365273
County:	St. Louis	**Longitude:**	-92.1751518

Activity: Construction Stormwater
Addr St: 4701 Grinden Dr
Addr City: Duluth
MPCA ID List: C00014195
Program 1: Stormwater
Name: North Perimeter Road Grading Drainage
Watershed : St. Louis River
Coord Co 1: Address Matching House Number
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/85161

Agency Interests: File Request Details

Item ID:	85161-AISI0000085161	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	9/12/2007	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	85161
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	12/8/2004	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	98608		

Name: North Perimeter Road Grading Drainage
Program List: CS

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	A1
Method Desc:	Address Matching House Number

2	***37 of 62***	***SSE***	***0.00 / 0.00***	***1,410.27 / 0***	***Delta Air Lines Global Services (DLH)*** ***4701 Grinden Dr*** ***Duluth MN 55811***	***MPCA AI***

Agency Interest ID:	130367
Name (Map):	Delta Air Lines Global Services (DLH)
Address (Map):	4701 Grinden Dr
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8419444
Longitude (Map):	-92.1938888
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Delta Air Lines Global Services (DLH)
Address (Site):	4701 Grinden Dr
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8419444
Longitude (Site):	-92.1938888
County (Site):	St. Louis
Name (Req):	Delta Air Lines Global Services (DLH)
Address (Req):	4701 Grinden Dr
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8419444
Longitude (Req):	-92.1938888
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	130367-AISI0000130367	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Ind Stormwater	***SI ID:***	130367
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	8B
Quarters:		***Senate Dist:***	8
Collection Date:	9/27/2015	***TRDSQQ:***	
Tmsp Created:	3/3/2011	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	4/26/2016	***Verified:***	No
Spatial ID:	59498410	***User Updt:***	spatial_

Name:	Delta Air Lines Global Services (DLH)
Program List:	IS
HUC 8:	04010202
HUC 8 Name:	Cloquet River
HUC 10:	0401020205
HUC 12:	040102020501
HUC 12 Name:	Wild Rice Lake Reservoir
DWSMA Code:	
DWSMA Name:	
Method Code:	G8
Method Desc:	GPS - Other

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010202
MPCA ID:	MNR0536NR	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	8
Program Name:	Stormwater	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	G8
City:	Duluth	**Latitude:**	46.8419444
County:	St. Louis	**Longitude:**	-92.1938888

Activity:	Industrial Stormwater
Addr St:	4701 Grinden Dr
Addr City:	Duluth
MPCA ID List:	MNR0536NR
Program 1:	Stormwater
Name:	Delta Air Lines Global Services (DLH)
Watershed :	Cloquet River
Coord Co 1:	GPS - Other
Activity L:	Industrial Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/130367

Agency Interests: File Request Details

Item ID:	130367-AISI0000130367	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Ind Stormwater	**SI ID:**	130367
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	3/3/2011	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	59498410		

Name:	Delta Air Lines Global Services (DLH)
Program List:	IS
HUC 8:	4010202
HUC 8 Name:	Cloquet River
HUC 10:	401020205
HUC 10 Name:	Fish Lake Reservoir-Beaver River
HUC 12:	40102020501
HUC 12 Name:	Wild Rice Lake Reservoir
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	G8
Method Desc:	GPS - Other

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	38 of 62	SSE	0.00 / 0.00	1,410.27 / 0	Delta Airlines Inc Duluth Ramp 4701 Grinden Rd Duluth MN 55811	MPCA AI

Agency Interest ID:	130799
Name (Map):	Delta Airlines Inc Duluth Ramp
Address (Map):	4701 Grinden Rd
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8365385
Longitude (Map):	-92.1765437
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Delta Airlines Inc Duluth Ramp
Address (Site):	4701 Grinden Rd
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8365385
Longitude (Site):	-92.1765437
County (Site):	St. Louis
Name (Req):	Delta Airlines Inc Duluth Ramp
Address (Req):	4701 Grinden Rd
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8365385
Longitude (Req):	-92.1765437
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	130799-AISI0000130799	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Aboveground Tanks	**SI ID:**	130799
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	2/19/2010	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	57590663	**User Updt:**	spatial_

Name:	Delta Airlines Inc Duluth Ramp
Program List:	AT
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	A1
Method Desc:	Address Matching House Number

My Neighborhood Site Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Active FLA: Yes
MPCA ID: TS0125282
Program Co: TL
Program Name: Tanks
Address: MN
Addr ZIP: 55811
City: Hermantown
County: St. Louis
Activity: Aboveground Tanks
Addr St: 4701 Grinden Rd
Addr City: Duluth
MPCA ID List: TS0125282
Program 1: Tanks
Name: Delta Airlines Inc Duluth Ramp
Watershed : St. Louis River
Coord Co 1: Address Matching House Number
Activity L: Aboveground Tanks
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/130799

HUC 8: 04010201
Cong Distr: 8
Senate Dis: 3
House Dist: 3B
IC Flag: No
Coord Coll: A1
Latitude: 46.8365385
Longitude: -92.1765437

Agency Interests: File Request Details

Item ID: 130799-AISI0000130799
Status: Active
Status Date:
Program: Aboveground Tanks
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 9/27/2015
Tmsp Created: 2/19/2010
User Created: DELTA_M_R1
Tmsp Updt: 4/26/2016
Spatial ID: 57590663
Name: Delta Airlines Inc Duluth Ramp
Program List: AT
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 130799
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: spatial_

2	39 of 62	SSE	0.00 / 0.00	1,410.27 / 0	Duluth International Airport 4701 Grinden Dr Duluth MN 55811	MPCA AI

Agency Interest ID: 638
Name (Map): Duluth International Airport
Address (Map): 4701 Grinden Dr
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.841405
Longitude (Map): -92.183171
County (Map): St. Louis
County Code (Map): 137

Loc Desc (Map):	
Name (Site):	Duluth International Airport
Address (Site):	4701 Grinden Dr
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811-1578
Latitude (Site):	46.841405
Longitude (Site):	-92.183171
County (Site):	St. Louis
Name (Req):	Duluth International Airport
Address (Req):	4701 Grinden Dr
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.841405
Longitude (Req):	-92.183171
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	638-AISI0000000638	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	638
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:	050	**Description:**	
Range :	15	**SI Designation:**	
Range Dir:	W	**Cong Dist:**	8
Section:	01	**House Dist:**	8B
Quarters:	dd	**Senate Dist:**	8
Collection Date:	11/15/2023	**TRDSQQ:**	05015201dd
Tmsp Created:	6/11/1996	**Ref Code:**	CEN
User Created:	DELTA_M_R1	**Ref Desc:**	Center of Feature Represented
Tmsp Updt:	4/16/2025	**Verified:**	No
Spatial ID:		**User Updt:**	smotton

Name:	Duluth International Airport
Program List:	AQ, BV, EV, HW, IS, PR, SA, UT
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	DP
Method Desc:	Digitized - MPCA online map

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	Multiple IDs	**Cong Distr:**	8
Program Co:	AQ; HW; SR; ST; TL	**Senate Dis:**	8
Program Name:	Multiple Programs	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-1578	**Coord Coll:**	DP
City:	Duluth	**Latitude:**	46.841405
County:	St. Louis	**Longitude:**	-92.183171

Activity:	Multiple Activities
Addr St:	4701 Grinden Dr
Addr City:	Duluth
MPCA ID List:	13700074; LS0003496; LS0004479; LS0020226; LS0020250; MNR000023143; MNR053644; MNR053C9T; SA0000367; TS0021164; VP15240

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program 1:	Air Quality; Hazardous Waste; Investigation and Cleanup; Stormwater; Tanks
Name:	Duluth International Airport
Watershed :	St. Louis River
Coord Co 1:	Digitized - MPCA online map
Activity L:	Air Quality; Brownfields, Voluntary Investigation and Cleanup; Hazardous Waste, Very small quantity generator; Industrial Stormwater; Petroleum Remediation, Leak Site; Site Assessment; Underground Tanks
Industrial:	Scheduled Passenger Air Transportation ; Air Traffic Control
Site URL:	https://webapp.pca.state.mn.us/wimn/site/638

Agency Interests: File Request Details

Item ID:	638-AISI0000000638	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	638
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:	50	**SI Designation:**	
Range :	15	**Cong Dist:**	8
Range Dir:	W	**House Dist:**	8B
Section:	1	**Senate Dist:**	8
Quarters:	dd	**TRDSQQ:**	05015201dd
Collection Date:	11/15/2023	**Ref Code:**	CEN
Tmsp Created:	6/11/1996	**Ref Desc:**	Center of Feature Represented
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/16/2025	**User Updt:**	smotton
Spatial ID:			

Name:	Duluth International Airport
Program List:	AQ, BV, EV, HW, IS, PR, SA, UT
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	DP
Method Desc:	Digitized - MPCA online map

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	40 of 62	SSE	0.00 / 0.00	1,410.27 / 0	**Runway 9/27 Reconstruction, Phase 1** **Duluth Airport 4701 Grinden Dr.** **Duluth MN 55811**	MPCA AI

Agency Interest ID:	212423
Name (Map):	Runway 9/27 Reconstruction, Phase 1
Address (Map):	Duluth Airport 4701 Grinden Dr.
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.842277
Longitude (Map):	-92.222676
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	Runway 9/27 Reconstruction *** Note:many records provided by the department have a truncated LOC_DESC field.
Name (Site):	Runway 9/27 Reconstruction, Phase 1
Address (Site):	Duluth Airport 4701 Grinden Dr.
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.842277
Longitude (Site):	-92.222676
County (Site):	St. Louis
Name (Req):	Runway 9/27 Reconstruction, Phase 1

Address (Req):	Duluth Airport
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	Runway 9/27 Reconstruction
Latitude (Req):	46.842277
Longitude (Req):	-92.222676
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	212423-AISI0000212423	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	212423
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	5/6/2016	**Ref Code:**	GEN
User Created:	RSP	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:		**User Updt:**	geo_nc

Name:	Runway 9/27 Reconstruction, Phase 1
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	DP
Method Desc:	Digitized - MPCA online map

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00043160	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	DP
City:	Hermantown	**Latitude:**	46.842277
County:	St. Louis	**Longitude:**	-92.222676

Activity:	Construction Stormwater
Addr St:	Duluth Airport 4701 Grinden Dr.
Addr City:	Duluth
MPCA ID List:	C00043160
Program 1:	Stormwater
Name:	Runway 9/27 Reconstruction, Phase 1
Watershed :	St. Louis River
Coord Co 1:	Digitized - MPCA online map
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/212423

Agency Interests: File Request Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Item ID:	212423-AISI0000212423	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	212423
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	5/6/2016	**Ref Desc:**	General Location
User Created:	RSP	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:			

Name:	Runway 9/27 Reconstruction, Phase 1
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	DP
Method Desc:	Digitized - MPCA online map

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	41 of 62	SSE	0.00 / 0.00	1,410.27 / 0	Duluth Airport Authority 4701 Grinden Dr Duluth MN 55811	MPCA AI

Agency Interest ID:	215002
Name (Map):	Duluth Airport Authority
Address (Map):	4701 Grinden Dr
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83778689
Longitude (Map):	-92.17481925
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	
Address (Site):	
City (Site):	
State (Site):	
ZIP (Site):	
Latitude (Site):	
Longitude (Site):	
County (Site):	
Name (Req):	Duluth Airport Authority
Address (Req):	4701 Grinden Dr
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83778689
Longitude (Req):	-92.17481925
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026)

Agency Interests: Map Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Item ID:	215002-AISI0000215002	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:		**SI ID:**	215002
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	12/9/2016	**TRDSQQ:**	
Tmsp Created:	12/9/2016	**Ref Code:**	GEN
User Created:	jhenry	**Ref Desc:**	General Location
Tmsp Updt:	12/9/2016	**Verified:**	No
Spatial ID:		**User Updt:**	geo_nc
Name:	Duluth Airport Authority		
Program List:			
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

Agency Interests: File Request Details

Item ID:	215002-AISI0000215002	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:		**SI ID:**	215002
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	12/9/2016	**Ref Code:**	GEN
Tmsp Created:	12/9/2016	**Ref Desc:**	General Location
User Created:	jhenry	**Verified:**	No
Tmsp Updt:	12/9/2016	**User Updt:**	geo_nc
Spatial ID:			
Name:	Duluth Airport Authority		
Program List:			
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	42 of 62	SSE	0.00 / 0.00	1,410.27 / 0	Duluth Airport Runway 9-27 Reconstruction 4701 Grinden Dr Duluth MN 55811	MPCA AI

Agency Interest ID: 229212

Name (Map):	Duluth Airport Runway 9-27 Reconstruction
Address (Map):	4701 Grinden Dr
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.840128
Longitude (Map):	-92.180167
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Duluth Airport Runway 9-27 Reconstruction
Address (Site):	4701 Grinden Dr
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811-1578
Latitude (Site):	46.840128
Longitude (Site):	-92.180167
County (Site):	St. Louis
Name (Req):	Duluth Airport Runway 9-27 Reconstruction
Address (Req):	4701 Grinden Dr
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.840128
Longitude (Req):	-92.180167
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	229212-AISI0000229212	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	229212
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	4/22/2019	**TRDSQQ:**	
Tmsp Created:	4/22/2019	**Ref Code:**	CEN
User Created:	RSP	**Ref Desc:**	Center of Feature Represented
Tmsp Updt:	4/22/2019	**Verified:**	No
Spatial ID:		**User Updt:**	geo_nc

Name:	Duluth Airport Runway 9-27 Reconstruction
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	DP
Method Desc:	Digitized - MPCA online map

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00053474	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	8
Program Name:	Stormwater	**House Dist:**	8B

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-1578	**Coord Coll:**	DP
City:	Duluth	**Latitude:**	46.840128
County:	St. Louis	**Longitude:**	-92.180167
Activity:	Construction Stormwater		
Addr St:	4701 Grinden Dr		
Addr City:	Duluth		
MPCA ID List:	C00053474		
Program 1:	Stormwater		
Name:	Duluth Airport Runway 9-27 Reconstruction		
Watershed :	St. Louis River		
Coord Co 1:	Digitized - MPCA online map		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/229212		

Agency Interests: File Request Details

Item ID:	229212-AISI0000229212	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	229212
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	4/22/2019	**Ref Code:**	CEN
Tmsp Created:	4/22/2019	**Ref Desc:**	Center of Feature Represented
User Created:	RSP	**Verified:**	No
Tmsp Updt:	4/22/2019	**User Updt:**	geo_nc
Spatial ID:			
Name:	Duluth Airport Runway 9-27 Reconstruction		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	DP		
Method Desc:	Digitized - MPCA online map		

2	43 of 62	SSE	0.00 / 0.00	1,410.27 / 0	Sonju Enterprises Inc 4701 Grinden Dr Box 161830 Duluth MN 55816	MPCA AI

Agency Interest ID:	235247
Name (Map):	Sonju Enterprises Inc
Address (Map):	4701 Grinden Dr Box 161830
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55816
Latitude (Map):	46.83891459
Longitude (Map):	-92.17994449
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	
Address (Site):	
City (Site):	
State (Site):	

ZIP (Site):
Latitude (Site):
Longitude (Site):
County (Site):
Name (Req): Sonju Enterprises Inc
Address (Req): 4701 Grinden Dr Box 161830
City (Req): Duluth
State (Req): MN
ZIP (Req): 55816
Loc Desc (Req):
Latitude (Req): 46.83891459
Longitude (Req): -92.17994449
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026)

Agency Interests: Map Details

Item ID: 235247-AISI0000235247
Status: Active
Status Date:
Program:
CTU Code: 239456
CTU Name: Duluth
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 7/7/2020
Tmsp Created: 7/6/2020
User Created: SYSTEM
Tmsp Updt: 7/7/2020
Spatial ID:
Name: Sonju Enterprises Inc
Program List:
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 235247
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 8B
Senate Dist: 8
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc

Agency Interests: File Request Details

Item ID: 235247-AISI0000235247
Status: Active
Status Date:
Program:
CTU Code: 239456
CTU Name: Duluth
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 7/7/2020
Tmsp Created: 7/6/2020
User Created: SYSTEM
Tmsp Updt: 7/7/2020
Spatial ID:
Name: Sonju Enterprises Inc
Program List:

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 235247
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 8B
Senate Dist: 8
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	A1
Method Desc:	Address Matching House Number

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	44 of 62	SSE	0.00 / 0.00	1,410.27 / 0	Krenzen Corporation 4701 Grinden Dr Duluth MN 55811	MPCA AI

Agency Interest ID:	235672
Name (Map):	Krenzen Corporation
Address (Map):	4701 Grinden Dr
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83891459
Longitude (Map):	-92.17994449
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	
Address (Site):	
City (Site):	
State (Site):	
ZIP (Site):	
Latitude (Site):	
Longitude (Site):	
County (Site):	
Name (Req):	Krenzen Corporation
Address (Req):	4701 Grinden Dr
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83891459
Longitude (Req):	-92.17994449
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026)

Agency Interests: Map Details

Item ID:	235672-AISI0000235672	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:		**SI ID:**	235672
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	7/6/2020	**TRDSQQ:**	
Tmsp Created:	7/6/2020	**Ref Code:**	GEN
User Created:	SYSTEM	**Ref Desc:**	General Location
Tmsp Updt:	7/6/2020	**Verified:**	No
Spatial ID:		**User Updt:**	geo_nc
Name:	Krenzen Corporation		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program List:
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

Agency Interests: File Request Details

Item ID: 235672-AISI0000235672
Status: Active
Status Date:
Program:
CTU Code: 239456
CTU Name: Duluth
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 7/6/2020
Tmsp Created: 7/6/2020
User Created: SYSTEM
Tmsp Updt: 7/6/2020
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 235672
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 8B
Senate Dist: 8
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc
Spatial ID:
Name: Krenzen Corporation
Program List:
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	45 of 62	SSE	0.00 / 0.00	1,410.27 / 0	2020 Commercial Service Apron Expansion 4701 Grinden Dr Duluth MN 55811	MPCA AI

Agency Interest ID: 235791
Name (Map): 2020 Commercial Service Apron Expansion
Address (Map): 4701 Grinden Dr
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.840877
Longitude (Map): -92.194117
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): 2020 Commercial Service Apron Expansion
Address (Site): 4701 Grinden Dr
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811-1578
Latitude (Site): 46.840877
Longitude (Site): -92.194117
County (Site): St. Louis

Name (Req):	2020 Commercial Service Apron Expansion
Address (Req):	4701 Grinden Dr
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.840877
Longitude (Req):	-92.194117
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	235791-AISI0000235791	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	235791
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	7/13/2020	**TRDSQQ:**	
Tmsp Created:	7/13/2020	**Ref Code:**	CEN
User Created:	RSP	**Ref Desc:**	Center of Feature Represented
Tmsp Updt:	7/13/2020	**Verified:**	No
Spatial ID:		**User Updt:**	geo_nc

Name:	2020 Commercial Service Apron Expansion
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	DP
Method Desc:	Digitized - MPCA online map

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00057371	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	8
Program Name:	Stormwater	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-1578	**Coord Coll:**	DP
City:	Duluth	**Latitude:**	46.840877
County:	St. Louis	**Longitude:**	-92.194117

Activity:	Construction Stormwater
Addr St:	4701 Grinden Dr
Addr City:	Duluth
MPCA ID List:	C00057371
Program 1:	Stormwater
Name:	2020 Commercial Service Apron Expansion
Watershed :	St. Louis River
Coord Co 1:	Digitized - MPCA online map
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/235791

Agency Interests: File Request Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Item ID:	235791-AISI0000235791	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	235791
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	7/13/2020	**Ref Code:**	CEN
Tmsp Created:	7/13/2020	**Ref Desc:**	Center of Feature Represented
User Created:	RSP	**Verified:**	No
Tmsp Updt:	7/13/2020	**User Updt:**	geo_nc
Spatial ID:			

Name:	2020 Commercial Service Apron Expansion
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	DP
Method Desc:	Digitized - MPCA online map

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	46 of 62	SSE	0.00 / 0.00	1,410.27 / 0	Overland West Inc 4701 Grinden Dr Duluth MN 55811	MPCA AI

Agency Interest ID:	235464
Name (Map):	Overland West Inc
Address (Map):	4701 Grinden Dr
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83891459
Longitude (Map):	-92.17994449
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	
Address (Site):	
City (Site):	
State (Site):	
ZIP (Site):	
Latitude (Site):	
Longitude (Site):	
County (Site):	
Name (Req):	Overland West Inc
Address (Req):	4701 Grinden Dr
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83891459
Longitude (Req):	-92.17994449
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026)

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Agency Interests: Map Details

Item ID:	235464-AISI0000235464	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:		***SI ID:***	235464
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	8B
Quarters:		***Senate Dist:***	8
Collection Date:	7/6/2020	***TRDSQQ:***	
Tmsp Created:	7/6/2020	***Ref Code:***	GEN
User Created:	SYSTEM	***Ref Desc:***	General Location
Tmsp Updt:	7/6/2020	***Verified:***	No
Spatial ID:		***User Updt:***	geo_nc
Name:	Overland West Inc		
Program List:			
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

Agency Interests: File Request Details

Item ID:	235464-AISI0000235464	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:		***SI ID:***	235464
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	8B
Section:		***Senate Dist:***	8
Quarters:		***TRDSQQ:***	
Collection Date:	7/6/2020	***Ref Code:***	GEN
Tmsp Created:	7/6/2020	***Ref Desc:***	General Location
User Created:	SYSTEM	***Verified:***	No
Tmsp Updt:	7/6/2020	***User Updt:***	geo_nc
Spatial ID:			
Name:	Overland West Inc		
Program List:			
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

2	***47 of 62***	***SSE***	***0.00 / 0.00***	***1,410.27 / 0***	***2024 Midfield Ramp Repair Duluth Airport 4701 Grinden Dr Duluth MN 55811***	***MPCA AI***

Agency Interest ID:	260965
Name (Map):	2024 Midfield Ramp Repair Duluth Airport
Address (Map):	4701 Grinden Dr
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.841287
Longitude (Map):	-92.197605
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	Duluth Airport *** Note:many records provided by the department have a truncated LOC_DESC field.
Name (Site):	2024 Midfield Ramp Repair Duluth Airport
Address (Site):	4701 Grinden Dr
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811-1578
Latitude (Site):	46.841287
Longitude (Site):	-92.197605
County (Site):	St. Louis
Name (Req):	2024 Midfield Ramp Repair Duluth Airport
Address (Req):	4701 Grinden Dr
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	Duluth Airport
Latitude (Req):	46.841287
Longitude (Req):	-92.197605
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	260965-AISI0000260965	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	260965
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	8B
Quarters:		***Senate Dist:***	8
Collection Date:	9/10/2024	***TRDSQQ:***	
Tmsp Created:	9/10/2024	***Ref Code:***	CEN
User Created:	RSP	***Ref Desc:***	Center of Feature Represented
Tmsp Updt:	9/10/2024	***Verified:***	No
Spatial ID:		***User Updt:***	geo_nc

Name:	2024 Midfield Ramp Repair Duluth Airport
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	DP
Method Desc:	Digitized - MPCA online map

My Neighborhood Site Details

Active FLA:	Yes	***HUC 8:***	04010201
MPCA ID:	C00070553	***Cong Distr:***	8

Program Co:	ST	**Senate Dis:**	8
Program Name:	Stormwater	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-1578	**Coord Coll:**	DP
City:	Duluth	**Latitude:**	46.841287
County:	St. Louis	**Longitude:**	-92.197605
Activity:	Construction Stormwater		
Addr St:	4701 Grinden Dr		
Addr City:	Duluth		
MPCA ID List:	C00070553		
Program 1:	Stormwater		
Name:	2024 Midfield Ramp Repair Duluth Airport		
Watershed :	St. Louis River		
Coord Co 1:	Digitized - MPCA online map		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/260965		

Agency Interests: File Request Details

Item ID:	260965-AISI0000260965	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	260965
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	9/10/2024	**Ref Code:**	CEN
Tmsp Created:	9/10/2024	**Ref Desc:**	Center of Feature Represented
User Created:	RSP	**Verified:**	No
Tmsp Updt:	9/10/2024	**User Updt:**	geo_nc
Spatial ID:			
Name:	2024 Midfield Ramp Repair Duluth Airport		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	DP		
Method Desc:	Digitized - MPCA online map		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	48 of 62	SSE	0.00 / 0.00	1,410.27 / 0	TAXIWAY A RECONSTRUCTION - PHASE 5 IFC AT THE DULUTH INTERNATIONAL AIRPORT (D 4701 Grinden Dr Duluth MN 55811	MPCA AI

Agency Interest ID:	262965
Name (Map):	TAXIWAY A RECONSTRUCTION - PHASE 5 IFC AT THE DULUTH INTERNATIONAL AIRPORT (D
Address (Map):	4701 Grinden Dr
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.839144
Longitude (Map):	-92.202492
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	

Name (Site):	TAXIWAY A RECONSTRUCTION - PHASE 5 IFC AT THE DULUTH INTERNATIONAL AIRPORT (D
Address (Site):	4701 Grinden Dr
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811-1578
Latitude (Site):	46.839144
Longitude (Site):	-92.202492
County (Site):	St. Louis
Name (Req):	TAXIWAY A RECONSTRUCTION - PHASE 5 IFC AT THE DULUTH INTERNATIONAL AIRPORT (D
Address (Req):	4701 Grinden Dr
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.839144
Longitude (Req):	-92.202492
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	262965-AISI0000262965	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	262965
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	4/15/2025	**TRDSQQ:**	
Tmsp Created:	4/15/2025	**Ref Code:**	CEN
User Created:	RSP	**Ref Desc:**	Center of Feature Represented
Tmsp Updt:	4/15/2025	**Verified:**	No
Spatial ID:		**User Updt:**	geo_nc
Name:	TAXIWAY A RECONSTRUCTION - PHASE 5 IFC AT THE DULUTH INTERNATIONAL AIRPORT (D		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	DP		
Method Desc:	Digitized - MPCA online map		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00071863	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	8
Program Name:	Stormwater	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-1578	**Coord Coll:**	DP
City:	Duluth	**Latitude:**	46.839144
County:	St. Louis	**Longitude:**	-92.202492
Activity:	Construction Stormwater		
Addr St:	4701 Grinden Dr		
Addr City:	Duluth		
MPCA ID List:	C00071863		
Program 1:	Stormwater		
Name:	TAXIWAY A RECONSTRUCTION - PHASE 5 IFC AT THE DULUTH INTERNATIONAL AIRPORT (D		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Watershed : St. Louis River
Coord Co 1: Digitized - MPCA online map
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/262965

Agency Interests: File Request Details

Item ID:	262965-AISI0000262965	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	262965
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	4/15/2025	**Ref Code:**	CEN
Tmsp Created:	4/15/2025	**Ref Desc:**	Center of Feature Represented
User Created:	RSP	**Verified:**	No
Tmsp Updt:	4/15/2025	**User Updt:**	geo_nc

Spatial ID:
Name: TAXIWAY A RECONSTRUCTION - PHASE 5 IFC AT THE DULUTH INTERNATIONAL AIRPORT (D
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: DP
Method Desc: Digitized - MPCA online map

2	49 of 62	SSE	0.00 / 0.00	1,410.27 / 0	TSA AT DULUTH INTERNATIONAL AIRPORT 4701 GRINDEN DR DULUTH MN 55811-1578	RCRA VSQG

Handler ID: MNS000105817
Generator Status: VSG
Recycler Activity?: NO
Recycler Activity Note: This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note: NO RECORDS: As of Nov 2025, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer:	No	**Used Oil Transpor:**	No
Mixed Waste Gen:	No	**Used Oil Trans Fac:**	No
Transporter:	No	**Used Oil Processor:**	No
Transfer Facility:	No	**Used Oil Refiner:**	No
Recycler:	No	**Used Oil Burner:**	No
Onsite Burner Exem:	No	**Commercial TSD:**	No
Furnace Exemption:	No	**Recycl Nonstorage:**	No
Underground Injec:	No		

Used Oil Market Burner: No

Used Oil Spec Marketer: No

Additional Handler Summary Details

Source Type:	I	***NAIC 1:***	
Seq No:	53	***NAIC 2:***	
Non Notifier:		***NAIC 3:***	
Receive Date:	20231218	***NAIC 4:***	
Active Site:	H----	***State:***	MN
Land Type:		***Location Latitude:***	46.838028
In Handler Univ:	Y	***Location Longitude:***	-92.17975
In A Universe:	Y	***Loc GIS Primary:***	N
Gen Status:	VSG	***Loc GIS Origin:***	AG
Report Cycle:		***State District Owner:***	
Accessibility:		***State District:***	
Region:	05		

Fed Waste Gen Owner: HQ
State Waste Generator Owner: MN
State Waste Generator: 5
Short Term Generator: N
Uni Waste: N
Universal Waste Dest Facility: N
Federal Universal Waste: N
As Federally Regulated Tsdf: ------
As Converter Tsdf: ------
As State Regulated Tsdf: ------
As State Regulated Handler: ---
Federal Indicator: ---
Hsm: N
Subpart K: ----
GPRA Permit: N
GPRA Renewal: N
Permit Renewal Wrkld: ------
Permwrk ID: ------
Perm Prog: ------
Pcwrkld: ------
Closwrkld: ------
GPRA Ca: N
Cawrkld: N
Subjca Tsd Discretion: N
NCAPS: N
EC Indicator: N
Ca725 Indicator: N
Ca750 Indicator: N
Operating Tsdf: ------
Full Enforcement: ------
Snc: N
Unaddressed Snc: N
Addressed Snc: N
Snc With Comp Sched: N
Fa Required: -----
Hhandler Last Change: 20231220
Recognized Trader Importer: N
Recognized Trader Exporter: N
Slab Importer: N
Slab Exporter: N
Manifest Broker: N
Subpart P: N
Contact Language: EN
Handler Name: TSA AT DULUTH INTERNATIONAL AIRPORT
Location Street No:
Location Street1: 4701 GRINDEN DR
Location Street2:
Location City: DULUTH
Location State: MN
Location Zip: 55811-1578
Location County Code: MN137
Location County Name: ST LOUIS

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Location Country:
Contact Name: DONALD LANG
Contact Street No:
Contact Street1: 2001 KILLEBREW DR STE 400
Contact Street2:
Contact City: BLOOMINGTON
Contact State: MN
Contact Zip: 55425
Contact Country:
Contact Phone & Ext: 612-486-6172
Contact Fax:
Contact Email Address: DONALD.LANG@TSA.DHS.GOV
Contact Title: ENVIRONMENTAL SPECIALIST
Owner Name:
Owner Type:
Owner Seq:
Operator Name:
Operator Type:
Operator Seq:
Public Notes:

Hazardous Waste Handler Details

Seq No: 1
Receive Date: 20040809
Handler Name: TSA AT DULUTH INTERNATIONAL AIRPORT
Fed Waste Generator: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Notification
TSD Activity: N

Hazardous Waste Handler Details

Seq No: 53
Receive Date: 20231218
Handler Name: TSA AT DULUTH INTERNATIONAL AIRPORT
Fed Waste Generator: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Implementer
TSD Activity: N

Owner/Operator Details

Owner/Operator Ind: Current Owner
Type: Federal
Name: TSA AIRPORT
Dt Became Current: 20040812
Dt Ended Current:
Phone: 612-486-6175
Source Type: Notification

Street No:
Street1: 4300 GLUMACK DR STE C-1137
Street2:
City: ST. PAUL
State: MN
Country: US
Zip: 55111

Historical Handler Details

Receive Dt: 20040809
Generator Code Description: Very Small Quantity Generator
Handler Name: TSA AT DULUTH INTERNATIONAL AIRPORT

2	*50 of 62*	*SSE*	*0.00 / 0.00*	*1,410.27 / 0*	***DULUTH AIRPORT AUTHORITY 4701 GRINDEN DR DULUTH MN 55811-1578***	***RCRA VSQG***

Handler ID: MNR000023143

Generator Status: VSG
Recycler Activity?: NO
Recycler Activity Note: This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note: VIOLATION or UNDETERMINED: There are VIOLATION or UNDETERMINED details or records associated with this facility (EPA ID) in the Compliance Monitoring and Enforcement table dated Nov 2025.

Violation Details

Viol Type: 262.A
Citation:
Determined Date: 20020508
Scheduled Compliance Date: 20020509
Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - General
Actual Rtc Date: 20020510
Found Violation: Yes
Rtc Qualifier: Observed

Enforcement Details

Enf Type: 121
Enf Type Desc: Letter of Warning (LOW)
Enf Action Date: 20020509
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Evaluation Details

Eval Start Date: 20020508
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc: Generators - General
Actual Rtc Date: 20020510
Eval Agency: State

Handler Summary

Importer: No
Mixed Waste Gen: No
Transporter: No
Transfer Facility: No
Recycler: No
Onsite Burner Exem: No
Furnace Exemption: No
Underground Injec: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No
Used Oil Transpor: No
Used Oil Trans Fac: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Commercial TSD: No
Recycl Nonstorage: No

Additional Handler Summary Details

Source Type: I
Seq No: 53
Non Notifier:
Receive Date: 20231218
Active Site: H----
Land Type:
In Handler Univ: Y
NAIC 1:
NAIC 2:
NAIC 3:
NAIC 4:
State: MN
Location Latitude: 46.836479
Location Longitude: -92.175188

In A Universe:	Y	***Loc GIS Primary:***	N
Gen Status:	VSG	***Loc GIS Origin:***	UC
Report Cycle:		***State District Owner:***	
Accessibility:		***State District:***	
Region:	05		

Fed Waste Gen Owner:	HQ
State Waste Generator Owner:	MN
State Waste Generator:	5
Short Term Generator:	N
Uni Waste:	N
Universal Waste Dest Facility:	N
Federal Universal Waste:	N
As Federally Regulated Tsdf:	------
As Converter Tsdf:	------
As State Regulated Tsdf:	------
As State Regulated Handler:	---
Federal Indicator:	---
Hsm:	N
Subpart K:	----
GPRA Permit:	N
GPRA Renewal:	N
Permit Renewal Wrkld:	------
Permwrk ID:	------
Perm Prog:	------
Pcwrkld:	------
Closwrkld:	------
GPRA Ca:	N
Cawrkld:	N
Subjca Tsd Discretion:	N
NCAPS:	N
EC Indicator:	N
Ca725 Indicator:	N
Ca750 Indicator:	N
Operating Tsdf:	------
Full Enforcement:	------
Snc:	N
Unaddressed Snc:	N
Addressed Snc:	N
Snc With Comp Sched:	N
Fa Required:	-----
Hhandler Last Change:	20231220
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	EN
Handler Name:	DULUTH AIRPORT AUTHORITY
Location Street No:	
Location Street1:	4701 GRINDEN DR
Location Street2:	
Location City:	DULUTH
Location State:	MN
Location Zip:	55811-1578
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	
Contact Name:	RYAN WELCH
Contact Street No:	
Contact Street1:	4701 GRINDEN DR
Contact Street2:	
Contact City:	DULUTH
Contact State:	MN
Contact Zip:	55811-1578
Contact Country:	
Contact Phone & Ext:	218-625-5051
Contact Fax:	
Contact Email Address:	RWELCH@DULUTHAIRPORT.COM

Contact Title: MANAGER
Owner Name:
Owner Type:
Owner Seq:
Operator Name:
Operator Type:
Operator Seq:
Public Notes:

Hazardous Waste Handler Details

Seq No: 1
Receive Date: 20000810
Handler Name: DULUTH AIRPORT AUTHORITY
Fed Waste Generator: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Notification
TSD Activity: N

Waste Code Details

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Hazardous Waste Handler Details

Seq No: 53
Receive Date: 20231218
Handler Name: DULUTH AIRPORT AUTHORITY
Fed Waste Generator: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Implementer
TSD Activity: N

Owner/Operator Details

Owner/Operator Ind: Current Operator
Type: Other
Name: DULUTH INTERNATIONAL AIRPORT (DAA)
Dt Became Current: 19990729
Dt Ended Current:
Phone: 218-727-2968
Source Type: Notification
Street No:
Street1: 4701 GRINDEN DR
Street2:
City: DULUTH
State: MN
Country: US
Zip: 55811

Historical Handler Details

Receive Dt: 20000810
Generator Code Description: Very Small Quantity Generator
Handler Name: DULUTH AIRPORT AUTHORITY

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Item ID: 638-AREA0000000006
Project ID: SA0000367
Project Type: Site Assessment Site
Project ID (RAP):
Project Type (RAP):
Site Status: Active / Existing
Perm List of Prior?:
Federal Reg:
Fed State Reg:
Non Reg:
SEMS?:
NPL:
Unpermitted Dump?:
Latitude: 46.83778689

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Petrol Brownfield?:		**Longitude:**	-92.17481925
VIC Site?:		**County (RAP):**	
Sf Voluntary:		**Latitude (RAP):**	
Inst Controls?:		**Longitude (RAP):**	
State Reg:			
Project Name:	Duluth Airport		
Site Address 1:	4701 Grinden Drive		
Site Address 2:			
Site City:	Duluth		
Site State:	MN		
Site Zip:			
Site County:	St. Louis		
Project Name(RAP):			
Address1 (RAP):			
Address2(RAP):			
City (RAP):			
State (RAP):			
Zip (RAP):			
Project Managers:	Site Assessment Coordinator (current)		
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

AI Name:	Duluth International Airport	**DWSMA Name:**	
Activity ID:	638	**Cong Dist:**	8
SI ID:	6	**House Dist:**	8B
SI Cat:	AREA	**Senate Dis:**	8
SI Type:	SITE	**HUC 8:**	04010201
Site Type:	CON	**HUC 10:**	0401020116
Acreage:	1.00	**HUC 12:**	040102011604
HRS Score:		**Method Des:**	Address Matching House Number
Score Year:		**Hydrologis:**	
DWSMA Code:		**MNTBA:**	
Loc Desc:			
HUC 8 Name:	St. Louis River		
HUC 12 Name:	Saint Louis River		
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/638		

Spatial Remediation Activity

AI ID:	638	**Site Start:**	2017-05-19 00:00:00
Site ID:	SA0000367	**Remedy Imp:**	
SI ID:	6	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	2017-05-19 00:00:00
Site Close:		**NPL List:**	
Leak Discovered:		**NPL Delete:**	
Leak Reported:		**PLP List:**	
Leak Reopened:		**PLP Delist:**	
Activity No:	1	**Staff Assi:**	
Activity ID:	SIW20170001	**FF Aproved:**	
Activity Type:	Site Assessment Investigation	**FF Closed:**	
Activity Code:	SIW	**Inv Comple:**	
Activity Year:	2017	**App Comple:**	
Discovered:		**Er Site Ev:**	

2	***52 of 62***	***SSE***	***0.00 / 0.00***	***1,410.27 / 0***	***NORTHWEST ARILINES 4701 Grinden Dr MN 55811 Duluth MN 55811***	***SPILLS***

Incident ID:	29734	**AI ID Source:**	
Incident Status:	Closed or Completed	**Source Address:**	4701 Grinden Dr
Incident Type:	Spill or Release	**Source City:**	Duluth
Incident Date:	1/22/1999	**Source State:**	MN
Program:	Emergency Response	**Source Zip:**	55811
Closure Type:	Response/Action Completed	**Latitude:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

County: St. Louis
Coord Method:
Location: 4701 Grinden Dr
MN
55811

Longitude:

Lead Investigator and Duty Officer

Substances: 40 gallons Aviation Gas
Duty Officer No:
Lead Investigator: Steve Leppala
Linked Incidents:
Source List: NORTHWEST ARILINES (Duluth, MN)
Address:
Ai ID Location:
State:
Zip:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	53 of 62	SSE	0.00 / 0.00	1,410.27 / 0	DULUTH AIRPORT AUTHORITY 4701 Grinden Dr MN 55811 Duluth MN 55811	SPILLS

Incident ID: 29432
Incident Status: Closed or Completed
Incident Type: Transportation Accident - Saddle Tank
Incident Date: 11/15/1998
Program: Emergency Response
Closure Type: Response/Action Completed
County: St. Louis
Coord Method:
Location: 4701 Grinden Dr
MN
55811

AI ID Source:
Source Address: 4701 Grinden Dr
Source City: Duluth
Source State: MN
Source Zip: 55811
Latitude:
Longitude:

Lead Investigator and Duty Officer

Substances: 40 gallons Aviation Gas
Duty Officer No:
Lead Investigator: Steve Leppala
Linked Incidents:
Source List: DULUTH AIRPORT AUTHORITY (Duluth, MN)
Address:
Ai ID Location:
State:
Zip:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	54 of 62	SSE	0.00 / 0.00	1,410.27 / 0	NORTHWEST AIRLINES 4701 Grinden Dr MN 55811 Duluth MN 55811	SPILLS

Incident ID: 29747
Incident Status: Closed or Completed
Incident Type: Spill or Release
Incident Date: 1/22/1999
Program: Emergency Response
Closure Type: Response/Action Completed
County: St. Louis
Coord Method:
Location: 4701 Grinden Dr
MN
55811

AI ID Source:
Source Address: 4701 Grinden Dr
Source City: Duluth
Source State: MN
Source Zip: 55811
Latitude:
Longitude:

Lead Investigator and Duty Officer

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Substances: 35 gallons Aviation Gas
Duty Officer No:
Lead Investigator: Steve Leppala
Linked Incidents:
Source List: NORTHWEST AIRLINES (Duluth, MN)
Address:
Ai ID Location:
State:
Zip:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	55 of 62	SSE	0.00 / 0.00	1,410.27 / 0	Northwest Airlines 4701 Grinden Dr MN 55811 Duluth MN	SPILLS

Incident ID: 58578
Incident Status: Closed or Completed
Incident Type: Spill or Release
Incident Date: 2/21/2003
Program: Emergency Response
Closure Type: Response/Action Completed
County: St. Louis
Coord Method:
Location: 4701 Grinden Dr
MN
55811

AI ID Source:
Source Address: Address Unknown
Source City: Duluth
Source State: MN
Source Zip:
Latitude:
Longitude:

Lead Investigator and Duty Officer

Substances: 90 gallons Jet Fuel A
Duty Officer No:
Lead Investigator: Steve Leppala
Linked Incidents:
Source List: Northwest Airlines (Duluth, MN)
Address:
Ai ID Location:
State:
Zip:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	56 of 62	SSE	0.00 / 0.00	1,410.27 / 0	AIR NATIONAL GUARD FD 4701 Grinden Dr. MN Duluth MN 55812	SPILLS

Incident ID: 30713
Incident Status: Closed or Completed
Incident Type: Spill or Release
Incident Date: 6/23/1999
Program: Emergency Response
Closure Type: Response/Action Completed
County: St. Louis
Coord Method:
Location: 4701 Grinden Dr.
MN

AI ID Source:
Source Address: Duluth
Source City: Duluth
Source State: MN
Source Zip: 55812
Latitude:
Longitude:

Lead Investigator and Duty Officer

Substances: 100 gallons Aviation Gas
Duty Officer No:
Lead Investigator: Steve Leppala
Linked Incidents:
Source List: AIR NATIONAL GUARD FD (Duluth, MN)
Address:
Ai ID Location:
State:
Zip:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	57 of 62	SSE	0.00 / 0.00	1,410.27 / 0	Minnesota Power Inc- General Office 4701 Grinden Drive Duluth MN 558022191	SPILLS

Incident ID: 194261
Incident Status: Closed or Completed
Incident Type: Spill or Release, Transformer
Incident Date: 4/12/2020
Program: Emergency Response
Closure Type: Response/Action Completed
County: St. Louis
Coord Method: Address Matching House Number
Location: 4701 Grinden Drive

AI ID Source: 2419
Source Address: 30 Superior St
Source City: Duluth
Source State: MN
Source Zip: 558022191
Latitude: 46.78663455
Longitude: -92.09856193

Lead Investigator and Duty Officer

Substances: 15 gallons Transformer Oil, Non-PCB
Duty Officer No: 190378
Lead Investigator: Craig Schafer
Linked Incidents:
Source List: Minnesota Power Inc- General Office (Duluth, MN)
Address:
Ai ID Location:
State:
Zip:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	58 of 62	SSE	0.00 / 0.00	1,410.27 / 0	Duluth International Airport 4701 Grinden Drive Duluth MN 558111578	SPILLS

Incident ID: 204931
Incident Status: Closed or Completed
Incident Type: Stormwater - Industrial
Incident Date: 8/4/2022
Program: Ind Stormwater
Closure Type:
County: St. Louis
Coord Method: Digitized - MPCA online map
Location: 4701 Grinden Drive

AI ID Source: 638
Source Address: 4701 Grinden Dr
Source City: Duluth
Source State: MN
Source Zip: 558111578
Latitude: 46.841405
Longitude: -92.183171

Lead Investigator and Duty Officer

Substances:
Duty Officer No: 207461
Lead Investigator: Craig Weingart
Linked Incidents:
Source List: Duluth Airport Authority (Duluth, MN); Duluth International Airport (Duluth, MN)
Address: 4701 Grinden Drive
Ai ID Location:
State:
Zip:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	59 of 62	SSE	0.00 / 0.00	1,410.27 / 0	4701 Grinden Dr Duluth MN	SPILLS

Incident ID: 215386
Incident Status: Closed or Completed
Incident Type: Spill or Release, Supplemental DO Report
Incident Date: 10/11/2024
Program: Emergency Response
Closure Type: Response/Action Completed
County: St. Louis
Coord Method:

AI ID Source:
Source Address:
Source City:
Source State:
Source Zip:
Latitude:
Longitude:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Location: 4701 Grinden Dr

Lead Investigator and Duty Officer

Substances:
Duty Officer No: 223440, 26816
Lead Investigator: Kayla Hovde
Linked Incidents: 215384
Source List: National Airline
Address: 4701 Grinden Dr
Ai ID Location:
State:
Zip:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	60 of 62	SSE	0.00 / 0.00	1,410.27 / 0	DAA ANG Fire Station Phase 3 4701 Grinden Dr Duluth MN 55803	SWF/LF

Site ID: 108560
Owner Name:
Program Name: Solid Waste
Activity Type Name: Solid Waste
Activity Name: DAA ANG Fire Station Phase 3
Address Line 1: 4701 Grinden Dr
Address Line 2:
State Code: MN
County Name: St. Louis

Legislative District: 8
HUC 8: 04010202
Watershed Name: Cloquet River
Latitude: 47.03751595
Longitude: -92.10876654
Coordinate Method: Public Land Survey-Two Quarter
Institutional Control: No
Indust. Classification:

Activities

Activity ID: C00020121
Active: No
Activity Sub Type Name:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	61 of 62	SSE	0.00 / 0.00	1,410.27 / 0	Duluth International Airport 4701 Grinden Dr Duluth MN 55811-1578	UST

AI ID: 638
Tank Type: Underground Storage Tank System
AI Name: Duluth International Airport
Address1: 4701 Grinden Dr
Address2:
Address3:
City: Duluth
County: St. Louis
State: MN
Zip: 55811-1578
Location Description:
Data Source: Minnesota Pollution Control Agency Tank Sites; Minnesota Pollution Control Agency Regulated Tank Systems (Map)

AI Name (Map): Duluth International Airport
Address1 (Map):
Address2 (Map):
City (Map):
State (Map):
Zip (Map):
Owner: Duluth Airport Authority
Owner Address: 4701 Grinden Dr
Owner City: Duluth
Owner State: MN
Owner Zip: 558111578

Tank Information

Tank Site ID: TS0021164
Tank ID: 638-EQUI0000000003
Tank Status: Removed
Install Date: 1/1/1900
Status Change Date: 6/4/1991
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 1,000 gal/Diesel/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0021164
Coord Collect Meth Desc: Address Matching House Number

Latitude: 46.83824934
Longitude: -92.17997448
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

On Tribal Land: N

Compartment Information

Compartment ID: 638-EQUI0000000003-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: 3
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 1000
Cathodic Prot Sys: Not needed
Special Use Desc: None

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: NONE
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None
Stored Product: Diesel
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Tank Information

Tank Site ID: TS0021164
Tank ID: 638-EQUI0000000005
Tank Status: Removed
Install Date: 1/1/1900
Status Change Date: 7/21/1991
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 1,000 gal/Fuel Oil/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0021164
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N
Latitude: 46.83824934
Longitude: -92.17997448
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Compartment Information

Compartment ID: 638-EQUI0000000005-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: 5
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 1000
Cathodic Prot Sys: Not needed
Special Use Desc: Heating

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: NONE
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None
Stored Product: Fuel Oil
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Tank Information

Tank Site ID: TS0021164
Tank ID: 638-EQUI0000000009
Tank Status: Removed
Install Date: 6/1/1965
Status Change Date: 10/30/1990
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 8,000 gal/Diesel/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0021164
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N
Latitude: 46.83824934
Longitude: -92.17997448
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Compartment Information

Compartment ID: 638-EQUI0000000009-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: 1
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 8000
Cathodic Prot Sys: Not needed
Special Use Desc: None

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: NONE
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None
Stored Product: Diesel
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Tank Information

Tank Site ID: TS0021164
Tank ID: 638-EQUI0000000007
Tank Status: Removed
Install Date: 11/1/1980
Status Change Date: 6/9/1997
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 1,000 gal/Gasoline/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0021164
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N
Latitude: 46.83824934
Longitude: -92.17997448
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Compartment Information

Compartment ID: 638-EQUI0000000007-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: 9
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 1000
Cathodic Prot Sys: Not needed
Special Use Desc: None

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: NONE
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None
Stored Product: Gasoline
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Tank Information

Tank Site ID:
Tank ID: 638-EQUI0000000014
Tank Status:
Install Date:
Status Change Date:
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 10,000 ga. diesel tank to be removed pending removal 9/26/2016
Tanks Url:
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N
Latitude: 46.83778689
Longitude: -92.17481925
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Compartment Information

Compartment ID: 638-EQUI0000000014-1
Compartment No: 1
Tank Wall Type:
Tank Material:
Subject Item Designation: 14
Overfill Prevention System:
Programs: UT
Capacity (gal):
Cathodic Prot Sys:
Special Use Desc:

Tank Information

Tank Site ID: TS0021164
Tank ID: 638-EQUI0000000002
Tank Status: Removed
Install Date: 1/1/1900
Status Change Date: 8/9/1993
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 50,000 gal/Aviation gasoline/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0021164
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N
Latitude: 46.83824934
Longitude: -92.17997448
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Compartment Information

Compartment ID: 638-EQUI0000000002-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: 11
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 50000
Cathodic Prot Sys: Not needed
Special Use Desc: None

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: SSP
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None
Stored Product: Aviation gasoline
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Tank Information

Tank Site ID: TS0021164
Tank ID: 638-EQUI0000000004
Tank Status: Removed
Install Date: 7/1/1949
Status Change Date: 8/13/1991
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 8,000 gal/Gasoline/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0021164
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N
Latitude: 46.83824934
Longitude: -92.17997448
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Compartment Information

Compartment ID: 638-EQUI0000000004-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: 6
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 8000
Cathodic Prot Sys: Not needed
Special Use Desc: None

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: NONE
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None
Stored Product: Gasoline
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Tank Information

Tank Site ID:
Tank ID: 638-EQUI0000000016
Tank Status: Removed
Install Date: 1/1/1900
Status Change Date: 9/26/2016
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 10,000 ga. diesel tank removed 9/26/2016, registered 10/21/2016
Tanks Url:
Coord Collect Meth Desc: Digitized - MPCA internal map
On Tribal Land: N
Latitude: 46.83740195
Longitude: -92.19065796
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Compartment Information

Compartment ID: 638-EQUI0000000016-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Steel
Subject Item Designation: 14
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 10000
Cathodic Prot Sys: Anode
Special Use Desc: None

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: NONE
Pipe Material: Steel
Pipe Corrosion Protection: Not needed
Stored Product: Diesel
Tank Leak Detection: UST Not needed
Vapor Recovery Flag:

Tank Information

Tank Site ID: TS0021164
Tank ID: 638-EQUI0000000008
Tank Status: Removed
Install Date: 1/1/1900
Status Change Date: 7/21/1991
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 500 gal/Fuel Oil/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0021164
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N
Latitude: 46.83824934
Longitude: -92.17997448
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Compartment Information

Compartment ID: 638-EQUI0000000008-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: 8
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 500
Cathodic Prot Sys: Not needed
Special Use Desc: Heating

Pipe Information

Pipe Wall Type: Single
Stored Product: Fuel Oil

Pipe Leak Detection: NONE
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Tank Information

Tank Site ID: TS0021164
Tank ID: 638-EQUI0000000006
Tank Status: Removed
Install Date: 1/1/1900
Status Change Date: 6/4/1991
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 1,000 gal/Gasoline/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0021164
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N
Latitude: 46.83824934
Longitude: -92.17997448
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Compartment Information

Compartment ID: 638-EQUI0000000006-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: 4
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 1000
Cathodic Prot Sys: Not needed
Special Use Desc: None

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: NONE
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None
Stored Product: Gasoline
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Tank Information

Tank Site ID: TS0021164
Tank ID: 638-EQUI0000000010
Tank Status: Removed
Install Date: 1/1/1900
Status Change Date: 6/4/1991
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 2,000 gal/Diesel/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0021164
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N
Latitude: 46.83824934
Longitude: -92.17997448
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Compartment Information

Compartment ID: 638-EQUI0000000010-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: 2
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 2000
Cathodic Prot Sys: Not needed
Special Use Desc: None

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: NONE
Pipe Material: Steel/Iron
Stored Product: Diesel
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Pipe Corrosion Protection: None

Tank Information

Tank Site ID: TS0021164
Tank ID: 638-EQUI0000000011
Tank Status: Removed
Install Date: 1/1/1900
Status Change Date: 8/9/1993
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 10,000 gal/Aviation gasoline/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0021164
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N
Latitude: 46.83824934
Longitude: -92.17997448
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Compartment Information

Compartment ID: 638-EQUI0000000011-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Fiberglass
Subject Item Designation: 10
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 10000
Cathodic Prot Sys: Not needed
Special Use Desc: None

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: SSP
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None
Stored Product: Aviation gasoline
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Tank Information

Tank Site ID: TS0021164
Tank ID: 638-EQUI0000000012
Tank Status: Removed
Install Date: 8/1/1974
Status Change Date: 8/13/1991
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 10,000 gal/Fuel Oil/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0021164
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N
Latitude: 46.83824934
Longitude: -92.17997448
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Compartment Information

Compartment ID: 638-EQUI0000000012-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: 7
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 10000
Cathodic Prot Sys: Not needed
Special Use Desc: Heating

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: NONE
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None
Stored Product: Fuel Oil
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Tank Information

Tank Site ID:
Tank ID: 638-EQUI0000000015
Tank Status: Removed
Install Date: 1/1/1900
Status Change Date: 9/26/2016
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 1500 ga. E-10 removed 9/26/2016, registered 10/21/2016
Tanks Url:
Coord Collect Meth Desc: Digitized - MPCA internal map
On Tribal Land: N
Latitude: 46.83740195
Longitude: -92.19065796
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Compartment Information

Compartment ID: 638-EQUI0000000015-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Steel
Subject Item Designation: 13
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 1500
Cathodic Prot Sys: Anode
Special Use Desc: None

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: NONE
Pipe Material: Steel
Pipe Corrosion Protection: Not needed
Stored Product: E-10 - 10% ethanol & 90% gas
Tank Leak Detection: UST Not needed
Vapor Recovery Flag:

Tank Information

Tank Site ID: TS0021164
Tank ID: 638-EQUI0000000001
Tank Status: Removed
Install Date: 1/1/1900
Status Change Date: 8/9/1993
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 50,000 gal/Aviation gasoline/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0021164
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N
Latitude: 46.83824934
Longitude: -92.17997448
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Compartment Information

Compartment ID: 638-EQUI0000000001-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: 12
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 50000
Cathodic Prot Sys: Not needed
Special Use Desc: None

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: SSP
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None
Stored Product: Aviation gasoline
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Tank Information

Tank Site ID:
Tank ID: 638-EQUI0000000013
Tank Status:
Install Date:
Status Change Date:
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 2500 ga. gas tank to be removed pending removal 9/26/2016
Tanks Url:
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N
Latitude: 46.83778689
Longitude: -92.17481925
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Compartment Information

Compartment ID: 638-EQUI0000000013-1
Compartment No: 1
Tank Wall Type:
Tank Material:
Subject Item Designation: 13
Overfill Prevention System:
Programs: UT
Capacity (gal):
Cathodic Prot Sys:
Special Use Desc:

MPCA Map Regulated Tank Systems

Item ID: 638-EQUI0000000013
Int Doc ID: 0
Spatial ID:
SI Type: USTS
SI Cat: EQUI
SI ID: 13
SI Cat Desc: Equipment
SI Designation: 013
Status Desc:
Status Dt:
Install Dt:
AI Prg Code: UT
AI Program: Underground Tanks
Compartments:
Substance:
Capacity:
Overfill Prevent:
Loc Desc:
County: St. Louis
Latitude: 46.83778689
Si Type Desc: Underground Storage Tank System
Huc8 Name: St. Louis River
Huc12 Name: Saint Louis River
Description: 2500 ga. gas tank to be removed pending removal 9/26/2016
Longitude: -92.17481925
Ctu Name: Duluth
Cong Dist: 8
House Dist: 8B
Senate Dist: 8
Huc8: 04010201
Huc10: 0401020116
Huc12: 040102011604
Dwsma Code:
Dwsma Name:
Trdsqq:
Pls Twsp:
Range :
Range Dir:
Section:
Quarters:
Method Desc: Address Matching House Number
Ref Desc: Copied from Agency Interest
Point X: -92.1748192503103
Point Y: 46.83778688994398

MPCA Map Regulated Tank Systems

Item ID: 638-EQUI0000000014
Int Doc ID: 0
Spatial ID:
SI Type: USTS
SI Cat: EQUI
SI ID: 14
SI Cat Desc: Equipment
SI Designation: 014
Status Desc:
Status Dt:
Install Dt:
AI Prg Code: UT
AI Program: Underground Tanks
Compartments:
Longitude: -92.17481925
Ctu Name: Duluth
Cong Dist: 8
House Dist: 8B
Senate Dist: 8
Huc8: 04010201
Huc10: 0401020116
Huc12: 040102011604
Dwsma Code:
Dwsma Name:
Trdsqq:
Pls Twsp:
Range :
Range Dir:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Substance: | **Section:**
Capacity: | **Quarters:**
Overfill Prevent: | **Method Desc:** Address Matching House Number
Loc Desc: | **Ref Desc:** Copied from Agency Interest
County: St. Louis | **Point X:** -92.1748192503103
Latitude: 46.83778689 | **Point Y:** 46.83778688994398
Si Type Desc: Underground Storage Tank System
Huc8 Name: St. Louis River
Huc12 Name: Saint Louis River
Description: 10,000 ga. diesel tank to be removed pending removal 9/26/2016

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	62 of 62	SSE	0.00 / 0.00	1,410.27 / 0	Duluth International Airport - Block 3 4701 Grinden Dr Duluth MN 55811	VIC

Item ID: 638-AREA0000000001 | **Unpermitted Dump?:**
Project ID: VP15240 | **State Reg:** Yes
Project Type: Brownfield Site | **Federal Reg:**
Project ID (RAP): VP15240 | **Fed State Reg:**
Project Type (RAP): Brownfield Site | **Non Reg:**
Site Status: Closed | **NPL:**
Perm List of Prio?: | **Site County:** St. Louis
Petrol Brownfield?: | **County (RAP):** St. Louis
VIC Site?: Yes | **Latitude:** 46.83633804
Sf Voluntary: | **Longitude:** -92.17481995
Inst Controls?: | **Latitude (RAP):** 46.83633804
SEMS?: | **Longitude (RAP):** -92.17481995
Project Name: Duluth International Airport - Block 3
Project Managers: Jane Mosel (no longer at MPCA)
Site Address 1: 4701 Grinden Dr
Site Address 2:
Site City: Duluth
Site State: MN
Site Zip: 55811
Project Name(RAP): Duluth International Airport - Block 3
Address1 (RAP): 4701 Grinden Dr
Address2(RAP):
City (RAP): Duluth
State (RAP): MN
Zip (RAP): 55811
Data Source: MPCA Remediation Sites; MPCA Remediation Sites with RAP approvals

Remediation Sites Details

Activity ID: 638 | **Object ID:** 5776
SI ID: 1 | **Cong Dist:** 8
SI Cat: AREA | **House Dist:** 3B
SI Type: BROW | **Senate Dis:** 3
Site Type: CON | **HUC 8:** 04010201
Acreage: 4.25 | **HUC 10:** 0401020116
HRS Score: | **HUC 12:** 040102011604
Score Year: | **Gdb Geomattr Data:**
DWSMA Code: | **MNTBA:**
AI Name: Duluth International Airport
Hydrologists: Mike Bares (no longer at MPCA)
DWSMA Name:
HUC 8 Name: St. Louis River
HUC 12 Name: Saint Louis River
Method Desc: DOQ - Digital Orthophoto Quad
Loc Desc: Lots 4 and 5
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/638

Remediation Sites with RAP Approval

Activity ID: 638 | **Rap Approved:**

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

No Association Dt:		**Rap Completed:**	
No Associatn Lettr:	No	**Site Start:**	
Rap Date:		**Site Closed:**	
Has RP:	Yes		
RP Names:	Duluth Airport Authority , Duluth International Airport (DAA), John Grinden		
AI Name:	Duluth International Airport		
Parcels:			
Coord Collection Method:	DOQ - Digital Orthophoto Quad		
WIMN:	https://webapp.pca.state.mn.us/wimn/site/638		

Spatial Remediation Activity

AI ID:	638	**Object ID:**	421
Site ID:	VP15240	**Remedy Imp:**	
SI ID:	1	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	2001-11-29 00:00:00
Site Start:	2001-11-29 00:00:00	**NPL List:**	
Site Close:	2002-08-09 00:00:00	**NPL Delete:**	
Leak Discovered:		**PLP List:**	
Leak Reported:		**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	2001-11-29 00:00:00
Activity No:	1	**FF Aproved:**	
Activity ID:	SIW20010001	**FF Closed:**	
Activity Type:	Brownfield Site	**Inv Comple:**	
Activity Code:	SIW	**App Comple:**	2001-11-29 00:00:00
Activity Year:	2001	**Er Site Ev:**	
Discovered:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	1 of2	SW	0.13 / 661.25	1,418.47 / 8	**Spotted Eagle Elementary School** **Address Unknown** **Duluth MN 55811**	HIST LEAKSITES

Prog Int ID:	220388	**Address Source:**	CORE
Site ID:	161357	**Township Name:**	
State County Code:	69	**County Name:**	St. Louis
Country:	USA	**Lat/Long ID:**	119902
Interest Type Cd:	LS	**Interest Type Dsc:**	Leak Site
ADDR ID:	421767	**Lat Degrees:**	46
Tank Site:	7788	**Lat Minutes:**	50
Interest Phone:	NO CORE PI PH.	**Lat Seconds:**	19.12
Interest Start Dt:	07/01/1999 10:41:20	**Long Degrees:**	-92
Interest End Dt:	03/24/2006 13:05:48	**Long Minutes:**	13
Active?:	No	**Long Seconds:**	4.89
Timestamp Added:	03/24/2006 13:05:48	**Lat/Long Source:**	CORE
Timestamp Updt:	11/10/2014 08:17:05	**Lat/Long Site ID:**	161357
Staff ID Updt:	RGAGLE	**Lat/Long Spatial ID:**	51070432
Source:	CORE	**Collection Date:**	04/16/2010 17:52:39
Coord Src Type:	2	**Map Scale Code:**	
Coord Src Desc:		**Org Name Source:**	Beth Brown
Foreign State:		**Foreign Zone:**	
FIPS County Cd1:	137		
Addr Timestmp Add:	11/10/2004 06:23:53		
Addr Timestamp Lst Updt:	08/01/2007 21:44:32		
Addr Updater Staff ID:	SYSTEM		
Lat/Long Timestamp Added:	10/12/2005 14:28:58		
Lat/Long Tmstmp Last Upd:	04/16/2010 18:19:26		
Lat/Long Updater Staff ID:	MAPT_NC		
Lat/Long Desc:			
Coord Coll Method Desc:	Zip Code Centroid		
Coord Coll Method Code:	Z1		
Comments:			

Leak Site

Complete Site Closure Date:	03/26/1996 00:00:00

Cond Closure Date:
Release Discovered Date: 08/31/1994 00:00:00
Leaksite Type Code: 1
Leaksite Type Desc: Leak Site
Leak Report Date: 08/31/1994 00:00:00
Tank Reg Status Code: F
TMSP Added: 12/04/1999 14:03:49
TMSP Last Updt: 05/04/2002 09:26:25
CU Yds Excavated Qty: 25
ENF Action Begin Date: 09/08/1994 00:00:00
Residence Type Code:
File Archive Box: 18
File Archive Lot: 98/206
Soil Digout Date: 08/19/1994 00:00:00
Staff ID Last Updt: TANKS
Std Letter Response Date:
VPIC Acres:
VPIC Application Date:
Contam Soils Remaining Flag: N
Indoor Air Collected Flag:
LUST Trust Eligible Flag: Yes
Offsite Contam Flag: U
REIMB Awarded Flag: No
Release From AST Flag: No
Release From UST Flag: No
Soil Gas Action Level Flag:
Soil Gas Data Collected Flag:
Sub Slab Sample Collected Flag:
Surface Water Impact Flag: U
Utility Project Flag: No
Vapor Intrusion Action Flag:
Vapor Intrusion Checked Flag:
Leaksite Type Defn: Leak site (tank and petroleum contamination).
Soil Gas Data Comments:
Vapor Intrusion Comments:

Leak Product Rls

Product Rls Seq ID: 322377
Leak Product Desc: Fuel Oil 1 & 2
Leak Product Defn: The product is fuel oil 1 & 2.

Leak GW Info

Well Type Code:
Affected Non Res Props:
Affected Residential Props:
Staff ID Last Updt: RSUCHAN
Staff ID Wellhead Area Assess:
TMSP Added: 12/04/1999 14:07:32
TMSP Last Updt: 11/04/2003 12:57:07
Water Supply Exceeds Ral Flag:
Cleanup Goal Achieved Flag:
DW Supply Contam Flag:
Free Product at Close Flag:
Free Product Observed Flag:
Free Product Thickness:
Ground Water Contam Flag: N
GW Cleanup Goal: 0
GW Exceeds Cleanup Goal Flag:
Impacted Aquifer Code:
MTBE High Level Date:
MTBE High Ug Per Liter Char:
MTBE High Ug Per Liter Numb:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

MTBE Present Historically Flag:
MTBE Present Now Flag:
Protected Area Flag:
PWS Well Impacted Flag:
Sensitive Area Flag:

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3 | ***2 of2*** | ***SW*** | ***0.13 / 661.25*** | ***1,418.47 / 8*** | ***Bristol & Colelillo Utility Work***
Address Unknown
Duluth MN 55811 | ***HIST LUST***

Prog Int ID:	221252	***Address Source:***	CORE
Site ID:	161357	***Township Name:***	
State County Code:	69	***County Name:***	St. Louis
Country:	USA	***Lat/Long ID:***	119902
Interest Type Cd:	LS	***Interest Type Dsc:***	Leak Site
ADDR ID:	421767	***Lat Degrees:***	46
Tank Site:	8691	***Lat Minutes:***	50
Interest Phone:	NO CORE PI PH.	***Lat Seconds:***	19.12
Interest Start Dt:	11/23/1998 09:24:05	***Long Degrees:***	-92
Interest End Dt:	03/24/2006 13:05:52	***Long Minutes:***	13
Active?:	No	***Long Seconds:***	4.89
Timestamp Added:	03/24/2006 13:05:52	***Lat/Long Source:***	CORE
Timestamp Updt:	11/10/2014 08:17:05	***Lat/Long Site ID:***	161357
Staff ID Updt:	RGAGLE	***Lat/Long Spatial ID:***	51070549
Source:	CORE	***Collection Date:***	04/16/2010 17:52:39
Coord Src Type:	2	***Map Scale Code:***	
Coord Src Desc:	State	***Org Name Source:***	Beth Brown
Foreign State:		***Foreign Zone:***	
FIPS County Cd1:	137		

Addr Timestmp Add:	11/10/2004 06:23:53
Addr Timestamp Lst Updt:	08/01/2007 21:44:32
Addr Updater Staff ID:	SYSTEM
Lat/Long Timestamp Added:	10/12/2005 14:28:58
Lat/Long Tmstmp Last Upd:	04/16/2010 18:19:26
Lat/Long Updater Staff ID:	MAPT_NC
Lat/Long Desc:	
Coord Coll Method Desc:	Zip Code Centroid
Coord Coll Method Code:	Z1
Comments:	

Leak Site

Complete Site Closure Date:	05/05/2004 00:00:00
Cond Closure Date:	
Release Discovered Date:	07/31/1995 00:00:00
Leaksite Type Code:	1
Leaksite Type Desc:	Leak Site
Leak Report Date:	08/17/1995 00:00:00
Tank Reg Status Code:	N
TMSP Added:	12/04/1999 14:03:49
TMSP Last Updt:	11/20/2013 08:04:17
CU Yds Excavated Qty:	77
ENF Action Begin Date:	08/30/1995 00:00:00
Residence Type Code:	
File Archive Box:	
File Archive Lot:	
Soil Digout Date:	08/21/1995 00:00:00
Staff ID Last Updt:	DBOETTC
Std Letter Response Date:	04/21/2004 00:00:00
VPIC Acres:	
VPIC Application Date:	
Contam Soils Remaining Flag:	Y
Indoor Air Collected Flag:	
LUST Trust Eligible Flag:	Yes
Offsite Contam Flag:	N
REIMB Awarded Flag:	No
Release From AST Flag:	No

Release From UST Flag:	Yes
Soil Gas Action Level Flag:	
Soil Gas Data Collected Flag:	
Sub Slab Sample Collected Flag:	
Surface Water Impact Flag:	N
Utility Project Flag:	Yes
Vapor Intrusion Action Flag:	
Vapor Intrusion Checked Flag:	
Leaksite Type Defn:	Leak site (tank and petroleum contamination).
Soil Gas Data Comments:	
Vapor Intrusion Comments:	

Leak Product Rls

Product Rls Seq ID:	44287
Leak Product Desc:	Fuel Oil 1 & 2
Leak Product Defn:	The product is fuel oil 1 & 2.

Leak GW Info

Well Type Code:	
Affected Non Res Props:	
Affected Residential Props:	
Staff ID Last Updt:	GZARLIN
Staff ID Wellhead Area Assess:	
TMSP Added:	12/04/1999 14:07:33
TMSP Last Updt:	05/05/2004 07:59:59
Water Supply Exceeds Ral Flag:	
Cleanup Goal Achieved Flag:	
DW Supply Contam Flag:	
Free Product at Close Flag:	
Free Product Observed Flag:	
Free Product Thickness:	
Ground Water Contam Flag:	N
GW Cleanup Goal:	0
GW Exceeds Cleanup Goal Flag:	
Impacted Aquifer Code:	
MTBE High Level Date:	
MTBE High Ug Per Liter Char:	
MTBE High Ug Per Liter Numb:	
MTBE Present Historically Flag:	
MTBE Present Now Flag:	
Protected Area Flag:	
PWS Well Impacted Flag:	
Sensitive Area Flag:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	1 of9	SW	0.13 / 698.45	1,418.82 / 8	Cindy Voigt Duluth MN 55811	MPCA AI

Agency Interest ID:	156770
Name (Map):	Cindy Voigt
Address (Map):	
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83852737
Longitude (Map):	-92.21792593
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Cindy Voigt
Address (Site):	

City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83852737
Longitude (Site):	-92.21792593
County (Site):	St. Louis
Name (Req):	Cindy Voigt
Address (Req):	
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83852737
Longitude (Req):	-92.21792593
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	156770-AISI0000156770	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	156770
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	2/21/2024	***TRDSQQ:***	
Tmsp Created:	11/10/2015	***Ref Code:***	GEN
User Created:	RSP	***Ref Desc:***	General Location
Tmsp Updt:	2/21/2024	***Verified:***	No
Spatial ID:		***User Updt:***	geo_nc

Name:	Cindy Voigt
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Z1
Method Desc:	Zip Code Centroid

My Neighborhood Site Details

Active FLA:	Yes	***HUC 8:***	04010201
MPCA ID:	C00042169	***Cong Distr:***	8
Program Co:	ST	***Senate Dis:***	3
Program Name:	Stormwater	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	Z1
City:	Hermantown	***Latitude:***	46.83852737
County:	St. Louis	***Longitude:***	-92.21792593

Activity:	Construction Stormwater
Addr St:	
Addr City:	Duluth
MPCA ID List:	C00042169
Program 1:	Stormwater
Name:	Cindy Voigt
Watershed :	St. Louis River
Coord Co 1:	Zip Code Centroid

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/156770

Agency Interests: File Request Details

Item ID:	156770-AISI0000156770	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	156770
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	2/21/2024	**Ref Code:**	GEN
Tmsp Created:	11/10/2015	**Ref Desc:**	General Location
User Created:	RSP	**Verified:**	No
Tmsp Updt:	2/21/2024	**User Updt:**	geo_nc
Spatial ID:			

Name: Cindy Voigt
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Z1
Method Desc: Zip Code Centroid

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	2 of9	SW	0.13 / 698.45	1,418.82 / 8	Kenwood Village Duluth MN 55811	MPCA AI

Agency Interest ID: 156624
Name (Map): Kenwood Village
Address (Map):
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83852737
Longitude (Map): -92.21792593
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Kenwood Village
Address (Site):
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83852737
Longitude (Site): -92.21792593
County (Site): St. Louis
Name (Req): Kenwood Village
Address (Req):
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.83852737
Longitude (Req): -92.21792593

County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 156624-AISI0000156624
Status: Active
Status Date:
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 2/21/2024
Tmsp Created: 10/21/2015
User Created: rparlin
Tmsp Updt: 2/21/2024
Spatial ID:
Name: Kenwood Village
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Z1
Method Desc: Zip Code Centroid

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 156624
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc

My Neighborhood Site Details

Active FLA: Yes
MPCA ID: C00042082
Program Co: ST
Program Name: Stormwater
Address: MN
Addr ZIP: 55811
City: Hermantown
County: St. Louis
Activity: Construction Stormwater
Addr St:
Addr City: Duluth
MPCA ID List: C00042082
Program 1: Stormwater
Name: Kenwood Village
Watershed : St. Louis River
Coord Co 1: Zip Code Centroid
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/156624

HUC 8: 04010201
Cong Distr: 8
Senate Dis: 3
House Dist: 3B
IC Flag: No
Coord Coll: Z1
Latitude: 46.83852737
Longitude: -92.21792593

Agency Interests: File Request Details

Item ID: 156624-AISI0000156624
Status: Active
Status Date:
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 156624
SI Cat Desc: Agency Interest
Description:
SI Designation:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	2/21/2024	**Ref Code:**	GEN
Tmsp Created:	10/21/2015	**Ref Desc:**	General Location
User Created:	rparlin	**Verified:**	No
Tmsp Updt:	2/21/2024	**User Updt:**	geo_nc
Spatial ID:			
Name:	Kenwood Village		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Z1		
Method Desc:	Zip Code Centroid		

4	**3 of9**	**SW**	**0.13 / 698.45**	**1,418.82 / 8**	**Kolar MTA Parking Lot Address Unknown Hermantown MN 55811**	**MPCA AI**

Agency Interest ID:	150854
Name (Map):	Kolar MTA Parking Lot
Address (Map):	Address Unknown
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83852737
Longitude (Map):	-92.21792593
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Kolar MTA Parking Lot
Address (Site):	Address Unknown
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83852737
Longitude (Site):	-92.21792593
County (Site):	St. Louis
Name (Req):	Kolar MTA Parking Lot
Address (Req):	Address Unknown
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83852737
Longitude (Req):	-92.21792593
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	150854-AISI0000150854	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	150854
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site

PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	2/21/2024	**TRDSQQ:**	
Tmsp Created:	11/7/2014	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	2/21/2024	**Verified:**	No
Spatial ID:		**User Updt:**	geo_nc

Name:	Kolar MTA Parking Lot
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Z1
Method Desc:	Zip Code Centroid

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00039444	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Z1
City:	Hermantown	**Latitude:**	46.83852737
County:	St. Louis	**Longitude:**	-92.21792593

Activity:	Construction Stormwater
Addr St:	Address Unknown
Addr City:	Hermantown
MPCA ID List:	C00039444
Program 1:	Stormwater
Name:	Kolar MTA Parking Lot
Watershed :	St. Louis River
Coord Co 1:	Zip Code Centroid
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/150854

Agency Interests: File Request Details

Item ID:	150854-AISI0000150854	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	150854
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	2/21/2024	**Ref Code:**	GEN
Tmsp Created:	11/7/2014	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	2/21/2024	**User Updt:**	geo_nc
Spatial ID:			

Name:	Kolar MTA Parking Lot
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Z1
Method Desc:	Zip Code Centroid

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	4 of9	SW	0.13 / 698.45	1,418.82 / 8	Richard Ave & Lindgren Rd Reconstruction Richard Ave, Lindgren Rd, Sam's Way, Evee Drive in Hermantown, MN Hermantown MN 55811	MPCA AI

Agency Interest ID:	256085
Name (Map):	Richard Ave & Lindgren Rd Reconstruction
Address (Map):	
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83852737
Longitude (Map):	-92.21792593
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	Richard Ave, Lindgren Rd, Sam's Way, Evee Drive in Hermantown, MN *** Note:many records provided by the department have a truncated LOC_DESC field.
Name (Site):	Richard Ave & Lindgren Rd Reconstruction
Address (Site):	
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83852737
Longitude (Site):	-92.21792593
County (Site):	St. Louis
Name (Req):	Richard Ave & Lindgren Rd Reconstruction
Address (Req):	
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	Richard Ave, Lindgren Rd, Sam's Way, Evee Drive in Hermantown, MN
Latitude (Req):	46.83852737
Longitude (Req):	-92.21792593
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	256085-AISI0000256085	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	256085
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/22/2023	**TRDSQQ:**	
Tmsp Created:	6/22/2023	**Ref Code:**	GEN
User Created:	RSP	**Ref Desc:**	General Location
Tmsp Updt:	6/22/2023	**Verified:**	No
Spatial ID:		**User Updt:**	geo_nc

Name:	Richard Ave & Lindgren Rd Reconstruction
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Z1
Method Desc:	Zip Code Centroid

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00067141	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Z1
City:	Hermantown	**Latitude:**	46.83852737
County:	St. Louis	**Longitude:**	-92.21792593

Activity:	Construction Stormwater
Addr St:	
Addr City:	Hermantown
MPCA ID List:	C00067141
Program 1:	Stormwater
Name:	Richard Ave & Lindgren Rd Reconstruction
Watershed :	St. Louis River
Coord Co 1:	Zip Code Centroid
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/256085

Agency Interests: File Request Details

Item ID:	256085-AISI0000256085	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	256085
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/22/2023	**Ref Code:**	GEN
Tmsp Created:	6/22/2023	**Ref Desc:**	General Location
User Created:	RSP	**Verified:**	No
Tmsp Updt:	6/22/2023	**User Updt:**	geo_nc

Spatial ID:	
Name:	Richard Ave & Lindgren Rd Reconstruction
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Z1
Method Desc:	Zip Code Centroid

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	5 of9	SW	0.13 / 698.45	1,418.82 / 8	Duluth International Airport - AOC C Duluth International Airport Duluth MN 55811	SITE ASSESSMENT

Item ID:	11034-AREA0000000005	**Federal Reg:**	
Project ID:	SA0020197	**Fed State Reg:**	
Project Type:	Site Assessment Site	**Non Reg:**	
Project ID (RAP):		**SEMS?:**	
Project Type (RAP):		**NPL:**	
Site Status:	Active / Existing	**Unpermitted Dump?:**	
Perm List of Prior?:		**Latitude:**	46.83852737
Petrol Brownfield?:		**Longitude:**	-92.21792593
VIC Site?:		**County (RAP):**	
Sf Voluntary:		**Latitude (RAP):**	
Inst Controls?:		**Longitude (RAP):**	
State Reg:			
Project Name:	Duluth International Airport - AOC C		
Site Address 1:	Duluth International Airport		
Site Address 2:			
Site City:	Duluth		
Site State:	MN		
Site Zip:	55811		
Site County:	St. Louis		
Project Name(RAP):			
Address1 (RAP):			
Address2(RAP):			
City (RAP):			
State (RAP):			
Zip (RAP):			
Project Managers:			
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

AI Name:	Taxiway B Phase 2	**DWSMA Name:**	
Activity ID:	11034	**Cong Dist:**	
SI ID:	5	**House Dist:**	
SI Cat:	AREA	**Senate Dis:**	
SI Type:	SITE	**HUC 8:**	
Site Type:	CON	**HUC 10:**	
Acreage:		**HUC 12:**	
HRS Score:		**Method Des:**	Zip Code Centroid
Score Year:		**Hydrologis:**	
DWSMA Code:		**MNTBA:**	
Loc Desc:			
HUC 8 Name:			
HUC 12 Name:			
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/11034		

Spatial Remediation Activity

AI ID:	11034	**Site Start:**	
Site ID:	SA0020197	**Remedy Imp:**	
SI ID:	5	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	
Site Close:		**NPL List:**	
Leak Discovered:		**NPL Delete:**	
Leak Reported:		**PLP List:**	
Leak Reopened:		**PLP Delist:**	
Activity No:	1	**Staff Assi:**	
Activity ID:	SIW20200001	**FF Aproved:**	
Activity Type:	Special Projects	**FF Closed:**	
Activity Code:	SIW	**Inv Comple:**	
Activity Year:	2020	**App Comple:**	
Discovered:		**Er Site Ev:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	6 of9	SW	0.13 / 698.45	1,418.82 / 8	Federal Aviation Admin Asr/rtr Old Terminal Building 2nd Floor Duluth MN 55811	UST

AI ID: 111127
Tank Type: Underground Storage Tank System
AI Name: Federal Aviation Admin Asr/rtr
Address1: Old Terminal Building 2nd Floor
Address2:
Address3:
City: Duluth
County: St. Louis
State: MN
Zip: 55811
Location Description:
Data Source: Minnesota Pollution Control Agency Tank Sites

AI Name (Map):
Address1 (Map):
Address2 (Map):
City (Map):
State (Map):
Zip (Map):
Owner: Faa/min Afs
Owner Address: 6311 34th Ave S
Owner City: Minneapolis
Owner State: MN
Owner Zip: 554502992

Tank Information

Tank Site ID: TS0005753
Tank ID: 111127-EQUI0000000001
Tank Status: Removed
Install Date: 4/18/1963
Status Change Date: 4/18/1963
Primary NAICS:
Primary SIC:
Subject Item Description: 515 gal/Diesel/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0005753
Coord Collect Meth Desc: Zip Code Centroid
On Tribal Land: N

Latitude: 46.83852737
Longitude: -92.21792593
Contractor of Tank:
Tribal Land:

Compartment Information

Compartment ID: 111127-EQUI0000000001-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: LOC
Overfill Prevention System: UST Not needed

Programs: UT
Capacity (gal): 515
Cathodic Prot Sys: Not needed
Special Use Desc: None

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: SSP
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None

Stored Product: Diesel
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Tank Information

Tank Site ID: TS0005753
Tank ID: 111127-EQUI0000000002
Tank Status: Removed
Install Date: 2/2/1976
Status Change Date: 2/2/1976
Primary NAICS:
Primary SIC:
Subject Item Description: 1,000 gal/Diesel/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0005753
Coord Collect Meth Desc: Zip Code Centroid
On Tribal Land: N

Latitude: 46.83852737
Longitude: -92.21792593
Contractor of Tank:
Tribal Land:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Compartment Information

Compartment ID:	111127-EQUI0000000002-1	***Programs:***	UT
Compartment No:	1	***Capacity (gal):***	1000
Tank Wall Type:	Single	***Cathodic Prot Sys:***	Not needed
Tank Material:	Bare/Paint/Asph Coat Steel	***Special Use Desc:***	None
Subject Item Designation:	ASR		
Overfill Prevention System:	UST Not needed		

Pipe Information

Pipe Wall Type:	Single	***Stored Product:***	Diesel
Pipe Leak Detection:	SSP	***Tank Leak Detection:***	UST Not needed
Pipe Material:	Steel/Iron	***Vapor Recovery Flag:***	No
Pipe Corrosion Protection:	None		

Tank Information

Tank Site ID:	TS0005753	***Latitude:***	46.83852737
Tank ID:	111127-EQUI0000000003	***Longitude:***	-92.21792593
Tank Status:	Removed	***Contractor of Tank:***	
Install Date:	8/10/1976	***Tribal Land:***	
Status Change Date:	8/10/1976		
Primary NAICS:			
Primary SIC:			
Subject Item Description:	2,000 gal/Diesel/Removed		
Tanks Url:	https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0005753		
Coord Collect Meth Desc:	Zip Code Centroid		
On Tribal Land:	N		

Compartment Information

Compartment ID:	111127-EQUI0000000003-1	***Programs:***	UT
Compartment No:	1	***Capacity (gal):***	2000
Tank Wall Type:	Single	***Cathodic Prot Sys:***	Not needed
Tank Material:	Bare/Paint/Asph Coat Steel	***Special Use Desc:***	None
Subject Item Designation:	ATB		
Overfill Prevention System:	UST Not needed		

Pipe Information

Pipe Wall Type:	Single	***Stored Product:***	Diesel
Pipe Leak Detection:	SSP	***Tank Leak Detection:***	UST Not needed
Pipe Material:	Steel/Iron	***Vapor Recovery Flag:***	No
Pipe Corrosion Protection:	None		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	7 of9	SW	0.13 / 698.45	1,418.82 / 8	Federal Aviation Admin Dlh/vortac Old Terminal Building 2nd Floor Duluth MN 55811	UST

AI ID:	111129	***AI Name (Map):***	
Tank Type:	Underground Storage Tank System	***Address1 (Map):***	
AI Name:	Federal Aviation Admin Dlh/vortac	***Address2 (Map):***	
Address1:	Old Terminal Building 2nd Floor	***City (Map):***	
Address2:		***State (Map):***	
Address3:		***Zip (Map):***	
City:	Duluth	***Owner:***	Faa/min Afs
County:	St. Louis	***Owner Address:***	6311 34th Ave S
State:	MN	***Owner City:***	Minneapolis
Zip:	55811	***Owner State:***	MN
Location Description:		***Owner Zip:***	554502992
Data Source:	Minnesota Pollution Control Agency Tank Sites		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Tank Information

Tank Site ID:	TS0005755	***Latitude:***	46.83852737
Tank ID:	111129-EQUI0000000001	***Longitude:***	-92.21792593
Tank Status:	Removed	***Contractor of Tank:***	
Install Date:	8/12/1962	***Tribal Land:***	
Status Change Date:	6/27/1994		
Primary NAICS:			
Primary SIC:			
Subject Item Description:	515 gal/Gasoline/Removed		
Tanks Url:	https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0005755		
Coord Collect Meth Desc:	Zip Code Centroid		
On Tribal Land:	N		

Compartment Information

Compartment ID:	111129-EQUI0000000001-1	***Programs:***	UT
Compartment No:	1	***Capacity (gal):***	515
Tank Wall Type:	Single	***Cathodic Prot Sys:***	Not needed
Tank Material:	Bare/Paint/Asph Coat Steel	***Special Use Desc:***	None
Subject Item Designation:	VOR		
Overfill Prevention System:	UST Not needed		

Pipe Information

Pipe Wall Type:	Single	***Stored Product:***	Gasoline
Pipe Leak Detection:	SSP	***Tank Leak Detection:***	UST Not needed
Pipe Material:	Steel/Iron	***Vapor Recovery Flag:***	No
Pipe Corrosion Protection:	None		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	8 of9	SW	0.13 / 698.45	1,418.82 / 8	Federal Aviation Admin Rcag Old Terminal Building 2nd Floor Duluth MN 55811	UST

AI ID:	111130	***AI Name (Map):***	
Tank Type:	Underground Storage Tank System	***Address1 (Map):***	
AI Name:	Federal Aviation Admin Rcag	***Address2 (Map):***	
Address1:	Old Terminal Building 2nd Floor	***City (Map):***	
Address2:		***State (Map):***	
Address3:		***Zip (Map):***	
City:	Duluth	***Owner:***	Faa/min Afs
County:	St. Louis	***Owner Address:***	6311 34th Ave S
State:	MN	***Owner City:***	Minneapolis
Zip:	55811	***Owner State:***	MN
Location Description:		***Owner Zip:***	554502992
Data Source:	Minnesota Pollution Control Agency Tank Sites		

Tank Information

Tank Site ID:	TS0005756	***Latitude:***	46.83852737
Tank ID:	111130-EQUI0000000001	***Longitude:***	-92.21792593
Tank Status:	Removed	***Contractor of Tank:***	
Install Date:	1/31/1958	***Tribal Land:***	
Status Change Date:	1/31/1958		
Primary NAICS:			
Primary SIC:			
Subject Item Description:	515 gal/Gasoline/Removed		
Tanks Url:	https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0005756		
Coord Collect Meth Desc:	Zip Code Centroid		
On Tribal Land:	N		

Compartment Information

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Compartment ID: 111130-EQUI0000000001-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: RCA
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 515
Cathodic Prot Sys: Not needed
Special Use Desc: None

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: SSP
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None
Stored Product: Gasoline
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	9 of9	SW	0.13 / 698.45	1,418.82 / 8	Zuck Property Island Beach Ln Duluth MN 55811	UST

AI ID: 126921
Tank Type: Underground Storage Tank System
AI Name: Zuck Property
Address1: Island Beach Ln
Address2:
Address3:
City: Duluth
County: St. Louis
State: MN
Zip: 55811
Location Description:
Data Source: Minnesota Pollution Control Agency Tank Sites
AI Name (Map):
Address1 (Map):
Address2 (Map):
City (Map):
State (Map):
Zip (Map):
Owner:
Owner Address:
Owner City:
Owner State:
Owner Zip:

Tank Information

Tank Site ID: TS0020843
Tank ID: 126921-EQUI0000000001
Tank Status: Removed
Install Date: 10/26/1998
Status Change Date: 10/26/1998
Primary NAICS:
Primary SIC:
Subject Item Description: 3,000 gal/Fuel Oil/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0020843
Coord Collect Meth Desc: Zip Code Centroid
On Tribal Land: N
Latitude: 46.83852737
Longitude: -92.21792593
Contractor of Tank:
Tribal Land:

Compartment Information

Compartment ID: 126921-EQUI0000000001-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: 1
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 3000
Cathodic Prot Sys: Not needed
Special Use Desc: Heating

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: NONE
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None
Stored Product: Fuel Oil
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
5	1 of1	ESE	0.16 / 826.55	1,410.66 / 0	MN Air National Guard See location description Duluth MN 55811	SHWS

Item ID:	191334-AREA0000000001	**Project Name:**	MN Air National Guard
Project ID:	LS0013038	**Project Type:**	Integrated Remediation
NPL:		**Latitude:**	46.83865383
PermList of Prior?:		**Longitude:**	-92.20729583
Petrol Brownfield?:		**SEMS?:**	
VIC Site?:		**Unpermitted Dump?:**	
Federal Reg:		**Fed State Reg:**	
State Reg:		**Non Reg:**	
Sf Voluntary:		**Inst Controls?:**	
Project Name(RAP):		**Address1 (RAP):**	
Project Type (RAP):		**Address2(RAP):**	
Latitude (RAP):		**City (RAP):**	
Longitude (RAP):		**State (RAP):**	
Project ID (RAP):		**Zip (RAP):**	
Site Status:	Closed	**County (RAP):**	
Data Source:	MPCA Remediation Sites		
Site Address 1:	See location description		
Site Address 2:			
Site City:	Duluth		
Site State:	MN		
Site Zip:	55811		
Site County:	St. Louis		
Project Managers:	Laura Hysjulien (no longer at MPCA)		

Remediation Sites Details

Activity ID:	191334	**SI Cat:**	AREA
SI ID:	1	**AI Name:**	MN Army National Guard
SI Type:	INRM	**Site Type:**	CON
Acreage:		**Cong Dist:**	8
House Dist:	8B	**Senate Dis:**	8
DWSMA Code:		**Method Des:**	Digitized - MPCA internal map
DWSMA Name:		**HUC 8:**	04010201
HRS Score:		**HUC 10:**	0401020116
Score Year:		**HUC 12:**	040102011604
MNTBA:			
Loc Desc:	Main Site Building		
Huc8 Name:	St. Louis River		
Huc12 Name:	Saint Louis River		
Hydrologis:	Mark Toso (former)		
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/191334		

Spatial Remediation Activity

AI ID:	191334	**Discovered:**	2000-05-15 00:00:00
Activity No:	1	**Site Start:**	2000-05-15 00:00:00
Activity ID:	SIW19990001	**Remedy Imp:**	
Site ID:	LS0013038	**Remedy Sel:**	
SI ID:	1	**ASMT Compl:**	
SI Cat:	AREA	**NPL Delete:**	
Activity Code:	SIW	**PLP List:**	
Activity Year:	1999	**PLP Delist:**	
Received:		**Staff Assi:**	
NPL List:		**FF Aproved:**	
NFA Decisi:		**FF Closed:**	
Site Close:	2000-05-15 00:00:00	**Inv Comple:**	
Leak Discovered:		**App Comple:**	
Leak Reported:		**Er Site Ev:**	
Leak Reopened:			
Activity Type:	Site Investigation		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
6	1 of1	ESE	0.16 / 827.32	1,410.66 / 0	MN Army National Guard See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	191334
Name (Map):	MN Army National Guard
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8386586
Longitude (Map):	-92.2072886
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	MN Army National Guard
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8386586
Longitude (Site):	-92.2072886
County (Site):	St. Louis
Name (Req):	MN Army National Guard
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8386586
Longitude (Req):	-92.2072886
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	191334-AISI0000191334	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Integrated Rem	**SI ID:**	191334
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	4/25/2016	**TRDSQQ:**	
Tmsp Created:	3/11/2003	**Ref Code:**	GEN
User Created:	DELTA_M_R2	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	89165	**User Updt:**	spatial_
Name:	MN Army National Guard		
Program List:	IR		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

My Neighborhood Site Details

Active FLA:	Yes	***HUC 8:***	04010201
MPCA ID:	LS0013038	***Cong Distr:***	8
Program Co:	SR	***Senate Dis:***	8
Program Name:	Investigation and Cleanup	***House Dist:***	8B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	DM
City:	Duluth	***Latitude:***	46.8386586
County:	St. Louis	***Longitude:***	-92.2072886
Activity:	Integrated Remediation		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	LS0013038		
Program 1:	Investigation and Cleanup		
Name:	MN Army National Guard		
Watershed :	St. Louis River		
Coord Co 1:	Digitized - MPCA internal map		
Activity L:	Integrated Remediation		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/191334		

Agency Interests: File Request Details

Item ID:	191334-AISI0000191334	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Integrated Rem	***SI ID:***	191334
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	8B
Section:		***Senate Dist:***	8
Quarters:		***TRDSQQ:***	
Collection Date:	4/25/2016	***Ref Code:***	GEN
Tmsp Created:	3/11/2003	***Ref Desc:***	General Location
User Created:	DELTA_M_R2	***Verified:***	No
Tmsp Updt:	4/26/2016	***User Updt:***	spatial_
Spatial ID:	89165		
Name:	MN Army National Guard		
Program List:	IR		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	1 of119	WSW	0.16 / 827.41	1,419.81 / 9	Taxilane, Aviation Apron, GA Hangers See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	122703
Name (Map):	Taxilane, Aviation Apron, GA Hangers
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis

County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Taxilane, Aviation Apron, GA Hangers
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Taxilane, Aviation Apron, GA Hangers
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	122703-AISI0000122703	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	2012-08-10 11:57:07	***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	122703
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	6/30/2016	***TRDSQQ:***	
Tmsp Created:	6/13/2008	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	6/30/2016	***Verified:***	No
Spatial ID:	54555496	***User Updt:***	geo_nc

Name:	Taxilane, Aviation Apron, GA Hangers
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	C00025688	***Cong Distr:***	8
Program Co:	ST	***Senate Dis:***	3
Program Name:	Stormwater	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	Q2
City:	Hermantown	***Latitude:***	46.83837374
County:	St. Louis	***Longitude:***	-92.21965346

Activity:	Construction Stormwater
Addr St:	See location description
Addr City:	Duluth
MPCA ID List:	C00025688

Program 1:	Stormwater
Name:	Taxilane, Aviation Apron, GA Hangers
Watershed :	St. Louis River
Coord Co 1:	Public Land Survey-Two Quarter
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/122703

Agency Interests: File Request Details

Item ID:	122703-AISI0000122703	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	8/10/2012	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	122703
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	6/13/2008	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	54555496		
Name:	Taxilane, Aviation Apron, GA Hangers		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	2 of119	WSW	0.16 / 827.41	1,419.81 / 9	Duluth Technology Park I See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	124790
Name (Map):	Duluth Technology Park I
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Duluth Technology Park I
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Duluth Technology Park I
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN

ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	124790-AISI0000124790	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2009-07-07 14:36:36	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	124790
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	5/7/2007	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	52795425	**User Updt:**	geo_nc
Name:	Duluth Technology Park I		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00021827	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00021827		
Program 1:	Stormwater		
Name:	Duluth Technology Park I		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/124790		

Agency Interests: File Request Details

Item ID:	124790-AISI0000124790	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	7/7/2009	**SI Cat:**	AISI

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program:	Const Stormwater	**SI ID:**	124790
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	5/7/2007	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	52795425		
Name:	Duluth Technology Park I		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

7	3 of119	WSW	0.16 / 827.41	1,419.81 / 9	**Lavaque Rd Bypass Storage Buildings** **See location description** **Hermantown MN 55811**	MPCA AI

Agency Interest ID:	91102
Name (Map):	Lavaque Rd Bypass Storage Buildings
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Lavaque Rd Bypass Storage Buildings
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Lavaque Rd Bypass Storage Buildings
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	91102-AISI0000091102	**Int Doc ID:**	0

Status:	Inactive	**SI Type:**	CON
Status Date:	2007-05-10 11:42:31	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	91102
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	8/22/2003	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	90779	**User Updt:**	geo_nc

Name:	Lavaque Rd Bypass Storage Buildings
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00010534	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346

Activity:	Construction Stormwater
Addr St:	See location description
Addr City:	Hermantown
MPCA ID List:	C00010534
Program 1:	Stormwater
Name:	Lavaque Rd Bypass Storage Buildings
Watershed :	St. Louis River
Coord Co 1:	Public Land Survey-Two Quarter
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/91102

Agency Interests: File Request Details

Item ID:	91102-AISI0000091102	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	5/10/2007	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	91102
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	8/22/2003	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	90779		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Name:	Lavaque Rd Bypass Storage Buildings
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	4 of119	WSW	0.16 / 827.41	1,419.81 / 9	Fountain Gate Townhomes See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	84118
Name (Map):	Fountain Gate Townhomes
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Fountain Gate Townhomes
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Fountain Gate Townhomes
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	84118-AISI0000084118	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2008-10-14 14:40:03	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	84118
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	11/8/2004	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No

Spatial ID:	98086	**User Updt:**	geo_nc
Name:	Fountain Gate Townhomes		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00013999	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00013999		
Program 1:	Stormwater		
Name:	Fountain Gate Townhomes		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/84118		

Agency Interests: File Request Details

Item ID:	84118-AISI0000084118	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	10/14/2008	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	84118
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	11/8/2004	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	98086		
Name:	Fountain Gate Townhomes		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	5 of119	WSW	0.16 / 827.41	1,419.81 / 9	Air National Guard By-pass Taxi See location description Duluth MN 55811	MPCA AI

Agency Interest ID: 102575
Name (Map): Air National Guard By-pass Taxi
Address (Map): See location description
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Air National Guard By-pass Taxi
Address (Site): See location description
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): Air National Guard By-pass Taxi
Address (Req): See location description
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.83837374
Longitude (Req): -92.21965346
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 102575-AISI0000102575
Status: Inactive
Status Date: 2008-08-08 06:50:23
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 6/30/2016
Tmsp Created: 11/28/2005
User Created: DELTA_M_R1
Tmsp Updt: 6/30/2016
Spatial ID: 50648242
Name: Air National Guard By-pass Taxi
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 102575
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	C00017163	***Cong Distr:***	8
Program Co:	ST	***Senate Dis:***	3
Program Name:	Stormwater	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	Q2
City:	Hermantown	***Latitude:***	46.83837374
County:	St. Louis	***Longitude:***	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00017163		
Program 1:	Stormwater		
Name:	Air National Guard By-pass Taxi		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/102575		

Agency Interests: File Request Details

Item ID:	102575-AISI0000102575	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	8/8/2008	***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	102575
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B
Section:		***Senate Dist:***	3
Quarters:		***TRDSQQ:***	
Collection Date:	6/30/2016	***Ref Code:***	GEN
Tmsp Created:	11/28/2005	***Ref Desc:***	General Location
User Created:	DELTA_M_R1	***Verified:***	No
Tmsp Updt:	6/30/2016	***User Updt:***	geo_nc
Spatial ID:	50648242		
Name:	Air National Guard By-pass Taxi		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	6 of119	WSW	0.16 / 827.41	1,419.81 / 9	Cedar Ridge Dr Const. Homesites See location description Hermantown MN 55811	MPCA AI

Agency Interest ID:	103974
Name (Map):	Cedar Ridge Dr Const. Homesites
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis

County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Cedar Ridge Dr Const. Homesites
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Cedar Ridge Dr Const. Homesites
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	103974-AISI0000103974	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	103974
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	6/30/2016	***TRDSQQ:***	
Tmsp Created:	12/19/2005	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	6/30/2016	***Verified:***	No
Spatial ID:	50648475	***User Updt:***	geo_nc
Name:	Cedar Ridge Dr Const. Homesites		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	Yes	***HUC 8:***	04010201
MPCA ID:	C00017364	***Cong Distr:***	8
Program Co:	ST	***Senate Dis:***	3
Program Name:	Stormwater	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	Q2
City:	Hermantown	***Latitude:***	46.83837374
County:	St. Louis	***Longitude:***	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Hermantown		
MPCA ID List:	C00017364		

Program 1:	Stormwater
Name:	Cedar Ridge Dr Const. Homesites
Watershed :	St. Louis River
Coord Co 1:	Public Land Survey-Two Quarter
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/103974

Agency Interests: File Request Details

Item ID:	103974-AISI0000103974	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	103974
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	12/19/2005	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	50648475		
Name:	Cedar Ridge Dr Const. Homesites		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	7 of119	WSW	0.16 / 827.41	1,419.81 / 9	TH 53 Commercial Devel See location description Hermantown MN 55811	MPCA AI

Agency Interest ID:	127064
Name (Map):	TH 53 Commercial Devel
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	TH 53 Commercial Devel
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	TH 53 Commercial Devel
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN

ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	127064-AISI0000127064	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	127064
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	6/26/2007	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	53196019	**User Updt:**	geo_nc

Name:	TH 53 Commercial Devel
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00022840	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346

Activity:	Construction Stormwater
Addr St:	See location description
Addr City:	Hermantown
MPCA ID List:	C00022840
Program 1:	Stormwater
Name:	TH 53 Commercial Devel
Watershed :	St. Louis River
Coord Co 1:	Public Land Survey-Two Quarter
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/127064

Agency Interests: File Request Details

Item ID:	127064-AISI0000127064	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program:	Const Stormwater	**SI ID:**	127064
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	6/26/2007	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	53196019		
Name:	TH 53 Commercial Devel		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

7	8 of119	WSW	0.16 / 827.41	1,419.81 / 9	SP 6925-118 (TH 61) See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	79051
Name (Map):	SP 6925-118 (TH 61)
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	SP 6925-118 (TH 61)
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	SP 6925-118 (TH 61)
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	79051-AISI0000079051	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON

Status Date:	2006-02-24 15:19:57	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	79051
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	7/19/2002	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	76417	**User Updt:**	geo_nc
Name:	SP 6925-118 (TH 61)		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00008880	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00008880		
Program 1:	Stormwater		
Name:	SP 6925-118 (TH 61)		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/79051		

Agency Interests: File Request Details

Item ID:	79051-AISI0000079051	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2/24/2006	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	79051
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	7/19/2002	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	76417		
Name:	SP 6925-118 (TH 61)		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	9 of119	WSW	0.16 / 827.41	1,419.81 / 9	Vineyard Church - New Facility Address Unknown Duluth MN 55811	MPCA AI

Agency Interest ID:	124003
Name (Map):	Vineyard Church - New Facility
Address (Map):	Address Unknown
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Vineyard Church - New Facility
Address (Site):	Address Unknown
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Vineyard Church - New Facility
Address (Req):	Address Unknown
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	124003-AISI0000124003	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2009-12-15 11:44:17	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	124003
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	10/4/2007	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	53721480	**User Updt:**	geo_nc

Name:	Vineyard Church - New Facility
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00024098	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346

Activity:	Construction Stormwater
Addr St:	Address Unknown
Addr City:	Duluth
MPCA ID List:	C00024098
Program 1:	Stormwater
Name:	Vineyard Church - New Facility
Watershed :	St. Louis River
Coord Co 1:	Public Land Survey-Two Quarter
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/124003

Agency Interests: File Request Details

Item ID:	124003-AISI0000124003	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	12/15/2009	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	124003
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	10/4/2007	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	53721480		

Name:	Vineyard Church - New Facility
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	10 of119	WSW	0.16 / 827.41	1,419.81 / 9	CR 266 - Laine Rd Address Unknown Duluth MN 55811	MPCA AI

Agency Interest ID: 119300
Name (Map): CR 266 - Laine Rd
Address (Map): Address Unknown
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): CR 266 - Laine Rd
Address (Site): Address Unknown
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): CR 266 - Laine Rd
Address (Req): Address Unknown
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.83837374
Longitude (Req): -92.21965346
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 119300-AISI0000119300
Status: Inactive
Status Date: 2011-08-17 13:45:03
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 6/30/2016
Tmsp Created: 7/11/2008
User Created: DELTA_M_R1
Tmsp Updt: 6/30/2016
Spatial ID: 54665565
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 119300
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc
Name: CR 266 - Laine Rd
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00026006	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	Address Unknown		
Addr City:	Duluth		
MPCA ID List:	C00026006		
Program 1:	Stormwater		
Name:	CR 266 - Laine Rd		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/119300		

Agency Interests: File Request Details

Item ID:	119300-AISI0000119300	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	8/17/2011	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	119300
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	7/11/2008	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	54665565		
Name:	CR 266 - Laine Rd		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	11 of119	WSW	0.16 / 827.41	1,419.81 / 9	SP 6915-125 (TH53) See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	93988
Name (Map):	SP 6915-125 (TH53)
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137

Loc Desc (Map):	
Name (Site):	SP 6915-125 (TH53)
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	SP 6915-125 (TH53)
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	93988-AISI0000093988	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2010-03-12 11:14:05	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	93988
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	6/17/2005	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	100929	**User Updt:**	geo_nc
Name:	SP 6915-125 (TH53)		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00015295	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00015295		
Program 1:	Stormwater		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Name: SP 6915-125 (TH53)
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/93988

Agency Interests: File Request Details

Item ID:	93988-AISI0000093988	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	3/12/2010	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	93988
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	6/17/2005	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	100929		

Name: SP 6915-125 (TH53)
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	12 of119	WSW	0.16 / 827.41	1,419.81 / 9	Swanson & Youngdale, Inc See location description Duluth MN 55811	MPCA AI

Agency Interest ID: 103374
Name (Map): Swanson & Youngdale, Inc
Address (Map): See location description
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Swanson & Youngdale, Inc
Address (Site): See location description
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): Swanson & Youngdale, Inc
Address (Req): See location description
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811

Loc Desc (Req):
Latitude (Req): 46.83837374
Longitude (Req): -92.21965346
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 103374-AISI0000103374
Status: Inactive
Status Date: 2007-07-27 15:57:50
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 6/30/2016
Tmsp Created: 10/31/2005
User Created: DELTA_M_R1
Tmsp Updt: 6/30/2016
Spatial ID: 103405
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 103374
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc
Name: Swanson & Youngdale, Inc
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA: No
MPCA ID: C00016909
Program Co: ST
Program Name: Stormwater
Address: MN
Addr ZIP: 55811
City: Hermantown
County: St. Louis
HUC 8: 04010201
Cong Distr: 8
Senate Dis: 3
House Dist: 3B
IC Flag: No
Coord Coll: Q2
Latitude: 46.83837374
Longitude: -92.21965346
Activity: Construction Stormwater
Addr St: See location description
Addr City: Duluth
MPCA ID List: C00016909
Program 1: Stormwater
Name: Swanson & Youngdale, Inc
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/103374

Agency Interests: File Request Details

Item ID: 103374-AISI0000103374
Status: Inactive
Status Date: 7/27/2007
Program: Const Stormwater
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 103374

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	10/31/2005	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	103405		
Name:	Swanson & Youngdale, Inc		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	13 of119	WSW	0.16 / 827.41	1,419.81 / 9	Hermantown Sanitary Imp District 426 See location description Hermantown MN 55811	MPCA AI

Agency Interest ID:	122094
Name (Map):	Hermantown Sanitary Imp District 426
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Hermantown Sanitary Imp District 426
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Hermantown Sanitary Imp District 426
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	122094-AISI0000122094	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON

Status Date:	2008-10-21 13:54:27	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	122094
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	5/23/2007	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	52890702	**User Updt:**	geo_nc
Name:	Hermantown Sanitary Imp District 426		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00022081	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Hermantown		
MPCA ID List:	C00022081		
Program 1:	Stormwater		
Name:	Hermantown Sanitary Imp District 426		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/122094		

Agency Interests: File Request Details

Item ID:	122094-AISI0000122094	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	10/21/2008	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	122094
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	5/23/2007	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	52890702		
Name:	Hermantown Sanitary Imp District 426		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

7	14 of119	WSW	0.16 / 827.41	1,419.81 / 9	Country Inn & Suites Hermantown See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	86815
Name (Map):	Country Inn & Suites Hermantown
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Country Inn & Suites Hermantown
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Country Inn & Suites Hermantown
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	86815-AISI0000086815	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2005-05-17 14:13:22	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	86815
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	10/31/2003	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	91346	**User Updt:**	geo_nc

Name:	Country Inn & Suites Hermantown
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00010889	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346

Activity:	Construction Stormwater
Addr St:	See location description
Addr City:	Duluth
MPCA ID List:	C00010889
Program 1:	Stormwater
Name:	Country Inn & Suites Hermantown
Watershed :	St. Louis River
Coord Co 1:	Public Land Survey-Two Quarter
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/86815

Agency Interests: File Request Details

Item ID:	86815-AISI0000086815	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	5/17/2005	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	86815
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	10/31/2003	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	91346		

Name:	Country Inn & Suites Hermantown
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	15 of119	WSW	0.16 / 827.41	1,419.81 / 9	Rehabilitation of Taxiway A See location description Duluth MN 55811	MPCA AI

Agency Interest ID: 93240
Name (Map): Rehabilitation of Taxiway A
Address (Map): See location description
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Rehabilitation of Taxiway A
Address (Site): See location description
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): Rehabilitation of Taxiway A
Address (Req): See location description
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.83837374
Longitude (Req): -92.21965346
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 93240-AISI0000093240
Status: Inactive
Status Date: 2005-09-13 11:16:07
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 6/30/2016
Tmsp Created: 8/14/2003
User Created: DELTA_M_R1
Tmsp Updt: 6/30/2016
Spatial ID: 90685
Name: Rehabilitation of Taxiway A
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 93240
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc

My Neighborhood Site Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00010498	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00010498		
Program 1:	Stormwater		
Name:	Rehabilitation of Taxiway A		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/93240		

Agency Interests: File Request Details

Item ID:	93240-AISI0000093240	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	9/13/2005	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	93240
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	8/14/2003	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	90685		
Name:	Rehabilitation of Taxiway A		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	16 of119	WSW	0.16 / 827.41	1,419.81 / 9	Hermantown Trunk Sewer Phase I See location description Hermantown MN 55811	MPCA AI

Agency Interest ID:	34596
Name (Map):	Hermantown Trunk Sewer Phase I
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137

Loc Desc (Map):	
Name (Site):	Hermantown Trunk Sewer Phase I
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Hermantown Trunk Sewer Phase I
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	34596-AISI0000034596	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2007-10-08 08:42:47	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	34596
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	6/7/2000	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	51919	**User Updt:**	geo_nc
Name:	Hermantown Trunk Sewer Phase I		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00006827	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Hermantown		
MPCA ID List:	C00006827		
Program 1:	Stormwater		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Name: Hermantown Trunk Sewer Phase I
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/34596

Agency Interests: File Request Details

Item ID:	34596-AISI0000034596	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	10/8/2007	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	34596
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	6/7/2000	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	51919		

Name: Hermantown Trunk Sewer Phase I
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	17 of119	WSW	0.16 / 827.41	1,419.81 / 9	Runway 9/27 Paved Shoulder Recon. Ph 1 See location description Duluth MN 55811	MPCA AI

Agency Interest ID: 107502
Name (Map): Runway 9/27 Paved Shoulder Recon. Ph 1
Address (Map): See location description
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Runway 9/27 Paved Shoulder Recon. Ph 1
Address (Site): See location description
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): Runway 9/27 Paved Shoulder Recon. Ph 1
Address (Req): See location description
City (Req): Duluth
State (Req): MN

ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	107502-AISI0000107502	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2008-08-08 06:56:35	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	107502
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	8/31/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	51383560	**User Updt:**	geo_nc
Name:	Runway 9/27 Paved Shoulder Recon. Ph 1		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00019837	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00019837		
Program 1:	Stormwater		
Name:	Runway 9/27 Paved Shoulder Recon. Ph 1		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/107502		

Agency Interests: File Request Details

Item ID:	107502-AISI0000107502	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	8/8/2008	**SI Cat:**	AISI

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program:	Const Stormwater	**SI ID:**	107502
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	8/31/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	51383560		
Name:	Runway 9/27 Paved Shoulder Recon. Ph 1		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

7	18 of119	WSW	0.16 / 827.41	1,419.81 / 9	SP 6915-122 (TH53) See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	84349
Name (Map):	SP 6915-122 (TH53)
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	SP 6915-122 (TH53)
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	SP 6915-122 (TH53)
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	84349-AISI0000084349	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON

Status Date:	2007-07-27 15:55:33	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	84349
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	8/16/2004	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	96658	**User Updt:**	geo_nc

Name:	SP 6915-122 (TH53)
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00013121	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346

Activity:	Construction Stormwater
Addr St:	See location description
Addr City:	Duluth
MPCA ID List:	C00013121
Program 1:	Stormwater
Name:	SP 6915-122 (TH53)
Watershed :	St. Louis River
Coord Co 1:	Public Land Survey-Two Quarter
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/84349

Agency Interests: File Request Details

Item ID:	84349-AISI0000084349	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	7/27/2007	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	84349
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	8/16/2004	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	96658		
Name:	SP 6915-122 (TH53)		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

7	**19 of119**	**WSW**	**0.16 / 827.41**	**1,419.81 / 9**	**Saint Scholastica West Parking Lot** **See location description** **Duluth MN 55811**	**MPCA AI**

Agency Interest ID:	83314
Name (Map):	Saint Scholastica West Parking Lot
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Saint Scholastica West Parking Lot
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Saint Scholastica West Parking Lot
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	83314-AISI0000083314	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2006-10-02 08:11:21	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	83314
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	7/13/2004	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No

Spatial ID:	95487	**User Updt:**	geo_nc
Name:	Saint Scholastica West Parking Lot		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00012837	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00012837		
Program 1:	Stormwater		
Name:	Saint Scholastica West Parking Lot		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/83314		

Agency Interests: File Request Details

Item ID:	83314-AISI0000083314	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	10/2/2006	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	83314
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	7/13/2004	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	95487		
Name:	Saint Scholastica West Parking Lot		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	20 of119	WSW	0.16 / 827.41	1,419.81 / 9	Aarons Valley-Chambersburg Dr See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	36420
Name (Map):	Aarons Valley-Chambersburg Dr
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Aarons Valley-Chambersburg Dr
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Aarons Valley-Chambersburg Dr
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	36420-AISI0000036420	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2006-02-24 14:12:36	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	36420
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	5/11/2000	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	51235	**User Updt:**	geo_nc
Name:	Aarons Valley-Chambersburg Dr		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	C00006745	***Cong Distr:***	8
Program Co:	ST	***Senate Dis:***	3
Program Name:	Stormwater	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	Q2
City:	Hermantown	***Latitude:***	46.83837374
County:	St. Louis	***Longitude:***	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00006745		
Program 1:	Stormwater		
Name:	Aarons Valley-Chambersburg Dr		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/36420		

Agency Interests: File Request Details

Item ID:	36420-AISI0000036420	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	2/24/2006	***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	36420
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B
Section:		***Senate Dist:***	3
Quarters:		***TRDSQQ:***	
Collection Date:	6/30/2016	***Ref Code:***	GEN
Tmsp Created:	5/11/2000	***Ref Desc:***	General Location
User Created:	DELTA_M_R1	***Verified:***	No
Tmsp Updt:	6/30/2016	***User Updt:***	geo_nc
Spatial ID:	51235		
Name:	Aarons Valley-Chambersburg Dr		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	***21 of119***	***WSW***	***0.16 / 827.41***	***1,419.81 / 9***	***Saturn of Hermantown See location description Hermantown MN 55811***	***MPCA AI***

Agency Interest ID:	105960
Name (Map):	Saturn of Hermantown
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis

County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Saturn of Hermantown
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Saturn of Hermantown
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	105960-AISI0000105960	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	2009-06-26 09:04:59	***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	105960
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	6/30/2016	***TRDSQQ:***	
Tmsp Created:	8/7/2006	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	6/30/2016	***Verified:***	No
Spatial ID:	51302256	***User Updt:***	geo_nc
Name:	Saturn of Hermantown		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	C00019566	***Cong Distr:***	8
Program Co:	ST	***Senate Dis:***	3
Program Name:	Stormwater	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	Q2
City:	Hermantown	***Latitude:***	46.83837374
County:	St. Louis	***Longitude:***	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Hermantown		
MPCA ID List:	C00019566		

Program 1:	Stormwater
Name:	Saturn of Hermantown
Watershed :	St. Louis River
Coord Co 1:	Public Land Survey-Two Quarter
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/105960

Agency Interests: File Request Details

Item ID:	105960-AISI0000105960	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	6/26/2009	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	105960
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	8/7/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	51302256		
Name:	Saturn of Hermantown		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	22 of119	WSW	0.16 / 827.41	1,419.81 / 9	SP 6917-102 (TH 53) See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	57726
Name (Map):	SP 6917-102 (TH 53)
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	SP 6917-102 (TH 53)
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	SP 6917-102 (TH 53)
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN

ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	57726-AISI0000057726	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2005-11-08 21:10:12	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	57726
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	7/18/2001	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	57637	**User Updt:**	geo_nc
Name:	SP 6917-102 (TH 53)		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00007871	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00007871		
Program 1:	Stormwater		
Name:	SP 6917-102 (TH 53)		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/57726		

Agency Interests: File Request Details

Item ID:	57726-AISI0000057726	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	11/8/2005	**SI Cat:**	AISI

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program:	Const Stormwater	**SI ID:**	57726
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	7/18/2001	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	57637		
Name:	SP 6917-102 (TH 53)		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

7	***23 of119***	***WSW***	***0.16 / 827.41***	***1,419.81 / 9***	***Richard McNutt Fill Site Address Unknown Hermantown MN 55811***	***MPCA AI***

Agency Interest ID:	136718
Name (Map):	Richard McNutt Fill Site
Address (Map):	Address Unknown
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Richard McNutt Fill Site
Address (Site):	Address Unknown
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Richard McNutt Fill Site
Address (Req):	Address Unknown
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	136718-AISI0000136718	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON

Status Date:	2009-12-15 11:38:38	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	136718
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	9/9/2008	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	54944705	**User Updt:**	geo_nc

Name: Richard McNutt Fill Site
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00026505	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346

Activity: Construction Stormwater
Addr St: Address Unknown
Addr City: Hermantown
MPCA ID List: C00026505
Program 1: Stormwater
Name: Richard McNutt Fill Site
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/136718

Agency Interests: File Request Details

Item ID:	136718-AISI0000136718	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	12/15/2009	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	136718
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	9/9/2008	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	54944705		

Name: Richard McNutt Fill Site

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	24 of119	WSW	0.16 / 827.41	1,419.81 / 9	Federal Aviation Admin Asr/rtr Old Terminal Building 2nd Floor Duluth MN 55811	MPCA AI

Agency Interest ID:	111127
Name (Map):	Federal Aviation Admin Asr/rtr
Address (Map):	Old Terminal Building 2nd Floor
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Federal Aviation Admin Asr/rtr
Address (Site):	Old Terminal Building 2nd Floor
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Federal Aviation Admin Asr/rtr
Address (Req):	Old Terminal Building 2nd Floor
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	111127-AISI0000111127	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2006-08-30 08:50:57	**SI Cat:**	AISI
Program:	Underground Tanks	**SI ID:**	111127
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	8/30/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	51379903	**User Updt:**	geo_nc

Name:	Federal Aviation Admin Asr/rtr
Program List:	UT
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	TS0005753	**Cong Distr:**	8
Program Co:	TL	**Senate Dis:**	3
Program Name:	Tanks	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346

Activity:	Underground Tanks
Addr St:	Old Terminal Building 2nd Floor
Addr City:	Duluth
MPCA ID List:	TS0005753
Program 1:	Tanks
Name:	Federal Aviation Admin Asr/rtr
Watershed :	St. Louis River
Coord Co 1:	Public Land Survey-Two Quarter
Activity L:	Underground Tanks
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/111127

Agency Interests: File Request Details

Item ID:	111127-AISI0000111127	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	8/30/2006	**SI Cat:**	AISI
Program:	Underground Tanks	**SI ID:**	111127
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	8/30/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	51379903		

Name:	Federal Aviation Admin Asr/rtr
Program List:	UT
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	25 of119	WSW	0.16 / 827.41	1,419.81 / 9	Timber Trails Estates See location description Hermantown MN 55811	MPCA AI

Agency Interest ID: 106517
Name (Map): Timber Trails Estates
Address (Map): See location description
City (Map): Hermantown
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Timber Trails Estates
Address (Site): See location description
City (Site): Hermantown
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): Timber Trails Estates
Address (Req): See location description
City (Req): Hermantown
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.83837374
Longitude (Req): -92.21965346
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 106517-AISI0000106517
Status: Inactive
Status Date: 2009-03-17 14:40:22
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 6/30/2016
Tmsp Created: 8/7/2006
User Created: DELTA_M_R1
Tmsp Updt: 6/30/2016
Spatial ID: 51302490
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 106517
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc
Name: Timber Trails Estates
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00019576	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Hermantown		
MPCA ID List:	C00019576		
Program 1:	Stormwater		
Name:	Timber Trails Estates		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/106517		

Agency Interests: File Request Details

Item ID:	106517-AISI0000106517	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	3/17/2009	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	106517
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	8/7/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	51302490		
Name:	Timber Trails Estates		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	26 of119	WSW	0.16 / 827.41	1,419.81 / 9	SP 8821-34 (TH 61) See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	36050
Name (Map):	SP 8821-34 (TH 61)
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137

Loc Desc (Map):	
Name (Site):	SP 8821-34 (TH 61)
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	SP 8821-34 (TH 61)
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	36050-AISI0000036050	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2007-10-08 08:42:47	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	36050
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	3/28/2000	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	50678	**User Updt:**	geo_nc
Name:	SP 8821-34 (TH 61)		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00006567	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00006567		
Program 1:	Stormwater		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Name: SP 8821-34 (TH 61)
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/36050

Agency Interests: File Request Details

Item ID:	36050-AISI0000036050	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	10/8/2007	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	36050
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	3/28/2000	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	50678		

Name: SP 8821-34 (TH 61)
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	27 of119	WSW	0.16 / 827.41	1,419.81 / 9	SP 69-598-031 - CR 694 See location description Duluth MN 55811	MPCA AI

Agency Interest ID: 99705
Name (Map): SP 69-598-031 - CR 694
Address (Map): See location description
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): SP 69-598-031 - CR 694
Address (Site): See location description
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): SP 69-598-031 - CR 694
Address (Req): See location description
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811

Loc Desc (Req):
Latitude (Req): 46.83837374
Longitude (Req): -92.21965346
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	99705-AISI0000099705	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2009-04-01 15:56:11	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	99705
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	3/27/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	51079400	**User Updt:**	geo_nc

Name: SP 69-598-031 - CR 694
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00017996	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346

Activity: Construction Stormwater
Addr St: See location description
Addr City: Duluth
MPCA ID List: C00017996
Program 1: Stormwater
Name: SP 69-598-031 - CR 694
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/99705

Agency Interests: File Request Details

Item ID:	99705-AISI0000099705	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	4/1/2009	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	99705

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	3/27/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	51079400		
Name:	SP 69-598-031 - CR 694		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

7	28 of119	WSW	0.16 / 827.41	1,419.81 / 9	North Country Aviation Hangar 1 Duluth Intl Airport Duluth MN 55811	MPCA AI

Agency Interest ID:	116052
Name (Map):	North Country Aviation
Address (Map):	Hangar 1 Duluth Intl Airport
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	North Country Aviation
Address (Site):	Hangar 1 Duluth Intl Airport
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	North Country Aviation
Address (Req):	Hangar 1 Duluth Intl Airport
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	116052-AISI0000116052	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2006-08-30 07:29:34	**SI Cat:**	AISI

Program:	Underground Tanks	**SI ID:**	116052
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	8/30/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	51378770	**User Updt:**	geo_nc
Name:	North Country Aviation		
Program List:	UT		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	TS0005130	**Cong Distr:**	8
Program Co:	TL	**Senate Dis:**	3
Program Name:	Tanks	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Underground Tanks		
Addr St:	Hangar 1 Duluth Intl Airport		
Addr City:	Duluth		
MPCA ID List:	TS0005130		
Program 1:	Tanks		
Name:	North Country Aviation		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Underground Tanks		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/116052		

Agency Interests: File Request Details

Item ID:	116052-AISI0000116052	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	8/30/2006	**SI Cat:**	AISI
Program:	Underground Tanks	**SI ID:**	116052
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	8/30/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	51378770		
Name:	North Country Aviation		
Program List:	UT		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	29 of119	WSW	0.16 / 827.41	1,419.81 / 9	Duluth 2005 Street Imp SW3 See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	107018
Name (Map):	Duluth 2005 Street Imp SW3
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Duluth 2005 Street Imp SW3
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Duluth 2005 Street Imp SW3
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	107018-AISI0000107018	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2007-08-28 17:46:06	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	107018
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	7/5/2005	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	9/28/2020	**Verified:**	No
Spatial ID:	101103	**User Updt:**	ceidem
Name:	Duluth 2005 Street Imp SW3		

Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	C00015423	***Cong Distr:***	8
Program Co:	ST	***Senate Dis:***	3
Program Name:	Stormwater	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	Q2
City:	Hermantown	***Latitude:***	46.83837374
County:	St. Louis	***Longitude:***	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00015423		
Program 1:	Stormwater		
Name:	Duluth 2005 Street Imp SW3		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/107018		

Agency Interests: File Request Details

Item ID:	107018-AISI0000107018	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	8/28/2007	***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	107018
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B
Section:		***Senate Dist:***	3
Quarters:		***TRDSQQ:***	
Collection Date:	6/30/2016	***Ref Code:***	GEN
Tmsp Created:	7/5/2005	***Ref Desc:***	General Location
User Created:	DELTA_M_R1	***Verified:***	No
Tmsp Updt:	9/28/2020	***User Updt:***	ceidem
Spatial ID:	101103		
Name:	Duluth 2005 Street Imp SW3		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	30 of119	WSW	0.16 / 827.41	1,419.81 / 9	Pike Lake Elementary See location description Duluth MN 55811	MPCA AI

Agency Interest ID: 91600
Name (Map): Pike Lake Elementary
Address (Map): See location description
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Pike Lake Elementary
Address (Site): See location description
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): Pike Lake Elementary
Address (Req): See location description
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.83837374
Longitude (Req): -92.21965346
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 91600-AISI0000091600
Status: Inactive
Status Date: 2007-05-10 11:02:19
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 6/30/2016
Tmsp Created: 7/14/2003
User Created: DELTA_M_R1
Tmsp Updt: 6/30/2016
Spatial ID: 90387
Name: Pike Lake Elementary
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 91600
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	C00010266	***Cong Distr:***	8
Program Co:	ST	***Senate Dis:***	3
Program Name:	Stormwater	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	Q2
City:	Hermantown	***Latitude:***	46.83837374
County:	St. Louis	***Longitude:***	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00010266		
Program 1:	Stormwater		
Name:	Pike Lake Elementary		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/91600		

Agency Interests: File Request Details

Item ID:	91600-AISI0000091600	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	5/10/2007	***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	91600
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B
Section:		***Senate Dist:***	3
Quarters:		***TRDSQQ:***	
Collection Date:	6/30/2016	***Ref Code:***	GEN
Tmsp Created:	7/14/2003	***Ref Desc:***	General Location
User Created:	DELTA_M_R1	***Verified:***	No
Tmsp Updt:	6/30/2016	***User Updt:***	geo_nc
Spatial ID:	90387		
Name:	Pike Lake Elementary		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	***31 of119***	***WSW***	***0.16 / 827.41***	***1,419.81 / 9***	***Allete-MN Power-HSC Imp. See location description Duluth MN 55811***	***MPCA AI***

Agency Interest ID:	101761
Name (Map):	Allete-MN Power-HSC Imp.
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137

Loc Desc (Map):	
Name (Site):	Allete-MN Power-HSC Imp.
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Allete-MN Power-HSC Imp.
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	101761-AISI0000101761	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	2007-07-27 15:35:42	***SI Cat:***	AISI
Program:	Multiple Programs	***SI ID:***	101761
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	6/30/2016	***TRDSQQ:***	
Tmsp Created:	7/18/2006	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	6/30/2016	***Verified:***	No
Spatial ID:	51277932	***User Updt:***	geo_nc
Name:	Allete-MN Power-HSC Imp.		
Program List:	CS, HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	C00019318	***Cong Distr:***	8
Program Co:	HW; ST	***Senate Dis:***	3
Program Name:	Multiple Programs	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	Q2
City:	Hermantown	***Latitude:***	46.83837374
County:	St. Louis	***Longitude:***	-92.21965346
Activity:	Multiple Activities		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00019318		
Program 1:	Hazardous Waste; Stormwater		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Name: Allete-MN Power-HSC Imp.
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater; Hazardous Waste
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/101761

Agency Interests: File Request Details

Item ID:	101761-AISI0000101761	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	7/27/2007	**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	101761
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	7/18/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	51277932		

Name: Allete-MN Power-HSC Imp.
Program List: CS, HW
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	32 of119	WSW	0.16 / 827.41	1,419.81 / 9	Hermantown Imp. Districts #425 & 308 See location description Hermantown MN 55811	MPCA AI

Agency Interest ID: 106256
Name (Map): Hermantown Imp. Districts #425 & 308
Address (Map): See location description
City (Map): Hermantown
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Hermantown Imp. Districts #425 & 308
Address (Site): See location description
City (Site): Hermantown
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): Hermantown Imp. Districts #425 & 308
Address (Req): See location description
City (Req): Hermantown
State (Req): MN

ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	106256-AISI0000106256	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2008-06-17 17:22:33	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	106256
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	8/14/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	51321049	**User Updt:**	geo_nc
Name:	Hermantown Imp. Districts #425 & 308		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00019654	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Hermantown		
MPCA ID List:	C00019654		
Program 1:	Stormwater		
Name:	Hermantown Imp. Districts #425 & 308		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/106256		

Agency Interests: File Request Details

Item ID:	106256-AISI0000106256	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	6/17/2008	**SI Cat:**	AISI

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program:	Const Stormwater	**SI ID:**	106256
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	8/14/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	51321049		
Name:	Hermantown Imp. Districts #425 & 308		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

7	33 of119	WSW	0.16 / 827.41	1,419.81 / 9	**Hermantown Sanitary Sewer Dist #429** **See location description** **Hermantown MN 55811**	MPCA AI

Agency Interest ID:	53622
Name (Map):	Hermantown Sanitary Sewer Dist #429
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Hermantown Sanitary Sewer Dist #429
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Hermantown Sanitary Sewer Dist #429
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	53622-AISI0000053622	**Int Doc ID:**	0

Status:	Inactive	**SI Type:**	CON
Status Date:	2008-10-10 14:00:56	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	53622
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	6/12/2008	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	54533980	**User Updt:**	geo_nc

Name: Hermantown Sanitary Sewer Dist #429
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00025659	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346

Activity: Construction Stormwater
Addr St: See location description
Addr City: Hermantown
MPCA ID List: C00025659
Program 1: Stormwater
Name: Hermantown Sanitary Sewer Dist #429
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/53622

Agency Interests: File Request Details

Item ID:	53622-AISI0000053622	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	10/10/2008	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	53622
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	6/12/2008	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	54533980		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Name: Hermantown Sanitary Sewer Dist #429
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

7	34 of119	WSW	0.16 / 827.41	1,419.81 / 9	National Bank of Commerce - Hermantown See location description Hermantown MN 55811	MPCA AI

Agency Interest ID: 91634
Name (Map): National Bank of Commerce - Hermantown
Address (Map): See location description
City (Map): Hermantown
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): National Bank of Commerce - Hermantown
Address (Site): See location description
City (Site): Hermantown
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): National Bank of Commerce - Hermantown
Address (Req): See location description
City (Req): Hermantown
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.83837374
Longitude (Req): -92.21965346
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 91634-AISI0000091634
Status: Inactive
Status Date: 2007-05-10 11:00:05
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 6/30/2016
Tmsp Created: 1/14/2004
User Created: DELTA_M_R1
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 91634
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location

Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	92292	**User Updt:**	geo_nc
Name:	National Bank of Commerce - Hermantown		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00011447	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Hermantown		
MPCA ID List:	C00011447		
Program 1:	Stormwater		
Name:	National Bank of Commerce - Hermantown		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/91634		

Agency Interests: File Request Details

Item ID:	91634-AISI0000091634	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	5/10/2007	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	91634
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	1/14/2004	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	92292		
Name:	National Bank of Commerce - Hermantown		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	35 of119	WSW	0.16 / 827.41	1,419.81 / 9	Airport Road Parking Lot See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	106663
Name (Map):	Airport Road Parking Lot
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Airport Road Parking Lot
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Airport Road Parking Lot
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	106663-AISI0000106663	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2008-01-25 15:19:29	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	106663
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	8/16/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	51321425	**User Updt:**	geo_nc

Name:	Airport Road Parking Lot
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	C00019683	***Cong Distr:***	8
Program Co:	ST	***Senate Dis:***	3
Program Name:	Stormwater	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	Q2
City:	Hermantown	***Latitude:***	46.83837374
County:	St. Louis	***Longitude:***	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00019683		
Program 1:	Stormwater		
Name:	Airport Road Parking Lot		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/106663		

Agency Interests: File Request Details

Item ID:	106663-AISI0000106663	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	1/25/2008	***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	106663
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B
Section:		***Senate Dist:***	3
Quarters:		***TRDSQQ:***	
Collection Date:	6/30/2016	***Ref Code:***	GEN
Tmsp Created:	8/16/2006	***Ref Desc:***	General Location
User Created:	DELTA_M_R1	***Verified:***	No
Tmsp Updt:	6/30/2016	***User Updt:***	geo_nc
Spatial ID:	51321425		
Name:	Airport Road Parking Lot		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	36 of119	WSW	0.16 / 827.41	1,419.81 / 9	Oppidan Investment Co Todd Dr Hermantown MN 55811	MPCA AI

Agency Interest ID:	83296
Name (Map):	Oppidan Investment Co
Address (Map):	Todd Dr
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346

County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Oppidan Investment Co
Address (Site):	Todd Dr
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Oppidan Investment Co
Address (Req):	Todd Dr
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	83296-AISI0000083296	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	2004-12-29 00:00:00	***SI Cat:***	AISI
Program:	Hazardous Waste	***SI ID:***	83296
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	6/30/2016	***TRDSQQ:***	
Tmsp Created:	10/13/2004	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	6/30/2016	***Verified:***	No
Spatial ID:	97641	***User Updt:***	geo_nc
Name:	Oppidan Investment Co		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	MNS000107227	***Cong Distr:***	8
Program Co:	HW	***Senate Dis:***	3
Program Name:	Hazardous Waste	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	Q2
City:	Hermantown	***Latitude:***	46.83837374
County:	St. Louis	***Longitude:***	-92.21965346
Activity:	Hazardous Waste		
Addr St:	Todd Dr		
Addr City:	Hermantown		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

MPCA ID List: MNS000107227
Program 1: Hazardous Waste
Name: Oppidan Investment Co
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Hazardous Waste
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/83296

Agency Interests: File Request Details

Item ID:	83296-AISI0000083296	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	12/29/2004	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	83296
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	10/13/2004	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	97641		

Name: Oppidan Investment Co
Program List: HW
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

7	37 of119	WSW	0.16 / 827.41	1,419.81 / 9	5533-3783 Lindahl Road - Canosia See location description Duluth MN 55811	MPCA AI

Agency Interest ID: 53624
Name (Map): 5533-3783 Lindahl Road - Canosia
Address (Map): See location description
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): 5533-3783 Lindahl Road - Canosia
Address (Site): See location description
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): 5533-3783 Lindahl Road - Canosia
Address (Req): See location description
City (Req): Duluth

State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	53624-AISI0000053624	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	2008-11-07 08:13:01	***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	53624
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	6/30/2016	***TRDSQQ:***	
Tmsp Created:	6/12/2008	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	6/30/2016	***Verified:***	No
Spatial ID:	54534074	***User Updt:***	geo_nc

Name:	5533-3783 Lindahl Road - Canosia
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	C00025661	***Cong Distr:***	8
Program Co:	ST	***Senate Dis:***	3
Program Name:	Stormwater	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	Q2
City:	Hermantown	***Latitude:***	46.83837374
County:	St. Louis	***Longitude:***	-92.21965346

Activity:	Construction Stormwater
Addr St:	See location description
Addr City:	Duluth
MPCA ID List:	C00025661
Program 1:	Stormwater
Name:	5533-3783 Lindahl Road - Canosia
Watershed :	St. Louis River
Coord Co 1:	Public Land Survey-Two Quarter
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/53624

Agency Interests: File Request Details

Item ID:	53624-AISI0000053624	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Status Date:	11/7/2008	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	53624
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	6/12/2008	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	54534074		
Name:	5533-3783 Lindahl Road - Canosia		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

7	***38 of119***	***WSW***	***0.16 / 827.41***	***1,419.81 / 9***	***Matthew Addition See location description Hermantown MN 55811***	***MPCA AI***

Agency Interest ID:	106039
Name (Map):	Matthew Addition
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Matthew Addition
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Matthew Addition
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	106039-AISI0000106039	**Int Doc ID:**	0

Status:	Inactive	**SI Type:**	CON
Status Date:	2009-07-07 14:54:36	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	106039
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	8/8/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	51304236	**User Updt:**	geo_nc

Name: Matthew Addition
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00019588	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346

Activity: Construction Stormwater
Addr St: See location description
Addr City: Hermantown
MPCA ID List: C00019588
Program 1: Stormwater
Name: Matthew Addition
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/106039

Agency Interests: File Request Details

Item ID:	106039-AISI0000106039	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	7/7/2009	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	106039
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	8/8/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	51304236		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Name:	Matthew Addition
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

7	39 of119	WSW	0.16 / 827.41	1,419.81 / 9	Green Acres Address Unknown Hermantown MN 55811	MPCA AI

Agency Interest ID:	122822
Name (Map):	Green Acres
Address (Map):	Address Unknown
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Green Acres
Address (Site):	Address Unknown
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Green Acres
Address (Req):	Address Unknown
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	122822-AISI0000122822	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	122822
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	7/24/2008	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No

Spatial ID:	54677775	**User Updt:**	geo_nc
Name:	Green Acres		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00026098	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	Address Unknown		
Addr City:	Hermantown		
MPCA ID List:	C00026098		
Program 1:	Stormwater		
Name:	Green Acres		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/122822		

Agency Interests: File Request Details

Item ID:	122822-AISI0000122822	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	122822
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	7/24/2008	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	54677775		
Name:	Green Acres		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	40 of119	WSW	0.16 / 827.41	1,419.81 / 9	Residence Inn - Duluth See location description Duluth MN 55811	MPCA AI

Agency Interest ID: 132928
Name (Map): Residence Inn - Duluth
Address (Map): See location description
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Residence Inn - Duluth
Address (Site): See location description
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): Residence Inn - Duluth
Address (Req): See location description
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.83837374
Longitude (Req): -92.21965346
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 132928-AISI0000132928
Status: Active
Status Date:
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 6/30/2016
Tmsp Created: 9/17/2008
User Created: DELTA_M_R1
Tmsp Updt: 6/30/2016
Spatial ID: 54963343
Name: Residence Inn - Duluth
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 132928
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

My Neighborhood Site Details

Active FLA:	Yes	***HUC 8:***	04010201
MPCA ID:	C00026590	***Cong Distr:***	8
Program Co:	ST	***Senate Dis:***	3
Program Name:	Stormwater	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	Q2
City:	Hermantown	***Latitude:***	46.83837374
County:	St. Louis	***Longitude:***	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00026590		
Program 1:	Stormwater		
Name:	Residence Inn - Duluth		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/132928		

Agency Interests: File Request Details

Item ID:	132928-AISI0000132928	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	132928
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B
Section:		***Senate Dist:***	3
Quarters:		***TRDSQQ:***	
Collection Date:	6/30/2016	***Ref Code:***	GEN
Tmsp Created:	9/17/2008	***Ref Desc:***	General Location
User Created:	DELTA_M_R1	***Verified:***	No
Tmsp Updt:	6/30/2016	***User Updt:***	geo_nc
Spatial ID:	54963343		
Name:	Residence Inn - Duluth		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	***41 of119***	***WSW***	***0.16 / 827.41***	***1,419.81 / 9***	***Federal Aviation Admin Rcag Old Terminal Building 2nd Floor Duluth MN 55811***	***MPCA AI***

Agency Interest ID:	111130
Name (Map):	Federal Aviation Admin Rcag
Address (Map):	Old Terminal Building 2nd Floor
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis

County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Federal Aviation Admin Rcag
Address (Site):	Old Terminal Building 2nd Floor
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Federal Aviation Admin Rcag
Address (Req):	Old Terminal Building 2nd Floor
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	111130-AISI0000111130	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	2006-08-30 08:50:57	***SI Cat:***	AISI
Program:	Underground Tanks	***SI ID:***	111130
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	6/30/2016	***TRDSQQ:***	
Tmsp Created:	8/30/2006	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	6/30/2016	***Verified:***	No
Spatial ID:	51379909	***User Updt:***	geo_nc
Name:	Federal Aviation Admin Rcag		
Program List:	UT		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	TS0005756	***Cong Distr:***	8
Program Co:	TL	***Senate Dis:***	3
Program Name:	Tanks	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	Q2
City:	Hermantown	***Latitude:***	46.83837374
County:	St. Louis	***Longitude:***	-92.21965346
Activity:	Underground Tanks		
Addr St:	Old Terminal Building 2nd Floor		
Addr City:	Duluth		
MPCA ID List:	TS0005756		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program 1: Tanks
Name: Federal Aviation Admin Rcag
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Underground Tanks
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/111130

Agency Interests: File Request Details

Item ID:	111130-AISI0000111130	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	8/30/2006	**SI Cat:**	AISI
Program:	Underground Tanks	**SI ID:**	111130
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	8/30/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	51379909		

Name: Federal Aviation Admin Rcag
Program List: UT
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	42 of119	WSW	0.16 / 827.41	1,419.81 / 9	SP 6917-105 (TH 53) See location description Duluth MN 55811	MPCA AI

Agency Interest ID: 5342
Name (Map): SP 6917-105 (TH 53)
Address (Map): See location description
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): SP 6917-105 (TH 53)
Address (Site): See location description
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): SP 6917-105 (TH 53)
Address (Req): See location description
City (Req): Duluth
State (Req): MN

ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	5342-AISI0000005342	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2005-11-08 21:09:59	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	5342
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	3/2/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	7704	**User Updt:**	geo_nc
Name:	SP 6917-105 (TH 53)		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00003344	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00003344		
Program 1:	Stormwater		
Name:	SP 6917-105 (TH 53)		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/5342		

Agency Interests: File Request Details

Item ID:	5342-AISI0000005342	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	11/8/2005	**SI Cat:**	AISI

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program:	Const Stormwater	**SI ID:**	5342
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	3/2/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	7704		
Name:	SP 6917-105 (TH 53)		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

7	***43 of119***	***WSW***	***0.16 / 827.41***	***1,419.81 / 9***	***Sackette Addition See location description Duluth MN 55811***	***MPCA AI***

Agency Interest ID:	104484
Name (Map):	Sackette Addition
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Sackette Addition
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Sackette Addition
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	104484-AISI0000104484	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON

Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	104484
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	12/5/2005	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	50648403	**User Updt:**	geo_nc
Name:	Sackette Addition		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00017311	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00017311		
Program 1:	Stormwater		
Name:	Sackette Addition		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/104484		

Agency Interests: File Request Details

Item ID:	104484-AISI0000104484	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	104484
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	12/5/2005	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	50648403		
Name:	Sackette Addition		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

7	***44 of119***	***WSW***	***0.16 / 827.41***	***1,419.81 / 9***	***Edgewood Vista See location description Hermantown MN 55811***	***MPCA AI***

Agency Interest ID:	9837
Name (Map):	Edgewood Vista
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Edgewood Vista
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Edgewood Vista
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	9837-AISI0000009837	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2005-11-08 21:09:59	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	9837
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	5/18/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	9404	**User Updt:**	geo_nc

Name:	Edgewood Vista
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00005766	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346

Activity:	Construction Stormwater
Addr St:	See location description
Addr City:	Hermantown
MPCA ID List:	C00005766
Program 1:	Stormwater
Name:	Edgewood Vista
Watershed :	St. Louis River
Coord Co 1:	Public Land Survey-Two Quarter
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/9837

Agency Interests: File Request Details

Item ID:	9837-AISI0000009837	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	11/8/2005	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	9837
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	5/18/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	9404		

Name:	Edgewood Vista
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	45 of119	WSW	0.16 / 827.41	1,419.81 / 9	Timber Ridge Townhomes Phase II See location description Hermantown MN 55811	MPCA AI

Agency Interest ID:	102730
Name (Map):	Timber Ridge Townhomes Phase II
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Timber Ridge Townhomes Phase II
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Timber Ridge Townhomes Phase II
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	102730-AISI0000102730	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2008-11-14 11:37:05	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	102730
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	11/28/2005	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	50648249	**User Updt:**	geo_nc

Name:	Timber Ridge Townhomes Phase II
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

My Neighborhood Site Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00017170	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Hermantown		
MPCA ID List:	C00017170		
Program 1:	Stormwater		
Name:	Timber Ridge Townhomes Phase II		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/102730		

Agency Interests: File Request Details

Item ID:	102730-AISI0000102730	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	11/14/2008	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	102730
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	11/28/2005	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	50648249		
Name:	Timber Ridge Townhomes Phase II		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

7	46 of119	WSW	0.16 / 827.41	1,419.81 / 9	SP 69-613-28; CP 8256 - CSAH 13 See location description Hermantown MN 55811	MPCA AI

Agency Interest ID:	101856
Name (Map):	SP 69-613-28; CP 8256 - CSAH 13
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137

Loc Desc (Map):	
Name (Site):	SP 69-613-28; CP 8256 - CSAH 13
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	SP 69-613-28; CP 8256 - CSAH 13
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	101856-AISI0000101856	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2008-07-11 08:16:12	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	101856
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	2/7/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	50851912	**User Updt:**	geo_nc
Name:	SP 69-613-28; CP 8256 - CSAH 13		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00017670	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Hermantown		
MPCA ID List:	C00017670		
Program 1:	Stormwater		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Name: SP 69-613-28; CP 8256 - CSAH 13
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/101856

Agency Interests: File Request Details

Item ID:	101856-AISI0000101856	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	7/11/2008	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	101856
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	2/7/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	50851912		

Name: SP 69-613-28; CP 8256 - CSAH 13
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	47 of119	WSW	0.16 / 827.41	1,419.81 / 9	Hermantown Sanitary Sewer Imp Dist 416 See location description Hermantown MN 55811	MPCA AI

Agency Interest ID: 93878
Name (Map): Hermantown Sanitary Sewer Imp Dist 416
Address (Map): See location description
City (Map): Hermantown
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Hermantown Sanitary Sewer Imp Dist 416
Address (Site): See location description
City (Site): Hermantown
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): Hermantown Sanitary Sewer Imp Dist 416
Address (Req): See location description
City (Req): Hermantown
State (Req): MN

ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	93878-AISI0000093878	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2005-01-07 15:18:02	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	93878
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	3/15/2004	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	92971	**User Updt:**	geo_nc
Name:	Hermantown Sanitary Sewer Imp Dist 416		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00011589	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Hermantown		
MPCA ID List:	C00011589		
Program 1:	Stormwater		
Name:	Hermantown Sanitary Sewer Imp Dist 416		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/93878		

Agency Interests: File Request Details

Item ID:	93878-AISI0000093878	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	1/7/2005	**SI Cat:**	AISI

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program:	Const Stormwater	**SI ID:**	93878
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	3/15/2004	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	92971		
Name:	Hermantown Sanitary Sewer Imp Dist 416		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

7	*48 of119*	*WSW*	*0.16 / 827.41*	*1,419.81 / 9*	***SP 6908-56 and SP 6932-13 See location description Hermantown MN 55811***	***MPCA AI***

Agency Interest ID:	122398
Name (Map):	SP 6908-56 and SP 6932-13
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	SP 6908-56 and SP 6932-13
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	SP 6908-56 and SP 6932-13
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	122398-AISI0000122398	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON

Status Date:	2008-09-05 08:08:38	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	122398
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	4/27/2007	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	52673188	**User Updt:**	geo_nc

Name: SP 6908-56 and SP 6932-13
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00021690	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346

Activity: Construction Stormwater
Addr St: See location description
Addr City: Hermantown
MPCA ID List: C00021690
Program 1: Stormwater
Name: SP 6908-56 and SP 6932-13
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/122398

Agency Interests: File Request Details

Item ID:	122398-AISI0000122398	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	9/5/2008	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	122398
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	4/27/2007	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	52673188		

Name: SP 6908-56 and SP 6932-13

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

7	49 of119	WSW	0.16 / 827.41	1,419.81 / 9	CSAH 43 See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	85563
Name (Map):	CSAH 43
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	CSAH 43
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	CSAH 43
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	85563-AISI0000085563	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2006-04-06 08:57:21	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	85563
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	5/25/2004	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	94237	**User Updt:**	geo_nc

Name:	CSAH 43
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00012184	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346

Activity:	Construction Stormwater
Addr St:	See location description
Addr City:	Duluth
MPCA ID List:	C00012184
Program 1:	Stormwater
Name:	CSAH 43
Watershed :	St. Louis River
Coord Co 1:	Public Land Survey-Two Quarter
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/85563

Agency Interests: File Request Details

Item ID:	85563-AISI0000085563	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	4/6/2006	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	85563
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	5/25/2004	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	94237		

Name:	CSAH 43
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	50 of119	WSW	0.16 / 827.41	1,419.81 / 9	Cirrus Design Corp Expansion See location description Duluth MN 55811	MPCA AI

Agency Interest ID: 104728
Name (Map): Cirrus Design Corp Expansion
Address (Map): See location description
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Cirrus Design Corp Expansion
Address (Site): See location description
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): Cirrus Design Corp Expansion
Address (Req): See location description
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.83837374
Longitude (Req): -92.21965346
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 104728-AISI0000104728
Status: Inactive
Status Date: 2007-09-12 12:11:11
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 6/30/2016
Tmsp Created: 10/30/2005
User Created: DELTA_M_R1
Tmsp Updt: 6/30/2016
Spatial ID: 103324
Name: Cirrus Design Corp Expansion
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 104728
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc

My Neighborhood Site Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00016832	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00016832		
Program 1:	Stormwater		
Name:	Cirrus Design Corp Expansion		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/104728		

Agency Interests: File Request Details

Item ID:	104728-AISI0000104728	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	9/12/2007	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	104728
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	10/30/2005	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	103324		
Name:	Cirrus Design Corp Expansion		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	51 of119	WSW	0.16 / 827.41	1,419.81 / 9	SP 3806-57 See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	35811
Name (Map):	SP 3806-57
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137

Loc Desc (Map):	
Name (Site):	SP 3806-57
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	SP 3806-57
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	35811-AISI0000035811	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2004-07-19 13:23:31	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	35811
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	1/7/2000	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	50066	**User Updt:**	geo_nc
Name:	SP 3806-57		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00006403	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00006403		
Program 1:	Stormwater		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Name: SP 3806-57
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/35811

Agency Interests: File Request Details

Item ID:	35811-AISI0000035811	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	7/19/2004	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	35811
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	1/7/2000	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	50066		

Name: SP 3806-57
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	52 of119	WSW	0.16 / 827.41	1,419.81 / 9	SP 6917-112 TH 53 See location description Duluth MN 55811	MPCA AI

Agency Interest ID: 6425
Name (Map): SP 6917-112 TH 53
Address (Map): See location description
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): SP 6917-112 TH 53
Address (Site): See location description
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): SP 6917-112 TH 53
Address (Req): See location description
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811

Loc Desc (Req):
Latitude (Req): 46.83837374
Longitude (Req): -92.21965346
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 6425-AISI0000006425
Status: Inactive
Status Date: 2005-11-08 21:09:59
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 6/30/2016
Tmsp Created: 5/14/1999
User Created: DELTA_M_R1
Tmsp Updt: 6/30/2016
Spatial ID: 9354
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 6425
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc
Name: SP 6917-112 TH 53
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA: No
MPCA ID: C00005672
Program Co: ST
Program Name: Stormwater
Address: MN
Addr ZIP: 55811
City: Hermantown
County: St. Louis
HUC 8: 04010201
Cong Distr: 8
Senate Dis: 3
House Dist: 3B
IC Flag: No
Coord Coll: Q2
Latitude: 46.83837374
Longitude: -92.21965346
Activity: Construction Stormwater
Addr St: See location description
Addr City: Duluth
MPCA ID List: C00005672
Program 1: Stormwater
Name: SP 6917-112 TH 53
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/6425

Agency Interests: File Request Details

Item ID: 6425-AISI0000006425
Status: Inactive
Status Date: 11/8/2005
Program: Const Stormwater
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 6425

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	5/14/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	9354		
Name:	SP 6917-112 TH 53		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	53 of119	WSW	0.16 / 827.41	1,419.81 / 9	CSAH 7 - Industrial Rd See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	85897
Name (Map):	CSAH 7 - Industrial Rd
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	CSAH 7 - Industrial Rd
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	CSAH 7 - Industrial Rd
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	85897-AISI0000085897	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2005-08-03 09:23:11	**SI Cat:**	AISI

Program:	Const Stormwater	**SI ID:**	85897
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	6/15/2004	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	94780	**User Updt:**	geo_nc
Name:	CSAH 7 - Industrial Rd		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00012483	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00012483		
Program 1:	Stormwater		
Name:	CSAH 7 - Industrial Rd		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/85897		

Agency Interests: File Request Details

Item ID:	85897-AISI0000085897	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	8/3/2005	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	85897
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	6/15/2004	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	94780		
Name:	CSAH 7 - Industrial Rd		
Program List:	CS		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	54 of119	WSW	0.16 / 827.41	1,419.81 / 9	SP 6917-101 TH 53 See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	38395
Name (Map):	SP 6917-101 TH 53
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	SP 6917-101 TH 53
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	SP 6917-101 TH 53
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	38395-AISI0000038395	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	1999-12-08 00:00:00	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	38395
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	8/17/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	46661	**User Updt:**	geo_nc
Name:	SP 6917-101 TH 53		

Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00003023	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346

Activity:	Construction Stormwater
Addr St:	See location description
Addr City:	Duluth
MPCA ID List:	C00003023
Program 1:	Stormwater
Name:	SP 6917-101 TH 53
Watershed :	St. Louis River
Coord Co 1:	Public Land Survey-Two Quarter
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/38395

Agency Interests: File Request Details

Item ID:	38395-AISI0000038395	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	12/8/1999	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	38395
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	8/17/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	46661		

Name:	SP 6917-101 TH 53
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	55 of119	WSW	0.16 / 827.41	1,419.81 / 9	Mesaba Energy Address Unknown Duluth MN 55811	MPCA AI

Agency Interest ID:	84968
Name (Map):	Mesaba Energy
Address (Map):	Address Unknown
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	
Address (Site):	
City (Site):	
State (Site):	
ZIP (Site):	
Latitude (Site):	
Longitude (Site):	
County (Site):	
Name (Req):	Mesaba Energy
Address (Req):	Address Unknown
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026)

Agency Interests: Map Details

Item ID:	84968-AISI0000084968	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Air	**SI ID:**	84968
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	2/25/2005	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	99355	**User Updt:**	geo_nc

Name:	Mesaba Energy
Program List:	AQ
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

Agency Interests: File Request Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Item ID:	84968-AISI0000084968	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Air	**SI ID:**	84968
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	2/25/2005	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	99355		
Name:	Mesaba Energy		
Program List:	AQ		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	56 of119	WSW	0.16 / 827.41	1,419.81 / 9	SP 69-616-043 CSAH 16 See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	99468
Name (Map):	SP 69-616-043 CSAH 16
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	SP 69-616-043 CSAH 16
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	SP 69-616-043 CSAH 16
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	99468-AISI0000099468	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	2008-08-15 14:15:47	***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	99468
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	6/30/2016	***TRDSQQ:***	
Tmsp Created:	4/5/2006	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	6/30/2016	***Verified:***	No
Spatial ID:	51086973	***User Updt:***	geo_nc
Name:	SP 69-616-043 CSAH 16		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	C00018066	***Cong Distr:***	8
Program Co:	ST	***Senate Dis:***	3
Program Name:	Stormwater	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	Q2
City:	Hermantown	***Latitude:***	46.83837374
County:	St. Louis	***Longitude:***	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00018066		
Program 1:	Stormwater		
Name:	SP 69-616-043 CSAH 16		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/99468		

Agency Interests: File Request Details

Item ID:	99468-AISI0000099468	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	8/15/2008	***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	99468
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B
Section:		***Senate Dist:***	3
Quarters:		***TRDSQQ:***	
Collection Date:	6/30/2016	***Ref Code:***	GEN

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Tmsp Created:	4/5/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	51086973		
Name:	SP 69-616-043 CSAH 16		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	57 of119	WSW	0.16 / 827.41	1,419.81 / 9	Krenzen Honda See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	102913
Name (Map):	Krenzen Honda
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Krenzen Honda
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Krenzen Honda
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	102913-AISI0000102913	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2007-07-11 14:28:58	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	102913
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3

Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	12/6/2005	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	50648439	**User Updt:**	geo_nc

Name: Krenzen Honda
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00017345	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346

Activity: Construction Stormwater
Addr St: See location description
Addr City: Duluth
MPCA ID List: C00017345
Program 1: Stormwater
Name: Krenzen Honda
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/102913

Agency Interests: File Request Details

Item ID:	102913-AISI0000102913	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	7/11/2007	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	102913
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	12/6/2005	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	50648439		

Name: Krenzen Honda
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
DWSMA Name:						
Method Code:		Q2				
Method Desc:		Public Land Survey-Two Quarter				
7	58 of119	WSW	0.16 / 827.41	1,419.81 / 9	SP 6917-107 (TH 53) See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	5506
Name (Map):	SP 6917-107 (TH 53)
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	SP 6917-107 (TH 53)
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	SP 6917-107 (TH 53)
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	5506-AISI0000005506	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2005-11-08 21:09:59	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	5506
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	3/3/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	7735	**User Updt:**	geo_nc

Name:	SP 6917-107 (TH 53)
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	

Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA: No
MPCA ID: C00004182
Program Co: ST
Program Name: Stormwater
Address: MN
Addr ZIP: 55811
City: Hermantown
County: St. Louis
Activity: Construction Stormwater
Addr St: See location description
Addr City: Duluth
MPCA ID List: C00004182
Program 1: Stormwater
Name: SP 6917-107 (TH 53)
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/5506

HUC 8: 04010201
Cong Distr: 8
Senate Dis: 3
House Dist: 3B
IC Flag: No
Coord Coll: Q2
Latitude: 46.83837374
Longitude: -92.21965346

Agency Interests: File Request Details

Item ID: 5506-AISI0000005506
Status: Inactive
Status Date: 11/8/2005
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 6/30/2016
Tmsp Created: 3/3/1999
User Created: DELTA_M_R1
Tmsp Updt: 6/30/2016
Spatial ID: 7735
Name: SP 6917-107 (TH 53)
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 5506
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc

7	59 of119	WSW	0.16 / 827.41	1,419.81 / 9	The Woods At Hermantown See location description Hermantown MN 55811	MPCA AI

Agency Interest ID: 100017
Name (Map): The Woods At Hermantown
Address (Map): See location description
City (Map): Hermantown
State (Map): MN

ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	The Woods At Hermantown
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	The Woods At Hermantown
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	100017-AISI0000100017	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	100017
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	1/24/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	50827235	**User Updt:**	geo_nc
Name:	The Woods At Hermantown		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00017601	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Activity:	Construction Stormwater
Addr St:	See location description
Addr City:	Hermantown
MPCA ID List:	C00017601
Program 1:	Stormwater
Name:	The Woods At Hermantown
Watershed :	St. Louis River
Coord Co 1:	Public Land Survey-Two Quarter
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/100017

Agency Interests: File Request Details

Item ID:	100017-AISI0000100017	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	100017
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	1/24/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	50827235		

Name:	The Woods At Hermantown
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	60 of119	WSW	0.16 / 827.41	1,419.81 / 9	Saint Lawrence Church Disposal Site See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	48390
Name (Map):	Saint Lawrence Church Disposal Site
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Saint Lawrence Church Disposal Site
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346

County (Site):	St. Louis
Name (Req):	Saint Lawrence Church Disposal Site
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	48390-AISI0000048390	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2012-01-17 11:45:39	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	48390
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	7/15/2008	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	54668759	**User Updt:**	geo_nc
Name:	Saint Lawrence Church Disposal Site		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00026026	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00026026		
Program 1:	Stormwater		
Name:	Saint Lawrence Church Disposal Site		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/48390		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Agency Interests: File Request Details

Item ID:	48390-AISI0000048390	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	1/17/2012	***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	48390
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B
Section:		***Senate Dist:***	3
Quarters:		***TRDSQQ:***	
Collection Date:	6/30/2016	***Ref Code:***	GEN
Tmsp Created:	7/15/2008	***Ref Desc:***	General Location
User Created:	DELTA_M_R1	***Verified:***	No
Tmsp Updt:	6/30/2016	***User Updt:***	geo_nc
Spatial ID:	54668759		
Name:	Saint Lawrence Church Disposal Site		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	61 of119	WSW	0.16 / 827.41	1,419.81 / 9	Maple Grove Acres See location description Hermantown MN 55811	MPCA AI

Agency Interest ID:	93441
Name (Map):	Maple Grove Acres
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Maple Grove Acres
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Maple Grove Acres
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	93441-AISI0000093441	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	2007-03-28 10:15:58	***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	93441
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	6/30/2016	***TRDSQQ:***	
Tmsp Created:	12/10/2003	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	6/30/2016	***Verified:***	No
Spatial ID:	91722	***User Updt:***	geo_nc
Name:	Maple Grove Acres		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	C00011190	***Cong Distr:***	8
Program Co:	ST	***Senate Dis:***	3
Program Name:	Stormwater	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	Q2
City:	Hermantown	***Latitude:***	46.83837374
County:	St. Louis	***Longitude:***	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Hermantown		
MPCA ID List:	C00011190		
Program 1:	Stormwater		
Name:	Maple Grove Acres		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/93441		

Agency Interests: File Request Details

Item ID:	93441-AISI0000093441	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	3/28/2007	***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	93441
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B
Section:		***Senate Dist:***	3
Quarters:		***TRDSQQ:***	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	12/10/2003	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	91722		
Name:	Maple Grove Acres		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

7	62 of119	WSW	0.16 / 827.41	1,419.81 / 9	Schneiderman's Furniture - Duluth See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	88651
Name (Map):	Schneiderman's Furniture - Duluth
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Schneiderman's Furniture - Duluth
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Schneiderman's Furniture - Duluth
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	88651-AISI0000088651	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2005-10-06 12:05:23	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	88651
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B

Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	7/8/2004	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	95357	**User Updt:**	geo_nc

Name: Schneiderman's Furniture - Duluth
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00012797	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346

Activity: Construction Stormwater
Addr St: See location description
Addr City: Duluth
MPCA ID List: C00012797
Program 1: Stormwater
Name: Schneiderman's Furniture - Duluth
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/88651

Agency Interests: File Request Details

Item ID:	88651-AISI0000088651	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	10/6/2005	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	88651
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	7/8/2004	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	95357		

Name: Schneiderman's Furniture - Duluth
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
DWSMA Code:						
DWSMA Name:						
Method Code:		Q2				
Method Desc:		Public Land Survey-Two Quarter				
7	63 of119	WSW	0.16 / 827.41	1,419.81 / 9	Runway 9/27 See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	94349
Name (Map):	Runway 9/27
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Runway 9/27
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Runway 9/27
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	94349-AISI0000094349	Int Doc ID:	0
Status:	Inactive	SI Type:	CON
Status Date:	2006-11-16 10:11:58	SI Cat:	AISI
Program:	Const Stormwater	SI ID:	94349
CTU Code:	239436	SI Cat Desc:	Agency Interest
CTU Name:	Hermantown	SI Type Desc:	Conventional Site
PLS Twsp:		Description:	
Range :		SI Designation:	
Range Dir:		Cong Dist:	8
Section:		House Dist:	3B
Quarters:		Senate Dist:	3
Collection Date:	6/30/2016	TRDSQQ:	
Tmsp Created:	9/14/2005	Ref Code:	GEN
User Created:	DELTA_M_R1	Ref Desc:	General Location
Tmsp Updt:	6/30/2016	Verified:	No
Spatial ID:	102238	User Updt:	geo_nc
Name:	Runway 9/27		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00016118	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346

Activity: Construction Stormwater
Addr St: See location description
Addr City: Duluth
MPCA ID List: C00016118
Program 1: Stormwater
Name: Runway 9/27
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/94349

Agency Interests: File Request Details

Item ID:	94349-AISI0000094349	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	11/16/2006	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	94349
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	9/14/2005	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	102238		

Name: Runway 9/27
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	64 of119	WSW	0.16 / 827.41	1,419.81 / 9	Coffee Creek Park Development See location description Duluth MN 55811	MPCA AI

Agency Interest ID: 107098
Name (Map): Coffee Creek Park Development
Address (Map): See location description
City (Map): Duluth

State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Coffee Creek Park Development
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Coffee Creek Park Development
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	107098-AISI0000107098	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2012-03-07 14:31:44	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	107098
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	8/23/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	51360204	**User Updt:**	geo_nc
Name:	Coffee Creek Park Development		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00019766	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00019766		
Program 1:	Stormwater		
Name:	Coffee Creek Park Development		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/107098		

Agency Interests: File Request Details

Item ID:	107098-AISI0000107098	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	3/7/2012	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	107098
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	8/23/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	51360204		
Name:	Coffee Creek Park Development		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	65 of119	WSW	0.16 / 827.41	1,419.81 / 9	Entrance Rd Realignment - MnANG See location description Hermantown MN 55811	MPCA AI

Agency Interest ID:	102550
Name (Map):	Entrance Rd Realignment - MnANG
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Entrance Rd Realignment - MnANG
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374

Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Entrance Rd Realignment - MnANG
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	102550-AISI0000102550	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2007-07-11 11:36:10	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	102550
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	11/23/2005	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	50648216	**User Updt:**	geo_nc
Name:	Entrance Rd Realignment - MnANG		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00017139	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Hermantown		
MPCA ID List:	C00017139		
Program 1:	Stormwater		
Name:	Entrance Rd Realignment - MnANG		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/102550		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Agency Interests: File Request Details

Item ID:	102550-AISI0000102550	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	7/11/2007	***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	102550
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B
Section:		***Senate Dist:***	3
Quarters:		***TRDSQQ:***	
Collection Date:	6/30/2016	***Ref Code:***	GEN
Tmsp Created:	11/23/2005	***Ref Desc:***	General Location
User Created:	DELTA_M_R1	***Verified:***	No
Tmsp Updt:	6/30/2016	***User Updt:***	geo_nc
Spatial ID:	50648216		
Name:	Entrance Rd Realignment - MnANG		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	66 of119	WSW	0.16 / 827.41	1,419.81 / 9	Bishop Woods 1st Addition Utility/Road See location description Hermantown MN 55811	MPCA AI

Agency Interest ID:	77069
Name (Map):	Bishop Woods 1st Addition Utility/Road
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Bishop Woods 1st Addition Utility/Road
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Bishop Woods 1st Addition Utility/Road
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14

Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	77069-AISI0000077069	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	2007-03-22 09:47:37	***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	77069
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	6/30/2016	***TRDSQQ:***	
Tmsp Created:	6/24/2002	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	6/30/2016	***Verified:***	No
Spatial ID:	76017	***User Updt:***	geo_nc
Name:	Bishop Woods 1st Addition Utility/Road		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	C00008745	***Cong Distr:***	8
Program Co:	ST	***Senate Dis:***	3
Program Name:	Stormwater	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	Q2
City:	Hermantown	***Latitude:***	46.83837374
County:	St. Louis	***Longitude:***	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Hermantown		
MPCA ID List:	C00008745		
Program 1:	Stormwater		
Name:	Bishop Woods 1st Addition Utility/Road		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/77069		

Agency Interests: File Request Details

Item ID:	77069-AISI0000077069	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	3/22/2007	***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	77069
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	6/24/2002	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	76017		
Name:	Bishop Woods 1st Addition Utility/Road		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	67 of119	WSW	0.16 / 827.41	1,419.81 / 9	Suites of Miller Hill See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	89662
Name (Map):	Suites of Miller Hill
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Suites of Miller Hill
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Suites of Miller Hill
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	89662-AISI0000089662	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	89662
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	

Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	6/23/2004	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	94912	**User Updt:**	geo_nc
Name:	Suites of Miller Hill		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00012556	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00012556		
Program 1:	Stormwater		
Name:	Suites of Miller Hill		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/89662		

Agency Interests: File Request Details

Item ID:	89662-AISI0000089662	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	89662
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	6/23/2004	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	94912		
Name:	Suites of Miller Hill		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	68 of119	WSW	0.16 / 827.41	1,419.81 / 9	2000 Stebner Park Project NW1/4, Sec 24, T 50N, R 15 Hermantown MN 55811	MPCA AI

Agency Interest ID: 51850
Name (Map): 2000 Stebner Park Project
Address (Map): NW1/4, Sec 24, T 50N, R 15
City (Map): Hermantown
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): 2000 Stebner Park Project
Address (Site): NW1/4, Sec 24, T 50N, R 15
City (Site): Hermantown
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): 2000 Stebner Park Project
Address (Req): NW1/4, Sec 24, T 50N, R 15
City (Req): Hermantown
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.83837374
Longitude (Req): -92.21965346
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 51850-AISI0000051850
Status: Inactive
Status Date: 2005-11-08 21:10:10
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 6/30/2016
Tmsp Created: 6/5/2000
User Created: DELTA_M_R1
Tmsp Updt: 6/30/2016
Spatial ID: 51819
Name: 2000 Stebner Park Project
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 51850
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc

HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00006810	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346

Activity:	Construction Stormwater
Addr St:	NW1/4, Sec 24, T 50N, R 15
Addr City:	Hermantown
MPCA ID List:	C00006810
Program 1:	Stormwater
Name:	2000 Stebner Park Project
Watershed :	St. Louis River
Coord Co 1:	Public Land Survey-Two Quarter
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/51850

Agency Interests: File Request Details

Item ID:	51850-AISI0000051850	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	11/8/2005	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	51850
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	6/5/2000	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	51819		

Name:	2000 Stebner Park Project
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	69 of119	WSW	0.16 / 827.41	1,419.81 / 9	Iron Workers Apprenticeship Training Fac See location description Hermantown MN 55811	MPCA AI

Agency Interest ID: 124727

Name (Map):	Iron Workers Apprenticeship Training Fac
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Iron Workers Apprenticeship Training Fac
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Iron Workers Apprenticeship Training Fac
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	124727-AISI0000124727	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2008-09-16 14:41:13	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	124727
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	2/27/2007	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	52473178	**User Updt:**	geo_nc

Name:	Iron Workers Apprenticeship Training Fac
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00021063	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Hermantown		
MPCA ID List:	C00021063		
Program 1:	Stormwater		
Name:	Iron Workers Apprenticeship Training Fac		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/124727		

Agency Interests: File Request Details

Item ID:	124727-AISI0000124727	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	9/16/2008	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	124727
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	2/27/2007	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	52473178		
Name:	Iron Workers Apprenticeship Training Fac		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	70 of119	WSW	0.16 / 827.41	1,419.81 / 9	Grouse Ridge See location description Hermantown MN 55811	MPCA AI

Agency Interest ID:	93879
Name (Map):	Grouse Ridge
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Grouse Ridge
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN

ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Grouse Ridge
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	93879-AISI0000093879	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	93879
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	3/15/2004	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	92972	**User Updt:**	geo_nc
Name:	Grouse Ridge		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00011590	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Hermantown		
MPCA ID List:	C00011590		
Program 1:	Stormwater		
Name:	Grouse Ridge		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			

Site URL: https://webapp.pca.state.mn.us/wimn/site/93879

Agency Interests: File Request Details

Item ID:	93879-AISI0000093879	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	93879
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	3/15/2004	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	92972		
Name:	Grouse Ridge		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	71 of119	WSW	0.16 / 827.41	1,419.81 / 9	Pine View See location description Hermantown MN 55811	MPCA AI

Agency Interest ID:	94346
Name (Map):	Pine View
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Pine View
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Pine View
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137

Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	94346-AISI0000094346	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	94346
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	9/14/2005	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	102235	**User Updt:**	geo_nc
Name:	Pine View		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00016115	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Hermantown		
MPCA ID List:	C00016115		
Program 1:	Stormwater		
Name:	Pine View		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/94346		

Agency Interests: File Request Details

Item ID:	94346-AISI0000094346	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	94346
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	9/14/2005	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	102235		
Name:	Pine View		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	72 of119	WSW	0.16 / 827.41	1,419.81 / 9	Keene Creek Townhomes See location description Hermantown MN 55811	MPCA AI

Agency Interest ID:	68110
Name (Map):	Keene Creek Townhomes
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Keene Creek Townhomes
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Keene Creek Townhomes
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	68110-AISI0000068110	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2007-04-04 15:41:56	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	68110
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	

Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	9/6/2002	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	84822	**User Updt:**	geo_nc
Name:	Keene Creek Townhomes		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00009020	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Hermantown		
MPCA ID List:	C00009020		
Program 1:	Stormwater		
Name:	Keene Creek Townhomes		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/68110		

Agency Interests: File Request Details

Item ID:	68110-AISI0000068110	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	4/4/2007	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	68110
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	9/6/2002	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	84822		
Name:	Keene Creek Townhomes		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	73 of119	WSW	0.16 / 827.41	1,419.81 / 9	Stebner Rd MSA 103 SAP 202-103-05 See location description Hermantown MN 55811	MPCA AI

Agency Interest ID: 5670
Name (Map): Stebner Rd MSA 103 SAP 202-103-05
Address (Map): See location description
City (Map): Hermantown
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Stebner Rd MSA 103 SAP 202-103-05
Address (Site): See location description
City (Site): Hermantown
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): Stebner Rd MSA 103 SAP 202-103-05
Address (Req): See location description
City (Req): Hermantown
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.83837374
Longitude (Req): -92.21965346
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 5670-AISI0000005670
Status: Inactive
Status Date: 2005-08-03 07:55:18
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 6/30/2016
Tmsp Created: 5/12/1999
User Created: DELTA_M_R1
Tmsp Updt: 6/30/2016
Spatial ID: 9284
Name: Stebner Rd MSA 103 SAP 202-103-05
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 5670
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc

HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA: No
MPCA ID: C00005712
Program Co: ST
Program Name: Stormwater
Address: MN
Addr ZIP: 55811
City: Hermantown
County: St. Louis
HUC 8: 04010201
Cong Distr: 8
Senate Dis: 3
House Dist: 3B
IC Flag: No
Coord Coll: Q2
Latitude: 46.83837374
Longitude: -92.21965346
Activity: Construction Stormwater
Addr St: See location description
Addr City: Hermantown
MPCA ID List: C00005712
Program 1: Stormwater
Name: Stebner Rd MSA 103 SAP 202-103-05
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/5670

Agency Interests: File Request Details

Item ID: 5670-AISI0000005670
Status: Inactive
Status Date: 8/3/2005
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 6/30/2016
Tmsp Created: 5/12/1999
User Created: DELTA_M_R1
Tmsp Updt: 6/30/2016
Spatial ID: 9284
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 5670
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc
Name: Stebner Rd MSA 103 SAP 202-103-05
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

7	74 of119	WSW	0.16 / 827.41	1,419.81 / 9	Reserve Branch Line Address Unknown Duluth MN 55811	MPCA AI

Agency Interest ID: 104415

Name (Map):	Reserve Branch Line
Address (Map):	Address Unknown
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Reserve Branch Line
Address (Site):	Address Unknown
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Reserve Branch Line
Address (Req):	Address Unknown
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	104415-AISI0000104415	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	104415
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	7/6/2005	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	101138	**User Updt:**	geo_nc

Name:	Reserve Branch Line
Program List:	HW, PR
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	Multiple IDs	**Cong Distr:**	8
Program Co:	HW; SR	**Senate Dis:**	3
Program Name:	Multiple Programs	**House Dist:**	3B

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Multiple Activities		
Addr St:	Address Unknown		
Addr City:	Duluth		
MPCA ID List:	LS0007788; LS0008691; MNS000112854		
Program 1:	Hazardous Waste; Investigation and Cleanup		
Name:	Reserve Branch Line		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Hazardous Waste; Petroleum Remediation, Leak Site		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/104415		

Agency Interests: File Request Details

Item ID:	104415-AISI0000104415	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	104415
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	7/6/2005	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	101138		
Name:	Reserve Branch Line		
Program List:	HW, PR		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	75 of119	WSW	0.16 / 827.41	1,419.81 / 9	Arrowhead 345 KV Substation See location description Hermantown MN 55811	MPCA AI

Agency Interest ID:	104710
Name (Map):	Arrowhead 345 KV Substation
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Arrowhead 345 KV Substation
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN

ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Arrowhead 345 KV Substation
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	104710-AISI0000104710	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2007-07-23 12:16:03	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	104710
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	8/31/2005	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	102057	**User Updt:**	geo_nc
Name:	Arrowhead 345 KV Substation		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00016076	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Hermantown		
MPCA ID List:	C00016076		
Program 1:	Stormwater		
Name:	Arrowhead 345 KV Substation		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			

Site URL: https://webapp.pca.state.mn.us/wimn/site/104710

Agency Interests: File Request Details

Item ID:	104710-AISI0000104710	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	7/23/2007	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	104710
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	8/31/2005	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	102057		

Name:	Arrowhead 345 KV Substation
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	76 of119	WSW	0.16 / 827.41	1,419.81 / 9	SAP 69-643-14, CP 8214 CSAH 43 See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	102894
Name (Map):	SAP 69-643-14, CP 8214 CSAH 43
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	SAP 69-643-14, CP 8214 CSAH 43
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	SAP 69-643-14, CP 8214 CSAH 43
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137

Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	102894-AISI0000102894	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2011-08-17 13:45:52	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	102894
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	12/6/2005	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	50648410	**User Updt:**	geo_nc
Name:	SAP 69-643-14, CP 8214 CSAH 43		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00017317	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00017317		
Program 1:	Stormwater		
Name:	SAP 69-643-14, CP 8214 CSAH 43		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/102894		

Agency Interests: File Request Details

Item ID:	102894-AISI0000102894	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	8/17/2011	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	102894
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	12/6/2005	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	50648410		
Name:	SAP 69-643-14, CP 8214 CSAH 43		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	77 of119	WSW	0.16 / 827.41	1,419.81 / 9	Perimeter Fence Phase II See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	95489
Name (Map):	Perimeter Fence Phase II
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Perimeter Fence Phase II
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Perimeter Fence Phase II
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	95489-AISI0000095489	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2006-12-04 11:14:38	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	95489
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	

Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	9/29/2005	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	102575	**User Updt:**	geo_nc
Name:	Perimeter Fence Phase II		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00016373	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00016373		
Program 1:	Stormwater		
Name:	Perimeter Fence Phase II		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/95489		

Agency Interests: File Request Details

Item ID:	95489-AISI0000095489	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	12/4/2006	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	95489
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	9/29/2005	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	102575		
Name:	Perimeter Fence Phase II		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
HUC 12 Name:		Saint Louis River				
SI Type Desc:		Conventional Site				
DWSMA Code:						
DWSMA Name:						
Method Code:		Q2				
Method Desc:		Public Land Survey-Two Quarter				
7	78 of119	WSW	0.16 / 827.41	1,419.81 / 9	SP 3806-52 (TH 61) See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	36274
Name (Map):	SP 3806-52 (TH 61)
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	SP 3806-52 (TH 61)
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	SP 3806-52 (TH 61)
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	36274-AISI0000036274	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2007-10-08 08:42:47	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	36274
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	4/3/2000	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	50716	**User Updt:**	geo_nc
Name:	SP 3806-52 (TH 61)		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		

HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00003696	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346

Activity:	Construction Stormwater
Addr St:	See location description
Addr City:	Duluth
MPCA ID List:	C00003696
Program 1:	Stormwater
Name:	SP 3806-52 (TH 61)
Watershed :	St. Louis River
Coord Co 1:	Public Land Survey-Two Quarter
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/36274

Agency Interests: File Request Details

Item ID:	36274-AISI0000036274	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	10/8/2007	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	36274
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	4/3/2000	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	50716		

Name:	SP 3806-52 (TH 61)
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	79 of119	WSW	0.16 / 827.41	1,419.81 / 9	North Country Aviation Duluth International Airport Duluth MN 55811	MPCA AI

Agency Interest ID:	116062
Name (Map):	North Country Aviation

Address (Map):	Duluth International Airport
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	North Country Aviation
Address (Site):	Duluth International Airport
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	North Country Aviation
Address (Req):	Duluth International Airport
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	116062-AISI0000116062	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2010-02-18 16:00:14	**SI Cat:**	AISI
Program:	Underground Tanks	**SI ID:**	116062
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	8/30/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	51378795	**User Updt:**	geo_nc

Name:	North Country Aviation
Program List:	UT
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	TS0005154	**Cong Distr:**	8
Program Co:	TL	**Senate Dis:**	3
Program Name:	Tanks	**House Dist:**	3B
Address:	MN	**IC Flag:**	No

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Underground Tanks		
Addr St:	Duluth International Airport		
Addr City:	Duluth		
MPCA ID List:	TS0005154		
Program 1:	Tanks		
Name:	North Country Aviation		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Underground Tanks		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/116062		

Agency Interests: File Request Details

Item ID:	116062-AISI0000116062	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2/18/2010	**SI Cat:**	AISI
Program:	Underground Tanks	**SI ID:**	116062
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	8/30/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	51378795		
Name:	North Country Aviation		
Program List:	UT		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	80 of119	WSW	0.16 / 827.41	1,419.81 / 9	SP 69-601-001, CP 8293 See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	127145
Name (Map):	SP 69-601-001, CP 8293
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	SP 69-601-001, CP 8293
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811

Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	SP 69-601-001, CP 8293
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	127145-AISI0000127145	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2008-08-22 08:49:07	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	127145
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	4/24/2007	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	52671370	**User Updt:**	geo_nc
Name:	SP 69-601-001, CP 8293		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00021636	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00021636		
Program 1:	Stormwater		
Name:	SP 69-601-001, CP 8293		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/127145		

Agency Interests: File Request Details

Item ID:	127145-AISI0000127145	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	8/22/2008	***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	127145
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B
Section:		***Senate Dist:***	3
Quarters:		***TRDSQQ:***	
Collection Date:	6/30/2016	***Ref Code:***	GEN
Tmsp Created:	4/24/2007	***Ref Desc:***	General Location
User Created:	DELTA_M_R1	***Verified:***	No
Tmsp Updt:	6/30/2016	***User Updt:***	geo_nc
Spatial ID:	52671370		
Name:	SP 69-601-001, CP 8293		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	81 of119	WSW	0.16 / 827.41	1,419.81 / 9	Houland Lane See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	91815
Name (Map):	Houland Lane
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Houland Lane
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Houland Lane
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14

Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	91815-AISI0000091815	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	2007-06-27 16:05:00	***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	91815
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	6/30/2016	***TRDSQQ:***	
Tmsp Created:	12/17/2003	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	6/30/2016	***Verified:***	No
Spatial ID:	91818	***User Updt:***	geo_nc
Name:	Houland Lane		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	C00011272	***Cong Distr:***	8
Program Co:	ST	***Senate Dis:***	3
Program Name:	Stormwater	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	Q2
City:	Hermantown	***Latitude:***	46.83837374
County:	St. Louis	***Longitude:***	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00011272		
Program 1:	Stormwater		
Name:	Houland Lane		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/91815		

Agency Interests: File Request Details

Item ID:	91815-AISI0000091815	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	6/27/2007	***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	91815
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	12/17/2003	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	91818		
Name:	Houland Lane		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

7	82 of119	WSW	0.16 / 827.41	1,419.81 / 9	UMD Sports/Health Ctr Building See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	94109
Name (Map):	UMD Sports/Health Ctr Building
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	UMD Sports/Health Ctr Building
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	UMD Sports/Health Ctr Building
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	94109-AISI0000094109	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2006-11-16 13:03:09	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	94109
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	

Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	8/9/2005	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	101651	**User Updt:**	geo_nc
Name:	UMD Sports/Health Ctr Building		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00015737	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00015737		
Program 1:	Stormwater		
Name:	UMD Sports/Health Ctr Building		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/94109		

Agency Interests: File Request Details

Item ID:	94109-AISI0000094109	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	11/16/2006	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	94109
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	8/9/2005	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	101651		
Name:	UMD Sports/Health Ctr Building		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
HUC 12 Name:		Saint Louis River				
SI Type Desc:		Conventional Site				
DWSMA Code:						
DWSMA Name:						
Method Code:		Q2				
Method Desc:		Public Land Survey-Two Quarter				
7	83 of119	WSW	0.16 / 827.41	1,419.81 / 9	Jackson Estates - Phase II See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	89577
Name (Map):	Jackson Estates - Phase II
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Jackson Estates - Phase II
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Jackson Estates - Phase II
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	89577-AISI0000089577	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	89577
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	11/22/2002	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	87660	**User Updt:**	geo_nc
Name:	Jackson Estates - Phase II		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		

HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA: Yes
MPCA ID: C00009270
Program Co: ST
Program Name: Stormwater
Address: MN
Addr ZIP: 55811
City: Hermantown
County: St. Louis
HUC 8: 04010201
Cong Distr: 8
Senate Dis: 3
House Dist: 3B
IC Flag: No
Coord Coll: Q2
Latitude: 46.83837374
Longitude: -92.21965346
Activity: Construction Stormwater
Addr St: See location description
Addr City: Duluth
MPCA ID List: C00009270
Program 1: Stormwater
Name: Jackson Estates - Phase II
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/89577

Agency Interests: File Request Details

Item ID: 89577-AISI0000089577
Status: Active
Status Date:
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 6/30/2016
Tmsp Created: 11/22/2002
User Created: DELTA_M_R1
Tmsp Updt: 6/30/2016
Spatial ID: 87660
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 89577
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc
Name: Jackson Estates - Phase II
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

7	84 of119	WSW	0.16 / 827.41	1,419.81 / 9	Township Road 5641 - Esker Trail See location description Duluth MN 55811	MPCA AI

Agency Interest ID: 122454
Name (Map): Township Road 5641 - Esker Trail

Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Township Road 5641 - Esker Trail
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Township Road 5641 - Esker Trail
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	122454-AISI0000122454	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2009-01-23 14:05:20	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	122454
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	8/20/2007	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	53517884	**User Updt:**	geo_nc

Name:	Township Road 5641 - Esker Trail
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00023676	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00023676		
Program 1:	Stormwater		
Name:	Township Road 5641 - Esker Trail		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/122454		

Agency Interests: File Request Details

Item ID:	122454-AISI0000122454	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	1/23/2009	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	122454
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	8/20/2007	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	53517884		
Name:	Township Road 5641 - Esker Trail		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	85 of119	WSW	0.16 / 827.41	1,419.81 / 9	Trunk Sewer Phase II - Hermantown See location description Hermantown MN 55811	MPCA AI

Agency Interest ID:	77310
Name (Map):	Trunk Sewer Phase II - Hermantown
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Trunk Sewer Phase II - Hermantown
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN

ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Trunk Sewer Phase II - Hermantown
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	77310-AISI0000077310	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2007-10-05 15:14:48	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	77310
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	6/25/2002	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	76051	**User Updt:**	geo_nc
Name:	Trunk Sewer Phase II - Hermantown		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00008756	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Hermantown		
MPCA ID List:	C00008756		
Program 1:	Stormwater		
Name:	Trunk Sewer Phase II - Hermantown		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			

Site URL: https://webapp.pca.state.mn.us/wimn/site/77310

Agency Interests: File Request Details

Item ID:	77310-AISI0000077310	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	10/5/2007	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	77310
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	6/25/2002	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	76051		

Name:	Trunk Sewer Phase II - Hermantown
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	86 of119	WSW	0.16 / 827.41	1,419.81 / 9	Butternut Ave - Maple Ridge Development See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	86613
Name (Map):	Butternut Ave - Maple Ridge Development
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Butternut Ave - Maple Ridge Development
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Butternut Ave - Maple Ridge Development
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis

County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	86613-AISI0000086613	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2007-09-12 12:05:50	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	86613
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	6/4/2004	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	94445	**User Updt:**	geo_nc

Name: Butternut Ave - Maple Ridge Development
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00012317	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346

Activity: Construction Stormwater
Addr St: See location description
Addr City: Duluth
MPCA ID List: C00012317
Program 1: Stormwater
Name: Butternut Ave - Maple Ridge Development
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/86613

Agency Interests: File Request Details

Item ID:	86613-AISI0000086613	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	9/12/2007	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	86613
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	6/4/2004	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	94445		
Name:	Butternut Ave - Maple Ridge Development		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	87 of119	WSW	0.16 / 827.41	1,419.81 / 9	Administrative Services Addition See location description Hermantown MN 55811	MPCA AI

Agency Interest ID:	108084
Name (Map):	Administrative Services Addition
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Administrative Services Addition
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Administrative Services Addition
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	108084-AISI0000108084	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2007-12-07 09:22:10	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	108084
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	

Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	10/19/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	51530865	**User Updt:**	geo_nc

Name: Administrative Services Addition
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00020286	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346

Activity: Construction Stormwater
Addr St: See location description
Addr City: Hermantown
MPCA ID List: C00020286
Program 1: Stormwater
Name: Administrative Services Addition
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/108084

Agency Interests: File Request Details

Item ID:	108084-AISI0000108084	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	12/7/2007	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	108084
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	10/19/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	51530865		

Name: Administrative Services Addition
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
HUC 12:		40102011604				
HUC 12 Name:		Saint Louis River				
SI Type Desc:		Conventional Site				
DWSMA Code:						
DWSMA Name:						
Method Code:		Q2				
Method Desc:		Public Land Survey-Two Quarter				
7	88 of119	WSW	0.16 / 827.41	1,419.81 / 9	Bluff's Ridge Estates See location description Duluth MN 55811	MPCA AI

Agency Interest ID: 102288
Name (Map): Bluff's Ridge Estates
Address (Map): See location description
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Bluff's Ridge Estates
Address (Site): See location description
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): Bluff's Ridge Estates
Address (Req): See location description
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.83837374
Longitude (Req): -92.21965346
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 102288-AISI0000102288
Status: Active
Status Date:
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 6/30/2016
Tmsp Created: 11/7/2005
User Created: DELTA_M_R1
Tmsp Updt: 6/30/2016
Spatial ID: 103517
Name: Bluff's Ridge Estates
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 102288
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA: Yes
MPCA ID: C00016999
Program Co: ST
Program Name: Stormwater
Address: MN
Addr ZIP: 55811
City: Hermantown
County: St. Louis
Activity: Construction Stormwater
Addr St: See location description
Addr City: Duluth
MPCA ID List: C00016999
Program 1: Stormwater
Name: Bluff's Ridge Estates
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/102288

HUC 8: 04010201
Cong Distr: 8
Senate Dis: 3
House Dist: 3B
IC Flag: No
Coord Coll: Q2
Latitude: 46.83837374
Longitude: -92.21965346

Agency Interests: File Request Details

Item ID: 102288-AISI0000102288
Status: Active
Status Date:
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 6/30/2016
Tmsp Created: 11/7/2005
User Created: DELTA_M_R1
Tmsp Updt: 6/30/2016
Spatial ID: 103517
Name: Bluff's Ridge Estates
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 102288
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc

7	89 of119	WSW	0.16 / 827.41	1,419.81 / 9	Joe Ogston Property Fill See location description Duluth MN 55811	MPCA AI

Agency Interest ID: 84425

Name (Map):	Joe Ogston Property Fill
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Joe Ogston Property Fill
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Joe Ogston Property Fill
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	84425-AISI0000084425	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	84425
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	8/27/2004	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	96950	**User Updt:**	geo_nc

Name:	Joe Ogston Property Fill
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00013256	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00013256		
Program 1:	Stormwater		
Name:	Joe Ogston Property Fill		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/84425		

Agency Interests: File Request Details

Item ID:	84425-AISI0000084425	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	84425
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	8/27/2004	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	96950		
Name:	Joe Ogston Property Fill		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	90 of119	WSW	0.16 / 827.41	1,419.81 / 9	MSAS 199 - Airport Road Reconstruction See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	120957
Name (Map):	MSAS 199 - Airport Road Reconstruction
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	MSAS 199 - Airport Road Reconstruction
Address (Site):	See location description
City (Site):	Duluth

State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	MSAS 199 - Airport Road Reconstruction
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	120957-AISI0000120957	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2008-08-22 08:00:56	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	120957
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	3/22/2007	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	52607717	**User Updt:**	geo_nc
Name:	MSAS 199 - Airport Road Reconstruction		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00021278	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00021278		
Program 1:	Stormwater		
Name:	MSAS 199 - Airport Road Reconstruction		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/120957

Agency Interests: File Request Details

Item ID:	120957-AISI0000120957	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	8/22/2008	***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	120957
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B
Section:		***Senate Dist:***	3
Quarters:		***TRDSQQ:***	
Collection Date:	6/30/2016	***Ref Code:***	GEN
Tmsp Created:	3/22/2007	***Ref Desc:***	General Location
User Created:	DELTA_M_R1	***Verified:***	No
Tmsp Updt:	6/30/2016	***User Updt:***	geo_nc
Spatial ID:	52607717		

Name: MSAS 199 - Airport Road Reconstruction
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	91 of119	WSW	0.16 / 827.41	1,419.81 / 9	LaVaque Road (CSAH 48) SAP 69-648-22 See location description Hermantown MN 55811	MPCA AI

Agency Interest ID: 78019
Name (Map): LaVaque Road (CSAH 48) SAP 69-648-22
Address (Map): See location description
City (Map): Hermantown
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): LaVaque Road (CSAH 48) SAP 69-648-22
Address (Site): See location description
City (Site): Hermantown
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): LaVaque Road (CSAH 48) SAP 69-648-22
Address (Req): See location description
City (Req): Hermantown
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.83837374
Longitude (Req): -92.21965346

County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	78019-AISI0000078019	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2005-08-03 09:55:19	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	78019
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	6/26/2002	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	76067	**User Updt:**	geo_nc

Name: LaVaque Road (CSAH 48) SAP 69-648-22
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00008764	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346

Activity: Construction Stormwater
Addr St: See location description
Addr City: Hermantown
MPCA ID List: C00008764
Program 1: Stormwater
Name: LaVaque Road (CSAH 48) SAP 69-648-22
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/78019

Agency Interests: File Request Details

Item ID:	78019-AISI0000078019	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	8/3/2005	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	78019
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	6/26/2002	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	76067		
Name:	LaVaque Road (CSAH 48) SAP 69-648-22		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	92 of119	WSW	0.16 / 827.41	1,419.81 / 9	Hermantown Community Church E of Stebner Rd along Maple Grove Rd Hermantown MN 55811	MPCA AI

Agency Interest ID:	5767
Name (Map):	Hermantown Community Church
Address (Map):	E of Stebner Rd along Maple Grove Rd
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Hermantown Community Church
Address (Site):	E of Stebner Rd along Maple Grove Rd
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Hermantown Community Church
Address (Req):	E of Stebner Rd along
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	5767-AISI0000005767	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2005-11-28 10:10:35	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	5767
CTU Code:	239436	**SI Cat Desc:**	Agency Interest

CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	2/4/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	7140	**User Updt:**	geo_nc
Name:	Hermantown Community Church		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00004465	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	E of Stebner Rd along Maple Grove Rd		
Addr City:	Hermantown		
MPCA ID List:	C00004465		
Program 1:	Stormwater		
Name:	Hermantown Community Church		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/5767		

Agency Interests: File Request Details

Item ID:	5767-AISI0000005767	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	11/28/2005	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	5767
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	2/4/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	7140		
Name:	Hermantown Community Church		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	93 of119	WSW	0.16 / 827.41	1,419.81 / 9	Stebner Park Soccer Complex - Hermantown See location description Hermantown MN 55811	MPCA AI

Agency Interest ID: 121933
Name (Map): Stebner Park Soccer Complex - Hermantown
Address (Map): See location description
City (Map): Hermantown
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Stebner Park Soccer Complex - Hermantown
Address (Site): See location description
City (Site): Hermantown
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): Stebner Park Soccer Complex - Hermantown
Address (Req): See location description
City (Req): Hermantown
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.83837374
Longitude (Req): -92.21965346
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	121933-AISI0000121933	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2009-03-17 13:25:53	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	121933
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	7/24/2008	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	54680019	**User Updt:**	geo_nc
Name:	Stebner Park Soccer Complex - Hermantown		
Program List:	CS		

HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA: No
MPCA ID: C00026110
Program Co: ST
Program Name: Stormwater
Address: MN
Addr ZIP: 55811
City: Hermantown
County: St. Louis
HUC 8: 04010201
Cong Distr: 8
Senate Dis: 3
House Dist: 3B
IC Flag: No
Coord Coll: Q2
Latitude: 46.83837374
Longitude: -92.21965346
Activity: Construction Stormwater
Addr St: See location description
Addr City: Hermantown
MPCA ID List: C00026110
Program 1: Stormwater
Name: Stebner Park Soccer Complex - Hermantown
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/121933

Agency Interests: File Request Details

Item ID: 121933-AISI0000121933
Status: Inactive
Status Date: 3/17/2009
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 6/30/2016
Tmsp Created: 7/24/2008
User Created: DELTA_M_R1
Tmsp Updt: 6/30/2016
Spatial ID: 54680019
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 121933
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc
Name: Stebner Park Soccer Complex - Hermantown
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

7	94 of119	WSW	0.16 / 827.41	1,419.81 / 9	Prime Properties Commercial Development	MPCA AI

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
					See location description Hermantown MN 55811	

Agency Interest ID:	94491
Name (Map):	Prime Properties Commercial Development
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Prime Properties Commercial Development
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Prime Properties Commercial Development
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	94491-AISI0000094491	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	2007-05-10 11:05:53	***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	94491
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	6/30/2016	***TRDSQQ:***	
Tmsp Created:	9/9/2004	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	6/30/2016	***Verified:***	No
Spatial ID:	97124	***User Updt:***	geo_nc

Name:	Prime Properties Commercial Development
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

My Neighborhood Site Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00013343	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346

Activity:	Construction Stormwater
Addr St:	See location description
Addr City:	Hermantown
MPCA ID List:	C00013343
Program 1:	Stormwater
Name:	Prime Properties Commercial Development
Watershed :	St. Louis River
Coord Co 1:	Public Land Survey-Two Quarter
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/94491

Agency Interests: File Request Details

Item ID:	94491-AISI0000094491	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	5/10/2007	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	94491
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	9/9/2004	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	97124		

Name:	Prime Properties Commercial Development
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	95 of119	WSW	0.16 / 827.41	1,419.81 / 9	US Customs & Border Patrol - Duluth See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	120267
Name (Map):	US Customs & Border Patrol - Duluth
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137

Loc Desc (Map):	
Name (Site):	US Customs & Border Patrol - Duluth
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	US Customs & Border Patrol - Duluth
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	120267-AISI0000120267	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	120267
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	9/9/2008	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	54943722	**User Updt:**	geo_nc
Name:	US Customs & Border Patrol - Duluth		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00026493	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00026493		
Program 1:	Stormwater		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Name: US Customs & Border Patrol - Duluth
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/120267

Agency Interests: File Request Details

Item ID:	120267-AISI0000120267	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	120267
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	9/9/2008	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	54943722		

Name: US Customs & Border Patrol - Duluth
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	96 of119	WSW	0.16 / 827.41	1,419.81 / 9	Bishop Woods See location description Hermantown MN 55811	MPCA AI

Agency Interest ID: 61974
Name (Map): Bishop Woods
Address (Map): See location description
City (Map): Hermantown
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Bishop Woods
Address (Site): See location description
City (Site): Hermantown
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): Bishop Woods
Address (Req): See location description
City (Req): Hermantown
State (Req): MN
ZIP (Req): 55811

Loc Desc (Req):
Latitude (Req): 46.83837374
Longitude (Req): -92.21965346
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 61974-AISI0000061974
Status: Inactive
Status Date: 2006-10-23 15:22:16
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 6/30/2016
Tmsp Created: 6/28/2001
User Created: DELTA_M_R1
Tmsp Updt: 6/30/2016
Spatial ID: 57356
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 61974
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc
Name: Bishop Woods
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA: No
MPCA ID: C00007820
Program Co: ST
Program Name: Stormwater
Address: MN
Addr ZIP: 55811
City: Hermantown
County: St. Louis
HUC 8: 04010201
Cong Distr: 8
Senate Dis: 3
House Dist: 3B
IC Flag: No
Coord Coll: Q2
Latitude: 46.83837374
Longitude: -92.21965346
Activity: Construction Stormwater
Addr St: See location description
Addr City: Hermantown
MPCA ID List: C00007820
Program 1: Stormwater
Name: Bishop Woods
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/61974

Agency Interests: File Request Details

Item ID: 61974-AISI0000061974
Status: Inactive
Status Date: 10/23/2006
Program: Const Stormwater
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 61974

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	6/28/2001	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	57356		
Name:	Bishop Woods		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	97 of119	WSW	0.16 / 827.41	1,419.81 / 9	Federal Aviation Admin Dlh/vortac Old Terminal Building 2nd Floor Duluth MN 55811	MPCA AI

Agency Interest ID:	111129
Name (Map):	Federal Aviation Admin Dlh/vortac
Address (Map):	Old Terminal Building 2nd Floor
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Federal Aviation Admin Dlh/vortac
Address (Site):	Old Terminal Building 2nd Floor
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Federal Aviation Admin Dlh/vortac
Address (Req):	Old Terminal Building 2nd Floor
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	111129-AISI0000111129	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2006-08-30 08:50:57	**SI Cat:**	AISI

Program:	Underground Tanks	**SI ID:**	111129
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	8/30/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	51379907	**User Updt:**	geo_nc
Name:	Federal Aviation Admin Dlh/vortac		
Program List:	UT		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	TS0005755	**Cong Distr:**	8
Program Co:	TL	**Senate Dis:**	3
Program Name:	Tanks	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Underground Tanks		
Addr St:	Old Terminal Building 2nd Floor		
Addr City:	Duluth		
MPCA ID List:	TS0005755		
Program 1:	Tanks		
Name:	Federal Aviation Admin Dlh/vortac		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Underground Tanks		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/111129		

Agency Interests: File Request Details

Item ID:	111129-AISI0000111129	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	8/30/2006	**SI Cat:**	AISI
Program:	Underground Tanks	**SI ID:**	111129
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	8/30/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	51379907		
Name:	Federal Aviation Admin Dlh/vortac		
Program List:	UT		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	98 of119	WSW	0.16 / 827.41	1,419.81 / 9	SP 6928-25 TH 73 See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	38356
Name (Map):	SP 6928-25 TH 73
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	SP 6928-25 TH 73
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	SP 6928-25 TH 73
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	38356-AISI0000038356	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2005-11-08 21:10:09	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	38356
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	8/9/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	46170	**User Updt:**	geo_nc
Name:	SP 6928-25 TH 73		

Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	C00006144	***Cong Distr:***	8
Program Co:	ST	***Senate Dis:***	3
Program Name:	Stormwater	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	Q2
City:	Hermantown	***Latitude:***	46.83837374
County:	St. Louis	***Longitude:***	-92.21965346

Activity:	Construction Stormwater
Addr St:	See location description
Addr City:	Duluth
MPCA ID List:	C00006144
Program 1:	Stormwater
Name:	SP 6928-25 TH 73
Watershed :	St. Louis River
Coord Co 1:	Public Land Survey-Two Quarter
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/38356

Agency Interests: File Request Details

Item ID:	38356-AISI0000038356	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	11/8/2005	***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	38356
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B
Section:		***Senate Dist:***	3
Quarters:		***TRDSQQ:***	
Collection Date:	6/30/2016	***Ref Code:***	GEN
Tmsp Created:	8/9/1999	***Ref Desc:***	General Location
User Created:	DELTA_M_R1	***Verified:***	No
Tmsp Updt:	6/30/2016	***User Updt:***	geo_nc
Spatial ID:	46170		

Name:	SP 6928-25 TH 73
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	99 of119	WSW	0.16 / 827.41	1,419.81 / 9	Andrews Division 1st See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	86009
Name (Map):	Andrews Division 1st
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Andrews Division 1st
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Andrews Division 1st
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	86009-AISI0000086009	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	86009
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	5/18/2004	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	94137	**User Updt:**	geo_nc

Name:	Andrews Division 1st
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

My Neighborhood Site Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00012110	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00012110		
Program 1:	Stormwater		
Name:	Andrews Division 1st		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/86009		

Agency Interests: File Request Details

Item ID:	86009-AISI0000086009	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	86009
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	5/18/2004	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	94137		
Name:	Andrews Division 1st		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	100 of119	WSW	0.16 / 827.41	1,419.81 / 9	Fed Ex Express Airport Approach Rd Duluth MN 55811	MPCA AI

Agency Interest ID:	112629
Name (Map):	Fed Ex Express
Address (Map):	Airport Approach Rd
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137

Loc Desc (Map):	
Name (Site):	Fed Ex Express
Address (Site):	Airport Approach Rd
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Fed Ex Express
Address (Req):	Airport Approach Rd
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	112629-AISI0000112629	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Aboveground Tanks	***SI ID:***	112629
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	6/30/2016	***TRDSQQ:***	
Tmsp Created:	9/14/2006	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	6/30/2016	***Verified:***	No
Spatial ID:	51437319	***User Updt:***	geo_nc
Name:	Fed Ex Express		
Program List:	AT		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	Yes	***HUC 8:***	04010201
MPCA ID:	Multiple IDs	***Cong Distr:***	8
Program Co:	TL	***Senate Dis:***	3
Program Name:	Tanks	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	Q2
City:	Hermantown	***Latitude:***	46.83837374
County:	St. Louis	***Longitude:***	-92.21965346
Activity:	Aboveground Tanks		
Addr St:	Airport Approach Rd		
Addr City:	Duluth		
MPCA ID List:	TS0122304; TS0122621		
Program 1:	Tanks		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Name: Fed Ex Express
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Aboveground Tanks
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/112629

Agency Interests: File Request Details

Item ID: 112629-AISI0000112629
Status: Active
Status Date:
Program: Aboveground Tanks
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 6/30/2016
Tmsp Created: 9/14/2006
User Created: DELTA_M_R1
Tmsp Updt: 6/30/2016
Spatial ID: 51437319
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 112629
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc
Name: Fed Ex Express
Program List: AT
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	101 of119	WSW	0.16 / 827.41	1,419.81 / 9	Mahoney Property See location description Duluth MN 55811	MPCA AI

Agency Interest ID: 83398
Name (Map): Mahoney Property
Address (Map): See location description
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Mahoney Property
Address (Site): See location description
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): Mahoney Property
Address (Req): See location description
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811

Loc Desc (Req):
Latitude (Req): 46.83837374
Longitude (Req): -92.21965346
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 83398-AISI0000083398
Status: Inactive
Status Date: 2008-12-02 11:39:15
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 6/30/2016
Tmsp Created: 8/12/2004
User Created: DELTA_M_R1
Tmsp Updt: 6/30/2016
Spatial ID: 96625
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 83398
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc
Name: Mahoney Property
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA: No
MPCA ID: C00013088
Program Co: ST
Program Name: Stormwater
Address: MN
Addr ZIP: 55811
City: Hermantown
County: St. Louis
HUC 8: 04010201
Cong Distr: 8
Senate Dis: 3
House Dist: 3B
IC Flag: No
Coord Coll: Q2
Latitude: 46.83837374
Longitude: -92.21965346
Activity: Construction Stormwater
Addr St: See location description
Addr City: Duluth
MPCA ID List: C00013088
Program 1: Stormwater
Name: Mahoney Property
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/83398

Agency Interests: File Request Details

Item ID: 83398-AISI0000083398
Status: Inactive
Status Date: 12/2/2008
Program: Const Stormwater
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 83398

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	8/12/2004	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	96625		
Name:	Mahoney Property		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	102 of119	WSW	0.16 / 827.41	1,419.81 / 9	Curtis Oil Company Inc Site Expansion See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	126016
Name (Map):	Curtis Oil Company Inc Site Expansion
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Curtis Oil Company Inc Site Expansion
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Curtis Oil Company Inc Site Expansion
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	126016-AISI0000126016	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON

Status Date:	2009-06-26 16:05:19	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	126016
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	10/24/2007	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	53804027	**User Updt:**	geo_nc
Name:	Curtis Oil Company Inc Site Expansion		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00024381	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00024381		
Program 1:	Stormwater		
Name:	Curtis Oil Company Inc Site Expansion		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/126016		

Agency Interests: File Request Details

Item ID:	126016-AISI0000126016	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	6/26/2009	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	126016
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	10/24/2007	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	53804027		
Name:	Curtis Oil Company Inc Site Expansion		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

7	103 of119	WSW	0.16 / 827.41	1,419.81 / 9	Duluth Dump Site #1 Final Closure See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	110392
Name (Map):	Duluth Dump Site #1 Final Closure
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Duluth Dump Site #1 Final Closure
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Duluth Dump Site #1 Final Closure
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	110392-AISI0000110392	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2008-08-14 15:02:52	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	110392
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	10/16/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	51527818	**User Updt:**	geo_nc

Name:	Duluth Dump Site #1 Final Closure
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00020246	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346

Activity:	Construction Stormwater
Addr St:	See location description
Addr City:	Duluth
MPCA ID List:	C00020246
Program 1:	Stormwater
Name:	Duluth Dump Site #1 Final Closure
Watershed :	St. Louis River
Coord Co 1:	Public Land Survey-Two Quarter
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/110392

Agency Interests: File Request Details

Item ID:	110392-AISI0000110392	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	8/14/2008	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	110392
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	10/16/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	51527818		

Name:	Duluth Dump Site #1 Final Closure
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	104 of119	WSW	0.16 / 827.41	1,419.81 / 9	Foxborrow 1st Phase 2 See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	85752
Name (Map):	Foxborrow 1st Phase 2
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Foxborrow 1st Phase 2
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Foxborrow 1st Phase 2
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	85752-AISI0000085752	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	85752
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	4/26/2004	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	93656	**User Updt:**	geo_nc

Name:	Foxborrow 1st Phase 2
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

My Neighborhood Site Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00011894	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00011894		
Program 1:	Stormwater		
Name:	Foxborrow 1st Phase 2		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/85752		

Agency Interests: File Request Details

Item ID:	85752-AISI0000085752	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	85752
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	4/26/2004	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	93656		
Name:	Foxborrow 1st Phase 2		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	105 of119	WSW	0.16 / 827.41	1,419.81 / 9	Miller Dwan Hospice House See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	133278
Name (Map):	Miller Dwan Hospice House
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137

Loc Desc (Map):	
Name (Site):	Miller Dwan Hospice House
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Miller Dwan Hospice House
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	133278-AISI0000133278	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	2009-07-02 08:08:47	***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	133278
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	6/30/2016	***TRDSQQ:***	
Tmsp Created:	7/13/2006	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	6/30/2016	***Verified:***	No
Spatial ID:	51274502	***User Updt:***	geo_nc
Name:	Miller Dwan Hospice House		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	C00019275	***Cong Distr:***	8
Program Co:	ST	***Senate Dis:***	3
Program Name:	Stormwater	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	Q2
City:	Hermantown	***Latitude:***	46.83837374
County:	St. Louis	***Longitude:***	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00019275		
Program 1:	Stormwater		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Name: Miller Dwan Hospice House
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/133278

Agency Interests: File Request Details

Item ID:	133278-AISI0000133278	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	7/2/2009	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	133278
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	7/13/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	51274502		

Name: Miller Dwan Hospice House
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	106 of119	WSW	0.16 / 827.41	1,419.81 / 9	Runway 9-27 Paved Shoulder Reconstruct See location description Duluth MN 55811	MPCA AI

Agency Interest ID: 87266
Name (Map): Runway 9-27 Paved Shoulder Reconstruct
Address (Map): See location description
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Runway 9-27 Paved Shoulder Reconstruct
Address (Site): See location description
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): Runway 9-27 Paved Shoulder Reconstruct
Address (Req): See location description
City (Req): Duluth
State (Req): MN

ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	87266-AISI0000087266	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2004-12-07 13:58:37	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	87266
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	9/10/2004	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	97167	**User Updt:**	geo_nc
Name:	Runway 9-27 Paved Shoulder Reconstruct		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00013386	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00013386		
Program 1:	Stormwater		
Name:	Runway 9-27 Paved Shoulder Reconstruct		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/87266		

Agency Interests: File Request Details

Item ID:	87266-AISI0000087266	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	12/7/2004	**SI Cat:**	AISI

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program:	Const Stormwater	**SI ID:**	87266
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	9/10/2004	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	97167		
Name:	Runway 9-27 Paved Shoulder Reconstruct		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

7	107 of119	WSW	0.16 / 827.41	1,419.81 / 9	**Hermantown Sanitary Sewer District 406** **See location description** **Hermantown MN 55811**	MPCA AI

Agency Interest ID:	89732
Name (Map):	Hermantown Sanitary Sewer District 406
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Hermantown Sanitary Sewer District 406
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Hermantown Sanitary Sewer District 406
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	89732-AISI0000089732	**Int Doc ID:**	0

Status:	Inactive	**SI Type:**	CON
Status Date:	2005-01-07 15:15:37	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	89732
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	4/22/2003	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	89583	**User Updt:**	geo_nc

Name: Hermantown Sanitary Sewer District 406
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00009660	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346

Activity: Construction Stormwater
Addr St: See location description
Addr City: Hermantown
MPCA ID List: C00009660
Program 1: Stormwater
Name: Hermantown Sanitary Sewer District 406
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/89732

Agency Interests: File Request Details

Item ID:	89732-AISI0000089732	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	1/7/2005	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	89732
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	4/22/2003	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	89583		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Name:	Hermantown Sanitary Sewer District 406
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	108 of119	WSW	0.16 / 827.41	1,419.81 / 9	Hermantown Trunk Sewer Phase 3 See location description Hermantown MN 55811	MPCA AI

Agency Interest ID:	137801
Name (Map):	Hermantown Trunk Sewer Phase 3
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Hermantown Trunk Sewer Phase 3
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Hermantown Trunk Sewer Phase 3
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	137801-AISI0000137801	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2008-11-14 12:03:11	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	137801
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	1/19/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No

Spatial ID:	50818353	**User Updt:**	geo_nc
Name:	Hermantown Trunk Sewer Phase 3		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00017583	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Hermantown		
MPCA ID List:	C00017583		
Program 1:	Stormwater		
Name:	Hermantown Trunk Sewer Phase 3		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/137801		

Agency Interests: File Request Details

Item ID:	137801-AISI0000137801	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	11/14/2008	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	137801
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	1/19/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	50818353		
Name:	Hermantown Trunk Sewer Phase 3		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	109 of119	WSW	0.16 / 827.41	1,419.81 / 9	Bruno's Old World Foods Address Unknown Duluth MN 55811	MPCA AI

Agency Interest ID: 94803
Name (Map): Bruno's Old World Foods
Address (Map): Address Unknown
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Bruno's Old World Foods
Address (Site): Address Unknown
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): Bruno's Old World Foods
Address (Req): Address Unknown
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.83837374
Longitude (Req): -92.21965346
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 94803-AISI0000094803
Status: Inactive
Status Date: 2007-07-20 15:55:00
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 6/30/2016
Tmsp Created: 9/29/2005
User Created: DELTA_M_R1
Tmsp Updt: 6/30/2016
Spatial ID: 102543
Name: Bruno's Old World Foods
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 94803
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	C00016304	***Cong Distr:***	8
Program Co:	ST	***Senate Dis:***	3
Program Name:	Stormwater	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	Q2
City:	Hermantown	***Latitude:***	46.83837374
County:	St. Louis	***Longitude:***	-92.21965346
Activity:	Construction Stormwater		
Addr St:	Address Unknown		
Addr City:	Duluth		
MPCA ID List:	C00016304		
Program 1:	Stormwater		
Name:	Bruno's Old World Foods		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/94803		

Agency Interests: File Request Details

Item ID:	94803-AISI0000094803	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	7/20/2007	***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	94803
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B
Section:		***Senate Dist:***	3
Quarters:		***TRDSQQ:***	
Collection Date:	6/30/2016	***Ref Code:***	GEN
Tmsp Created:	9/29/2005	***Ref Desc:***	General Location
User Created:	DELTA_M_R1	***Verified:***	No
Tmsp Updt:	6/30/2016	***User Updt:***	geo_nc
Spatial ID:	102543		
Name:	Bruno's Old World Foods		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	110 of119	WSW	0.16 / 827.41	1,419.81 / 9	Saint Louis County Public Safety Building See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	109180
Name (Map):	Saint Louis County Public Safety Building
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346

County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Saint Louis County Public Safety Building
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Saint Louis County Public Safety Building
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	109180-AISI0000109180	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2008-07-18 11:50:10	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	109180
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	9/19/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	51440215	**User Updt:**	geo_nc
Name:	Saint Louis County Public Safety Building		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00019991	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

MPCA ID List: C00019991
Program 1: Stormwater
Name: Saint Louis County Public Safety Building
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/109180

Agency Interests: File Request Details

Item ID:	109180-AISI0000109180	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	7/18/2008	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	109180
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	9/19/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	51440215		

Name: Saint Louis County Public Safety Building
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	111 of119	WSW	0.16 / 827.41	1,419.81 / 9	SCS Aircraft Interiors - Duluth See location description Duluth MN 55811	MPCA AI

Agency Interest ID: 120205
Name (Map): SCS Aircraft Interiors - Duluth
Address (Map): See location description
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): SCS Aircraft Interiors - Duluth
Address (Site): See location description
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): SCS Aircraft Interiors - Duluth
Address (Req): See location description
City (Req): Duluth

State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	120205-AISI0000120205	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	120205
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	6/30/2016	***TRDSQQ:***	
Tmsp Created:	7/18/2008	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	6/30/2016	***Verified:***	No
Spatial ID:	54673153	***User Updt:***	geo_nc

Name:	SCS Aircraft Interiors - Duluth
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	Yes	***HUC 8:***	04010201
MPCA ID:	C00026072	***Cong Distr:***	8
Program Co:	ST	***Senate Dis:***	3
Program Name:	Stormwater	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	Q2
City:	Hermantown	***Latitude:***	46.83837374
County:	St. Louis	***Longitude:***	-92.21965346

Activity:	Construction Stormwater
Addr St:	See location description
Addr City:	Duluth
MPCA ID List:	C00026072
Program 1:	Stormwater
Name:	SCS Aircraft Interiors - Duluth
Watershed :	St. Louis River
Coord Co 1:	Public Land Survey-Two Quarter
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/120205

Agency Interests: File Request Details

Item ID:	120205-AISI0000120205	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	120205
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	7/18/2008	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	54673153		
Name:	SCS Aircraft Interiors - Duluth		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

7	112 of119	WSW	0.16 / 827.41	1,419.81 / 9	SP 69-619-12 See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	6286
Name (Map):	SP 69-619-12
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	SP 69-619-12
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	SP 69-619-12
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	6286-AISI0000006286	**Int Doc ID:**	0

Status:	Inactive	**SI Type:**	CON
Status Date:	2005-08-03 07:49:54	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	6286
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	3/30/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	8275	**User Updt:**	geo_nc
Name:	SP 69-619-12		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00004283	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00004283		
Program 1:	Stormwater		
Name:	SP 69-619-12		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/6286		

Agency Interests: File Request Details

Item ID:	6286-AISI0000006286	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	8/3/2005	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	6286
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	3/30/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	8275		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Name:	SP 69-619-12
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	113 of119	WSW	0.16 / 827.41	1,419.81 / 9	CSAH 48 See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	85508
Name (Map):	CSAH 48
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	CSAH 48
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	CSAH 48
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	85508-AISI0000085508	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2007-07-27 15:39:13	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	85508
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	5/25/2004	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No

Spatial ID:	94224	**User Updt:**	geo_nc
Name:	CSAH 48		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00012172	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00012172		
Program 1:	Stormwater		
Name:	CSAH 48		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/85508		

Agency Interests: File Request Details

Item ID:	85508-AISI0000085508	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	7/27/2007	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	85508
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	5/25/2004	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	94224		
Name:	CSAH 48		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	114 of119	WSW	0.16 / 827.41	1,419.81 / 9	Hermantown Sanitary Sewer Imp 418 See location description Hermantown MN 55811	MPCA AI

Agency Interest ID:	85493
Name (Map):	Hermantown Sanitary Sewer Imp 418
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Hermantown Sanitary Sewer Imp 418
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Hermantown Sanitary Sewer Imp 418
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	85493-AISI0000085493	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2005-01-07 15:12:52	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	85493
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	5/25/2004	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	94209	**User Updt:**	geo_nc

Name:	Hermantown Sanitary Sewer Imp 418
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	C00012156	***Cong Distr:***	8
Program Co:	ST	***Senate Dis:***	3
Program Name:	Stormwater	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	Q2
City:	Hermantown	***Latitude:***	46.83837374
County:	St. Louis	***Longitude:***	-92.21965346

Activity:	Construction Stormwater
Addr St:	See location description
Addr City:	Hermantown
MPCA ID List:	C00012156
Program 1:	Stormwater
Name:	Hermantown Sanitary Sewer Imp 418
Watershed :	St. Louis River
Coord Co 1:	Public Land Survey-Two Quarter
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/85493

Agency Interests: File Request Details

Item ID:	85493-AISI0000085493	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	1/7/2005	***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	85493
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B
Section:		***Senate Dist:***	3
Quarters:		***TRDSQQ:***	
Collection Date:	6/30/2016	***Ref Code:***	GEN
Tmsp Created:	5/25/2004	***Ref Desc:***	General Location
User Created:	DELTA_M_R1	***Verified:***	No
Tmsp Updt:	6/30/2016	***User Updt:***	geo_nc
Spatial ID:	94209		

Name:	Hermantown Sanitary Sewer Imp 418
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	115 of119	WSW	0.16 / 827.41	1,419.81 / 9	Timber Ridge Townhomes Phase III See location description Hermantown MN 55811	MPCA AI

Agency Interest ID:	119236
Name (Map):	Timber Ridge Townhomes Phase III
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374

Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Timber Ridge Townhomes Phase III
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Timber Ridge Townhomes Phase III
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	119236-AISI0000119236	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	119236
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	8/5/2008	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	54742807	**User Updt:**	geo_nc
Name:	Timber Ridge Townhomes Phase III		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00026220	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Addr City: Hermantown
MPCA ID List: C00026220
Program 1: Stormwater
Name: Timber Ridge Townhomes Phase III
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/119236

Agency Interests: File Request Details

Item ID: 119236-AISI0000119236
Status: Active
Status Date:
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 6/30/2016
Tmsp Created: 8/5/2008
User Created: DELTA_M_R1
Tmsp Updt: 6/30/2016
Spatial ID: 54742807
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 119236
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc
Name: Timber Ridge Townhomes Phase III
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	116 of119	WSW	0.16 / 827.41	1,419.81 / 9	Village at Maple Ridge See location description Hermantown MN 55811	MPCA AI

Agency Interest ID: 106909
Name (Map): Village at Maple Ridge
Address (Map): See location description
City (Map): Hermantown
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Village at Maple Ridge
Address (Site): See location description
City (Site): Hermantown
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): Village at Maple Ridge
Address (Req): See location description

City (Req): Hermantown
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.83837374
Longitude (Req): -92.21965346
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 106909-AISI0000106909
Status: Active
Status Date:
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 6/30/2016
Tmsp Created: 8/9/2006
User Created: DELTA_M_R1
Tmsp Updt: 6/30/2016
Spatial ID: 51305202
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 106909
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc
Name: Village at Maple Ridge
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA: Yes
MPCA ID: Multiple IDs
Program Co: ST
Program Name: Stormwater
Address: MN
Addr ZIP: 55811
City: Hermantown
County: St. Louis
HUC 8: 04010201
Cong Distr: 8
Senate Dis: 3
House Dist: 3B
IC Flag: No
Coord Coll: Q2
Latitude: 46.83837374
Longitude: -92.21965346
Activity: Construction Stormwater
Addr St: See location description
Addr City: Hermantown
MPCA ID List: C00019609; SUB0026455
Program 1: Stormwater
Name: Village at Maple Ridge
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/106909

Agency Interests: File Request Details

Item ID: 106909-AISI0000106909
Int Doc ID: 0

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	106909
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	8/9/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	51305202		
Name:	Village at Maple Ridge		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	117 of119	WSW	0.16 / 827.41	1,419.81 / 9	Walsh's Addition - Basswood Ave See location description Duluth MN 55811	MPCA AI

Agency Interest ID:	92110
Name (Map):	Walsh's Addition - Basswood Ave
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Walsh's Addition - Basswood Ave
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Walsh's Addition - Basswood Ave
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	92110-AISI0000092110	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	92110
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	12/31/2003	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	91976	**User Updt:**	geo_nc
Name:	Walsh's Addition - Basswood Ave		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	Multiple IDs	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	C00011352; SUB0029072; SUB0033338		
Program 1:	Stormwater		
Name:	Walsh's Addition - Basswood Ave		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/92110		

Agency Interests: File Request Details

Item ID:	92110-AISI0000092110	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	92110
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	12/31/2003	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Spatial ID:	91976
Name:	Walsh's Addition - Basswood Ave
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2
Method Desc:	Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	118 of119	WSW	0.16 / 827.41	1,419.81 / 9	Forest Ridge Estates See location description Hermantown MN 55811	MPCA AI

Agency Interest ID:	104125
Name (Map):	Forest Ridge Estates
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Forest Ridge Estates
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Forest Ridge Estates
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	104125-AISI0000104125	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2008-07-11 12:04:57	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	104125
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	5/12/2005	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location

Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	100348	**User Updt:**	geo_nc
Name:	Forest Ridge Estates		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	Multiple IDs	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Construction Stormwater		
Addr St:	See location description		
Addr City:	Hermantown		
MPCA ID List:	C00014992; SUB0025481; SUB0025482; SUB0025483; SUB0025484; SUB0025485; SUB0025486; SUB0025487; SUB0025488; SUB0025489; SUB0025490; SUB0025491; SUB0025492; SUB0025493; SUB0025494; SUB0025495; SUB002549		
Program 1:	Stormwater		
Name:	Forest Ridge Estates		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/104125		

Agency Interests: File Request Details

Item ID:	104125-AISI0000104125	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	7/11/2008	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	104125
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	5/12/2005	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	100348		
Name:	Forest Ridge Estates		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
Method Code:		Q2				
Method Desc:		Public Land Survey-Two Quarter				
7	119 of119	WSW	0.16 / 827.41	1,419.81 / 9	Sterling Pond Estates See location description Hermantown MN 55811	MPCA AI

Agency Interest ID:	101290
Name (Map):	Sterling Pond Estates
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Sterling Pond Estates
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Sterling Pond Estates
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	101290-AISI0000101290	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	101290
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	7/10/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	51249548	**User Updt:**	geo_nc

Name:	Sterling Pond Estates
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2

Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	Multiple IDs	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346

Activity: Construction Stormwater
Addr St: See location description
Addr City: Hermantown
MPCA ID List: C00019178; SUB0024501; SUB0026914; SUB0027018; SUB0027075; SUB0029694; SUB0033043
Program 1: Stormwater
Name: Sterling Pond Estates
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/101290

Agency Interests: File Request Details

Item ID:	101290-AISI0000101290	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	101290
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	7/10/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	51249548		

Name: Sterling Pond Estates
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

8	***1 of1***	***ESE***	***0.16 / 828.46***	***1,410.66 / 0***	***MN Air National Guard See location description Duluth MN 55811***	***HIST LAST***

Prog Int ID:	225412	**Address Source:**	CORE
Site ID:	122474	**Township Name:**	
State County Code:	69	**County Name:**	St. Louis
Country:	USA	**Lat/Long ID:**	109750
Interest Type Cd:	LS	**Interest Type Dsc:**	Leak Site
ADDR ID:	24026	**Lat Degrees:**	46

Tank Site:	13038	**Lat Minutes:**	50
Interest Phone:	NO CORE PI PH.	**Lat Seconds:**	19.17
Interest Start Dt:	10/20/1999 08:31:29	**Long Degrees:**	-92
Interest End Dt:	04/14/2011 14:17:25	**Long Minutes:**	12
Active?:	No	**Long Seconds:**	26.23
Timestamp Added:	03/24/2006 13:06:16	**Lat/Long Source:**	CORE
Timestamp Updt:	11/10/2014 08:17:05	**Lat/Long Site ID:**	122474
Staff ID Updt:	RGAGLE	**Lat/Long Spatial ID:**	51071259
Source:	CORE	**Collection Date:**	04/14/2011 14:13:04
Coord Src Type:	2	**Map Scale Code:**	
Coord Src Desc:	State	**Org Name Source:**	Beth Brown
Foreign State:		**Foreign Zone:**	
FIPS County Cd1:	137		

Addr Timestmp Add:	03/02/1999 08:14:45
Addr Timestamp Lst Updt:	08/01/2007 21:43:50
Addr Updater Staff ID:	SYSTEM
Lat/Long Timestamp Added:	10/12/2005 14:27:17
Lat/Long Tmstmp Last Upd:	04/14/2011 14:13:03
Lat/Long Updater Staff ID:	MAPTOOL
Lat/Long Desc:	
Coord Coll Method Desc:	Digitized - Map Tool
Coord Coll Method Code:	DM
Comments:	CERCLA Site, Mike Bares contact.\n\nSite Closed in Large AST Remediation\n\ncontinue as CERCLA site. Site is located on the south side of the runway towards the western portion. Site is located within the western portion of the building complex. Site is between Airport Rd, just off of the bend, and between the service road.

Leak Site

Complete Site Closure Date:	05/15/2000 00:00:00
Cond Closure Date:	
Release Discovered Date:	
Leaksite Type Code:	4
Leaksite Type Desc:	Million Gal Plus Fac. Leaksite
Leak Report Date:	
Tank Reg Status Code:	S
TMSP Added:	12/04/1999 14:03:53
TMSP Last Updt:	04/16/2014 12:03:49
CU Yds Excavated Qty:	
ENF Action Begin Date:	
Residence Type Code:	
File Archive Box:	
File Archive Lot:	
Soil Digout Date:	
Staff ID Last Updt:	CMCLAIN
Std Letter Response Date:	
VPIC Acres:	
VPIC Application Date:	
Contam Soils Remaining Flag:	U
Indoor Air Collected Flag:	
LUST Trust Eligible Flag:	Yes
Offsite Contam Flag:	U
REIMB Awarded Flag:	Yes
Release From AST Flag:	Yes
Release From UST Flag:	No
Soil Gas Action Level Flag:	
Soil Gas Data Collected Flag:	
Sub Slab Sample Collected Flag:	
Surface Water Impact Flag:	U
Utility Project Flag:	No
Vapor Intrusion Action Flag:	
Vapor Intrusion Checked Flag:	
Leaksite Type Defn:	Million gallon plus facility leaksite.
Soil Gas Data Comments:	
Vapor Intrusion Comments:	

Leak Product Release

Product Rls Seq ID: 14334
Leak Product Desc: Fuel Oil 1 & 2
Leak Product Defn: The product is fuel oil 1 & 2.

Leak GW Info

Well Type Code:
Affected Non Res Props:
Affected Residential Props:
Staff ID Last Updt: RSUCHAN
Staff ID Wellhead Area Assess:
TMSP Added: 12/04/1999 14:07:36
TMSP Last Updt: 11/04/2003 12:57:09
Water Supply Exceeds Ral Flag:
Cleanup Goal Achieved Flag:
DW Supply Contam Flag:
Free Product at Close Flag:
Free Product Observed Flag:
Free Product Thickness:
Ground Water Contam Flag:
GW Cleanup Goal: 0
GW Exceeds Cleanup Goal Flag:
Impacted Aquifer Code:
MTBE High Level Date:
MTBE High Ug Per Liter Char:
MTBE High Ug Per Liter Numb:
MTBE Present Historically Flag:
MTBE Present Now Flag:
Protected Area Flag:
PWS Well Impacted Flag:
Sensitive Area Flag:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
9	1 of2	SSE	0.17 / 909.79	1,432.90 / 22	Lake State dba Turbo Diesel 5043 Miller Trunk Hwy Duluth MN 55811	MPCA AI

Agency Interest ID: 23202
Name (Map): Lake State dba Turbo Diesel
Address (Map): 5043 Miller Trunk Hwy
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.8357202
Longitude (Map): -92.208701
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Lake State dba Turbo Diesel
Address (Site): 5043 Miller Trunk Hwy
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.8357202
Longitude (Site): -92.208701
County (Site): St. Louis
Name (Req): Lake State dba Turbo Diesel
Address (Req): 5043 Miller Trunk Hwy
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.8357202
Longitude (Req): -92.208701
County (Req): St. Louis

County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	23202-AISI0000023202	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2014-09-09 00:00:00	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	23202
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	7/26/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	18165	**User Updt:**	spatial_
Name:	Lake State dba Turbo Diesel		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	MND981782592	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	3
Program Name:	Hazardous Waste	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Hermantown	**Latitude:**	46.8357202
County:	St. Louis	**Longitude:**	-92.208701
Activity:	Hazardous Waste		
Addr St:	5043 Miller Trunk Hwy		
Addr City:	Duluth		
MPCA ID List:	MND981782592		
Program 1:	Hazardous Waste		
Name:	Lake State dba Turbo Diesel		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Hazardous Waste		
Industrial:	General Automotive Repair		
Site URL:	https://webapp.pca.state.mn.us/wimn/site/23202		

Agency Interests: File Request Details

Item ID:	23202-AISI0000023202	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	9/9/2014	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	23202
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	7/26/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	18165		
Name:	Lake State dba Turbo Diesel		
Program List:	HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

9	2 of2	SSE	0.17 / 909.79	1,432.90 / 22	**LAKE STATE DBA TURBO DIESEL** **5043 MILLER TRUNK HIGHWAY** **DULUTH MN 55811**	RCRA VSQG

Handler ID:	MND981782592
Generator Status:	VSG
Recycler Activity?:	NO
Recycler Activity Note:	This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note: VIOLATION or UNDETERMINED: There are VIOLATION or UNDETERMINED details or records associated with this facility (EPA ID) in the Compliance Monitoring and Enforcement table dated Nov 2025.

Violation Details

Viol Type:	262.A	**Actual Rtc Date:**	20040521
Citation:		**Found Violation:**	Yes
Determined Date:	20040428	**Rtc Qualifier:**	Observed
Scheduled Compliance Date:			
Eval Activity Location:	MN		
Viol Determined By Agency:	State		
Viol Short Desc:	Generators - General		

Enforcement Details

Enf Type:	112
Enf Type Desc:	
Enf Action Date:	20040428
Disposition Status Desc:	
Disposition Status Date:	
Enf Agency:	State
Proposed Amount:	
Final Amount:	
Paid Amount:	

Violation Details

Viol Type:	262.D	**Actual Rtc Date:**	20040521
Citation:		**Found Violation:**	Yes
Determined Date:	20040428	**Rtc Qualifier:**	Observed

Scheduled Compliance Date:
Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - Records/Reporting

Enforcement Details

Enf Type: 112
Enf Type Desc:
Enf Action Date: 20040428
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Evaluation Details

Eval Start Date: 20040428
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc: Generators - General
Actual Rtc Date: 20040521
Eval Agency: State

Eval Start Date: 20040428
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc: Generators - Records/Reporting
Actual Rtc Date: 20040521
Eval Agency: State

Handler Summary

Importer: No
Mixed Waste Gen: No
Transporter: No
Transfer Facility: No
Recycler: No
Onsite Burner Exem: No
Furnace Exemption: No
Underground Injec: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No
Used Oil Transpor: No
Used Oil Trans Fac: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Commercial TSD: No
Recycl Nonstorage: No

Additional Handler Summary Details

Source Type: N
Seq No: 1
Non Notifier:
Receive Date: 19860916
Active Site: H----
Land Type: P
In Handler Univ: Y
In A Universe: Y
Gen Status: VSG
Report Cycle:
Accessibility:
Region: 05
Fed Waste Gen Owner: HQ
State Waste Generator Owner: MN
State Waste Generator: 3
Short Term Generator: N
Uni Waste: N
Universal Waste Dest Facility: N
NAIC 1: 811111
NAIC 2: 811111
NAIC 3: 811111
NAIC 4: 811111
State: MN
Location Latitude: 46.836641
Location Longitude: -92.211729
Loc GIS Primary: N
Loc GIS Origin: UC
State District Owner:
State District:

Federal Universal Waste:	N
As Federally Regulated Tsdf:	------
As Converter Tsdf:	------
As State Regulated Tsdf:	------
As State Regulated Handler:	---
Federal Indicator:	---
Hsm:	N
Subpart K:	----
GPRA Permit:	N
GPRA Renewal:	N
Permit Renewal Wrkld:	------
Permwrk ID:	------
Perm Prog:	------
Pcwrkld:	------
Closwrkld:	------
GPRA Ca:	N
Cawrkld:	N
Subjca Tsd Discretion:	N
NCAPS:	N
EC Indicator:	N
Ca725 Indicator:	N
Ca750 Indicator:	N
Operating Tsdf:	------
Full Enforcement:	------
Snc:	N
Unaddressed Snc:	N
Addressed Snc:	N
Snc With Comp Sched:	N
Fa Required:	-----
Hhandler Last Change:	20091019
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	EN
Handler Name:	LAKE STATE DBA TURBO DIESEL
Location Street No:	
Location Street1:	5043 MILLER TRUNK HIGHWAY
Location Street2:	
Location City:	DULUTH
Location State:	MN
Location Zip:	55811
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	US
Contact Name:	JAMES C KEIPER
Contact Street No:	
Contact Street1:	5043 MILLER TRUNK HIGHWAY
Contact Street2:	
Contact City:	DULUTH
Contact State:	MN
Contact Zip:	55811
Contact Country:	US
Contact Phone & Ext:	218-729-5365
Contact Fax:	
Contact Email Address:	
Contact Title:	
Owner Name:	
Owner Type:	
Owner Seq:	
Operator Name:	LAKE STATE DBA TURBO DIESEL
Operator Type:	P
Operator Seq:	1
Public Notes:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Hazardous Waste Handler Details

Seq No: 1
Receive Date: 19860916
Handler Name: LAKE STATE DBA TURBO DIESEL
Fed Waste Generator: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Notification
TSD Activity: N

Waste Code Details

Waste Code: D000
Waste Code Desc: DESCRIPTION

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Owner/Operator Details

Owner/Operator Ind: Current Operator
Type: Private
Name: NAME NOT REPORTED
Dt Became Current:
Dt Ended Current:
Phone: 312-555-1212
Source Type: Notification
Street No:
Street1: ADDRESS NOT REPORTED
Street2:
City: CITY NOT REPORTED
State: AK
Country:
Zip: 99998

Owner/Operator Ind: Current Operator
Type: Private
Name: LAKE STATE DBA TURBO DIESEL
Dt Became Current: 19990726
Dt Ended Current:
Phone: 218-729-5365
Source Type: Notification
Street No:
Street1: 5043 MILLER TRUNK HIGHWAY
Street2:
City: DULUTH
State: MN
Country: US
Zip: 55811

10	1 of1	ESE	0.17 / 912.05	1,411.68 / 1	***IRP Site 4*** ***Former 148th FW ANG POL,*** ***Airport Road*** ***Duluth MN 55811***	MPCA AI

Agency Interest ID: 216265
Name (Map): IRP Site 4
Address (Map): Former 148th FW ANG POL, Airport Road
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.8384
Longitude (Map): -92.2071
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map): Former 148th Fighter Wing POL *** Note:many records provided by the department have a truncated LOC_DESC field.
Name (Site): IRP Site 4
Address (Site): Former 148th FW ANG POL, Airport Road
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.8384
Longitude (Site): -92.2071
County (Site): St. Louis
Name (Req): IRP Site 4
Address (Req): Former 148th FW ANG POL, Airport Road
City (Req): Duluth
State (Req): MN

ZIP (Req):	55811
Loc Desc (Req):	Former 148th Fighter Wing POL
Latitude (Req):	46.8384
Longitude (Req):	-92.2071
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	216265-AISI0000216265	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	216265
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	4/21/2017	**TRDSQQ:**	
Tmsp Created:	4/21/2017	**Ref Code:**	CEN
User Created:	RSP	**Ref Desc:**	Center of Feature Represented
Tmsp Updt:	4/24/2023	**Verified:**	No
Spatial ID:		**User Updt:**	WO_2132805

Name:	IRP Site 4
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	DM
Method Desc:	Digitized - MPCA internal map

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00045935	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	8
Program Name:	Stormwater	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	DM
City:	Duluth	**Latitude:**	46.8384
County:	St. Louis	**Longitude:**	-92.2071

Activity:	Construction Stormwater
Addr St:	Former 148th FW ANG POL, Airport Road
Addr City:	Duluth
MPCA ID List:	C00045935
Program 1:	Stormwater
Name:	IRP Site 4
Watershed :	St. Louis River
Coord Co 1:	Digitized - MPCA internal map
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/216265

Agency Interests: File Request Details

Item ID:	216265-AISI0000216265	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program:	Const Stormwater	**SI ID:**	216265
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	4/21/2017	**Ref Code:**	CEN
Tmsp Created:	4/21/2017	**Ref Desc:**	Center of Feature Represented
User Created:	RSP	**Verified:**	No
Tmsp Updt:	4/24/2023	**User Updt:**	WO_2132805
Spatial ID:			
Name:	IRP Site 4		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

11	1 of5	SSE	0.18 / 931.57	1,429.75 / 19	**Miner's Incorporated** **5065 Miller Trunk Highway** **Hermantown MN 55811**	HIST LEAKSITES

Prog Int ID:	221578	**Address Source:**	CORE
Site ID:	227176	**Township Name:**	Whiteface Reservoir
State County Code:	69	**County Name:**	St. Louis
Country:	USA	**Lat/Long ID:**	139916
Interest Type Cd:	LS	**Interest Type Dsc:**	Leak Site
ADDR ID:	84367	**Lat Degrees:**	46
Tank Site:	9029	**Lat Minutes:**	50
Interest Phone:	NO CORE PI PH.	**Lat Seconds:**	14.96
Interest Start Dt:	07/15/1997 00:00:00	**Long Degrees:**	-92
Interest End Dt:	11/29/2006 07:02:46	**Long Minutes:**	12
Active?:	No	**Long Seconds:**	50.21
Timestamp Added:	11/29/2006 07:02:46	**Lat/Long Source:**	CORE
Timestamp Updt:	11/10/2014 08:17:06	**Lat/Long Site ID:**	227176
Staff ID Updt:	RGAGLE	**Lat/Long Spatial ID:**	51829156
Source:	CORE	**Collection Date:**	06/03/2008 10:39:57
Coord Src Type:		**Map Scale Code:**	
Coord Src Desc:		**Org Name Source:**	
Foreign State:		**Foreign Zone:**	
FIPS County Cd1:	137		
Addr Timestmp Add:	01/03/2000 08:24:54		
Addr Timestamp Lst Updt:	08/01/2007 21:44:06		
Addr Updater Staff ID:	SYSTEM		
Lat/Long Timestamp Added:	06/03/2008 10:39:43		
Lat/Long Tmstmp Last Upd:	06/03/2008 10:39:57		
Lat/Long Updater Staff ID:	MAPTOOL		
Lat/Long Desc:			
Coord Coll Method Desc:	Digitized - Map Tool		
Coord Coll Method Code:	DM		
Comments:			

Leak Site

Complete Site Closure Date:	04/08/1997 00:00:00
Cond Closure Date:	
Release Discovered Date:	12/07/1995 00:00:00
Leaksite Type Code:	1

Leaksite Type Desc:	Leak Site
Leak Report Date:	12/07/1995 00:00:00
Tank Reg Status Code:	U
TMSP Added:	12/04/1999 14:03:50
TMSP Last Updt:	08/28/2014 10:37:43
CU Yds Excavated Qty:	45
ENF Action Begin Date:	
Residence Type Code:	
File Archive Box:	05
File Archive Lot:	01/124
Soil Digout Date:	12/06/1995 00:00:00
Staff ID Last Updt:	DBOETTC
Std Letter Response Date:	
VPIC Acres:	
VPIC Application Date:	
Contam Soils Remaining Flag:	Y
Indoor Air Collected Flag:	
LUST Trust Eligible Flag:	No
Offsite Contam Flag:	U
REIMB Awarded Flag:	No
Release From AST Flag:	No
Release From UST Flag:	No
Soil Gas Action Level Flag:	
Soil Gas Data Collected Flag:	
Sub Slab Sample Collected Flag:	
Surface Water Impact Flag:	U
Utility Project Flag:	No
Vapor Intrusion Action Flag:	
Vapor Intrusion Checked Flag:	
Leaksite Type Defn:	Leak site (tank and petroleum contamination).
Soil Gas Data Comments:	
Vapor Intrusion Comments:	

Leak Product Rls

Product Rls Seq ID:	325063
Leak Product Desc:	Fuel Oil 1 & 2
Leak Product Defn:	The product is fuel oil 1 & 2.

Product Rls Seq ID:	323155
Leak Product Desc:	Diesel
Leak Product Defn:	The product is diesel oil.

Leak GW Info

Well Type Code:	
Affected Non Res Props:	
Affected Residential Props:	
Staff ID Last Updt:	RSUCHAN
Staff ID Wellhead Area Assess:	
TMSP Added:	12/04/1999 14:07:33
TMSP Last Updt:	11/04/2003 12:57:08
Water Supply Exceeds Ral Flag:	
Cleanup Goal Achieved Flag:	
DW Supply Contam Flag:	
Free Product at Close Flag:	
Free Product Observed Flag:	
Free Product Thickness:	
Ground Water Contam Flag:	
GW Cleanup Goal:	0
GW Exceeds Cleanup Goal Flag:	
Impacted Aquifer Code:	
MTBE High Level Date:	
MTBE High Ug Per Liter Char:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

MTBE High Ug Per Liter Numb:
MTBE Present Historically Flag:
MTBE Present Now Flag:
Protected Area Flag:
PWS Well Impacted Flag:
Sensitive Area Flag:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
11	2 of5	SSE	0.18 / 931.57	1,429.75 / 19	Miner's Incorporated 5065 Miller Trunk Highway Hermantown MN 55811	LST REM SITE

Item ID: 112450-AREA0000000001
Project ID: LS0009029
Project Type: Leak Site
Project ID (RAP):
Project Type (RAP):
Site Status: Closed
Perm List of Prio?:
Petrol Brownfield?:
VIC Site?:
Sf Voluntary:
Inst Controls?:
SEMS?:
Project Name: Miner's Incorporated
Project Managers: Steve Leppala (no longer at MPCA)
Site Address 1: 5065 Miller Trunk Highway
Site Address 2:
Site City: Hermantown
Site State: MN
Site ZIP: 55811
Project Name(RAP):
Address1 (RAP):
Address2 (RAP):
City (RAP):
State (RAP):
ZIP (RAP):
Data Source: MPCA Remediation Sites

Unpermitted Dump?:
State Reg:
Federal Reg:
Fed State Reg:
Non Reg:
NPL:
Site County: St. Louis
County (RAP):
Latitude: 46.83749443
Longitude: -92.21394689
Latitude (RAP):
Longitude (RAP):

Remediation Sites Details

Activity ID: 112450
SI ID: 1
Si Cat: AREA
SI Type: LEAK
Site Type: CON
Acreage:
HRS Score:
Score Year:
DWSMA Code:
AI Name: Miners Inc
DWSMA Name:
Hydrologists:
Huc 8 Name: St. Louis River
Huc12 Name: Saint Louis River
Method Desc: Digitized - MPCA internal map
Loc Desc:
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/112450

Object ID: 22197
Cong Dist: 8
House Dist: 3B
Senate Dis: 3
HUC 8: 04010201
HUC 10: 0401020116
HUC 12: 040102011604
Gdb Geomattr Data:
MNTBA:

Spatial Remediation Activity

AI ID: 112450
Site ID: LS0009029
SI ID: 1
SI Cat: AREA
NFA Decisi:
Site Start: 1995-12-07 00:00:00

Object ID: 16121
Remedy Imp:
Remedy Sel:
ASMT Compl:
Received:
NPL List:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Site Close:	1997-04-08 00:00:00	**NPL Delete:**	
Leak Discovered:	1995-12-07 00:00:00	**PLP List:**	
Leak Reported:	1995-12-07 00:00:00	**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	
Activity No:	1	**FF Aproved:**	
Activity ID:	SIW19950001	**FF Closed:**	
Activity Type:	Leak Site Investigation	**Inv Comple:**	
Activity Code:	SIW	**App Comple:**	
Activity Year:	1995	**Er Site Ev:**	
Discovered:			

11	3 of5	SSE	0.18 / 931.57	1,429.75 / 19	**Miners Inc** **5065 Miller Trunk Hwy** **Hermantown MN 55811**	MPCA AI

Agency Interest ID:	112450
Name (Map):	Miners Inc
Address (Map):	5065 Miller Trunk Hwy
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.837489
Longitude (Map):	-92.2139484
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Miners Inc
Address (Site):	5065 Miller Trunk Hwy
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811-1442
Latitude (Site):	46.837489
Longitude (Site):	-92.2139484
County (Site):	St. Louis
Name (Req):	Miners Inc
Address (Req):	5065 Miller Trunk Hwy
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.837489
Longitude (Req):	-92.2139484
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	112450-AISI0000112450	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2006-11-29 07:02:46	**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	112450
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:		**TRDSQQ:**	
Tmsp Created:	9/13/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	8/20/2024	**Verified:**	No
Spatial ID:	51427944	**User Updt:**	RSP
Name:	Miners Inc		
Program List:	HW, PR, UT		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: DM
Method Desc: Digitized - MPCA internal map

My Neighborhood Site Details

Active FLA: No
MPCA ID: Multiple IDs
Program Co: HW; SR; TL
Program Name: Multiple Programs
Address: MN
Addr ZIP: 55811-1442
City: Hermantown
County: St. Louis
HUC 8: 04010201
Cong Distr: 8
Senate Dis: 3
House Dist: 3B
IC Flag: No
Coord Coll: DM
Latitude: 46.837489
Longitude: -92.2139484
Activity: Multiple Activities
Addr St: 5065 Miller Trunk Hwy
Addr City: Hermantown
MPCA ID List: LS0009029; MNS000334848; TS0019488
Program 1: Hazardous Waste; Investigation and Cleanup; Tanks
Name: Miners Inc
Watershed : St. Louis River
Coord Co 1: Digitized - MPCA internal map
Activity L: Hazardous Waste, Small quantity generator; Petroleum Remediation, Leak Site; Underground Tanks
Industrial: All Other Miscellaneous Retailers
Site URL: https://webapp.pca.state.mn.us/wimn/site/112450

Agency Interests: File Request Details

Item ID: 112450-AISI0000112450
Status: Inactive
Status Date: 11/29/2006
Program: Multiple Programs
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date:
Tmsp Created: 9/13/2006
User Created: DELTA_M_R1
Tmsp Updt: 8/20/2024
Spatial ID: 51427944
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 112450
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: RSP
Name: Miners Inc
Program List: HW, PR, UT
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: DM
Method Desc: Digitized - MPCA internal map

11	4 of5	SSE	0.18 / 931.57	1,429.75 / 19	MINERS INC 5065 MILLER TRUNK HWY	RCRA SQG

HERMANTOWN MN 55811-1442

Handler ID:	MNS000334848
Generator Status:	SQG
Recycler Activity?:	NO
Recycler Activity Note:	This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note:	NO RECORDS: As of Nov 2025, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer:	No	***Used Oil Transpor:***	No
Mixed Waste Gen:	No	***Used Oil Trans Fac:***	No
Transporter:	No	***Used Oil Processor:***	No
Transfer Facility:	No	***Used Oil Refiner:***	No
Recycler:	No	***Used Oil Burner:***	No
Onsite Burner Exem:	No	***Commercial TSD:***	No
Furnace Exemption:	No	***Recycl Nonstorage:***	No
Underground Injec:	No		
Used Oil Market Burner:	No		
Used Oil Spec Marketer:	No		

Additional Handler Summary Details

Source Type:	I	***NAIC 1:***	
Seq No:	53	***NAIC 2:***	
Non Notifier:		***NAIC 3:***	
Receive Date:	20231218	***NAIC 4:***	
Active Site:	H----	***State:***	MN
Land Type:		***Location Latitude:***	46.836991
In Handler Univ:	Y	***Location Longitude:***	-92.21427
In A Universe:	Y	***Loc GIS Primary:***	N
Gen Status:	SQG	***Loc GIS Origin:***	AG
Report Cycle:		***State District Owner:***	
Accessibility:		***State District:***	
Region:	05		
Fed Waste Gen Owner:	HQ		
State Waste Generator Owner:	MN		
State Waste Generator:	2		
Short Term Generator:	N		
Uni Waste:	N		
Universal Waste Dest Facility:	N		
Federal Universal Waste:	N		
As Federally Regulated Tsdf:	------		
As Converter Tsdf:	------		
As State Regulated Tsdf:	------		
As State Regulated Handler:	---		
Federal Indicator:	---		
Hsm:	N		
Subpart K:	----		
GPRA Permit:	N		
GPRA Renewal:	N		
Permit Renewal Wrkld:	------		
Permwrk ID:	------		
Perm Prog:	------		
Pcwrkld:	------		
Closwrkld:	------		
GPRA Ca:	N		
Cawrkld:	N		
Subjca Tsd Discretion:	N		
NCAPS:	N		

EC Indicator:	N
Ca725 Indicator:	N
Ca750 Indicator:	N
Operating Tsdf:	------
Full Enforcement:	------
Snc:	N
Unaddressed Snc:	N
Addressed Snc:	N
Snc With Comp Sched:	N
Fa Required:	-----
Hhandler Last Change:	20231220
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	EN
Handler Name:	MINERS INC
Location Street No:	
Location Street1:	5065 MILLER TRUNK HWY
Location Street2:	
Location City:	HERMANTOWN
Location State:	MN
Location Zip:	55811-1442
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	
Contact Name:	BOB SHAW
Contact Street No:	
Contact Street1:	5065 MILLER TRUNK HIGHWAY
Contact Street2:	
Contact City:	HERMANTOWN
Contact State:	MN
Contact Zip:	55811-1442
Contact Country:	
Contact Phone & Ext:	218-729-3353
Contact Fax:	
Contact Email Address:	BOB.SHAW@MINERS-INC.COM
Contact Title:	
Owner Name:	
Owner Type:	
Owner Seq:	
Operator Name:	
Operator Type:	
Operator Seq:	
Public Notes:	

Hazardous Waste Handler Details

Seq No:	1
Receive Date:	20200114
Handler Name:	MINERS INC
Fed Waste Generator:	2
Generator Code Description:	Small Quantity Generator
Source Type:	Implementer
TSD Activity:	N

Waste Code Details

Waste Code:	U
Waste Code Desc:	Unknown Waste

Hazardous Waste Handler Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Seq No: 53
Receive Date: 20231218
Handler Name: MINERS INC
Fed Waste Generator: 2
Generator Code Description: Small Quantity Generator
Source Type: Implementer
TSD Activity: N

Owner/Operator Details

Owner/Operator Ind: Current Operator
Type: Private
Name: MINER'S INCORPORATED
Dt Became Current: 19991010
Dt Ended Current: 20200114
Phone: 218-729-5882
Source Type: Implementer

Street No:
Street1: 5065 MILLER TRUNK HIGHWAY
Street2:
City: HERMANTOWN
State: MN
Country: US
Zip: 55811

Historical Handler Details

Receive Dt: 20200114
Generator Code Description: Small Quantity Generator
Handler Name: MINERS INC

11	5 of5	SSE	0.18 / 931.57	1,429.75 / 19	Miners Inc 5065 Miller Trunk Hwy Hermantown MN 55811-1442	UST

AI ID: 112450
Tank Type: Underground Storage Tank System
AI Name: Miners Inc
Address1: 5065 Miller Trunk Hwy
Address2:
Address3:
City: Hermantown
County: St. Louis
State: MN
Zip: 55811-1442
Location Description:
Data Source: Minnesota Pollution Control Agency Tank Sites

AI Name (Map):
Address1 (Map):
Address2 (Map):
City (Map):
State (Map):
Zip (Map):
Owner: Miner's Incorporated
Owner Address: 5065 Miller Trunk Hwy
Owner City: Hermantown
Owner State: MN
Owner Zip: 558111442

Tank Information

Tank Site ID: TS0019488
Tank ID: 112450-EQUI0000000002
Tank Status: Removed
Install Date: 1/1/1900
Status Change Date: 12/7/1995
Primary NAICS:
Primary SIC:
Subject Item Description: 1,000 gal/Fuel Oil/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0019488
Coord Collect Meth Desc: Public Land Survey-Two Quarter
On Tribal Land: N

Latitude: 46.84924589
Longitude: -92.23551093
Contractor of Tank:
Tribal Land:

Compartment Information

Compartment ID: 112450-EQUI0000000002-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: 3
Overfill Prevention System: UST Not needed

Programs: UT
Capacity (gal): 1000
Cathodic Prot Sys: Not needed
Special Use Desc: Heating

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: NONE
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None
Stored Product: Fuel Oil
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Tank Information

Tank Site ID: TS0019488
Tank ID: 112450-EQUI0000000003
Tank Status: Removed
Install Date: 1/1/1900
Status Change Date: 12/7/1995
Primary NAICS:
Primary SIC:
Subject Item Description: 10,000 gal/Diesel/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0019488
Coord Collect Meth Desc: Public Land Survey-Two Quarter
On Tribal Land: N
Latitude: 46.84924589
Longitude: -92.23551093
Contractor of Tank:
Tribal Land:

Compartment Information

Compartment ID: 112450-EQUI0000000003-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: 2
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 10000
Cathodic Prot Sys: Not needed
Special Use Desc: None

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: NONE
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None
Stored Product: Diesel
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Tank Information

Tank Site ID: TS0019488
Tank ID: 112450-EQUI0000000001
Tank Status: Removed
Install Date: 1/1/1900
Status Change Date: 12/7/1995
Primary NAICS:
Primary SIC:
Subject Item Description: 10,000 gal/Gasoline/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0019488
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N
Latitude: 46.83678416
Longitude: -92.21440736
Contractor of Tank:
Tribal Land:

Compartment Information

Compartment ID: 112450-EQUI0000000001-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: 1
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 10000
Cathodic Prot Sys: Not needed
Special Use Desc: None

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Pipe Information

Pipe Wall Type:	Single	***Stored Product:***	Gasoline
Pipe Leak Detection:	NONE	***Tank Leak Detection:***	UST Not needed
Pipe Material:	Steel/Iron	***Vapor Recovery Flag:***	No
Pipe Corrosion Protection:	None		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
12	1 of4	SSE	0.18 / 973.42	1,431.18 / 21	**AT & T Wireless** **5051 Miller Trunk Hwy** **Hermantown MN 55811**	MPCA AI

Agency Interest ID:	88695
Name (Map):	AT & T Wireless
Address (Map):	5051 Miller Trunk Hwy
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.9373356
Longitude (Map):	-91.9289389
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	AT & T Wireless
Address (Site):	5051 Miller Trunk Hwy
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.9373356
Longitude (Site):	-91.9289389
County (Site):	St. Louis
Name (Req):	AT & T Wireless
Address (Req):	5051 Miller Trunk Hwy
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.9373356
Longitude (Req):	-91.9289389
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	88695-AISI0000088695	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	2011-11-10 00:00:00	***SI Cat:***	AISI
Program:	Hazardous Waste	***SI ID:***	88695
CTU Code:	664712	***SI Cat Desc:***	Agency Interest
CTU Name:	Lakewood Township	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	9/27/2015	***TRDSQQ:***	
Tmsp Created:	3/31/2003	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	4/26/2016	***Verified:***	No
Spatial ID:	89374	***User Updt:***	spatial_
Name:	AT & T Wireless		
Program List:	HW		
HUC 8:	04010102		
HUC 8 Name:	Lake Superior - South		
HUC 10:	0401010204		
HUC 12:	040101020402		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 12 Name: Talmadge Creek-Frontal Lake Superior
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

My Neighborhood Site Details

Active FLA: No
MPCA ID: MNR000116095
Program Co: HW
Program Name: Hazardous Waste
Address: MN
Addr ZIP: 55811
City: Lakewood Township
County: St. Louis
Activity: Hazardous Waste
Addr St: 5051 Miller Trunk Hwy
Addr City: Hermantown
MPCA ID List: MNR000116095
Program 1: Hazardous Waste
Name: AT & T Wireless
Watershed : Lake Superior - South
Coord Co 1: Address Matching House Number
Activity L: Hazardous Waste
Industrial: Radiotelephone Communications
Site URL: https://webapp.pca.state.mn.us/wimn/site/88695

HUC 8: 04010102
Cong Distr: 8
Senate Dis: 3
House Dist: 3B
IC Flag: No
Coord Coll: A1
Latitude: 46.9373356
Longitude: -91.9289389

Agency Interests: File Request Details

Item ID: 88695-AISI0000088695
Status: Inactive
Status Date: 11/10/2011
Program: Hazardous Waste
CTU Code: 664712
CTU Name: Lakewood Township
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 9/27/2015
Tmsp Created: 3/31/2003
User Created: DELTA_M_R1
Tmsp Updt: 4/26/2016
Spatial ID: 89374
Name: AT & T Wireless
Program List: HW
HUC 8: 4010102
HUC 8 Name: Lake Superior - South
HUC 10: 401010204
HUC 10 Name: City of Duluth-Frontal Lake Superior
HUC 12: 40101020402
HUC 12 Name: Talmadge Creek-Frontal Lake Superior
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 88695
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: spatial_

12	2 of4	SSE	0.18 / 973.42	1,431.18 / 21	**Duluth Electric Contracting** **5051 Miller Trunk Hwy** **Hermantown MN 55811**	MPCA AI

Agency Interest ID: 131052
Name (Map): Duluth Electric Contracting

Address (Map):	5051 Miller Trunk Hwy
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8361179
Longitude (Map):	-92.2094653
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Duluth Electric Contracting
Address (Site):	5051 Miller Trunk Hwy
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8361179
Longitude (Site):	-92.2094653
County (Site):	St. Louis
Name (Req):	Duluth Electric Contracting
Address (Req):	5051 Miller Trunk Hwy
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8361179
Longitude (Req):	-92.2094653
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	131052-AISI0000131052	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	131052
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	3/10/2009	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	55558409	**User Updt:**	spatial_
Name:	Duluth Electric Contracting		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	MNS000143511	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	3
Program Name:	Hazardous Waste	**House Dist:**	3B
Address:	MN	**IC Flag:**	No

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Addr ZIP:	55811	**Coord Coll:**	A1
City:	Hermantown	**Latitude:**	46.8361179
County:	St. Louis	**Longitude:**	-92.2094653
Activity:	Hazardous Waste		
Addr St:	5051 Miller Trunk Hwy		
Addr City:	Hermantown		
MPCA ID List:	MNS000143511		
Program 1:	Hazardous Waste		
Name:	Duluth Electric Contracting		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Hazardous Waste		
Industrial:	Electrical Contractors and Other Wiring Installation Contractors		
Site URL:	https://webapp.pca.state.mn.us/wimn/site/131052		

Agency Interests: File Request Details

Item ID:	131052-AISI0000131052	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	131052
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	3/10/2009	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	55558409		
Name:	Duluth Electric Contracting		
Program List:	HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

12	*3 of4*	***SSE***	***0.18 / 973.42***	***1,431.18 / 21***	***AT & T WIRELESS 5051 MILLER TRUNK HIGHWAY DULUTH MN 55804***	***RCRA NON GEN***

Handler ID:	MNR000116095
Generator Status:	N
Recycler Activity?:	NO
Recycler Activity Note:	This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note:	NO RECORDS: As of Nov 2025, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer:	No	**Used Oil Transpor:**	No

Mixed Waste Gen:	No	**Used Oil Trans Fac:**	No
Transporter:	No	**Used Oil Processor:**	No
Transfer Facility:	No	**Used Oil Refiner:**	No
Recycler:	No	**Used Oil Burner:**	No
Onsite Burner Exem:	No	**Commercial TSD:**	No
Furnace Exemption:	No	**Recycl Nonstorage:**	No
Underground Injec:	No		

Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Additional Handler Summary Details

Source Type:	N	**NAIC 1:**	517212
Seq No:	1	**NAIC 2:**	517212
Non Notifier:		**NAIC 3:**	
Receive Date:	20030317	**NAIC 4:**	
Active Site:	-----	**State:**	MN
Land Type:	P	**Location Latitude:**	46.937336
In Handler Univ:	N	**Location Longitude:**	-91.928939
In A Universe:	N	**Loc GIS Primary:**	N
Gen Status:	N	**Loc GIS Origin:**	UC
Report Cycle:		**State District Owner:**	
Accessibility:		**State District:**	
Region:	05		

Fed Waste Gen Owner:	HQ
State Waste Generator Owner:	MN
State Waste Generator:	N
Short Term Generator:	N
Uni Waste:	N
Universal Waste Dest Facility:	N
Federal Universal Waste:	N
As Federally Regulated Tsdf:	------
As Converter Tsdf:	------
As State Regulated Tsdf:	------
As State Regulated Handler:	---
Federal Indicator:	---
Hsm:	N
Subpart K:	----
GPRA Permit:	N
GPRA Renewal:	N
Permit Renewal Wrkld:	------
Permwrk ID:	------
Perm Prog:	------
Pcwrkld:	------
Closwrkld:	------
GPRA Ca:	N
Cawrkld:	N
Subjca Tsd Discretion:	N
NCAPS:	N
EC Indicator:	N
Ca725 Indicator:	N
Ca750 Indicator:	N
Operating Tsdf:	------
Full Enforcement:	------
Snc:	N
Unaddressed Snc:	N
Addressed Snc:	N
Snc With Comp Sched:	N
Fa Required:	-----
Hhandler Last Change:	20091019
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	EN
Handler Name:	AT & T WIRELESS

Location Street No:	
Location Street1:	5051 MILLER TRUNK HIGHWAY
Location Street2:	
Location City:	DULUTH
Location State:	MN
Location Zip:	55804
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	US
Contact Name:	ROSA L WHIPPLE
Contact Street No:	
Contact Street1:	1905 ASTON AVE STE 100
Contact Street2:	
Contact City:	CARLSBAD
Contact State:	CA
Contact Zip:	92008
Contact Country:	US
Contact Phone & Ext:	760-602-8842
Contact Fax:	
Contact Email Address:	
Contact Title:	
Owner Name:	
Owner Type:	
Owner Seq:	
Operator Name:	AT & T WIRELESS CORP
Operator Type:	P
Operator Seq:	1
Public Notes:	

Hazardous Waste Handler Details

Seq No:	1
Receive Date:	20030317
Handler Name:	AT & T WIRELESS
Fed Waste Generator:	N
Generator Code Description:	Not a Generator, Verified
Source Type:	Notification
TSD Activity:	N

Waste Code Details

Waste Code:	D002
Waste Code Desc:	CORROSIVE WASTE

Owner/Operator Details

Owner/Operator Ind:	Current Operator	**Street No:**	
Type:	Private	**Street1:**	5051 MILLER TRUNK HWY
Name:	AT & T WIRELESS	**Street2:**	
Dt Became Current:	20030317	**City:**	DULUTH
Dt Ended Current:		**State:**	MN
Phone:	760-602-8677	**Country:**	US
Source Type:	Notification	**Zip:**	55804
Owner/Operator Ind:	Current Operator	**Street No:**	
Type:	Private	**Street1:**	1905 ASTON AVE STE 100
Name:	AT & T WIRELESS CORP	**Street2:**	
Dt Became Current:	20030331	**City:**	CARLSBAD
Dt Ended Current:		**State:**	CA
Phone:	760-602-8842	**Country:**	US
Source Type:	Notification	**Zip:**	92008

12	*4 of4*	*SSE*	*0.18 / 973.42*	*1,431.18 / 21*	*DULUTH ELECTRIC CONTRACTING*	*RCRA VSQG*

5051 MILLER TRUNK HWY
HERMANTOWN MN 55811

Handler ID: MNS000143511
Generator Status: VSG
Recycler Activity?: NO
Recycler Activity Note: This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note: NO RECORDS: As of Nov 2025, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer:	No	***Used Oil Transpor:***	No
Mixed Waste Gen:	No	***Used Oil Trans Fac:***	No
Transporter:	No	***Used Oil Processor:***	No
Transfer Facility:	No	***Used Oil Refiner:***	No
Recycler:	No	***Used Oil Burner:***	No
Onsite Burner Exem:	No	***Commercial TSD:***	No
Furnace Exemption:	No	***Recycl Nonstorage:***	No
Underground Injec:	No		
Used Oil Market Burner:	No		
Used Oil Spec Marketer:	No		

Additional Handler Summary Details

Source Type:	I	***NAIC 1:***	
Seq No:	53	***NAIC 2:***	
Non Notifier:		***NAIC 3:***	
Receive Date:	20231218	***NAIC 4:***	
Active Site:	H----	***State:***	MN
Land Type:		***Location Latitude:***	46.836991
In Handler Univ:	Y	***Location Longitude:***	-92.213374
In A Universe:	Y	***Loc GIS Primary:***	N
Gen Status:	VSG	***Loc GIS Origin:***	AG
Report Cycle:		***State District Owner:***	
Accessibility:		***State District:***	
Region:	05		
Fed Waste Gen Owner:	HQ		
State Waste Generator Owner:	MN		
State Waste Generator:	6		
Short Term Generator:	N		
Uni Waste:	N		
Universal Waste Dest Facility:	N		
Federal Universal Waste:	N		
As Federally Regulated Tsdf:	------		
As Converter Tsdf:	------		
As State Regulated Tsdf:	------		
As State Regulated Handler:	---		
Federal Indicator:	---		
Hsm:	N		
Subpart K:	----		
GPRA Permit:	N		
GPRA Renewal:	N		
Permit Renewal Wrkld:	------		
Permwrk ID:	------		
Perm Prog:	------		
Pcwrkld:	------		
Closwrkld:	------		
GPRA Ca:	N		
Cawrkld:	N		
Subjca Tsd Discretion:	N		
NCAPS:	N		

EC Indicator:	N
Ca725 Indicator:	N
Ca750 Indicator:	N
Operating Tsdf:	------
Full Enforcement:	------
Snc:	N
Unaddressed Snc:	N
Addressed Snc:	N
Snc With Comp Sched:	N
Fa Required:	-----
Hhandler Last Change:	20231220
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	EN
Handler Name:	DULUTH ELECTRIC CONTRACTING
Location Street No:	
Location Street1:	5051 MILLER TRUNK HWY
Location Street2:	
Location City:	HERMANTOWN
Location State:	MN
Location Zip:	55811
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	
Contact Name:	JOHN STEPHEN
Contact Street No:	
Contact Street1:	5051 MILLER TRUNK HWY
Contact Street2:	
Contact City:	HERMANTOWN
Contact State:	MN
Contact Zip:	55811
Contact Country:	
Contact Phone & Ext:	218-724-5566
Contact Fax:	
Contact Email Address:	
Contact Title:	OWNER
Owner Name:	
Owner Type:	
Owner Seq:	
Operator Name:	
Operator Type:	
Operator Seq:	
Public Notes:	

Hazardous Waste Handler Details

Seq No:	1
Receive Date:	20090305
Handler Name:	DULUTH ELECTRIC CONTRACTING
Fed Waste Generator:	3
Generator Code Description:	Very Small Quantity Generator
Source Type:	Notification
TSD Activity:	N

Hazardous Waste Handler Details

Seq No:	53
Receive Date:	20231218
Handler Name:	DULUTH ELECTRIC CONTRACTING
Fed Waste Generator:	3
Generator Code Description:	Very Small Quantity Generator
Source Type:	Implementer

TSD Activity: N

Owner/Operator Details

Owner/Operator Ind:	Current Operator	***Street No:***	
Type:	Private	***Street1:***	5051 MILLER TRUNK HWY
Name:	DULUTH ELECTRIC CONTRACTING	***Street2:***	
Dt Became Current:	20090310	***City:***	HERMANTOWN
Dt Ended Current:		***State:***	MN
Phone:	218-724-5566	***Country:***	US
Source Type:	Notification	***Zip:***	55811

Historical Handler Details

Receive Dt:	20090305
Generator Code Description:	Very Small Quantity Generator
Handler Name:	DULUTH ELECTRIC CONTRACTING

13	*1 of1*	*ESE*	*0.19 / 989.02*	*1,411.68 / 1*	***Site 4 Remedial Action - 148th FW MN ANG Airport rd Duluth MN 55811***	***MPCA AI***

Agency Interest ID:	144465
Name (Map):	Site 4 Remedial Action - 148th FW MN ANG
Address (Map):	Airport rd
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.838511
Longitude (Map):	-92.206678
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Site 4 Remedial Action - 148th FW MN ANG
Address (Site):	Airport rd
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.838511
Longitude (Site):	-92.206678
County (Site):	St. Louis
Name (Req):	Site 4 Remedial Action - 148th FW MN ANG
Address (Req):	Airport rd
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.838511
Longitude (Req):	-92.206678
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	144465-AISI0000144465	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	144465
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	

Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	5/21/2014	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	68765572	**User Updt:**	spatial_

Name: Site 4 Remedial Action - 148th FW MN ANG
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: G8
Method Desc: GPS - Other

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00038142	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	8
Program Name:	Stormwater	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	G8
City:	Duluth	**Latitude:**	46.838511
County:	St. Louis	**Longitude:**	-92.206678

Activity: Construction Stormwater
Addr St: Airport rd
Addr City: Duluth
MPCA ID List: C00038142
Program 1: Stormwater
Name: Site 4 Remedial Action - 148th FW MN ANG
Watershed : St. Louis River
Coord Co 1: GPS - Other
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/144465

Agency Interests: File Request Details

Item ID:	144465-AISI0000144465	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	144465
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	5/21/2014	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	68765572		

Name: Site 4 Remedial Action - 148th FW MN ANG
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	G8
Method Desc:	GPS - Other

---

14 | **1 of3** | **ESE** | **0.19 / 1,016.67** | **1,416.28 / 6** | **Defense Revitilization And Marketing**
4997 Airport Rd
Duluth MN 55811 | **HIST LEAKSITES**

Prog Int ID:	222753	**Address Source:**	CORE
Site ID:	245826	**Township Name:**	Whiteface Reservoir
State County Code:	69	**County Name:**	St. Louis
Country:	USA	**Lat/Long ID:**	132633
Interest Type Cd:	LS	**Interest Type Dsc:**	Leak Site
ADDR ID:	269757	**Lat Degrees:**	46
Tank Site:	10249	**Lat Minutes:**	50
Interest Phone:	NO CORE PI PH.	**Lat Seconds:**	19.56
Interest Start Dt:	03/24/1999 13:44:24	**Long Degrees:**	-92
Interest End Dt:	11/29/2006 08:17:49	**Long Minutes:**	12
Active?:	No	**Long Seconds:**	35.32
Timestamp Added:	11/29/2006 08:17:49	**Lat/Long Source:**	CORE
Timestamp Updt:	11/10/2014 08:17:06	**Lat/Long Site ID:**	245826
Staff ID Updt:	RGAGLE	**Lat/Long Spatial ID:**	51830700
Source:	CORE	**Collection Date:**	03/14/2011 11:07:53
Coord Src Type:		**Map Scale Code:**	
Coord Src Desc:		**Org Name Source:**	
Foreign State:		**Foreign Zone:**	
FIPS County Cd1:	137		

Addr Timestmp Add:	11/29/2006 08:17:24
Addr Timestamp Lst Updt:	11/04/2008 21:13:55
Addr Updater Staff ID:	SYSTEM
Lat/Long Timestamp Added:	11/29/2006 08:18:00
Lat/Long Tmstmp Last Upd:	03/14/2011 11:07:53
Lat/Long Updater Staff ID:	MAPTOOL
Lat/Long Desc:	
Coord Coll Method Desc:	Digitized - Map Tool
Coord Coll Method Code:	DM
Comments:	

Leak Site

Complete Site Closure Date:	01/14/1998 00:00:00
Cond Closure Date:	
Release Discovered Date:	06/17/1997 00:00:00
Leaksite Type Code:	1
Leaksite Type Desc:	Leak Site
Leak Report Date:	06/18/1997 00:00:00
Tank Reg Status Code:	U
TMSP Added:	12/04/1999 14:03:51
TMSP Last Updt:	07/16/2014 14:05:08
CU Yds Excavated Qty:	100
ENF Action Begin Date:	06/25/1997 00:00:00
Residence Type Code:	
File Archive Box:	09
File Archive Lot:	01/124
Soil Digout Date:	06/20/1997 00:00:00
Staff ID Last Updt:	DBOETTC
Std Letter Response Date:	06/25/1997 00:00:00
VPIC Acres:	
VPIC Application Date:	
Contam Soils Remaining Flag:	U
Indoor Air Collected Flag:	
LUST Trust Eligible Flag:	No
Offsite Contam Flag:	U

REIMB Awarded Flag:	No
Release From AST Flag:	No
Release From UST Flag:	No
Soil Gas Action Level Flag:	
Soil Gas Data Collected Flag:	
Sub Slab Sample Collected Flag:	
Surface Water Impact Flag:	U
Utility Project Flag:	No
Vapor Intrusion Action Flag:	
Vapor Intrusion Checked Flag:	
Leaksite Type Defn:	Leak site (tank and petroleum contamination).
Soil Gas Data Comments:	
Vapor Intrusion Comments:	

Leak Product Rls

Product Rls Seq ID:	35799
Leak Product Desc:	Fuel Oil 1 & 2
Leak Product Defn:	The product is fuel oil 1 & 2.

Leak GW Info

Well Type Code:	
Affected Non Res Props:	
Affected Residential Props:	
Staff ID Last Updt:	RSUCHAN
Staff ID Wellhead Area Assess:	
TMSP Added:	12/04/1999 14:07:34
TMSP Last Updt:	11/04/2003 12:57:08
Water Supply Exceeds Ral Flag:	
Cleanup Goal Achieved Flag:	
DW Supply Contam Flag:	
Free Product at Close Flag:	
Free Product Observed Flag:	
Free Product Thickness:	
Ground Water Contam Flag:	N
GW Cleanup Goal:	0
GW Exceeds Cleanup Goal Flag:	
Impacted Aquifer Code:	
MTBE High Level Date:	
MTBE High Ug Per Liter Char:	
MTBE High Ug Per Liter Numb:	
MTBE Present Historically Flag:	
MTBE Present Now Flag:	
Protected Area Flag:	
PWS Well Impacted Flag:	
Sensitive Area Flag:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
14	2 of3	ESE	0.19 / 1,016.67	1,416.28 / 6	***Defense Revitilization And Marketing*** ***4997 Airport Rd*** ***Duluth MN 55811***	***LST*** ***REM SITE***

Item ID:	199185-AREA0000000001	***Unpermitted Dump?:***	
Project ID:	LS0010249	***State Reg:***	
Project Type:	Leak Site	***Federal Reg:***	
Project ID (RAP):		***Fed State Reg:***	
Project Type (RAP):		***Non Reg:***	
Site Status:	Closed	***NPL:***	
Perm List of Prio?:		***Site County:***	St. Louis
Petrol Brownfield?:		***County (RAP):***	
VIC Site?:		***Latitude:***	46.8387676
Sf Voluntary:		***Longitude:***	-92.20980593

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Inst Controls?:		**Latitude (RAP):**	
SEMS?:		**Longitude (RAP):**	
Project Name:	Defense Revitilization And Marketing		
Project Managers:	Steve Leppala (no longer at MPCA)		
Site Address 1:	4997 Airport Rd		
Site Address 2:			
Site City:	Duluth		
Site State:	MN		
Site ZIP:	55811		
Project Name(RAP):			
Address1 (RAP):			
Address2 (RAP):			
City (RAP):			
State (RAP):			
ZIP (RAP):			
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

Activity ID:	199185	**Object ID:**	8281
SI ID:	1	**Cong Dist:**	8
Si Cat:	AREA	**House Dist:**	8B
SI Type:	LEAK	**Senate Dis:**	8
Site Type:	CON	**HUC 8:**	04010201
Acreage:		**HUC 10:**	0401020116
HRS Score:		**HUC 12:**	040102011604
Score Year:		**Gdb Geomattr Data:**	
DWSMA Code:		**MNTBA:**	
AI Name:	Defense Revitilization And Marketing		
DWSMA Name:			
Hydrologists:			
Huc 8 Name:	St. Louis River		
Huc12 Name:	Saint Louis River		
Method Desc:	Digitized - MPCA internal map		
Loc Desc:			
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/199185		

Spatial Remediation Activity

AI ID:	199185	**Object ID:**	35773
Site ID:	LS0010249	**Remedy Imp:**	
SI ID:	1	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	
Site Start:	1997-06-18 00:00:00	**NPL List:**	
Site Close:	1998-01-14 00:00:00	**NPL Delete:**	
Leak Discovered:	1997-06-17 00:00:00	**PLP List:**	
Leak Reported:	1997-06-18 00:00:00	**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	
Activity No:	1	**FF Aproved:**	
Activity ID:	SIW19970001	**FF Closed:**	
Activity Type:	Leak Site Investigation	**Inv Comple:**	
Activity Code:	SIW	**App Comple:**	
Activity Year:	1997	**Er Site Ev:**	
Discovered:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
14	3 of3	ESE	0.19 / 1,016.67	1,416.28 / 6	**Defense Revitilization And Marketing** **4997 Airport Rd** **Duluth MN 55811**	MPCA AI

Agency Interest ID:	199185
Name (Map):	Defense Revitilization And Marketing
Address (Map):	4997 Airport Rd
City (Map):	Duluth
State (Map):	MN

ZIP (Map):	55811
Latitude (Map):	46.8387676
Longitude (Map):	-92.2098136
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Defense Revitilization And Marketing
Address (Site):	4997 Airport Rd
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8387676
Longitude (Site):	-92.2098136
County (Site):	St. Louis
Name (Req):	Defense Revitilization And Marketing
Address (Req):	4997 Airport Rd
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8387676
Longitude (Req):	-92.2098136
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	199185-AISI0000199185	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	PetroleumRemediation	***SI ID:***	199185
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	8B
Quarters:		***Senate Dist:***	8
Collection Date:	4/26/2016	***TRDSQQ:***	
Tmsp Created:	11/29/2006	***Ref Code:***	GEN
User Created:	DELTA_M_R2	***Ref Desc:***	General Location
Tmsp Updt:	4/26/2016	***Verified:***	No
Spatial ID:	51830699	***User Updt:***	spatial_
Name:	Defense Revitilization And Marketing		
Program List:	PR		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

My Neighborhood Site Details

Active FLA:	Yes	***HUC 8:***	04010201
MPCA ID:	LS0010249	***Cong Distr:***	8
Program Co:	SR	***Senate Dis:***	8
Program Name:	Investigation and Cleanup	***House Dist:***	8B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	DM
City:	Duluth	***Latitude:***	46.8387676
County:	St. Louis	***Longitude:***	-92.2098136

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Activity: Petroleum Remediation, Leak Site
Addr St: 4997 Airport Rd
Addr City: Duluth
MPCA ID List: LS0010249
Program 1: Investigation and Cleanup
Name: Defense Revitilization And Marketing
Watershed : St. Louis River
Coord Co 1: Digitized - MPCA internal map
Activity L: Petroleum Remediation, Leak Site
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/199185

Agency Interests: File Request Details

Item ID: 199185-AISI0000199185
Status: Active
Status Date:
Program: PetroleumRemediation
CTU Code: 239456
CTU Name: Duluth
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 4/26/2016
Tmsp Created: 11/29/2006
User Created: DELTA_M_R2
Tmsp Updt: 4/26/2016
Spatial ID: 51830699
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 199185
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 8B
Senate Dist: 8
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: spatial_

Name: Defense Revitilization And Marketing
Program List: PR
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: DM
Method Desc: Digitized - MPCA internal map

15	1 of2	SE	0.20 / 1,038.31	1,426.11 / 16	National Weather Service 5027 Miller Trunk Highway Duluth MN 55811	MPCA AI

Agency Interest ID: 51445
Name (Map): National Weather Service
Address (Map): 5027 Miller Trunk Highway
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.8350328
Longitude (Map): -92.2077953
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map): CSLL: Site along road used for address match *** Note:many records provided by the department have a truncated LOC_DESC field.
Name (Site): National Weather Service
Address (Site): 5027 Miller Trunk Hwy
City (Site): Hermantown
State (Site): MN
ZIP (Site): 55811-1442
Latitude (Site): 46.8350328
Longitude (Site): -92.2077953

County (Site):	St. Louis
Name (Req):	National Weather Service
Address (Req):	5027 Miller Trunk Highway
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	CSLL: Site along road used for address match
Latitude (Req):	46.8350328
Longitude (Req):	-92.2077953
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	51445-AISI0000051445	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	51445
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	2/13/2002	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	63241	**User Updt:**	spatial_
Name:	National Weather Service		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	MNR000108498	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	3
Program Name:	Hazardous Waste	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-1442	**Coord Coll:**	A1
City:	Hermantown	**Latitude:**	46.8350328
County:	St. Louis	**Longitude:**	-92.2077953
Activity:	Hazardous Waste, Minimal quantity generator		
Addr St:	5027 Miller Trunk Hwy		
Addr City:	Hermantown		
MPCA ID List:	MNR000108498		
Program 1:	Hazardous Waste		
Name:	National Weather Service		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Hazardous Waste, Minimal quantity generator		
Industrial:	Web Search Portals and All Other Information Services		
Site URL:	https://webapp.pca.state.mn.us/wimn/site/51445		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Agency Interests: File Request Details

Item ID:	51445-AISI0000051445	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Hazardous Waste	***SI ID:***	51445
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B
Section:		***Senate Dist:***	3
Quarters:		***TRDSQQ:***	
Collection Date:	9/27/2015	***Ref Code:***	GEN
Tmsp Created:	2/13/2002	***Ref Desc:***	General Location
User Created:	DELTA_M_R1	***Verified:***	No
Tmsp Updt:	4/26/2016	***User Updt:***	spatial_
Spatial ID:	63241		
Name:	National Weather Service		
Program List:	HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
15	2 of2	SE	0.20 / 1,038.31	1,426.11 / 16	NATIONAL WEATHER SERVICE 5027 MILLER TRUNK HIGHWAY DULUTH MN 55811	RCRA VSQG

Handler ID:	MNR000108498
Generator Status:	VSG
Recycler Activity?:	NO
Recycler Activity Note:	This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note:	NO RECORDS: As of Nov 2025, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer:	No	***Used Oil Transpor:***	No
Mixed Waste Gen:	No	***Used Oil Trans Fac:***	No
Transporter:	No	***Used Oil Processor:***	No
Transfer Facility:	No	***Used Oil Refiner:***	No
Recycler:	No	***Used Oil Burner:***	No
Onsite Burner Exem:	No	***Commercial TSD:***	No
Furnace Exemption:	No	***Recycl Nonstorage:***	No
Underground Injec:	No		
Used Oil Market Burner:	No		
Used Oil Spec Marketer:	No		

Additional Handler Summary Details

Source Type:	I	***NAIC 1:***	
Seq No:	53	***NAIC 2:***	

Non Notifier:		**NAIC 3:**	
Receive Date:	20231218	**NAIC 4:**	
Active Site:	H----	**State:**	MN
Land Type:		**Location Latitude:**	46.835033
In Handler Univ:	Y	**Location Longitude:**	-92.207795
In A Universe:	Y	**Loc GIS Primary:**	N
Gen Status:	VSG	**Loc GIS Origin:**	UC
Report Cycle:		**State District Owner:**	
Accessibility:		**State District:**	
Region:	05		

Fed Waste Gen Owner:	HQ
State Waste Generator Owner:	MN
State Waste Generator:	6
Short Term Generator:	N
Uni Waste:	N
Universal Waste Dest Facility:	N
Federal Universal Waste:	N
As Federally Regulated Tsdf:	------
As Converter Tsdf:	------
As State Regulated Tsdf:	------
As State Regulated Handler:	---
Federal Indicator:	---
Hsm:	N
Subpart K:	----
GPRA Permit:	N
GPRA Renewal:	N
Permit Renewal Wrkld:	------
Permwrk ID:	------
Perm Prog:	------
Pcwrkld:	------
Closwrkld:	------
GPRA Ca:	N
Cawrkld:	N
Subjca Tsd Discretion:	N
NCAPS:	N
EC Indicator:	N
Ca725 Indicator:	N
Ca750 Indicator:	N
Operating Tsdf:	------
Full Enforcement:	------
Snc:	N
Unaddressed Snc:	N
Addressed Snc:	N
Snc With Comp Sched:	N
Fa Required:	-----
Hhandler Last Change:	20231220
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	EN
Handler Name:	NATIONAL WEATHER SERVICE
Location Street No:	
Location Street1:	5027 MILLER TRUNK HIGHWAY
Location Street2:	
Location City:	DULUTH
Location State:	MN
Location Zip:	55811
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	
Contact Name:	JOSEPH MOORE
Contact Street No:	
Contact Street1:	5027 MILLER TRUNK HIGHWAY
Contact Street2:	
Contact City:	DULUTH
Contact State:	MN

Contact Zip: 55811
Contact Country:
Contact Phone & Ext: 218-729-0651
Contact Fax:
Contact Email Address: JOSEPH.MOORE@NOAA.GOV
Contact Title: MANAGER
Owner Name:
Owner Type:
Owner Seq:
Operator Name:
Operator Type:
Operator Seq:
Public Notes:

Hazardous Waste Handler Details

Seq No: 1
Receive Date: 20020109
Handler Name: NATIONAL WEATHER SERVICE
Fed Waste Generator: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Notification
TSD Activity: N

Waste Code Details

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: F003
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F005
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Hazardous Waste Handler Details

Seq No: 53
Receive Date: 20231218
Handler Name: NATIONAL WEATHER SERVICE
Fed Waste Generator: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Implementer
TSD Activity: N

Owner/Operator Details

Owner/Operator Ind: Current Operator
Type: Federal
Name: NATIONAL WEATHER SERVICE
Dt Became Current: 20020213
Dt Ended Current:
Street No:
Street1: 5027 MILLER TRUNK HIGHWAY
Street2:
City: DULUTH
State: MN

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Phone:	218-729-0651	**Country:**	US
Source Type:	Notification	**Zip:**	55811

Historical Handler Details

Receive Dt:	20020109
Generator Code Description:	Very Small Quantity Generator
Handler Name:	NATIONAL WEATHER SERVICE

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
16	1 of3	SW	0.20 / 1,065.41	1,427.89 / 17	Todd Signs LLC 5147 Miller Trunk Highway Duluth MN 55811	MPCA AI

Agency Interest ID:	25311
Name (Map):	Todd Signs LLC
Address (Map):	5147 Miller Trunk Highway
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83677054
Longitude (Map):	-92.22117602
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Todd Signs LLC
Address (Site):	5147 Miller Trunk Highway
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83677054
Longitude (Site):	-92.22117602
County (Site):	St. Louis
Name (Req):	Todd Signs LLC
Address (Req):	5147 Miller Trunk Highway
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83677054
Longitude (Req):	-92.22117602
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	25311-AISI0000025311	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	25311
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	9/28/2015	**TRDSQQ:**	
Tmsp Created:	7/26/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	18131	**User Updt:**	spatial_
Name:	Todd Signs LLC		
Program List:	HW, RR		
HUC 8:	04010201		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

My Neighborhood Site Details

Active FLA: Yes
MPCA ID: MND985730183
Program Co: HW; SR
Program Name: Multiple Programs
Address: MN
Addr ZIP: 55811
City: Hermantown
County: St. Louis
HUC 8: 04010201
Cong Distr: 8
Senate Dis: 3
House Dist: 3B
IC Flag: No
Coord Coll: A1
Latitude: 46.83677054
Longitude: -92.22117602
Activity: Multiple Activities
Addr St: 5147 Miller Trunk Highway
Addr City: Duluth
MPCA ID List: MND985730183
Program 1: Hazardous Waste; Investigation and Cleanup
Name: Todd Signs LLC
Watershed : St. Louis River
Coord Co 1: Address Matching House Number
Activity L: Hazardous Waste; RCRA Remediation
Industrial: Sign Manufacturing
Site URL: https://webapp.pca.state.mn.us/wimn/site/25311

Agency Interests: File Request Details

Item ID: 25311-AISI0000025311
Status: Active
Status Date:
Program: Multiple Programs
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 9/28/2015
Tmsp Created: 7/26/1999
User Created: DELTA_M_R1
Tmsp Updt: 4/26/2016
Spatial ID: 18131
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 25311
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: spatial_
Name: Todd Signs LLC
Program List: HW, RR
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

16	2 of3	SW	0.20 / 1,065.41	1,427.89 / 17	TODD SIGN 5147 MILLER TRUNK HWY DULUTH MN 55811	RCRA VSQG

Handler ID: MND985730183
Generator Status: VSG
Recycler Activity?: NO
Recycler Activity Note: This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note: VIOLATION or UNDETERMINED: There are VIOLATION or UNDETERMINED details or records associated with this facility (EPA ID) in the Compliance Monitoring and Enforcement table dated Nov 2025.

Violation Details

Viol Type: 262.A
Citation:
Determined Date: 19920427
Scheduled Compliance Date: 19920619
Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - General
Actual Rtc Date: 19920427
Found Violation: Yes
Rtc Qualifier: Observed

Enforcement Details

Enf Type: 122
Enf Type Desc: Notice of Violation (NOV)
Enf Action Date: 19920619
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Violation Details

Viol Type: 262.C
Citation:
Determined Date: 19920427
Scheduled Compliance Date: 19920619
Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - Pre-transport
Actual Rtc Date: 19920427
Found Violation: Yes
Rtc Qualifier: Observed

Enforcement Details

Enf Type: 122
Enf Type Desc: Notice of Violation (NOV)
Enf Action Date: 19920619
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Violation Details

Viol Type: 262.A
Citation:
Determined Date: 19920122
Scheduled Compliance Date: 19920305
Actual Rtc Date: 19920427
Found Violation: Yes
Rtc Qualifier: Observed

Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - General

Enforcement Details

Enf Type: 122
Enf Type Desc: Notice of Violation (NOV)
Enf Action Date: 19920305
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Evaluation Details

Eval Start Date: 19920813
Eval Type Desc: FOCUSED COMPLIANCE INSPECTION
Viol Short Desc:
Actual Rtc Date:
Eval Agency: State

Eval Start Date: 19920427
Eval Type Desc: COMPLIANCE SCHEDULE EVALUATION
Viol Short Desc: Generators - General
Actual Rtc Date: 19920427
Eval Agency: State

Eval Start Date: 19920427
Eval Type Desc: COMPLIANCE SCHEDULE EVALUATION
Viol Short Desc: Generators - Pre-transport
Actual Rtc Date: 19920427
Eval Agency: State

Eval Start Date: 19920122
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc: Generators - General
Actual Rtc Date: 19920427
Eval Agency: State

Handler Summary

Importer: No
Mixed Waste Gen: No
Transporter: No
Transfer Facility: No
Recycler: No
Onsite Burner Exem: No
Furnace Exemption: No
Underground Injec: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No
Used Oil Transpor: No
Used Oil Trans Fac: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Commercial TSD: No
Recycl Nonstorage: No

Additional Handler Summary Details

Source Type: I
Seq No: 1
Non Notifier: X
Receive Date: 19921208
Active Site: H----
Land Type:
In Handler Univ: Y
NAIC 1:
NAIC 2:
NAIC 3:
NAIC 4:
State: MN
Location Latitude: 46.836755
Location Longitude: -92.219337

In A Universe:	Y	***Loc GIS Primary:***	N
Gen Status:	VSG	***Loc GIS Origin:***	AG
Report Cycle:		***State District Owner:***	
Accessibility:		***State District:***	
Region:	05		
Fed Waste Gen Owner:	HQ		
State Waste Generator Owner:			
State Waste Generator:			
Short Term Generator:	N		
Uni Waste:	N		
Universal Waste Dest Facility:	N		
Federal Universal Waste:	N		
As Federally Regulated Tsdf:	------		
As Converter Tsdf:	------		
As State Regulated Tsdf:	------		
As State Regulated Handler:	---		
Federal Indicator:	---		
Hsm:	N		
Subpart K:	----		
GPRA Permit:	N		
GPRA Renewal:	N		
Permit Renewal Wrkld:	------		
Permwrk ID:	------		
Perm Prog:	------		
Pcwrkld:	------		
Closwrkld:	------		
GPRA Ca:	N		
Cawrkld:	N		
Subjca Tsd Discretion:	N		
NCAPS:	N		
EC Indicator:	N		
Ca725 Indicator:	N		
Ca750 Indicator:	N		
Operating Tsdf:	------		
Full Enforcement:	------		
Snc:	N		
Unaddressed Snc:	N		
Addressed Snc:	N		
Snc With Comp Sched:	N		
Fa Required:	-----		
Hhandler Last Change:	20000915		
Recognized Trader Importer:	N		
Recognized Trader Exporter:	N		
Slab Importer:	N		
Slab Exporter:	N		
Manifest Broker:	N		
Subpart P:	N		
Contact Language:	EN		
Handler Name:	TODD SIGN		
Location Street No:			
Location Street1:	5147 MILLER TRUNK HWY		
Location Street2:			
Location City:	DULUTH		
Location State:	MN		
Location Zip:	55811		
Location County Code:	MN137		
Location County Name:	ST LOUIS		
Location Country:	US		
Contact Name:			
Contact Street No:			
Contact Street1:			
Contact Street2:			
Contact City:			
Contact State:			
Contact Zip:			
Contact Country:	US		
Contact Phone & Ext:			
Contact Fax:			
Contact Email Address:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Contact Title:
Owner Name: TODD SIGN, INC.
Owner Type: P
Owner Seq: 1
Operator Name:
Operator Type:
Operator Seq:
Public Notes:

Hazardous Waste Handler Details

Seq No: 1
Receive Date: 19921208
Handler Name: TODD SIGN
Fed Waste Generator: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Implementer
TSD Activity: N

Owner/Operator Details

Owner/Operator Ind: Current Owner
Type: Private
Name: TODD SIGN, INC.
Dt Became Current:
Dt Ended Current:
Phone:
Source Type: Implementer
Street No:
Street1: NOT REPORTED
Street2:
City: NOT REPORTED
State: AK
Country:
Zip: 12345

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16 | ***3 of3*** | ***SW*** | ***0.20 / 1,065.41*** | ***1,427.89 / 17*** | ***Todd Signs***
5147 Miller Trunk Highway
Duluth MN 55811 | ***SHWS***

Item ID: 25311-AREA0000000001
Project ID: MND985730183
NPL:
PermList of Prior?:
Petrol Brownfield?:
VIC Site?:
Federal Reg:
State Reg: Yes
Sf Voluntary:
Project Name(RAP): Todd Signs
Project Type (RAP): RCRA Remediation Site
Latitude (RAP): 46.83676228
Longitude (RAP): -92.22116829
Project ID (RAP): MND985730183
Site Status: Closed
Project Name: Todd Signs
Project Type: RCRA Remediation Site
Latitude: 46.83676228
Longitude: -92.22116829
SEMS?:
Unpermitted Dump?:
Fed State Reg:
Non Reg:
Inst Controls?:
Address1 (RAP): 5147 Miller Trunk Highway
Address2(RAP):
City (RAP): Duluth
State (RAP): MN
Zip (RAP): 55811
County (RAP): St. Louis
Data Source: MPCA Remediation Sites; MPCA Remediation Sites with RAP approvals
Site Address 1: 5147 Miller Trunk Highway
Site Address 2:
Site City: Duluth
Site State: MN
Site Zip: 55811
Site County: St. Louis
Project Managers:

Remediation Sites Details

Activity ID: 25311
SI ID: 1
SI Type: RCRA
Acreage:
House Dist: 3B
SI Cat: AREA
AI Name: Todd Signs LLC
Site Type: CON
Cong Dist: 8
Senate Dis: 3

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

DWSMA Code:		**Method Des:**	Address Matching House Number
DWSMA Name:		**HUC 8:**	04010201
HRS Score:		**HUC 10:**	0401020116
Score Year:		**HUC 12:**	040102011604
MNTBA:			
Loc Desc:	...		
	...		
Huc8 Name:	St. Louis River		
Huc12 Name:	Saint Louis River		
Hydrologis:	Sandra Beck (no longer at MPCA)		
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/25311		

Remediation Sites with RAP Approval

Activity ID:	25311	**Rap Date:**	
No Association Date:		**Site Start:**	
No Association Letter:	No	**Rap Approved:**	
Has Rp:	Yes	**Rap Completed:**	
Coord Collection Method:	Address Matching House Number	**Site Closed:**	
Parcels:			
WIMN:	https://webapp.pca.state.mn.us/wimn/site/25311		
AI Name:	Todd Signs LLC		
Rp Names:	(TBD)		

Spatial Remediation Activity

AI ID:	25311	**Discovered:**	
Activity No:	1	**Site Start:**	1992-05-08 00:00:00
Activity ID:	SIW19990001	**Remedy Imp:**	1993-12-23 00:00:00
Site ID:	MND985730183	**Remedy Sel:**	
SI ID:	1	**ASMT Compl:**	
SI Cat:	AREA	**NPL Delete:**	
Activity Code:	SIW	**PLP List:**	
Activity Year:	1999	**PLP Delist:**	
Received:	1992-05-08 00:00:00	**Staff Assi:**	
NPL List:		**FF Aproved:**	
NFA Decisi:		**FF Closed:**	
Site Close:	1993-12-23 00:00:00	**Inv Comple:**	1993-12-23 00:00:00
Leak Discovered:		**App Comple:**	
Leak Reported:		**Er Site Ev:**	
Leak Reopened:			
Activity Type:	RCRA Remediation Invst/Cleanup		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
17	1 of2	SE	0.20 / 1,075.16	1,432.58 / 22	OReilly Auto Parts 5993 5029 Miller Trunk Hwy Hermantown MN 55811	MPCA AI

Agency Interest ID:	233113
Name (Map):	OReilly Auto Parts 5993
Address (Map):	5029 Miller Trunk Hwy
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83852737
Longitude (Map):	-92.21792593
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	OReilly Auto Parts 5993
Address (Site):	5029 Miller Trunk Hwy
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83852737

Longitude (Site):	-92.21792593
County (Site):	St. Louis
Name (Req):	OReilly Auto Parts 5993
Address (Req):	5029 Miller Trunk Hwy
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83852737
Longitude (Req):	-92.21792593
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	233113-AISI0000233113	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	233113
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	12/27/2019	**TRDSQQ:**	
Tmsp Created:	12/27/2019	**Ref Code:**	GEN
User Created:	swright1	**Ref Desc:**	General Location
Tmsp Updt:	12/27/2019	**Verified:**	No
Spatial ID:		**User Updt:**	geo_nc

Name:	OReilly Auto Parts 5993
Program List:	HW
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	Z1
Method Desc:	Zip Code Centroid

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	MNS000334592	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	3
Program Name:	Hazardous Waste	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Z1
City:	Hermantown	**Latitude:**	46.83852737
County:	St. Louis	**Longitude:**	-92.21792593

Activity:	Hazardous Waste, Very small quantity generator
Addr St:	5029 Miller Trunk Hwy
Addr City:	Hermantown
MPCA ID List:	MNS000334592
Program 1:	Hazardous Waste
Name:	OReilly Auto Parts 5993
Watershed :	St. Louis River
Coord Co 1:	Zip Code Centroid
Activity L:	Hazardous Waste, Very small quantity generator
Industrial:	Automotive Parts and Accessories Retailers
Site URL:	https://webapp.pca.state.mn.us/wimn/site/233113

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Agency Interests: File Request Details

Item ID:	233113-AISI0000233113	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Hazardous Waste	***SI ID:***	233113
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B
Section:		***Senate Dist:***	3
Quarters:		***TRDSQQ:***	
Collection Date:	12/27/2019	***Ref Code:***	GEN
Tmsp Created:	12/27/2019	***Ref Desc:***	General Location
User Created:	swright1	***Verified:***	No
Tmsp Updt:	12/27/2019	***User Updt:***	geo_nc
Spatial ID:			
Name:	OReilly Auto Parts 5993		
Program List:	HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Z1		
Method Desc:	Zip Code Centroid		

17	*2 of2*	*SE*	*0.20 / 1,075.16*	*1,432.58 / 22*	***OREILLY AUTO PARTS 5993 5029 MILLER TRUNK HWY HERMANTOWN MN 55811***	***RCRA VSQG***

Handler ID:	MNS000334592
Generator Status:	VSG
Recycler Activity?:	NO
Recycler Activity Note:	This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note:	NO RECORDS: As of Nov 2025, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer:	No	***Used Oil Transpor:***	No
Mixed Waste Gen:	No	***Used Oil Trans Fac:***	No
Transporter:	No	***Used Oil Processor:***	No
Transfer Facility:	No	***Used Oil Refiner:***	No
Recycler:	No	***Used Oil Burner:***	No
Onsite Burner Exem:	No	***Commercial TSD:***	No
Furnace Exemption:	No	***Recycl Nonstorage:***	No
Underground Injec:	No		
Used Oil Market Burner:	No		
Used Oil Spec Marketer:	No		

Additional Handler Summary Details

Source Type:	I	***NAIC 1:***	
Seq No:	53	***NAIC 2:***	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Non Notifier:		**NAIC 3:**	
Receive Date:	20231218	**NAIC 4:**	
Active Site:	H----	**State:**	MN
Land Type:		**Location Latitude:**	46.836529
In Handler Univ:	Y	**Location Longitude:**	-92.210466
In A Universe:	Y	**Loc GIS Primary:**	N
Gen Status:	VSG	**Loc GIS Origin:**	AG
Report Cycle:		**State District Owner:**	
Accessibility:		**State District:**	
Region:	05		

Fed Waste Gen Owner:	HQ
State Waste Generator Owner:	MN
State Waste Generator:	5
Short Term Generator:	N
Uni Waste:	N
Universal Waste Dest Facility:	N
Federal Universal Waste:	N
As Federally Regulated Tsdf:	------
As Converter Tsdf:	------
As State Regulated Tsdf:	------
As State Regulated Handler:	---
Federal Indicator:	---
Hsm:	N
Subpart K:	----
GPRA Permit:	N
GPRA Renewal:	N
Permit Renewal Wrkld:	------
Permwrk ID:	------
Perm Prog:	------
Pcwrkld:	------
Closwrkld:	------
GPRA Ca:	N
Cawrkld:	N
Subjca Tsd Discretion:	N
NCAPS:	N
EC Indicator:	N
Ca725 Indicator:	N
Ca750 Indicator:	N
Operating Tsdf:	------
Full Enforcement:	------
Snc:	N
Unaddressed Snc:	N
Addressed Snc:	N
Snc With Comp Sched:	N
Fa Required:	-----
Hhandler Last Change:	20231220
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	EN
Handler Name:	OREILLY AUTO PARTS 5993
Location Street No:	
Location Street1:	5029 MILLER TRUNK HWY
Location Street2:	
Location City:	HERMANTOWN
Location State:	MN
Location Zip:	55811
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	
Contact Name:	JOHN BOUNDS
Contact Street No:	
Contact Street1:	233 S PATTERSON AVE
Contact Street2:	
Contact City:	SPRINGFIELD
Contact State:	MO

Contact Zip: 65802-2210
Contact Country:
Contact Phone & Ext: 417-520-4589
Contact Fax:
Contact Email Address: JBOUNDS2@OREILLYAUTO.COM
Contact Title: MANAGER
Owner Name:
Owner Type:
Owner Seq:
Operator Name:
Operator Type:
Operator Seq:
Public Notes:

Hazardous Waste Handler Details

Seq No: 1
Receive Date: 20191227
Handler Name: OREILLY AUTO PARTS 5993
Fed Waste Generator: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Implementer
TSD Activity: N

Waste Code Details

Waste Code: U
Waste Code Desc: Unknown Waste

Hazardous Waste Handler Details

Seq No: 53
Receive Date: 20231218
Handler Name: OREILLY AUTO PARTS 5993
Fed Waste Generator: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Implementer
TSD Activity: N

Historical Handler Details

Receive Dt: 20191227
Generator Code Description: Very Small Quantity Generator
Handler Name: OREILLY AUTO PARTS 5993

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
18	1 of2	S	0.20 / 1,079.30	1,419.86 / 9	Lorentz-Marchand-Offices 5071 Miller Trunk Highway Hermantown MN 55811	MPCA AI

Agency Interest ID: 105349
Name (Map): Lorentz-Marchand-Offices
Address (Map): 5071 Miller Trunk Highway
City (Map): Hermantown
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.8367565
Longitude (Map): -92.2119781
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Lorentz-Marchand-Offices
Address (Site): 5071 Miller Trunk Highway
City (Site): Hermantown

State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8367565
Longitude (Site):	-92.2119781
County (Site):	St. Louis
Name (Req):	Lorentz-Marchand-Offices
Address (Req):	5071 Miller Trunk Highway
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8367565
Longitude (Req):	-92.2119781
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	105349-AISI0000105349	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Underground Tanks	**SI ID:**	105349
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	8/28/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	51370677	**User Updt:**	spatial_
Name:	Lorentz-Marchand-Offices		
Program List:	UT		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	TS0011423	**Cong Distr:**	8
Program Co:	TL	**Senate Dis:**	3
Program Name:	Tanks	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Hermantown	**Latitude:**	46.8367565
County:	St. Louis	**Longitude:**	-92.2119781
Activity:	Underground Tanks		
Addr St:	5071 Miller Trunk Highway		
Addr City:	Hermantown		
MPCA ID List:	TS0011423		
Program 1:	Tanks		
Name:	Lorentz-Marchand-Offices		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Underground Tanks		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/105349

Agency Interests: File Request Details

Item ID:	105349-AISI0000105349	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Underground Tanks	**SI ID:**	105349
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	8/28/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	51370677		
Name:	Lorentz-Marchand-Offices		
Program List:	UT		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
18	2 of2	S	0.20 / 1,079.30	1,419.86 / 9	Lorentz-Marchand-Offices 5071 Miller Trunk Highway Hermantown MN 55811	UST

AI ID:	105349	**AI Name (Map):**	
Tank Type:	Underground Storage Tank System	**Address1 (Map):**	
AI Name:	Lorentz-Marchand-Offices	**Address2 (Map):**	
Address1:	5071 Miller Trunk Highway	**City (Map):**	
Address2:		**State (Map):**	
Address3:		**Zip (Map):**	
City:	Hermantown	**Owner:**	Jonthan S Miner
County:	St. Louis	**Owner Address:**	
State:	MN	**Owner City:**	
Zip:	55811	**Owner State:**	
Location Description:		**Owner Zip:**	
Data Source:	Minnesota Pollution Control Agency Tank Sites		

Tank Information

Tank Site ID:	TS0011423	**Latitude:**	46.84924589
Tank ID:	105349-EQUI0000000001	**Longitude:**	-92.23551093
Tank Status:	Removed	**Contractor of Tank:**	
Install Date:	1/1/1900	**Tribal Land:**	
Status Change Date:	12/6/1995		
Primary NAICS:			
Primary SIC:			
Subject Item Description:	10,000 gal/Fuel Oil/Removed		
Tanks Url:	https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0011423		
Coord Collect Meth Desc:	Public Land Survey-Two Quarter		
On Tribal Land:	N		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Compartment Information

Compartment ID:	105349-EQUI0000000001-1	***Programs:***	UT
Compartment No:	1	***Capacity (gal):***	10000
Tank Wall Type:	Single	***Cathodic Prot Sys:***	Anode
Tank Material:	Bare/Paint/Asph Coat Steel	***Special Use Desc:***	Heating
Subject Item Designation:	12		
Overfill Prevention System:	UST Not needed		

Pipe Information

Pipe Wall Type:	Single	***Stored Product:***	Fuel Oil
Pipe Leak Detection:	SSP	***Tank Leak Detection:***	UST Not needed
Pipe Material:	Steel/Iron	***Vapor Recovery Flag:***	No
Pipe Corrosion Protection:	None		

19	*1 of2*	*S*	*0.20 / 1,080.87*	*1,421.85 / 11*	***Johnson Supply Co 5083 Miller Trunk Hwy Hermantown MN 55811***	*MPCA AI*

Agency Interest ID:	623
Name (Map):	Johnson Supply Co
Address (Map):	5083 Miller Trunk Hwy
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8306178
Longitude (Map):	-92.2003885
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Johnson Supply Co
Address (Site):	5083 Miller Trunk Hwy
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811-1442
Latitude (Site):	46.8306178
Longitude (Site):	-92.2003885
County (Site):	St. Louis
Name (Req):	Johnson Supply Co
Address (Req):	5083 Miller Trunk Hwy
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8306178
Longitude (Req):	-92.2003885
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	623-AISI0000000623	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Multiple Programs	***SI ID:***	623
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3

Collection Date:		**TRDSQQ:**	
Tmsp Created:	6/11/1996	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	3/9/2023	**Verified:**	Yes
Spatial ID:	1076	**User Updt:**	RSP
Name:	Johnson Supply Co		
Program List:	AQ, HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	Multiple IDs	**Cong Distr:**	8
Program Co:	AQ; HW	**Senate Dis:**	3
Program Name:	Multiple Programs	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-1442	**Coord Coll:**	A1
City:	Hermantown	**Latitude:**	46.8306178
County:	St. Louis	**Longitude:**	-92.2003885
Activity:	Multiple Activities		
Addr St:	5083 Miller Trunk Hwy		
Addr City:	Hermantown		
MPCA ID List:	13700266; MN0000199562		
Program 1:	Air Quality; Hazardous Waste		
Name:	Johnson Supply Co		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Air Quality; Hazardous Waste, Very small quantity generator		
Industrial:	Automotive Parts and Accessories Retailers; Specialized Automotive Repair		
Site URL:	https://webapp.pca.state.mn.us/wimn/site/623		

Agency Interests: File Request Details

Item ID:	623-AISI0000000623	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	623
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:		**Ref Code:**	GEN
Tmsp Created:	6/11/1996	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	Yes
Tmsp Updt:	3/9/2023	**User Updt:**	RSP
Spatial ID:	1076		
Name:	Johnson Supply Co		
Program List:	AQ, HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
DWSMA Name:						
Method Code:		A1				
Method Desc:		Address Matching House Number				
19	2 of2	S	0.20 / 1,080.87	1,421.85 / 11	JOHNSON SUPPLY CO 5083 MILLER TRUNK HWY HERMANTOWN MN 55811-1442	RCRA VSQG

Handler ID: MN0000199562
Generator Status: VSG
Recycler Activity?: NO
Recycler Activity Note: This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note: VIOLATION or UNDETERMINED: There are VIOLATION or UNDETERMINED details or records associated with this facility (EPA ID) in the Compliance Monitoring and Enforcement table dated Nov 2025.

Violation Details

Viol Type: 262.A
Citation:
Determined Date: 20020716
Scheduled Compliance Date: 20020717
Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - General
Actual Rtc Date: 20020820
Found Violation: Yes
Rtc Qualifier: Observed

Enforcement Details

Enf Type: 121
Enf Type Desc: Letter of Warning (LOW)
Enf Action Date: 20020717
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Violation Details

Viol Type: 262.B
Citation:
Determined Date: 20020716
Scheduled Compliance Date: 20020717
Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - Manifest
Actual Rtc Date: 20020820
Found Violation: Yes
Rtc Qualifier: Observed

Enforcement Details

Enf Type: 121
Enf Type Desc: Letter of Warning (LOW)
Enf Action Date: 20020717
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Evaluation Details

Eval Start Date:	20020716
Eval Type Desc:	COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:	Generators - General
Actual Rtc Date:	20020820
Eval Agency:	State

Eval Start Date:	20020716
Eval Type Desc:	COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:	Generators - Manifest
Actual Rtc Date:	20020820
Eval Agency:	State

Handler Summary

Importer:	No	***Used Oil Transpor:***	No
Mixed Waste Gen:	No	***Used Oil Trans Fac:***	No
Transporter:	No	***Used Oil Processor:***	No
Transfer Facility:	No	***Used Oil Refiner:***	No
Recycler:	No	***Used Oil Burner:***	No
Onsite Burner Exem:	No	***Commercial TSD:***	No
Furnace Exemption:	No	***Recycl Nonstorage:***	No
Underground Injec:	No		
Used Oil Market Burner:	No		
Used Oil Spec Marketer:	No		

Additional Handler Summary Details

Source Type:	I	***NAIC 1:***	
Seq No:	55	***NAIC 2:***	
Non Notifier:		***NAIC 3:***	
Receive Date:	20240412	***NAIC 4:***	
Active Site:	H----	***State:***	MN
Land Type:		***Location Latitude:***	46.830618
In Handler Univ:	Y	***Location Longitude:***	-92.200389
In A Universe:	Y	***Loc GIS Primary:***	N
Gen Status:	VSG	***Loc GIS Origin:***	UC
Report Cycle:		***State District Owner:***	
Accessibility:		***State District:***	
Region:	05		
Fed Waste Gen Owner:	HQ		
State Waste Generator Owner:	MN		
State Waste Generator:	5		
Short Term Generator:	N		
Uni Waste:	N		
Universal Waste Dest Facility:	N		
Federal Universal Waste:	N		
As Federally Regulated Tsdf:	------		
As Converter Tsdf:	------		
As State Regulated Tsdf:	------		
As State Regulated Handler:	---		
Federal Indicator:	---		
Hsm:	N		
Subpart K:	----		
GPRA Permit:	N		
GPRA Renewal:	N		
Permit Renewal Wrkld:	------		
Permwrk ID:	------		
Perm Prog:	------		
Pcwrkld:	------		
Closwrkld:	------		
GPRA Ca:	N		
Cawrkld:	N		

Subjca Tsd Discretion:	N
NCAPS:	N
EC Indicator:	N
Ca725 Indicator:	N
Ca750 Indicator:	N
Operating Tsdf:	------
Full Enforcement:	------
Snc:	N
Unaddressed Snc:	N
Addressed Snc:	N
Snc With Comp Sched:	N
Fa Required:	-----
Hhandler Last Change:	20240823
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	EN
Handler Name:	JOHNSON SUPPLY CO
Location Street No:	
Location Street1:	5083 MILLER TRUNK HWY
Location Street2:	
Location City:	HERMANTOWN
Location State:	MN
Location Zip:	55811-1442
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	
Contact Name:	JOEL JOHNSON
Contact Street No:	
Contact Street1:	5083 MILLER TRUNK HWY
Contact Street2:	
Contact City:	HERMANTOWN
Contact State:	MN
Contact Zip:	55811-1442
Contact Country:	
Contact Phone & Ext:	218-722-1717
Contact Fax:	
Contact Email Address:	KJOHNSON@JOHNSONAUTOBODYSUPPLY.COM
Contact Title:	
Owner Name:	
Owner Type:	
Owner Seq:	
Operator Name:	
Operator Type:	
Operator Seq:	
Public Notes:	

Hazardous Waste Handler Details

Seq No:	1
Receive Date:	19960212
Handler Name:	CUSTOM COACH COLLISION REPAIR
Fed Waste Generator:	3
Generator Code Description:	Very Small Quantity Generator
Source Type:	Notification
TSD Activity:	N

Waste Code Details

Waste Code:	D001
Waste Code Desc:	IGNITABLE WASTE
Waste Code:	F001

Waste Code Desc: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F002
Waste Code Desc: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F003
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F005
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Hazardous Waste Handler Details

Seq No: 53
Receive Date: 20231218
Handler Name: JOHNSON SUPPLY CO
Fed Waste Generator: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Implementer
TSD Activity: N

Hazardous Waste Handler Details

Seq No: 55
Receive Date: 20240412
Handler Name: JOHNSON SUPPLY CO
Fed Waste Generator: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Implementer
TSD Activity: N

Owner/Operator Details

Owner/Operator Ind: Current Operator
Type: Private
Name: CUSTOM COACH COLLISION REPAIR
Dt Became Current: 19990728
Dt Ended Current:
Phone: 218-729-5554
Source Type: Notification

Street No:
Street1: 5083 MILLER TRUNK HIGHWAY
Street2:
City: HERMANTOWN
State: MN
Country: US
Zip: 55811-1442

Historical Handler Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Receive Dt: 20231218
Generator Code Description: Very Small Quantity Generator
Handler Name: JOHNSON SUPPLY CO

Receive Dt: 19960212
Generator Code Description: Very Small Quantity Generator
Handler Name: CUSTOM COACH COLLISION REPAIR

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
20	1 of1	SSW	0.21 / 1,086.69	1,422.18 / 12	Happy Campers Rv Specialists 5085 Miller Trunk Hwy Duluth MN 55811	MPCA AI

Agency Interest ID: 22936
Name (Map): Happy Campers Rv Specialists
Address (Map): 5085 Miller Trunk Hwy
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.8366632
Longitude (Map): -92.2156217
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Happy Campers Rv Specialists
Address (Site): 5085 Miller Trunk Hwy
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811-1442
Latitude (Site): 46.8366632
Longitude (Site): -92.2156217
County (Site): St. Louis
Name (Req): Happy Campers Rv Specialists
Address (Req): 5085 Miller Trunk Hwy
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.8366632
Longitude (Req): -92.2156217
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 22936-AISI0000022936
Status: Inactive
Status Date: 1999-07-27 18:24:16
Program: Hazardous Waste
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 9/27/2015
Tmsp Created: 7/26/1999
User Created: DELTA_M_R1
Tmsp Updt: 4/26/2016
Spatial ID: 19605
Name: Happy Campers Rv Specialists
Program List: HW
HUC 8: 04010201
HUC 8 Name: St. Louis River

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 22936
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: spatial_

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 10: 0401020114
HUC 12: 040102011401
HUC 12 Name: Upper Midway River
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

My Neighborhood Site Details

Active FLA: No
MPCA ID: HWLIC1400232
Program Co: HW
Program Name: Hazardous Waste
Address: MN
Addr ZIP: 55811-1442
City: Hermantown
County: St. Louis
HUC 8: 04010201
Cong Distr: 8
Senate Dis: 3
House Dist: 3B
IC Flag: No
Coord Coll: A1
Latitude: 46.8366632
Longitude: -92.2156217
Activity: Hazardous Waste
Addr St: 5085 Miller Trunk Hwy
Addr City: Duluth
MPCA ID List: HWLIC1400232
Program 1: Hazardous Waste
Name: Happy Campers Rv Specialists
Watershed : St. Louis River
Coord Co 1: Address Matching House Number
Activity L: Hazardous Waste
Industrial: Miscellaneous Retail
Site URL: https://webapp.pca.state.mn.us/wimn/site/22936

Agency Interests: File Request Details

Item ID: 22936-AISI0000022936
Status: Inactive
Status Date: 7/27/1999
Program: Hazardous Waste
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 9/27/2015
Tmsp Created: 7/26/1999
User Created: DELTA_M_R1
Tmsp Updt: 4/26/2016
Spatial ID: 19605
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 22936
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: spatial_
Name: Happy Campers Rv Specialists
Program List: HW
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020114
HUC 10 Name: Midway River
HUC 12: 40102011401
HUC 12 Name: Upper Midway River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

21	1 of2	SSW	0.21 / 1,092.92	1,422.68 / 12	Hermantown Radiator Repair 5087 Miller Trunk Highway Hermantown MN 55811	MPCA AI

Agency Interest ID:	13300
Name (Map):	Hermantown Radiator Repair
Address (Map):	5087 Miller Trunk Highway
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8366638
Longitude (Map):	-92.2158046
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Hermantown Radiator Repair
Address (Site):	5087 Miller Trunk Highway
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8366638
Longitude (Site):	-92.2158046
County (Site):	St. Louis
Name (Req):	Hermantown Radiator Repair
Address (Req):	5087 Miller Trunk Highway
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8366638
Longitude (Req):	-92.2158046
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	13300-AISI0000013300	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	2006-02-13 00:00:00	***SI Cat:***	AISI
Program:	Hazardous Waste	***SI ID:***	13300
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	9/27/2015	***TRDSQQ:***	
Tmsp Created:	7/26/1999	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	4/26/2016	***Verified:***	No
Spatial ID:	19483	***User Updt:***	spatial_

Name:	Hermantown Radiator Repair
Program List:	HW
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020114
HUC 12:	040102011401
HUC 12 Name:	Upper Midway River
DWSMA Code:	
DWSMA Name:	
Method Code:	A1
Method Desc:	Address Matching House Number

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	MND985706431	***Cong Distr:***	8
Program Co:	HW	***Senate Dis:***	3

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program Name:	Hazardous Waste	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Hermantown	**Latitude:**	46.8366638
County:	St. Louis	**Longitude:**	-92.2158046
Activity:	Hazardous Waste		
Addr St:	5087 Miller Trunk Highway		
Addr City:	Hermantown		
MPCA ID List:	MND985706431		
Program 1:	Hazardous Waste		
Name:	Hermantown Radiator Repair		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Hazardous Waste		
Industrial:	Specialized Automotive Repair		
Site URL:	https://webapp.pca.state.mn.us/wimn/site/13300		

Agency Interests: File Request Details

Item ID:	13300-AISI0000013300	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2/13/2006	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	13300
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	7/26/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	19483		
Name:	Hermantown Radiator Repair		
Program List:	HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020114		
HUC 10 Name:	Midway River		
HUC 12:	40102011401		
HUC 12 Name:	Upper Midway River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

21	2 of2	SSW	0.21 / 1,092.92	1,422.68 / 12	HERMANTOWN RADIATOR REPAIR 5087 MILLER TRUNK HIGHWAY HERMANTOWN MN 55811	RCRA NON GEN

Handler ID:	MND985706431
Generator Status:	N
Recycler Activity?:	NO
Recycler Activity Note:	This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note:	NO RECORDS: As of Nov 2025, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer:	No	***Used Oil Transpor:***	No
Mixed Waste Gen:	No	***Used Oil Trans Fac:***	No
Transporter:	No	***Used Oil Processor:***	No
Transfer Facility:	No	***Used Oil Refiner:***	No
Recycler:	No	***Used Oil Burner:***	No
Onsite Burner Exem:	No	***Commercial TSD:***	No
Furnace Exemption:	No	***Recycl Nonstorage:***	No
Underground Injec:	No		
Used Oil Market Burner:	No		
Used Oil Spec Marketer:	No		

Additional Handler Summary Details

Source Type:	N	***NAIC 1:***	811118
Seq No:	1	***NAIC 2:***	811118
Non Notifier:		***NAIC 3:***	
Receive Date:	19910528	***NAIC 4:***	
Active Site:	-----	***State:***	MN
Land Type:	P	***Location Latitude:***	46.836664
In Handler Univ:	N	***Location Longitude:***	-92.215805
In A Universe:	N	***Loc GIS Primary:***	N
Gen Status:	N	***Loc GIS Origin:***	UC
Report Cycle:		***State District Owner:***	
Accessibility:		***State District:***	
Region:	05		
Fed Waste Gen Owner:	HQ		
State Waste Generator Owner:	MN		
State Waste Generator:	N		
Short Term Generator:	N		
Uni Waste:	N		
Universal Waste Dest Facility:	N		
Federal Universal Waste:	N		
As Federally Regulated Tsdf:	------		
As Converter Tsdf:	------		
As State Regulated Tsdf:	------		
As State Regulated Handler:	---		
Federal Indicator:	---		
Hsm:	N		
Subpart K:	----		
GPRA Permit:	N		
GPRA Renewal:	N		
Permit Renewal Wrkld:	------		
Permwrk ID:	------		
Perm Prog:	------		
Pcwrkld:	------		
Closwrkld:	------		
GPRA Ca:	N		
Cawrkld:	N		
Subjca Tsd Discretion:	N		
NCAPS:	N		
EC Indicator:	N		
Ca725 Indicator:	N		
Ca750 Indicator:	N		
Operating Tsdf:	------		
Full Enforcement:	------		
Snc:	N		
Unaddressed Snc:	N		
Addressed Snc:	N		
Snc With Comp Sched:	N		
Fa Required:	-----		
Hhandler Last Change:	20091019		
Recognized Trader Importer:	N		
Recognized Trader Exporter:	N		
Slab Importer:	N		
Slab Exporter:	N		

Manifest Broker:	N
Subpart P:	N
Contact Language:	EN
Handler Name:	HERMANTOWN RADIATOR REPAIR
Location Street No:	
Location Street1:	5087 MILLER TRUNK HIGHWAY
Location Street2:	
Location City:	HERMANTOWN
Location State:	MN
Location Zip:	55811
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	US
Contact Name:	GLENN A HANSEN
Contact Street No:	
Contact Street1:	4992 LIGHTNING DR
Contact Street2:	
Contact City:	HERMANTOWN
Contact State:	MN
Contact Zip:	55811
Contact Country:	US
Contact Phone & Ext:	218-729-6717
Contact Fax:	
Contact Email Address:	
Contact Title:	
Owner Name:	
Owner Type:	
Owner Seq:	
Operator Name:	HERMANTOWN RADIATOR REPAIR
Operator Type:	P
Operator Seq:	1
Public Notes:	

Hazardous Waste Handler Details

Seq No:	1
Receive Date:	19910528
Handler Name:	HERMANTOWN RADIATOR REPAIR
Fed Waste Generator:	N
Generator Code Description:	Not a Generator, Verified
Source Type:	Notification
TSD Activity:	N

Waste Code Details

Waste Code:	D000
Waste Code Desc:	DESCRIPTION
Waste Code:	D008
Waste Code Desc:	LEAD

Owner/Operator Details

Owner/Operator Ind:	Current Operator	**Street No:**	
Type:	Private	**Street1:**	4992 LIGHTNING DR
Name:	HERMANTOWN RADIATOR REPAIR	**Street2:**	
Dt Became Current:	19990726	**City:**	HERMANTOWN
Dt Ended Current:	20060213	**State:**	MN
Phone:	218-729-6717	**Country:**	US
Source Type:	Notification	**Zip:**	55811

22	*1 of5*	*SSW*	*0.21 / 1,094.74*	*1,423.14 / 13*	***Hermantown Service Center 5097 Miller Trunk Highway Duluth MN 55811***	***HIST LEAKSITES***

Prog Int ID:	221402	***Address Source:***	CORE
Site ID:	56159640	***Township Name:***	Stuntz
State County Code:	69	***County Name:***	St. Louis
Country:	USA	***Lat/Long ID:***	146072
Interest Type Cd:	LS	***Interest Type Dsc:***	Leak Site
ADDR ID:	268414	***Lat Degrees:***	46
Tank Site:	8846	***Lat Minutes:***	49
Interest Phone:	NO CORE PI PH.	***Lat Seconds:***	50.93
Interest Start Dt:	02/25/1998 08:55:45	***Long Degrees:***	-92
Interest End Dt:	06/15/2009 14:49:28	***Long Minutes:***	12
Active?:	No	***Long Seconds:***	2.68
Timestamp Added:	06/15/2009 14:49:28	***Lat/Long Source:***	CORE
Timestamp Updt:	11/10/2014 08:17:06	***Lat/Long Site ID:***	56159640
Staff ID Updt:	RGAGLE	***Lat/Long Spatial ID:***	56159642
Source:	CORE	***Collection Date:***	08/03/2004 12:34:10
Coord Src Type:		***Map Scale Code:***	
Coord Src Desc:		***Org Name Source:***	
Foreign State:		***Foreign Zone:***	None
FIPS County Cd1:	137		

Addr Timestmp Add:	06/15/2009 14:49:25
Addr Timestamp Lst Updt:	06/15/2009 14:49:25
Addr Updater Staff ID:	CMCLAIN
Lat/Long Timestamp Added:	06/15/2009 14:49:30
Lat/Long Tmstmp Last Upd:	04/01/2010 13:35:59
Lat/Long Updater Staff ID:	MAPT_NC
Lat/Long Desc:	
Coord Coll Method Desc:	Address Matching House Number
Coord Coll Method Code:	A1
Comments:	

Leak Site

Complete Site Closure Date:	11/10/1997 00:00:00
Cond Closure Date:	
Release Discovered Date:	10/10/1995 00:00:00
Leaksite Type Code:	1
Leaksite Type Desc:	Leak Site
Leak Report Date:	10/10/1995 00:00:00
Tank Reg Status Code:	F
TMSP Added:	12/04/1999 14:03:49
TMSP Last Updt:	08/01/2014 08:55:04
CU Yds Excavated Qty:	21
ENF Action Begin Date:	10/26/1995 00:00:00
Residence Type Code:	
File Archive Box:	18
File Archive Lot:	00/298
Soil Digout Date:	10/01/1995 00:00:00
Staff ID Last Updt:	DBOETTC
Std Letter Response Date:	11/12/1995 00:00:00
VPIC Acres:	
VPIC Application Date:	
Contam Soils Remaining Flag:	Y
Indoor Air Collected Flag:	
LUST Trust Eligible Flag:	Yes
Offsite Contam Flag:	N
REIMB Awarded Flag:	No
Release From AST Flag:	No
Release From UST Flag:	No
Soil Gas Action Level Flag:	
Soil Gas Data Collected Flag:	
Sub Slab Sample Collected Flag:	
Surface Water Impact Flag:	U
Utility Project Flag:	No
Vapor Intrusion Action Flag:	
Vapor Intrusion Checked Flag:	
Leaksite Type Defn:	Leak site (tank and petroleum contamination).

Soil Gas Data Comments:
Vapor Intrusion Comments:

Leak Product Rls

Product Rls Seq ID: 325046
Leak Product Desc: Fuel Oil 1 & 2
Leak Product Defn: The product is fuel oil 1 & 2.

Product Rls Seq ID: 323039
Leak Product Desc: Gasoline Leaded
Leak Product Defn: The product is leaded gasoline.

Leak GW Info

Well Type Code:
Affected Non Res Props:
Affected Residential Props:
Staff ID Last Updt: RSUCHAN
Staff ID Wellhead Area Assess:
TMSP Added: 12/04/1999 14:07:33
TMSP Last Updt: 11/04/2003 12:57:08
Water Supply Exceeds Ral Flag:
Cleanup Goal Achieved Flag:
DW Supply Contam Flag:
Free Product at Close Flag:
Free Product Observed Flag: N
Free Product Thickness:
Ground Water Contam Flag: Y
GW Cleanup Goal: 0
GW Exceeds Cleanup Goal Flag:
Impacted Aquifer Code: 3
MTBE High Level Date:
MTBE High Ug Per Liter Char:
MTBE High Ug Per Liter Numb:
MTBE Present Historically Flag:
MTBE Present Now Flag:
Protected Area Flag:
PWS Well Impacted Flag:
Sensitive Area Flag:

22	2 of5	SSW	0.21 / 1,094.74	1,423.14 / 13	Hermantown Service Center 5097 Miller Trunk Highway Duluth MN 55811	LST REM SITE

Item ID: 206920-AREA0000000001
Project ID: LS0008846
Project Type: Leak Site
Project ID (RAP):
Project Type (RAP):
Site Status: Closed
Perm List of Prio?:
Petrol Brownfield?:
VIC Site?:
Sf Voluntary:
Inst Controls?:
SEMS?:
Project Name: Hermantown Service Center
Project Managers: James Joslyn (no longer at MPCA)
Site Address 1: 5097 Miller Trunk Highway
Site Address 2:
Site City: Duluth
Site State: MN
Site ZIP: 55811

Unpermitted Dump?:
State Reg:
Federal Reg: Yes
Fed State Reg:
Non Reg:
NPL:
Site County: St. Louis
County (RAP):
Latitude: 46.83678414
Longitude: -92.21682108
Latitude (RAP):
Longitude (RAP):

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Project Name(RAP):
Address1 (RAP):
Address2 (RAP):
City (RAP):
State (RAP):
ZIP (RAP):
Data Source: MPCA Remediation Sites

Remediation Sites Details

Activity ID:	206920	***Object ID:***	19800
SI ID:	1	***Cong Dist:***	8
Si Cat:	AREA	***House Dist:***	3B
SI Type:	LEAK	***Senate Dis:***	3
Site Type:	CON	***HUC 8:***	04010201
Acreage:		***HUC 10:***	0401020116
HRS Score:		***HUC 12:***	040102011604
Score Year:		***Gdb Geomattr Data:***	
DWSMA Code:		***MNTBA:***	

AI Name: Hermantown Service Center
DWSMA Name:
Hydrologists: Mike Bares (no longer at MPCA)
Huc 8 Name: St. Louis River
Huc12 Name: Saint Louis River
Method Desc: Address Matching House Number
Loc Desc:
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/206920

Spatial Remediation Activity

AI ID:	206920	***Object ID:***	36523
Site ID:	LS0008846	***Remedy Imp:***	
SI ID:	1	***Remedy Sel:***	
SI Cat:	AREA	***ASMT Compl:***	
NFA Decisi:		***Received:***	
Site Start:	1995-10-10 00:00:00	***NPL List:***	
Site Close:	1997-11-10 00:00:00	***NPL Delete:***	
Leak Discovered:	1995-10-10 00:00:00	***PLP List:***	
Leak Reported:	1995-10-10 00:00:00	***PLP Delist:***	
Leak Reopened:		***Staff Assi:***	
Activity No:	1	***FF Aproved:***	
Activity ID:	SIW19950001	***FF Closed:***	
Activity Type:	Leak Site Investigation	***Inv Comple:***	
Activity Code:	SIW	***App Comple:***	
Activity Year:	1995	***Er Site Ev:***	
Discovered:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
22	3 of5	SSW	0.21 / 1,094.74	1,423.14 / 13	Richard Johnson dba Hermantown Service Center 5097 Miller Trunk Highway Hermantown MN 55811	MPCA AI

Agency Interest ID: 13301
Name (Map): Richard Johnson dba Hermantown Service Center
Address (Map): 5097 Miller Trunk Highway
City (Map): Hermantown
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.8367292
Longitude (Map): -92.2167187
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Richard Johnson dba Hermantown Service Center
Address (Site): 5097 Miller Trunk Highway
City (Site): Hermantown

State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8367292
Longitude (Site):	-92.2167187
County (Site):	St. Louis
Name (Req):	Richard Johnson dba Hermantown Service Center
Address (Req):	5097 Miller Trunk Highway
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8367292
Longitude (Req):	-92.2167187
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	13301-AISI0000013301	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	13301
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	7/26/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	19484	**User Updt:**	spatial_

Name:	Richard Johnson dba Hermantown Service Center
Program List:	HW
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020114
HUC 12:	040102011401
HUC 12 Name:	Upper Midway River
DWSMA Code:	
DWSMA Name:	
Method Code:	A1
Method Desc:	Address Matching House Number

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	MND985680131	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	3
Program Name:	Hazardous Waste	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Hermantown	**Latitude:**	46.8367292
County:	St. Louis	**Longitude:**	-92.2167187

Activity:	Hazardous Waste
Addr St:	5097 Miller Trunk Highway
Addr City:	Hermantown
MPCA ID List:	MND985680131
Program 1:	Hazardous Waste
Name:	Richard Johnson dba Hermantown Service Center
Watershed :	St. Louis River
Coord Co 1:	Address Matching House Number
Activity L:	Hazardous Waste

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Industrial: General Automotive Repair
Site URL: https://webapp.pca.state.mn.us/wimn/site/13301

Agency Interests: File Request Details

Item ID:	13301-AISI0000013301	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	13301
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	7/26/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	19484		

Name: Richard Johnson dba Hermantown Service Center
Program List: HW
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020114
HUC 10 Name: Midway River
HUC 12: 40102011401
HUC 12 Name: Upper Midway River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
22	4 of5	SSW	0.21 / 1,094.74	1,423.14 / 13	Hermantown Service Center 5097 Miller Trunk Highway Duluth MN 55811	MPCA AI

Agency Interest ID: 206920
Name (Map): Hermantown Service Center
Address (Map): 5097 Miller Trunk Highway
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.8308159
Longitude (Map): -92.2007465
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Hermantown Service Center
Address (Site): 5097 Miller Trunk Highway
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.8308159
Longitude (Site): -92.2007465
County (Site): St. Louis
Name (Req): Hermantown Service Center
Address (Req): 5097 Miller Trunk Highway
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.8308159
Longitude (Req): -92.2007465
County (Req): St. Louis

County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	206920-AISI0000206920	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	PetroleumRemediation	**SI ID:**	206920
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	4/26/2016	**TRDSQQ:**	
Tmsp Created:	6/15/2009	**Ref Code:**	GEN
User Created:	DELTA_M_R2	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	56159641	**User Updt:**	spatial_

Name: Hermantown Service Center
Program List: PR
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	LS0008846	**Cong Distr:**	8
Program Co:	SR	**Senate Dis:**	3
Program Name:	Investigation and Cleanup	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Hermantown	**Latitude:**	46.8308159
County:	St. Louis	**Longitude:**	-92.2007465

Activity: Petroleum Remediation, Leak Site
Addr St: 5097 Miller Trunk Highway
Addr City: Duluth
MPCA ID List: LS0008846
Program 1: Investigation and Cleanup
Name: Hermantown Service Center
Watershed : St. Louis River
Coord Co 1: Address Matching House Number
Activity L: Petroleum Remediation, Leak Site
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/206920

Agency Interests: File Request Details

Item ID:	206920-AISI0000206920	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	PetroleumRemediation	**SI ID:**	206920
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	4/26/2016	**Ref Code:**	GEN
Tmsp Created:	6/15/2009	**Ref Desc:**	General Location
User Created:	DELTA_M_R2	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	56159641		
Name:	Hermantown Service Center		
Program List:	PR		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

22	5 of5	SSW	0.21 / 1,094.74	1,423.14 / 13	**HERMANTOWN SERVICE CENTER** **5097 MILLER TRUNK HIGHWAY** **HERMANTOWN MN 55811**	RCRA VSQG

Handler ID:	MND985680131
Generator Status:	VSG
Recycler Activity?:	NO
Recycler Activity Note:	This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note:	NO RECORDS: As of Nov 2025, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer:	No	**Used Oil Transpor:**	No
Mixed Waste Gen:	No	**Used Oil Trans Fac:**	No
Transporter:	No	**Used Oil Processor:**	No
Transfer Facility:	No	**Used Oil Refiner:**	No
Recycler:	No	**Used Oil Burner:**	No
Onsite Burner Exem:	No	**Commercial TSD:**	No
Furnace Exemption:	No	**Recycl Nonstorage:**	No
Underground Injec:	No		
Used Oil Market Burner:	No		
Used Oil Spec Marketer:	No		

Additional Handler Summary Details

Source Type:	N	**NAIC 1:**	811111
Seq No:	1	**NAIC 2:**	811111
Non Notifier:		**NAIC 3:**	
Receive Date:	19900406	**NAIC 4:**	
Active Site:	H----	**State:**	MN
Land Type:	P	**Location Latitude:**	46.836729
In Handler Univ:	Y	**Location Longitude:**	-92.216719
In A Universe:	Y	**Loc GIS Primary:**	N
Gen Status:	VSG	**Loc GIS Origin:**	UC
Report Cycle:		**State District Owner:**	
Accessibility:		**State District:**	
Region:	05		
Fed Waste Gen Owner:	HQ		

State Waste Generator Owner:	MN
State Waste Generator:	3
Short Term Generator:	N
Uni Waste:	N
Universal Waste Dest Facility:	N
Federal Universal Waste:	N
As Federally Regulated Tsdf:	------
As Converter Tsdf:	------
As State Regulated Tsdf:	------
As State Regulated Handler:	---
Federal Indicator:	---
Hsm:	N
Subpart K:	----
GPRA Permit:	N
GPRA Renewal:	N
Permit Renewal Wrkld:	------
Permwrk ID:	------
Perm Prog:	------
Pcwrkld:	------
Closwrkld:	------
GPRA Ca:	N
Cawrkld:	N
Subjca Tsd Discretion:	N
NCAPS:	N
EC Indicator:	N
Ca725 Indicator:	N
Ca750 Indicator:	N
Operating Tsdf:	------
Full Enforcement:	------
Snc:	N
Unaddressed Snc:	N
Addressed Snc:	N
Snc With Comp Sched:	N
Fa Required:	-----
Hhandler Last Change:	20091019
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	EN
Handler Name:	HERMANTOWN SERVICE CENTER
Location Street No:	
Location Street1:	5097 MILLER TRUNK HIGHWAY
Location Street2:	
Location City:	HERMANTOWN
Location State:	MN
Location Zip:	55811
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	US
Contact Name:	RICHARD T JOHNSON
Contact Street No:	
Contact Street1:	5097 MILLER TRUNK HIGHWAY
Contact Street2:	
Contact City:	HERMANTOWN
Contact State:	MN
Contact Zip:	55811
Contact Country:	US
Contact Phone & Ext:	218-729-5189
Contact Fax:	
Contact Email Address:	
Contact Title:	
Owner Name:	JOHNSON RICHARD THOMAS SR
Owner Type:	P
Owner Seq:	3
Operator Name:	HERMANTOWN SERVICE CENTER
Operator Type:	P

Operator Seq: 1
Public Notes:

Hazardous Waste Handler Details

Seq No: 1
Receive Date: 19900406
Handler Name: HERMANTOWN SERVICE CENTER
Fed Waste Generator: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Notification
TSD Activity: N

Waste Code Details

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Owner/Operator Details

Owner/Operator Ind: Current Owner
Type: Private
Name: JOHNSON RICHARD THOMAS SR
Dt Became Current:
Dt Ended Current:
Phone: 218-624-1750
Source Type: Notification
Street No:
Street1: 2801 WELLINGTON ST
Street2:
City: DULUTH
State: MN
Country:
Zip: 55806

Owner/Operator Ind: Current Operator
Type: Private
Name: HERMANTOWN SERVICE CENTER
Dt Became Current: 19990726
Dt Ended Current:
Phone: 218-729-5189
Source Type: Notification
Street No:
Street1: 5097 MILLER TRUNK HIGHWAY
Street2:
City: HERMANTOWN
State: MN
Country: US
Zip: 55811

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23 | ***1 of3*** | ***SSE*** | ***0.21 / 1,118.54*** | ***1,432.04 / 21*** | ***Pella Windows And Doors***
5033 Miller Trunk Highway
Duluth MN 55802 | ***HIST LEAKSITES***

Prog Int ID: 223140
Site ID: 246369
State County Code: 69
Country: USA
Interest Type Cd: LS
ADDR ID: 281603
Tank Site: 10710
Interest Phone: NO CORE PI PH.
Interest Start Dt: 09/27/1999 00:00:00
Interest End Dt: 11/30/2006 06:49:45
Active?: No
Timestamp Added: 11/30/2006 06:49:45
Timestamp Updt: 11/10/2014 08:17:06
Staff ID Updt: RGAGLE
Source: CORE
Coord Src Type: 2
Coord Src Desc:
Foreign State:
FIPS County Cd1: 137
Addr Timestmp Add: 11/30/2006 06:49:30
Addr Timestamp Lst Updt: 11/04/2008 21:13:55
Addr Updater Staff ID: SYSTEM
Lat/Long Timestamp Added: 11/30/2006 06:49:59
Lat/Long Tmstmp Last Upd: 11/30/2006 22:04:02
Address Source: CORE
Township Name: Whiteface Reservoir
County Name: St. Louis
Lat/Long ID: 132870
Interest Type Dsc: Leak Site
Lat Degrees: 46
Lat Minutes: 50
Lat Seconds: 14.53
Long Degrees: -92
Long Minutes: 12
Long Seconds: 45.68
Lat/Long Source: CORE
Lat/Long Site ID: 246369
Lat/Long Spatial ID: 51832801
Collection Date: 11/03/2005 00:00:00
Map Scale Code: B
Org Name Source: Rebecca Gorney
Foreign Zone:

Lat/Long Updater Staff ID:	COREUSER
Lat/Long Desc:	
Coord Coll Method Desc:	Digitized-DOQ
Coord Coll Method Code:	I2
Comments:	

Leak Site

Complete Site Closure Date:	02/07/2000 00:00:00
Cond Closure Date:	
Release Discovered Date:	09/03/1997 00:00:00
Leaksite Type Code:	1
Leaksite Type Desc:	Leak Site
Leak Report Date:	09/03/1997 00:00:00
Tank Reg Status Code:	U
TMSP Added:	12/04/1999 14:03:51
TMSP Last Updt:	05/27/2014 10:17:04
CU Yds Excavated Qty:	
ENF Action Begin Date:	09/08/1997 00:00:00
Residence Type Code:	
File Archive Box:	
File Archive Lot:	
Soil Digout Date:	
Staff ID Last Updt:	DBOETTC
Std Letter Response Date:	10/03/1997 00:00:00
VPIC Acres:	
VPIC Application Date:	
Contam Soils Remaining Flag:	U
Indoor Air Collected Flag:	
LUST Trust Eligible Flag:	No
Offsite Contam Flag:	U
REIMB Awarded Flag:	No
Release From AST Flag:	No
Release From UST Flag:	No
Soil Gas Action Level Flag:	
Soil Gas Data Collected Flag:	
Sub Slab Sample Collected Flag:	
Surface Water Impact Flag:	U
Utility Project Flag:	No
Vapor Intrusion Action Flag:	
Vapor Intrusion Checked Flag:	
Leaksite Type Defn:	Leak site (tank and petroleum contamination).
Soil Gas Data Comments:	
Vapor Intrusion Comments:	

Leak Product Rls

Product Rls Seq ID:	37262
Leak Product Desc:	Fuel Oil 1 & 2
Leak Product Defn:	The product is fuel oil 1 & 2.

Leak GW Info

Well Type Code:	
Affected Non Res Props:	
Affected Residential Props:	
Staff ID Last Updt:	RSUCHAN
Staff ID Wellhead Area Assess:	
TMSP Added:	12/04/1999 14:07:34
TMSP Last Updt:	11/04/2003 12:57:08
Water Supply Exceeds Ral Flag:	
Cleanup Goal Achieved Flag:	
DW Supply Contam Flag:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Free Product at Close Flag:
Free Product Observed Flag:
Free Product Thickness:
Ground Water Contam Flag: N
GW Cleanup Goal: 0
GW Exceeds Cleanup Goal Flag:
Impacted Aquifer Code:
MTBE High Level Date:
MTBE High Ug Per Liter Char:
MTBE High Ug Per Liter Numb:
MTBE Present Historically Flag:
MTBE Present Now Flag:
Protected Area Flag:
PWS Well Impacted Flag:
Sensitive Area Flag:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
23	2 of3	SSE	0.21 / 1,118.54	1,432.04 / 21	Pella Windows And Doors 5033 Miller Trunk Highway Duluth MN 55802	LST REM SITE

Item ID: 193510-AREA0000000001
Project ID: LS0010710
Project Type: Leak Site
Project ID (RAP):
Project Type (RAP):
Site Status: Closed
Perm List of Prio?:
Petrol Brownfield?:
VIC Site?:
Sf Voluntary:
Inst Controls?:
SEMS?:
Project Name: Pella Windows And Doors
Project Managers: Gary Zarling (no longer at MPCA)
Site Address 1: 5033 Miller Trunk Highway
Site Address 2:
Site City: Duluth
Site State: MN
Site ZIP: 55802
Project Name(RAP):
Address1 (RAP):
Address2 (RAP):
City (RAP):
State (RAP):
ZIP (RAP):
Data Source: MPCA Remediation Sites

Unpermitted Dump?:
State Reg:
Federal Reg:
Fed State Reg:
Non Reg:
NPL:
Site County: St. Louis
County (RAP):
Latitude: 46.83737564
Longitude: -92.21268463
Latitude (RAP):
Longitude (RAP):

Remediation Sites Details

Activity ID: 193510
SI ID: 1
Si Cat: AREA
SI Type: LEAK
Site Type: CON
Acreage:
HRS Score:
Score Year:
DWSMA Code:
AI Name: Pella Windows And Doors
DWSMA Name:
Hydrologists:
Huc 8 Name: St. Louis River
Huc12 Name: Saint Louis River
Method Desc: Digitized-DOQ
Loc Desc: Main Site Building
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/193510

Object ID: 5276
Cong Dist: 8
House Dist: 3B
Senate Dis: 3
HUC 8: 04010201
HUC 10: 0401020116
HUC 12: 040102011604
Gdb Geomattr Data:
MNTBA:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Spatial Remediation Activity

AI ID:	193510	***Object ID:***	30918
Site ID:	LS0010710	***Remedy Imp:***	
SI ID:	1	***Remedy Sel:***	
SI Cat:	AREA	***ASMT Compl:***	
NFA Decisi:		***Received:***	
Site Start:	1997-09-03 00:00:00	***NPL List:***	
Site Close:	2000-02-07 00:00:00	***NPL Delete:***	
Leak Discovered:	1997-09-03 00:00:00	***PLP List:***	
Leak Reported:	1997-09-03 00:00:00	***PLP Delist:***	
Leak Reopened:		***Staff Assi:***	
Activity No:	1	***FF Aproved:***	
Activity ID:	SIW19970001	***FF Closed:***	
Activity Type:	Leak Site Investigation	***Inv Comple:***	
Activity Code:	SIW	***App Comple:***	
Activity Year:	1997	***Er Site Ev:***	
Discovered:			

23	*3 of3*	*SSE*	*0.21 / 1,118.54*	*1,432.04 / 21*	***Pella Windows And Doors*** ***5033 Miller Trunk Highway*** ***Duluth MN 55802***	***MPCA AI***

Agency Interest ID:	193510
Name (Map):	Pella Windows And Doors
Address (Map):	5033 Miller Trunk Highway
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55802
Latitude (Map):	46.83736978
Longitude (Map):	-92.21269097
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Pella Windows And Doors
Address (Site):	5033 Miller Trunk Highway
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55802
Latitude (Site):	46.83736978
Longitude (Site):	-92.21269097
County (Site):	St. Louis
Name (Req):	Pella Windows And Doors
Address (Req):	5033 Miller Trunk Highway
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55802
Loc Desc (Req):	
Latitude (Req):	46.83736978
Longitude (Req):	-92.21269097
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	193510-AISI0000193510	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	PetroleumRemediation	***SI ID:***	193510
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	

Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	4/25/2016	**TRDSQQ:**	
Tmsp Created:	11/30/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R2	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	51832800	**User Updt:**	spatial_
Name:	Pella Windows And Doors		
Program List:	PR		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	I2		
Method Desc:	Digitized-DOQ		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	LS0010710	**Cong Distr:**	8
Program Co:	SR	**Senate Dis:**	3
Program Name:	Investigation and Cleanup	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55802	**Coord Coll:**	I2
City:	Hermantown	**Latitude:**	46.83736978
County:	St. Louis	**Longitude:**	-92.21269097
Activity:	Petroleum Remediation, Leak Site		
Addr St:	5033 Miller Trunk Highway		
Addr City:	Duluth		
MPCA ID List:	LS0010710		
Program 1:	Investigation and Cleanup		
Name:	Pella Windows And Doors		
Watershed :	St. Louis River		
Coord Co 1:	Digitized-DOQ		
Activity L:	Petroleum Remediation, Leak Site		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/193510		

Agency Interests: File Request Details

Item ID:	193510-AISI0000193510	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	PetroleumRemediation	**SI ID:**	193510
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	4/25/2016	**Ref Code:**	GEN
Tmsp Created:	11/30/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R2	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	51832800		
Name:	Pella Windows And Doors		
Program List:	PR		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
HUC 12 Name:		Saint Louis River				
SI Type Desc:		Conventional Site				
DWSMA Code:						
DWSMA Name:						
Method Code:		I2				
Method Desc:		Digitized-DOQ				
24	1 of1	SE	0.23 / 1,227.50	1,423.96 / 13	SP 8821-290 District Wide Culvert repairs/replacements SP 8821-290 located on TH 61,53,33,2,73,18,23,35,and 70 in Aitkin,Carlton,Pine and St. Louis Co Duluth MN 55811	MPCA AI

Agency Interest ID:	232128
Name (Map):	SP 8821-290 District Wide Culvert repairs/replacements
Address (Map):	SP 8821-290 located on TH 61,53,33,2,73,18,23,35,and 70 in Aitkin,Carlton,Pine and St. Louis Co
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83624
Longitude (Map):	-92.20984
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	Multiple locations, State Culvert repairs/replacement and guard rail replacements. *** Note:many records provided by the department have a truncated LOC_DESC field.
Name (Site):	SP 8821-290 District Wide Culvert repairs/replacements
Address (Site):	SP 8821-290 located on TH 61,53,33,2,73,18,23,35,and 70 in Aitkin,Carlton,Pine and St. Louis Co
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83624
Longitude (Site):	-92.20984
County (Site):	St. Louis
Name (Req):	SP 8821-290 District Wide Culvert repairs/replacements
Address (Req):	SP 8821-290 located on TH 61,53,33,2,73,18,23,35,and 70 in Aitkin,Carlton,Pine and St. Louis Co
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	Multiple locations, State Culvert repairs/replacement and guard rail replacements.
Latitude (Req):	46.83624
Longitude (Req):	-92.20984
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	232128-AISI0000232128	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	232128
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	9/6/2019	**TRDSQQ:**	
Tmsp Created:	9/6/2019	**Ref Code:**	CEN
User Created:	RSP	**Ref Desc:**	Center of Feature Represented
Tmsp Updt:	9/6/2019	**Verified:**	No
Spatial ID:		**User Updt:**	geo_nc
Name:	SP 8821-290 District Wide Culvert repairs/replacements		

Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	DP
Method Desc:	Digitized - MPCA online map

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00054809	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	DP
City:	Hermantown	**Latitude:**	46.83624
County:	St. Louis	**Longitude:**	-92.20984

Activity:	Construction Stormwater
Addr St:	SP 8821-290 located on TH 61,53,33,2,73,18,23,35,and 70 in Aitkin,Carlton,Pine and St. Louis Co
Addr City:	Duluth
MPCA ID List:	C00054809
Program 1:	Stormwater
Name:	SP 8821-290 District Wide Culvert repairs/replacements
Watershed :	St. Louis River
Coord Co 1:	Digitized - MPCA online map
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/232128

Agency Interests: File Request Details

Item ID:	232128-AISI0000232128	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	232128
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	9/6/2019	**Ref Code:**	CEN
Tmsp Created:	9/6/2019	**Ref Desc:**	Center of Feature Represented
User Created:	RSP	**Verified:**	No
Tmsp Updt:	9/6/2019	**User Updt:**	geo_nc

Spatial ID:	
Name:	SP 8821-290 District Wide Culvert repairs/replacements
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	DP
Method Desc:	Digitized - MPCA online map

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
25	1 of4	S	0.24 / 1,272.80	1,430.50 / 20	JD Sports and Repair 5040 and 5070 Miller Trunk Highway Hermantown MN 55811	BROWNFIELDS

Item ID:	194945-AREA0000000002	**Federal Reg:**	
Project ID:	PB4033	**Fed State Reg:**	
Project Type:	Brownfield Site	**Non Reg:**	
Project ID (RAP):		**SEMS?:**	
Project Type (RAP):		**NPL:**	
Site Status:	Closed	**Unpermitted Dump?:**	
Perm List of Prior?:		**Latitude:**	46.83611485
Petrol Brownfield?:	Yes	**Longitude:**	-92.21223135
VIC Site?:		**County (RAP):**	
Sf Voluntary:		**Latitude (RAP):**	
Inst Controls?:		**Longitude (RAP):**	
State Reg:			
Project Name:	JD Sports and Repair		
Site Address 1:	5040 and 5070 Miller Trunk Highway		
Site Address 2:			
Site City:	Hermantown		
Site State:	MN		
Site Zip:	55811		
Site County:	St. Louis		
Project Name(RAP):			
Address1 (RAP):			
Address2(RAP):			
City (RAP):			
State (RAP):			
Zip (RAP):			
Project Managers:	Stacey VanPatten (former)		
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

Activity ID:	194945	**DWSMA Name:**	
AI Name:	JD Sports and Repair	**Cong Dist:**	8
SI ID:	2	**House Dist:**	3B
SI Cat:	AREA	**Senate Dis:**	3
SI Type:	BROW	**HUC 8:**	04010201
Site Type:	CON	**HUC 10:**	0401020114
Acreage:	3.90	**HUC 12:**	040102011401
HRS Score:		**DWSMA Code:**	
Score Year:		**Method Des:**	Digitized - MPCA internal map
MNTBA:			
Loc Desc:			
HUC 8 Name:	St. Louis River		
HUC 12 Name:	Upper Midway River		
Hydrologist:	Kevin Mustonen (no longer at MPCA)		
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/194945		

Spatial Remediation Activity

AI ID:	194945	**Site Start:**	2011-10-19 00:00:00
Site ID:	PB4033	**Remedy Imp:**	
SI ID:	2	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	
Site Close:	2015-09-28 00:00:00	**NPL List:**	
Leak Discovered:		**NPL Delete:**	
Leak Reported:		**PLP List:**	
Leak Reopened:		**PLP Delist:**	
Activity No:	1	**Staff Assi:**	2011-10-19 00:00:00
Activity ID:	SIW20110001	**FF Aproved:**	
Activity Type:	Brownfield Site	**FF Closed:**	
Activity Code:	SIW	**Inv Comple:**	
Activity Year:	2011	**App Comple:**	2011-10-19 00:00:00

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
Discovered:				Er Site Ev:		
25	2 of4	S	0.24 / 1,272.80	1,430.50 / 20	J.D. Sports and Repair 5040 and 5070 Miller Trunk Highway Hermantown MN 55811	BROWNFIELDS

Item ID:	194945-AREA0000000001	Federal Reg:	
Project ID:	VP27770	Fed State Reg:	
Project Type:	Brownfield Site	Non Reg:	
Project ID (RAP):		SEMS?:	
Project Type (RAP):		NPL:	
Site Status:	Closed	Unpermitted Dump?:	
Perm List of Prior?:		Latitude:	46.83612131
Petrol Brownfield?:		Longitude:	-92.21222706
VIC Site?:	Yes	County (RAP):	
Sf Voluntary:		Latitude (RAP):	
Inst Controls?:		Longitude (RAP):	
State Reg:	Yes		
Project Name:	J.D. Sports and Repair		
Site Address 1:	5040 and 5070 Miller Trunk Highway		
Site Address 2:			
Site City:	Hermantown		
Site State:	MN		
Site Zip:	55811		
Site County:	St. Louis		
Project Name(RAP):			
Address1 (RAP):			
Address2(RAP):			
City (RAP):			
State (RAP):			
Zip (RAP):			
Project Managers:	David Knight (former)		
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

Activity ID:	194945	DWSMA Name:	
AI Name:	JD Sports and Repair	Cong Dist:	8
SI ID:	1	House Dist:	3B
SI Cat:	AREA	Senate Dis:	3
SI Type:	BROW	HUC 8:	04010201
Site Type:	CON	HUC 10:	0401020114
Acreage:	3.90	HUC 12:	040102011401
HRS Score:		DWSMA Code:	
Score Year:		Method Des:	Digitized - MPCA internal map
MNTBA:			
Loc Desc:			
HUC 8 Name:	St. Louis River		
HUC 12 Name:	Upper Midway River		
Hydrologist:			
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/194945		

Spatial Remediation Activity

AI ID:	194945	Site Start:	2011-10-19 00:00:00
Site ID:	VP27770	Remedy Imp:	
SI ID:	1	Remedy Sel:	
SI Cat:	AREA	ASMT Compl:	
NFA Decisi:		Received:	2011-10-19 00:00:00
Site Close:	2011-11-28 00:00:00	NPL List:	
Leak Discovered:		NPL Delete:	
Leak Reported:		PLP List:	
Leak Reopened:		PLP Delist:	
Activity No:	2	Staff Assi:	2011-10-19 00:00:00
Activity ID:	SIW20110002	FF Aproved:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Activity Type:	Brownfield Site	**FF Closed:**		
Activity Code:	SIW	**Inv Comple:**		
Activity Year:	2011	**App Comple:**	2011-10-19 00:00:00	
Discovered:		**Er Site Ev:**		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
25	3 of4	S	0.24 / 1,272.80	1,430.50 / 20	JD Sports and Repair 5040 and 5070 Miller Trunk Highway Hermantown MN 55811	MPCA AI

Agency Interest ID:	194945
Name (Map):	JD Sports and Repair
Address (Map):	5040 and 5070 Miller Trunk Highway
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8361237
Longitude (Map):	-92.2122319
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	JD Sports and Repair
Address (Site):	5040 and 5070 Miller Trunk Highway
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8361237
Longitude (Site):	-92.2122319
County (Site):	St. Louis
Name (Req):	JD Sports and Repair
Address (Req):	5040 and 5070 Miller Trunk Highway
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8361237
Longitude (Req):	-92.2122319
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	194945-AISI0000194945	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Brownfields	**SI ID:**	194945
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	4/25/2016	**TRDSQQ:**	
Tmsp Created:	10/20/2011	**Ref Code:**	GEN
User Created:	DELTA_M_R2	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	61172121	**User Updt:**	spatial_
Name:	JD Sports and Repair		
Program List:	BV		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020114		
HUC 12:	040102011401		
HUC 12 Name:	Upper Midway River		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

DWSMA Code:
DWSMA Name:
Method Code: DM
Method Desc: Digitized - MPCA internal map

My Neighborhood Site Details

Active FLA: Yes
MPCA ID: Multiple IDs
Program Co: SR
Program Name: Investigation and Cleanup
Address: MN
Addr ZIP: 55811
City: Hermantown
County: St. Louis
Activity: Multiple Activities
Addr St: 5040 and 5070 Miller Trunk Highway
Addr City: Hermantown
MPCA ID List: PB4033; VP27770
Program 1: Investigation and Cleanup
Name: JD Sports and Repair
Watershed : St. Louis River
Coord Co 1: Digitized - MPCA internal map
Activity L: Brownfields, Petroleum Brownfield; Brownfields, Voluntary Investigation and Cleanup
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/194945

HUC 8: 04010201
Cong Distr: 8
Senate Dis: 3
House Dist: 3B
IC Flag: No
Coord Coll: DM
Latitude: 46.8361237
Longitude: -92.2122319

Agency Interests: File Request Details

Item ID: 194945-AISI0000194945
Status: Active
Status Date:
Program: Brownfields
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 4/25/2016
Tmsp Created: 10/20/2011
User Created: DELTA_M_R2
Tmsp Updt: 4/26/2016
Spatial ID: 61172121
Name: JD Sports and Repair
Program List: BV
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020114
HUC 10 Name: Midway River
HUC 12: 40102011401
HUC 12 Name: Upper Midway River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: DM
Method Desc: Digitized - MPCA internal map

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 194945
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: spatial_

25	4 of4	S	0.24 / 1,272.80	1,430.50 / 20	J.D. Sports and Repair 5040 and 5070 Miller Trunk Highway Hermantown MN 55811	VIC

Item ID: 194945-AREA0000000001
Project ID: VP27770
Unpermitted Dump?:
State Reg: Yes

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Project Type:	Brownfield Site	**Federal Reg:**	
Project ID (RAP):		**Fed State Reg:**	
Project Type (RAP):		**Non Reg:**	
Site Status:	Closed	**NPL:**	
Perm List of Prio?:		**Site County:**	St. Louis
Petrol Brownfield?:		**County (RAP):**	
VIC Site?:	Yes	**Latitude:**	46.83612131
Sf Voluntary:		**Longitude:**	-92.21222706
Inst Controls?:		**Latitude (RAP):**	
SEMS?:		**Longitude (RAP):**	
Project Name:	J.D. Sports and Repair		
Project Managers:	David Knight (former)		
Site Address 1:	5040 and 5070 Miller Trunk Highway		
Site Address 2:			
Site City:	Hermantown		
Site State:	MN		
Site Zip:	55811		
Project Name(RAP):			
Address1 (RAP):			
Address2(RAP):			
City (RAP):			
State (RAP):			
Zip (RAP):			
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

Activity ID:	194945	**Object ID:**	26551
SI ID:	1	**Cong Dist:**	8
SI Cat:	AREA	**House Dist:**	3B
SI Type:	BROW	**Senate Dis:**	3
Site Type:	CON	**HUC 8:**	04010201
Acreage:	3.90	**HUC 10:**	0401020114
HRS Score:		**HUC 12:**	040102011401
Score Year:		**Gdb Geomattr Data:**	
DWSMA Code:		**MNTBA:**	
AI Name:	JD Sports and Repair		
Hydrologists:			
DWSMA Name:			
HUC 8 Name:	St. Louis River		
HUC 12 Name:	Upper Midway River		
Method Desc:	Digitized - MPCA internal map		
Loc Desc:			
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/194945		

Spatial Remediation Activity

AI ID:	194945	**Object ID:**	32534
Site ID:	VP27770	**Remedy Imp:**	
SI ID:	1	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	2011-10-19 00:00:00
Site Start:	2011-10-19 00:00:00	**NPL List:**	
Site Close:	2011-11-28 00:00:00	**NPL Delete:**	
Leak Discovered:		**PLP List:**	
Leak Reported:		**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	2011-10-19 00:00:00
Activity No:	2	**FF Aproved:**	
Activity ID:	SIW20110002	**FF Closed:**	
Activity Type:	Brownfield Site	**Inv Comple:**	
Activity Code:	SIW	**App Comple:**	2011-10-19 00:00:00
Activity Year:	2011	**Er Site Ev:**	
Discovered:			

26	1 of2	SE	0.24 / 1,278.61	1,419.46 / 9	Navy Operational Support Center 5019 Airport Rd	MPCA AI

Agency Interest ID:	108075
Name (Map):	Navy Operational Support Center
Address (Map):	5019 Airport Rd
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8373854
Longitude (Map):	-92.206529
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Navy Operational Support Center
Address (Site):	5019 Airport Rd
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8373854
Longitude (Site):	-92.206529
County (Site):	St. Louis
Name (Req):	Navy Operational Support Center
Address (Req):	5019 Airport Rd
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8373854
Longitude (Req):	-92.206529
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	108075-AISI0000108075	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	108075
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	10/18/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	51530385	**User Updt:**	spatial_
Name:	Navy Operational Support Center		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	MNS000121459	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	8
Program Name:	Hazardous Waste	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Duluth	**Latitude:**	46.8373854
County:	St. Louis	**Longitude:**	-92.206529
Activity:	Hazardous Waste		
Addr St:	5019 Airport Rd		
Addr City:	Duluth		
MPCA ID List:	MNS000121459		
Program 1:	Hazardous Waste		
Name:	Navy Operational Support Center		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Hazardous Waste		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/108075		

Agency Interests: File Request Details

Item ID:	108075-AISI0000108075	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	108075
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	10/18/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	51530385		
Name:	Navy Operational Support Center		
Program List:	HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
26	2 of2	SE	0.24 / 1,278.61	1,419.46 / 9	NAVY OPERATIONAL SUPPORT CENTER 5019 AIRPORT RD DULUTH MN 55811	RCRA NON GEN

Handler ID:	MNS000121459
Generator Status:	N
Recycler Activity?:	NO
Recycler Activity Note:	This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note:	NO RECORDS: As of Nov 2025, there are no Compliance Monitoring and Enforcement (violation) records

associated with this facility (EPA ID).

Handler Summary

Importer:	No	***Used Oil Transpor:***	No
Mixed Waste Gen:	No	***Used Oil Trans Fac:***	No
Transporter:	No	***Used Oil Processor:***	No
Transfer Facility:	No	***Used Oil Refiner:***	No
Recycler:	No	***Used Oil Burner:***	No
Onsite Burner Exem:	No	***Commercial TSD:***	No
Furnace Exemption:	No	***Recycl Nonstorage:***	No
Underground Injec:	No		
Used Oil Market Burner:	No		
Used Oil Spec Marketer:	No		

Additional Handler Summary Details

Source Type:	N	***NAIC 1:***	
Seq No:	1	***NAIC 2:***	
Non Notifier:		***NAIC 3:***	
Receive Date:	20061018	***NAIC 4:***	
Active Site:	-----	***State:***	MN
Land Type:	P	***Location Latitude:***	46.836512
In Handler Univ:	N	***Location Longitude:***	-92.207891
In A Universe:	N	***Loc GIS Primary:***	N
Gen Status:	N	***Loc GIS Origin:***	AG
Report Cycle:		***State District Owner:***	
Accessibility:		***State District:***	
Region:	05		
Fed Waste Gen Owner:	HQ		
State Waste Generator Owner:	MN		
State Waste Generator:	N		
Short Term Generator:	N		
Uni Waste:	N		
Universal Waste Dest Facility:	N		
Federal Universal Waste:	N		
As Federally Regulated Tsdf:	------		
As Converter Tsdf:	------		
As State Regulated Tsdf:	------		
As State Regulated Handler:	---		
Federal Indicator:	---		
Hsm:	N		
Subpart K:	----		
GPRA Permit:	N		
GPRA Renewal:	N		
Permit Renewal Wrkld:	------		
Permwrk ID:	------		
Perm Prog:	------		
Pcwrkld:	------		
Closwrkld:	------		
GPRA Ca:	N		
Cawrkld:	N		
Subjca Tsd Discretion:	N		
NCAPS:	N		
EC Indicator:	N		
Ca725 Indicator:	N		
Ca750 Indicator:	N		
Operating Tsdf:	------		
Full Enforcement:	------		
Snc:	N		
Unaddressed Snc:	N		
Addressed Snc:	N		
Snc With Comp Sched:	N		
Fa Required:	-----		
Hhandler Last Change:	20070620		
Recognized Trader Importer:	N		
Recognized Trader Exporter:	N		

Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	EN
Handler Name:	NAVY OPERATIONAL SUPPORT CENTER
Location Street No:	
Location Street1:	5019 AIRPORT RD
Location Street2:	
Location City:	DULUTH
Location State:	MN
Location Zip:	55811
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	US
Contact Name:	FELIPE GARCIA
Contact Street No:	
Contact Street1:	5019 AIRPORT RD
Contact Street2:	
Contact City:	DULUTH
Contact State:	MN
Contact Zip:	55811
Contact Country:	US
Contact Phone & Ext:	218-722-3454
Contact Fax:	
Contact Email Address:	
Contact Title:	
Owner Name:	NAVY OPERATIONAL SUPPORT CENTER
Owner Type:	P
Owner Seq:	1
Operator Name:	
Operator Type:	
Operator Seq:	
Public Notes:	

Hazardous Waste Handler Details

Seq No:	1
Receive Date:	20061018
Handler Name:	NAVY OPERATIONAL SUPPORT CENTER
Fed Waste Generator:	N
Generator Code Description:	Not a Generator, Verified
Source Type:	Notification
TSD Activity:	N

Owner/Operator Details

Owner/Operator Ind:	Current Owner	***Street No:***	
Type:	Private	***Street1:***	5019 AIRPORT RD
Name:	NAVY OPERATIONAL SUPPORT CENTER	***Street2:***	
Dt Became Current:	20061018	***City:***	DULUTH
Dt Ended Current:		***State:***	MN
Phone:	218-722-3454	***Country:***	US
Source Type:	Notification	***Zip:***	55811

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
27	*1 of1*	*SW*	*0.25 / 1,294.87*	*1,427.79 / 17*	***MAC Hermantown 5155 Miller Trunk Hwy Hermantown MN 55811***	***MPCA AI***

Agency Interest ID:	216186
Name (Map):	MAC Hermantown
Address (Map):	5155 Miller Trunk Hwy
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811

Latitude (Map):	46.83740278
Longitude (Map):	-92.22018611
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	MAC Hermantown
Address (Site):	5155 Miller Trunk Hwy
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83740278
Longitude (Site):	-92.22018611
County (Site):	St. Louis
Name (Req):	MAC Hermantown
Address (Req):	5155 Miller Trunk Hwy
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83740278
Longitude (Req):	-92.22018611
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	216186-AISI0000216186	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	216186
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	4/18/2017	**TRDSQQ:**	
Tmsp Created:	4/18/2017	**Ref Code:**	CEN
User Created:	RSP	**Ref Desc:**	Center of Feature Represented
Tmsp Updt:	4/24/2023	**Verified:**	No
Spatial ID:		**User Updt:**	WO_2132805

Name:	MAC Hermantown
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	DW
Method Desc:	Digitized - Web Map Google / Yahoo / Microsoft

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00045888	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	DW
City:	Hermantown	**Latitude:**	46.83740278
County:	St. Louis	**Longitude:**	-92.22018611
Activity:	Construction Stormwater		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Addr St: 5155 Miller Trunk Hwy
Addr City: Hermantown
MPCA ID List: C00045888
Program 1: Stormwater
Name: MAC Hermantown
Watershed : St. Louis River
Coord Co 1: Digitized - Web Map Google / Yahoo / Microsoft
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/216186

Agency Interests: File Request Details

Item ID: 216186-AISI0000216186
Status: Active
Status Date:
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 4/18/2017
Tmsp Created: 4/18/2017
User Created: RSP
Tmsp Updt: 4/24/2023
Spatial ID:
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 216186
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: CEN
Ref Desc: Center of Feature Represented
Verified: No
User Updt: WO_2132805

Name: MAC Hermantown
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: DW
Method Desc: Digitized - Web Map Google / Yahoo / Microsoft

28	***1 of1***	***WSW***	***0.25 / 1,304.46***	***1,424.51 / 14***	***5169 Miller Trunk Fill Project 5169 Miller Trunk Highway Hermantown MN 55811***	***MPCA AI***

Agency Interest ID: 101326
Name (Map): 5169 Miller Trunk Fill Project
Address (Map): 5169 Miller Trunk Highway
City (Map): Hermantown
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83676203
Longitude (Map): -92.22375752
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): 5169 Miller Trunk Fill Project
Address (Site): 5169 Miller Trunk Highway
City (Site): Hermantown
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83676203
Longitude (Site): -92.22375752
County (Site): St. Louis
Name (Req): 5169 Miller Trunk Fill Project

Address (Req):	5169 Miller Trunk Highway
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83676203
Longitude (Req):	-92.22375752
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	101326-AISI0000101326	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2009-08-06 14:30:22	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	101326
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/28/2016	**TRDSQQ:**	
Tmsp Created:	2/7/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/28/2016	**Verified:**	No
Spatial ID:	50851870	**User Updt:**	geo_nc
Name:	5169 Miller Trunk Fill Project		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00017664	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Hermantown	**Latitude:**	46.83676203
County:	St. Louis	**Longitude:**	-92.22375752
Activity:	Construction Stormwater		
Addr St:	5169 Miller Trunk Highway		
Addr City:	Hermantown		
MPCA ID List:	C00017664		
Program 1:	Stormwater		
Name:	5169 Miller Trunk Fill Project		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/101326		

Agency Interests: File Request Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Item ID:	101326-AISI0000101326	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	8/6/2009	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	101326
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/28/2016	**Ref Code:**	GEN
Tmsp Created:	2/7/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/28/2016	**User Updt:**	geo_nc
Spatial ID:	50851870		
Name:	5169 Miller Trunk Fill Project		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

29	***1 of3***	***SSW***	***0.25 / 1,312.78***	***1,426.68 / 16***	***Hermantown Service 5105 Miller Trunk Highway Hermantown MN 55811***	***MPCA AI***

Agency Interest ID:	46187
Name (Map):	Hermantown Service
Address (Map):	5105 Miller Trunk Highway
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8366677
Longitude (Map):	-92.2176693
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Hermantown Service
Address (Site):	5105 Miller Trunk Highway
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811-1250
Latitude (Site):	46.8366677
Longitude (Site):	-92.2176693
County (Site):	St. Louis
Name (Req):	Hermantown Service
Address (Req):	5105 Miller Trunk Highway
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8366677
Longitude (Req):	-92.2176693
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	46187-AISI0000046187	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	1999-10-15 09:48:55	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	46187
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	10/14/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	48099	**User Updt:**	spatial_

Name:	Hermantown Service
Program List:	HW
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020114
HUC 12:	040102011401
HUC 12 Name:	Upper Midway River
DWSMA Code:	
DWSMA Name:	
Method Code:	A1
Method Desc:	Address Matching House Number

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	MND982607194	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	3
Program Name:	Hazardous Waste	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-1250	**Coord Coll:**	A1
City:	Hermantown	**Latitude:**	46.8366677
County:	St. Louis	**Longitude:**	-92.2176693

Activity:	Hazardous Waste
Addr St:	5105 Miller Trunk Highway
Addr City:	Hermantown
MPCA ID List:	MND982607194
Program 1:	Hazardous Waste
Name:	Hermantown Service
Watershed :	St. Louis River
Coord Co 1:	Address Matching House Number
Activity L:	Hazardous Waste
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/46187

Agency Interests: File Request Details

Item ID:	46187-AISI0000046187	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	10/15/1999	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	46187
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	10/14/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	48099		
Name:	Hermantown Service		
Program List:	HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020114		
HUC 10 Name:	Midway River		
HUC 12:	40102011401		
HUC 12 Name:	Upper Midway River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

29	2 of3	SSW	0.25 / 1,312.78	1,426.68 / 16	**Db Enterprises** **5105 Miller Trunk Hwy** **Duluth MN 55811**	MPCA AI

Agency Interest ID:	48749
Name (Map):	Db Enterprises
Address (Map):	5105 Miller Trunk Hwy
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8366677
Longitude (Map):	-92.2176693
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Db Enterprises
Address (Site):	5105 Miller Trunk Hwy
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811-1250
Latitude (Site):	46.8366677
Longitude (Site):	-92.2176693
County (Site):	St. Louis
Name (Req):	Db Enterprises
Address (Req):	5105 Miller Trunk Hwy
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8366677
Longitude (Req):	-92.2176693
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	48749-AISI0000048749	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2001-09-24 00:00:00	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	48749
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	10/26/1999	**Ref Code:**	GEN

User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	48945	**User Updt:**	spatial_
Name:	Db Enterprises		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020114		
HUC 12:	040102011401		
HUC 12 Name:	Upper Midway River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	713249720	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	3
Program Name:	Hazardous Waste	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-1250	**Coord Coll:**	A1
City:	Hermantown	**Latitude:**	46.8366677
County:	St. Louis	**Longitude:**	-92.2176693
Activity:	Hazardous Waste		
Addr St:	5105 Miller Trunk Hwy		
Addr City:	Duluth		
MPCA ID List:	713249720		
Program 1:	Hazardous Waste		
Name:	Db Enterprises		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Hazardous Waste		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/48749		

Agency Interests: File Request Details

Item ID:	48749-AISI0000048749	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	9/24/2001	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	48749
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	10/26/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	48945		
Name:	Db Enterprises		
Program List:	HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020114		
HUC 10 Name:	Midway River		
HUC 12:	40102011401		
HUC 12 Name:	Upper Midway River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
Method Desc:		Address Matching House Number				
29	3 of3	SSW	0.25 / 1,312.78	1,426.68 / 16	HERMANTOWN SERVICE 5105 MILLER TRUNK HIGHWAY HERMANTOWN MN 55811-1250	RCRA NON GEN

Handler ID: MND982607194
Generator Status: N
Recycler Activity?: NO
Recycler Activity Note: This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note: NO RECORDS: As of Nov 2025, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer:	No	**Used Oil Transpor:**	No
Mixed Waste Gen:	No	**Used Oil Trans Fac:**	No
Transporter:	No	**Used Oil Processor:**	No
Transfer Facility:	No	**Used Oil Refiner:**	No
Recycler:	No	**Used Oil Burner:**	No
Onsite Burner Exem:	No	**Commercial TSD:**	No
Furnace Exemption:	No	**Recycl Nonstorage:**	No
Underground Injec:	No		
Used Oil Market Burner:	No		
Used Oil Spec Marketer:	No		

Additional Handler Summary Details

Source Type:	N	**NAIC 1:**	
Seq No:	1	**NAIC 2:**	
Non Notifier:		**NAIC 3:**	
Receive Date:	19880509	**NAIC 4:**	
Active Site:	-----	**State:**	MN
Land Type:	P	**Location Latitude:**	46.836668
In Handler Univ:	N	**Location Longitude:**	-92.217669
In A Universe:	N	**Loc GIS Primary:**	N
Gen Status:	N	**Loc GIS Origin:**	UC
Report Cycle:		**State District Owner:**	
Accessibility:		**State District:**	
Region:	05		
Fed Waste Gen Owner:	HQ		
State Waste Generator Owner:	MN		
State Waste Generator:	N		
Short Term Generator:	N		
Uni Waste:	N		
Universal Waste Dest Facility:	N		
Federal Universal Waste:	N		
As Federally Regulated Tsdf:	------		
As Converter Tsdf:	------		
As State Regulated Tsdf:	------		
As State Regulated Handler:	---		
Federal Indicator:	---		
Hsm:	N		
Subpart K:	----		
GPRA Permit:	N		
GPRA Renewal:	N		
Permit Renewal Wrkld:	------		
Permwrk ID:	------		
Perm Prog:	------		
Pcwrkld:	------		
Closwrkld:	------		

GPRA Ca:	N
Cawrkld:	N
Subjca Tsd Discretion:	N
NCAPS:	N
EC Indicator:	N
Ca725 Indicator:	N
Ca750 Indicator:	N
Operating Tsdf:	------
Full Enforcement:	------
Snc:	N
Unaddressed Snc:	N
Addressed Snc:	N
Snc With Comp Sched:	N
Fa Required:	-----
Hhandler Last Change:	20070620
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	
Handler Name:	HERMANTOWN SERVICE
Location Street No:	
Location Street1:	5105 MILLER TRUNK HIGHWAY
Location Street2:	
Location City:	HERMANTOWN
Location State:	MN
Location Zip:	55811-1250
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	US
Contact Name:	
Contact Street No:	
Contact Street1:	
Contact Street2:	
Contact City:	
Contact State:	
Contact Zip:	
Contact Country:	US
Contact Phone & Ext:	
Contact Fax:	
Contact Email Address:	
Contact Title:	
Owner Name:	HERMANTOWN SERVICE
Owner Type:	P
Owner Seq:	1
Operator Name:	NAME NOT REPORTED
Operator Type:	P
Operator Seq:	2
Public Notes:	

Hazardous Waste Handler Details

Seq No:	1
Receive Date:	19880509
Handler Name:	HERMANTOWN SERVICE
Fed Waste Generator:	N
Generator Code Description:	Not a Generator, Verified
Source Type:	Notification
TSD Activity:	N

Waste Code Details

Waste Code:	D000
Waste Code Desc:	DESCRIPTION

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Owner/Operator Details

Owner/Operator Ind:	Current Operator	***Street No:***	
Type:	Private	***Street1:***	ADDRESS NOT REPORTED
Name:	NAME NOT REPORTED	***Street2:***	
Dt Became Current:		***City:***	CITY NOT REPORTED
Dt Ended Current:		***State:***	AK
Phone:	312-555-1212	***Country:***	
Source Type:	Notification	***Zip:***	99998

Owner/Operator Ind:	Current Owner	***Street No:***	
Type:	Private	***Street1:***	5105 MILLER TRUNK HIGHWAY
Name:	HERMANTOWN SERVICE	***Street2:***	
Dt Became Current:	19991014	***City:***	HERMANTOWN
Dt Ended Current:	19991012	***State:***	MN
Phone:		***Country:***	US
Source Type:	Notification	***Zip:***	55811-1250

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30 | ***1 of4*** | ***SSE*** | ***0.25 / 1,327.64*** | ***1,431.32 / 21*** | ***Northside Truck Sales***
5040 Miller Trunk Hwy
Hermantown MN 55811 | ***HIST LAST***

Prog Int ID:	219996	***Address Source:***	CORE
Site ID:	68681	***Township Name:***	
State County Code:	69	***County Name:***	St. Louis
Country:	USA	***Lat/Long ID:***	68468
Interest Type Cd:	LS	***Interest Type Dsc:***	Leak Site
ADDR ID:	33662	***Lat Degrees:***	46
Tank Site:	7380	***Lat Minutes:***	50
Interest Phone:	NO CORE PI PH.	***Lat Seconds:***	10.03
Interest Start Dt:	03/03/1998 00:00:00	***Long Degrees:***	-92
Interest End Dt:	03/24/2006 13:05:46	***Long Minutes:***	12
Active?:	No	***Long Seconds:***	44.01
Timestamp Added:	03/24/2006 13:05:46	***Lat/Long Source:***	CORE
Timestamp Updt:	11/10/2014 08:17:05	***Lat/Long Site ID:***	68681
Staff ID Updt:	RGAGLE	***Lat/Long Spatial ID:***	51070380
Source:	CORE	***Collection Date:***	11/04/2011 07:37:17
Coord Src Type:	2	***Map Scale Code:***	T
Coord Src Desc:	State	***Org Name Source:***	MPCA
Foreign State:		***Foreign Zone:***	
FIPS County Cd1:	137		

Addr Timestmp Add:	05/13/1999 13:38:40
Addr Timestamp Lst Updt:	08/01/2007 21:43:52
Addr Updater Staff ID:	SYSTEM
Lat/Long Timestamp Added:	02/24/2001 00:00:00
Lat/Long Tmstmp Last Upd:	11/04/2011 07:37:16
Lat/Long Updater Staff ID:	MAPTOOL
Lat/Long Desc:	
Coord Coll Method Desc:	Digitized - Map Tool
Coord Coll Method Code:	DM
Comments:	

Leak Site

Complete Site Closure Date:	01/12/1996 00:00:00
Cond Closure Date:	
Release Discovered Date:	05/12/1994 00:00:00
Leaksite Type Code:	1
Leaksite Type Desc:	Leak Site
Leak Report Date:	05/12/1994 00:00:00
Tank Reg Status Code:	S
TMSP Added:	12/04/1999 14:03:48

TMSP Last Updt:	09/28/2015 14:39:11
CU Yds Excavated Qty:	50
ENF Action Begin Date:	06/02/1994 00:00:00
Residence Type Code:	
File Archive Box:	96
File Archive Lot:	98/206
Soil Digout Date:	05/12/1994 00:00:00
Staff ID Last Updt:	SVANPAT
Std Letter Response Date:	08/31/1995 00:00:00
VPIC Acres:	
VPIC Application Date:	
Contam Soils Remaining Flag:	Y
Indoor Air Collected Flag:	
LUST Trust Eligible Flag:	No
Offsite Contam Flag:	U
REIMB Awarded Flag:	No
Release From AST Flag:	Yes
Release From UST Flag:	No
Soil Gas Action Level Flag:	
Soil Gas Data Collected Flag:	
Sub Slab Sample Collected Flag:	
Surface Water Impact Flag:	U
Utility Project Flag:	No
Vapor Intrusion Action Flag:	
Vapor Intrusion Checked Flag:	
Leaksite Type Defn:	Leak site (tank and petroleum contamination).
Soil Gas Data Comments:	
Vapor Intrusion Comments:	

Leak Product Release

Product Rls Seq ID:	322136
Leak Product Desc:	Used Oil
Leak Product Defn:	The product is used oil.

Leak GW Info

Well Type Code:	
Affected Non Res Props:	
Affected Residential Props:	
Staff ID Last Updt:	RSUCHAN
Staff ID Wellhead Area Assess:	
TMSP Added:	12/04/1999 14:07:32
TMSP Last Updt:	11/04/2003 12:57:07
Water Supply Exceeds Ral Flag:	
Cleanup Goal Achieved Flag:	
DW Supply Contam Flag:	
Free Product at Close Flag:	
Free Product Observed Flag:	
Free Product Thickness:	
Ground Water Contam Flag:	N
GW Cleanup Goal:	0
GW Exceeds Cleanup Goal Flag:	
Impacted Aquifer Code:	
MTBE High Level Date:	
MTBE High Ug Per Liter Char:	
MTBE High Ug Per Liter Numb:	
MTBE Present Historically Flag:	
MTBE Present Now Flag:	
Protected Area Flag:	
PWS Well Impacted Flag:	
Sensitive Area Flag:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
30	2 of4	SSE	0.25 / 1,327.64	1,431.32 / 21	Northside Truck Sales 5040 Miller Trunk Hwy Hermantown MN 55811	LST REM SITE

Item ID:	39166-AREA0000000002	**Unpermitted Dump?:**	
Project ID:	LS0007380	**State Reg:**	Yes
Project Type:	Leak Site	**Federal Reg:**	
Project ID (RAP):		**Fed State Reg:**	
Project Type (RAP):		**Non Reg:**	
Site Status:	Closed	**NPL:**	
Perm List of Prio?:		**Site County:**	St. Louis
Petrol Brownfield?:		**County (RAP):**	
VIC Site?:		**Latitude:**	46.83609136
Sf Voluntary:		**Longitude:**	-92.21188322
Inst Controls?:		**Latitude (RAP):**	
SEMS?:		**Longitude (RAP):**	
Project Name:	Northside Truck Sales		
Project Managers:	Steve Leppala (no longer at MPCA)		
Site Address 1:	5040 Miller Trunk Hwy		
Site Address 2:			
Site City:	Hermantown		
Site State:	MN		
Site ZIP:	55811		
Project Name(RAP):			
Address1 (RAP):			
Address2 (RAP):			
City (RAP):			
State (RAP):			
ZIP (RAP):			
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

Activity ID:	39166	**Object ID:**	12186
SI ID:	2	**Cong Dist:**	8
Si Cat:	AREA	**House Dist:**	3B
SI Type:	LEAK	**Senate Dis:**	3
Site Type:	CON	**HUC 8:**	04010201
Acreage:		**HUC 10:**	0401020114
HRS Score:		**HUC 12:**	040102011401
Score Year:		**Gdb Geomattr Data:**	
DWSMA Code:		**MNTBA:**	
AI Name:	JD's Sports & Repair		
DWSMA Name:			
Hydrologists:			
Huc 8 Name:	St. Louis River		
Huc12 Name:	Upper Midway River		
Method Desc:	Digitized - MPCA internal map		
Loc Desc:			
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/39166		

Spatial Remediation Activity

AI ID:	39166	**Object ID:**	8849
Site ID:	LS0007380	**Remedy Imp:**	
SI ID:	2	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	
Site Start:	1994-05-12 00:00:00	**NPL List:**	
Site Close:	1996-01-12 00:00:00	**NPL Delete:**	
Leak Discovered:	1994-05-12 00:00:00	**PLP List:**	
Leak Reported:	1994-05-12 00:00:00	**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	
Activity No:	1	**FF Aproved:**	
Activity ID:	SIW19940001	**FF Closed:**	
Activity Type:	Leak Site Investigation	**Inv Comple:**	
Activity Code:	SIW	**App Comple:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
Activity Year: 1994 **Discovered:**				**Er Site Ev:**		
30	3 of4	SSE	0.25 / 1,327.64	1,431.32 / 21	**Northside Truck Sales & Service Inc** **5040 Miller Trunk Hwy** **Hermantown MN 55811**	MPCA AI

Agency Interest ID: 13645
Name (Map): Northside Truck Sales & Service Inc
Address (Map): 5040 Miller Trunk Hwy
City (Map): Hermantown
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.8364732
Longitude (Map): -92.2115697
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Northside Truck Sales & Service Inc
Address (Site): 5040 Miller Trunk Hwy
City (Site): Hermantown
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.8364732
Longitude (Site): -92.2115697
County (Site): St. Louis
Name (Req): Northside Truck Sales & Service Inc
Address (Req): 5040 Miller Trunk Hwy
City (Req): Hermantown
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.8364732
Longitude (Req): -92.2115697
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 13645-AISI0000013645
Status: Inactive
Status Date: 2006-03-28 00:00:00
Program: Hazardous Waste
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 9/27/2015
Tmsp Created: 7/26/1999
User Created: DELTA_M_R1
Tmsp Updt: 4/26/2016
Spatial ID: 18679
Name: Northside Truck Sales & Service Inc
Program List: HW
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020114
HUC 12: 040102011401
HUC 12 Name: Upper Midway River
DWSMA Code:
DWSMA Name:

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 13645
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: spatial_

Method Code: A1
Method Desc: Address Matching House Number

My Neighborhood Site Details

Active FLA: No
MPCA ID: MND982621872
Program Co: HW
Program Name: Hazardous Waste
Address: MN
Addr ZIP: 55811
City: Hermantown
County: St. Louis
Activity: Hazardous Waste
Addr St: 5040 Miller Trunk Hwy
Addr City: Hermantown
MPCA ID List: MND982621872
Program 1: Hazardous Waste
Name: Northside Truck Sales & Service Inc
Watershed : St. Louis River
Coord Co 1: Address Matching House Number
Activity L: Hazardous Waste
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/13645

HUC 8: 04010201
Cong Distr: 8
Senate Dis: 3
House Dist: 3B
IC Flag: No
Coord Coll: A1
Latitude: 46.8364732
Longitude: -92.2115697

Agency Interests: File Request Details

Item ID: 13645-AISI0000013645
Status: Inactive
Status Date: 3/28/2006
Program: Hazardous Waste
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 9/27/2015
Tmsp Created: 7/26/1999
User Created: DELTA_M_R1
Tmsp Updt: 4/26/2016
Spatial ID: 18679
Name: Northside Truck Sales & Service Inc
Program List: HW
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020114
HUC 10 Name: Midway River
HUC 12: 40102011401
HUC 12 Name: Upper Midway River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 13645
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: spatial_

30	4 of4	SSE	0.25 / 1,327.64	1,431.32 / 21	JD's Sports & Repair 5040 Miller Trunk Hwy Hermantown MN 55811	MPCA AI

Agency Interest ID: 39166
Name (Map): JD's Sports & Repair
Address (Map): 5040 Miller Trunk Hwy
City (Map): Hermantown
State (Map): MN

ZIP (Map):	55811
Latitude (Map):	46.8361197
Longitude (Map):	-92.2122264
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	JD's Sports & Repair
Address (Site):	5040 Miller Trunk Hwy
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8361197
Longitude (Site):	-92.2122264
County (Site):	St. Louis
Name (Req):	JD's Sports & Repair
Address (Req):	5040 Miller Trunk Hwy
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8361197
Longitude (Req):	-92.2122264
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	39166-AISI0000039166	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	2010-03-09 00:00:00	***SI Cat:***	AISI
Program:	Multiple Programs	***SI ID:***	39166
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	9/27/2015	***TRDSQQ:***	
Tmsp Created:	1/12/2000	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	4/26/2016	***Verified:***	No
Spatial ID:	50097	***User Updt:***	spatial_
Name:	JD's Sports & Repair		
Program List:	AT, HW, PR		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020114		
HUC 12:	040102011401		
HUC 12 Name:	Upper Midway River		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	Multiple IDs	***Cong Distr:***	8
Program Co:	HW; SR; TL	***Senate Dis:***	3
Program Name:	Multiple Programs	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	DM
City:	Hermantown	***Latitude:***	46.8361197
County:	St. Louis	***Longitude:***	-92.2122264

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Activity: Multiple Activities
Addr St: 5040 Miller Trunk Hwy
Addr City: Hermantown
MPCA ID List: LS0007380; MNR000070961; TS0054794
Program 1: Hazardous Waste; Investigation and Cleanup; Tanks
Name: JD's Sports & Repair
Watershed : St. Louis River
Coord Co 1: Digitized - MPCA internal map
Activity L: Aboveground Tanks; Hazardous Waste; Petroleum Remediation, Leak Site
Industrial: General Automotive Repair
Site URL: https://webapp.pca.state.mn.us/wimn/site/39166

Agency Interests: File Request Details

Item ID: 39166-AISI0000039166
Status: Inactive
Status Date: 3/9/2010
Program: Multiple Programs
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 9/27/2015
Tmsp Created: 1/12/2000
User Created: DELTA_M_R1
Tmsp Updt: 4/26/2016
Spatial ID: 50097
Name: JD's Sports & Repair
Program List: AT, HW, PR
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020114
HUC 10 Name: Midway River
HUC 12: 40102011401
HUC 12 Name: Upper Midway River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: DM
Method Desc: Digitized - MPCA internal map

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 39166
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: spatial_

31	1 of3	SSW	0.25 / 1,345.68	1,426.86 / 16	Airbase Convenience Store 3220 Miller Trunk Highway Duluth MN 55811	HIST LEAKSITES

Prog Int ID: 215106
Site ID: 241107
State County Code: 69
Country: USA
Interest Type Cd: LS
ADDR ID: 240001
Tank Site: 2297
Interest Phone: NO CORE PI PH.
Interest Start Dt: 03/11/1999 14:10:38
Interest End Dt: 11/13/2006 08:31:50
Active?: No
Timestamp Added: 11/13/2006 08:31:50
Timestamp Updt: 11/10/2014 08:17:05
Staff ID Updt: RGAGLE
Source: CORE
Coord Src Type: 2
Coord Src Desc:
Foreign State:
FIPS County Cd1: 137

Address Source: CORE
Township Name: Whiteface Reservoir
County Name: St. Louis
Lat/Long ID: 129715
Interest Type Dsc: Leak Site
Lat Degrees: 46
Lat Minutes: 50
Lat Seconds: 10.37
Long Degrees: -92
Long Minutes: 13
Long Seconds: .31
Lat/Long Source: CORE
Lat/Long Site ID: 241107
Lat/Long Spatial ID: 51737000
Collection Date: 11/03/2005 00:00:00
Map Scale Code: B
Org Name Source: Rebecca Gorney
Foreign Zone:

Addr Timestmp Add:	11/13/2006 08:31:35
Addr Timestamp Lst Updt:	04/10/2009 16:08:02
Addr Updater Staff ID:	RGAGLE
Lat/Long Timestamp Added:	11/13/2006 08:32:00
Lat/Long Tmstmp Last Upd:	11/13/2006 22:03:40
Lat/Long Updater Staff ID:	COREUSER
Lat/Long Desc:	
Coord Coll Method Desc:	Digitized-DOQ
Coord Coll Method Code:	I2
Comments:	

Leak Site

Complete Site Closure Date:	10/08/1998 00:00:00
Cond Closure Date:	
Release Discovered Date:	
Leaksite Type Code:	1
Leaksite Type Desc:	Leak Site
Leak Report Date:	02/02/1990 00:00:00
Tank Reg Status Code:	F
TMSP Added:	12/04/1999 14:03:44
TMSP Last Updt:	06/25/2014 14:40:02
CU Yds Excavated Qty:	0
ENF Action Begin Date:	06/19/1990 00:00:00
Residence Type Code:	
File Archive Box:	
File Archive Lot:	
Soil Digout Date:	
Staff ID Last Updt:	DBOETTC
Std Letter Response Date:	05/23/1995 00:00:00
VPIC Acres:	
VPIC Application Date:	
Contam Soils Remaining Flag:	Y
Indoor Air Collected Flag:	
LUST Trust Eligible Flag:	Yes
Offsite Contam Flag:	U
REIMB Awarded Flag:	No
Release From AST Flag:	No
Release From UST Flag:	No
Soil Gas Action Level Flag:	
Soil Gas Data Collected Flag:	
Sub Slab Sample Collected Flag:	
Surface Water Impact Flag:	U
Utility Project Flag:	No
Vapor Intrusion Action Flag:	
Vapor Intrusion Checked Flag:	
Leaksite Type Defn:	Leak site (tank and petroleum contamination).
Soil Gas Data Comments:	
Vapor Intrusion Comments:	

Leak Product Rls

Product Rls Seq ID:	327512
Leak Product Desc:	Gasoline, Type Unknown
Leak Product Defn:	The product is an unknown type of gasoline.

Leak GW Info

Well Type Code:	
Affected Non Res Props:	
Affected Residential Props:	
Staff ID Last Updt:	RSUCHAN
Staff ID Wellhead Area Assess:	
TMSP Added:	12/04/1999 14:07:28

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

TMSP Last Updt: 11/04/2003 12:57:06
Water Supply Exceeds Ral Flag:
Cleanup Goal Achieved Flag:
DW Supply Contam Flag:
Free Product at Close Flag:
Free Product Observed Flag: N
Free Product Thickness:
Ground Water Contam Flag: Y
GW Cleanup Goal: 0
GW Exceeds Cleanup Goal Flag:
Impacted Aquifer Code:
MTBE High Level Date:
MTBE High Ug Per Liter Char:
MTBE High Ug Per Liter Numb:
MTBE Present Historically Flag:
MTBE Present Now Flag:
Protected Area Flag:
PWS Well Impacted Flag:
Sensitive Area Flag:

Leak Cleanup Act

Leak Action Seq ID: 330780
Leak Action Desc: CAD Monitoring
Leak Action Apprv Dt:
Leak Action Begin Dt:
Leak Action End Dt: 10/01/1998 00:00:00
Product Rcvred Gal:
Product Rmved Gal:
Treated Water Gal:
Corrective Rsn Cd:

31	2 of3	SSW	0.25 / 1,345.68	1,426.86 / 16	Airbase Convenience Store 3220 Miller Trunk Highway Duluth MN 55811	LST REM SITE

Item ID: 195151-AREA0000000001
Project ID: LS0002297
Project Type: Leak Site
Project ID (RAP):
Project Type (RAP):
Site Status: Closed
Perm List of Prio?:
Petrol Brownfield?:
VIC Site?:
Sf Voluntary:
Inst Controls?:
SEMS?:
Project Name: Airbase Convenience Store
Project Managers: Steve Leppala (no longer at MPCA)
Site Address 1: 3220 Miller Trunk Highway
Site Address 2:
Site City: Duluth
Site State: MN
Site ZIP: 55811
Project Name(RAP):
Address1 (RAP):
Address2 (RAP):
City (RAP):
State (RAP):
ZIP (RAP):
Data Source: MPCA Remediation Sites
Unpermitted Dump?:
State Reg:
Federal Reg: Yes
Fed State Reg:
Non Reg:
NPL:
Site County: St. Louis
County (RAP):
Latitude: 46.83621216
Longitude: -92.2167511
Latitude (RAP):
Longitude (RAP):

Remediation Sites Details

Activity ID: 195151
SI ID: 1
Si Cat: AREA
Object ID: 8338
Cong Dist: 8
House Dist: 3B

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

SI Type:	LEAK	**Senate Dis:**	3
Site Type:	CON	**HUC 8:**	04010201
Acreage:		**HUC 10:**	0401020114
HRS Score:		**HUC 12:**	040102011401
Score Year:		**Gdb Geomattr Data:**	
DWSMA Code:		**MNTBA:**	
AI Name:	Airbase Convenience Store		
DWSMA Name:			
Hydrologists:	Jonathan Smith (no longer at MPCA)		
Huc 8 Name:	St. Louis River		
Huc12 Name:	Upper Midway River		
Method Desc:	Digitized-DOQ		
Loc Desc:	Main Site Building		
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/195151		

Spatial Remediation Activity

AI ID:	195151	**Object ID:**	32766
Site ID:	LS0002297	**Remedy Imp:**	
SI ID:	1	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	
Site Start:	1990-02-02 00:00:00	**NPL List:**	
Site Close:	1998-10-08 00:00:00	**NPL Delete:**	
Leak Discovered:		**PLP List:**	
Leak Reported:	1990-02-02 00:00:00	**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	
Activity No:	1	**FF Aproved:**	
Activity ID:	SIW19900001	**FF Closed:**	
Activity Type:	Leak Site Investigation	**Inv Comple:**	
Activity Code:	SIW	**App Comple:**	
Activity Year:	1990	**Er Site Ev:**	
Discovered:			

31	*3 of3*	*SSW*	*0.25 / 1,345.68*	*1,426.86 / 16*	***Airbase Convenience Store 3220 Miller Trunk Highway Duluth MN 55811***	*MPCA AI*

Agency Interest ID:	195151
Name (Map):	Airbase Convenience Store
Address (Map):	3220 Miller Trunk Highway
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83621528
Longitude (Map):	-92.21675347
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Airbase Convenience Store
Address (Site):	3220 Miller Trunk Highway
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83621528
Longitude (Site):	-92.21675347
County (Site):	St. Louis
Name (Req):	Airbase Convenience Store
Address (Req):	3220 Miller Trunk Highway
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83621528
Longitude (Req):	-92.21675347
County (Req):	St. Louis
County Code (Req):	137

Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	195151-AISI0000195151	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	PetroleumRemediation	**SI ID:**	195151
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	4/25/2016	**TRDSQQ:**	
Tmsp Created:	11/13/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R2	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	51736999	**User Updt:**	spatial_
Name:	Airbase Convenience Store		
Program List:	PR		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020114		
HUC 12:	040102011401		
HUC 12 Name:	Upper Midway River		
DWSMA Code:			
DWSMA Name:			
Method Code:	I2		
Method Desc:	Digitized-DOQ		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	LS0002297	**Cong Distr:**	8
Program Co:	SR	**Senate Dis:**	3
Program Name:	Investigation and Cleanup	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	I2
City:	Hermantown	**Latitude:**	46.83621528
County:	St. Louis	**Longitude:**	-92.21675347
Activity:	Petroleum Remediation, Leak Site		
Addr St:	3220 Miller Trunk Highway		
Addr City:	Duluth		
MPCA ID List:	LS0002297		
Program 1:	Investigation and Cleanup		
Name:	Airbase Convenience Store		
Watershed :	St. Louis River		
Coord Co 1:	Digitized-DOQ		
Activity L:	Petroleum Remediation, Leak Site		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/195151		

Agency Interests: File Request Details

Item ID:	195151-AISI0000195151	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	PetroleumRemediation	**SI ID:**	195151
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	4/25/2016	**Ref Code:**	GEN
Tmsp Created:	11/13/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R2	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	51736999		
Name:	Airbase Convenience Store		
Program List:	PR		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020114		
HUC 10 Name:	Midway River		
HUC 12:	40102011401		
HUC 12 Name:	Upper Midway River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	I2		
Method Desc:	Digitized-DOQ		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
32	1 of1	SSW	0.26 / 1,359.33	1,427.31 / 17	Hermantown Square 5094 Miller Trunk Hwy Hermantown MN 55811	MPCA AI

Agency Interest ID:	125714
Name (Map):	Hermantown Square
Address (Map):	5094 Miller Trunk Hwy
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8364941
Longitude (Map):	-92.2166223
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Hermantown Square
Address (Site):	5094 Miller Trunk Hwy
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8364941
Longitude (Site):	-92.2166223
County (Site):	St. Louis
Name (Req):	Hermantown Square
Address (Req):	5094 Miller Trunk Hwy
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8364941
Longitude (Req):	-92.2166223
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	125714-AISI0000125714	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2007-09-06 16:22:49	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	125714
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	

Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	4/7/2016	**TRDSQQ:**	
Tmsp Created:	12/18/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	51976444	**User Updt:**	spatial_
Name:	Hermantown Square		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020114		
HUC 12:	040102011401		
HUC 12 Name:	Upper Midway River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00020696	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Hermantown	**Latitude:**	46.8364941
County:	St. Louis	**Longitude:**	-92.2166223
Activity:	Construction Stormwater		
Addr St:	5094 Miller Trunk Hwy		
Addr City:	Hermantown		
MPCA ID List:	C00020696		
Program 1:	Stormwater		
Name:	Hermantown Square		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/125714		

Agency Interests: File Request Details

Item ID:	125714-AISI0000125714	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	9/6/2007	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	125714
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	4/7/2016	**Ref Code:**	GEN
Tmsp Created:	12/18/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	51976444		
Name:	Hermantown Square		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020114		
HUC 10 Name:	Midway River		
HUC 12:	40102011401		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
HUC 12 Name:		Upper Midway River				
SI Type Desc:		Conventional Site				
DWSMA Code:						
DWSMA Name:						
Method Code:		A1				
Method Desc:		Address Matching House Number				

33	1 of2	SE	0.26 / 1,369.98	1,431.93 / 21	ASP Mechanical Inc. 5028 Miller Trunk Hwy Hermantown MN 55811	MPCA AI

Agency Interest ID:	233155.0
Name (Map):	
Address (Map):	
City (Map):	
State (Map):	
ZIP (Map):	
Latitude (Map):	
Longitude (Map):	
County (Map):	
County Code (Map):	
Loc Desc (Map):	
Name (Site):	ASP Mechanical Inc.
Address (Site):	5028 Miller Trunk Hwy
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83586946
Longitude (Site):	-92.21106039
County (Site):	St. Louis
Name (Req):	ASP Mechanical Inc.
Address (Req):	5028 Miller Trunk Hwy
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83586946
Longitude (Req):	-92.21106039
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	L4092	**Cong Distr:**	8
Program Co:	SS	**Senate Dis:**	3
Program Name:	SSTS	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Hermantown	**Latitude:**	46.83586946
County:	St. Louis	**Longitude:**	-92.21106039

Activity:	SSTS
Addr St:	5028 Miller Trunk Hwy
Addr City:	Hermantown
MPCA ID List:	L4092
Program 1:	SSTS
Name:	ASP Mechanical Inc.
Watershed :	St. Louis River
Coord Co 1:	Address Matching House Number
Activity L:	SSTS
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/233155

Agency Interests: File Request Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Item ID:	233155-AISI0000233155	**Int Doc ID:**	0
Status:	Active	**SI Type:**	LCO
Status Date:		**SI Cat:**	AISI
Program:		**SI ID:**	233155
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	9/14/2022	**Ref Code:**	GEN
Tmsp Created:	1/2/2020	**Ref Desc:**	General Location
User Created:	btischl	**Verified:**	No
Tmsp Updt:	8/6/2025	**User Updt:**	btischl
Spatial ID:			

Name:	ASP Mechanical Inc.
Program List:	
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Licensed / Certified Organization
DWSMA Code:	
DWSMA Name:	
Method Code:	A1
Method Desc:	Address Matching House Number

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
33	2 of2	SE	0.26 / 1,369.98	1,431.93 / 21	Valerie Tillman 5028 Miller Trunk Hwy Hermantown MN 55811	MPCA AI

Agency Interest ID:	257819
Name (Map):	
Address (Map):	
City (Map):	
State (Map):	
ZIP (Map):	
Latitude (Map):	
Longitude (Map):	
County (Map):	
County Code (Map):	
Loc Desc (Map):	
Name (Site):	
Address (Site):	
City (Site):	
State (Site):	
ZIP (Site):	
Latitude (Site):	
Longitude (Site):	
County (Site):	
Name (Req):	Valerie Tillman
Address (Req):	5028 Miller Trunk Hwy
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	
Longitude (Req):	
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026)

Agency Interests: File Request Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Item ID:	257819-AISI0000257819	**Int Doc ID:**	0
Status:	Active	**SI Type:**	LCP
Status Date:		**SI Cat:**	AISI
Program:		**SI ID:**	257819
CTU Code:		**SI Cat Desc:**	Agency Interest
CTU Name:		**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	
Range Dir:		**House Dist:**	
Section:		**Senate Dist:**	
Quarters:		**TRDSQQ:**	
Collection Date:		**Ref Code:**	
Tmsp Created:	11/28/2023	**Ref Desc:**	
User Created:	ctorgus	**Verified:**	No
Tmsp Updt:	11/28/2023	**User Updt:**	ctorgus
Spatial ID:			
Name:	Valerie Tillman		
Program List:			
HUC 8:			
HUC 8 Name:			
HUC 10:			
HUC 10 Name:			
HUC 12:			
HUC 12 Name:			
SI Type Desc:	Licensed / Certified Person		
DWSMA Code:			
DWSMA Name:			
Method Code:			
Method Desc:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
34	1 of1	ESE	0.26 / 1,385.47	1,411.87 / 1	**Former MANG Tank Farm** **4977 Airport Rd** **Duluth MN 55811**	MPCA AI

Agency Interest ID:	193070
Name (Map):	Former MANG Tank Farm
Address (Map):	4977 Airport Rd
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8385341
Longitude (Map):	-92.2065059
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Former MANG Tank Farm
Address (Site):	4977 Airport Rd
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8385341
Longitude (Site):	-92.2065059
County (Site):	St. Louis
Name (Req):	Former MANG Tank Farm
Address (Req):	4977 Airport Rd
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8385341
Longitude (Req):	-92.2065059
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	193070-AISI0000193070	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	PetroleumRemediation	**SI ID:**	193070
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	4/25/2016	**TRDSQQ:**	
Tmsp Created:	6/16/2014	**Ref Code:**	GEN
User Created:	DELTA_M_R2	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	68953434	**User Updt:**	spatial_
Name:	Former MANG Tank Farm		
Program List:	PR		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	CS0011720	**Cong Distr:**	8
Program Co:	SR	**Senate Dis:**	8
Program Name:	Investigation and Cleanup	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	DM
City:	Duluth	**Latitude:**	46.8385341
County:	St. Louis	**Longitude:**	-92.2065059
Activity:	Petroleum Remediation, Contaminated Soil Treatment Facility		
Addr St:	4977 Airport Rd		
Addr City:	Duluth		
MPCA ID List:	CS0011720		
Program 1:	Investigation and Cleanup		
Name:	Former MANG Tank Farm		
Watershed :	St. Louis River		
Coord Co 1:	Digitized - MPCA internal map		
Activity L:	Petroleum Remediation, Contaminated Soil Treatment Facility		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/193070		

Agency Interests: File Request Details

Item ID:	193070-AISI0000193070	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	PetroleumRemediation	**SI ID:**	193070
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	4/25/2016	**Ref Code:**	GEN
Tmsp Created:	6/16/2014	**Ref Desc:**	General Location
User Created:	DELTA_M_R2	**Verified:**	No

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	68953434		
Name:	Former MANG Tank Farm		
Program List:	PR		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

35	1 of1	ESE	0.27 / 1,403.89	1,411.02 / 0	**DULUTH AIR FORCE BASE Site 32 - MANG AOC C** **See location description** **Duluth MN 55811**	SHWS

Item ID:	192224-AREA0000000026	**Project Name:**	DULUTH AIR FORCE BASE Site 32 - MANG AOC C
Project ID:	SR0000368	**Project Type:**	Superfund sub-area
NPL:	Yes	**Latitude:**	46.83841654
PermList of Prior?:		**Longitude:**	-92.20496307
Petrol Brownfield?:		**SEMS?:**	
VIC Site?:		**Unpermitted Dump?:**	
Federal Reg:		**Fed State Reg:**	
State Reg:		**Non Reg:**	
Sf Voluntary:		**Inst Controls?:**	
Project Name(RAP):	DULUTH AIR FORCE BASE Site 32 - MANG AOC C	**Address1 (RAP):**	See location description
Project Type (RAP):	Superfund sub-area	**Address2(RAP):**	
Latitude (RAP):	46.83841654	**City (RAP):**	Duluth
Longitude (RAP):	-92.20496307	**State (RAP):**	MN
Project ID (RAP):	SR0000368	**Zip (RAP):**	55811
Site Status:	Active / Existing	**County (RAP):**	St. Louis
Data Source:	MPCA Remediation Sites; MPCA Remediation Sites with RAP approvals		
Site Address 1:	See location description		
Site Address 2:			
Site City:	Duluth		
Site State:	MN		
Site Zip:	55811		
Site County:	St. Louis		
Project Managers:	Dan Cervin (current), Mark Elliott (former)		

Remediation Sites Details

Activity ID:	192224	**SI Cat:**	AREA
SI ID:	26	**AI Name:**	Duluth Air Force Base
SI Type:	OPER	**Site Type:**	CON
Acreage:	4.20	**Cong Dist:**	8
House Dist:	8B	**Senate Dis:**	8
DWSMA Code:		**Method Des:**	Interpolation Other
DWSMA Name:		**HUC 8:**	04010201
HRS Score:		**HUC 10:**	0401020116
Score Year:		**HUC 12:**	040102011604
MNTBA:			
Loc Desc:	This site, referred to as AOC C is located beneath the current MANG POL and the former MANG and US Air Force Quonset Hut maintenance and stoarge area. It is generally located north of Airport Drive. The Site is within the Cloquet River Watershed.		
Huc8 Name:	St. Louis River		
Huc12 Name:	Saint Louis River		
Hydrologis:	Mark Elliott (current)		
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/192224		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Remediation Sites with RAP Approval

Activity ID:	192224	***Rap Date:***	
No Association Date:		***Site Start:***	
No Association Letter:	No	***Rap Approved:***	
Has Rp:	Yes	***Rap Completed:***	
Coord Collection Method:	Interpolation Other	***Site Closed:***	
Parcels:			
WIMN:	https://webapp.pca.state.mn.us/wimn/site/192224		
AI Name:	Duluth Air Force Base		
Rp Names:	(TBD)		

Spatial Remediation Activity

AI ID:	192224	***Discovered:***	2004-09-30 00:00:00
Activity No:	1	***Site Start:***	1984-10-30 00:00:00
Activity ID:	SIW20090001	***Remedy Imp:***	
Site ID:	SR0000368	***Remedy Sel:***	2013-06-26 00:00:00
SI ID:	26	***ASMT Compl:***	2006-12-31 00:00:00
SI Cat:	AREA	***NPL Delete:***	
Activity Code:	SIW	***PLP List:***	
Activity Year:	2009	***PLP Delist:***	
Received:	1984-10-30 00:00:00	***Staff Assi:***	2009-01-08 00:00:00
NPL List:		***FF Aproved:***	
NFA Decisi:		***FF Closed:***	
Site Close:		***Inv Comple:***	2012-02-17 00:00:00
Leak Discovered:		***App Comple:***	2009-01-08 00:00:00
Leak Reported:		***Er Site Ev:***	
Leak Reopened:			
Activity Type:	Superfund Investigation/Cleanup		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
36	1 of8	ESE	0.28 / 1,463.32	1,417.69 / 7	U Of Duluth - Nrri Building 5013 Miller Trunk Highway 3151 Miller Trunk Hwy Duluth MN 55811	DELISTED TANK

Delisted Storage Tanks

Program in ID:	201438	***AI ID:***	
Site ID:	220770	***AI Name:***	
Tank Site ID:		***Address:***	
Tank Site:	12613	***City:***	
Tank Type:		***State:***	
Active?:	No	***Zip:***	
Interest Type:	D1	***Owner:***	
Interest Type Desc:	Deleted Tank Site	***Owner Address:***	
Interest State Date:	07/23/1992 19:11:05	***Owner City:***	
Interest Eng Date:	08/26/2009 12:29:17	***Owner State:***	
Interest Name:	U Of Duluth - Nrri Building	***Owner Zip:***	
Interest Phone:	NO CORE PI PH.	***Addr ID:***	197387
Org Name Source:		***Address1:***	5013 Miller Trunk Highway
Lat/Long ID:	163168	***Address2:***	3151 Miller Trunk Hwy
Lat Degrees:	46	***Addr Time Added:***	08/31/2006 11:19:10
Lat Minutes:	50	***Addr Time Lat Updt:***	11/04/2008 21:13:54
Lat Seconds:	9.56	***Addr Staff ID Last U:***	SYSTEM
Long Degrees:	-92	***Staff ID Updt:***	RGAGLE
Long Minutes:	12	***Addr Source:***	CORE
Long Seconds:	25.26	***Source:***	CORE
Lat/Long Desc:		***Timestamp Added:***	08/31/2006 14:27:44
Lat/Long Time Add:	03/29/2010 18:43:04	***Timestamp Updt:***	11/10/2014 08:17:05
Lat/Long Time Updt:	12/06/2011 08:06:45	***Township Name:***	Whiteface Reservoir
Lat/Long Staff ID:	MAPTOOL	***City Name:***	Duluth

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Collection Date:	12/06/2011 08:06:44	**State Code:**	MN
Coord Src Type:		**Zip Code:**	55811
Coord Src Desc:		**Country Code:**	USA
Coord Coll Meth Cd:	DM	**State County Code:**	69
Coord Coll Method:	Digitized - Map Tool	**FIPS County Code1:**	137
Map Scale Code:		**County Name:**	St. Louis
Lat/Long Source:	CORE	**Address Web:**	
Lat/Long Site ID:	220770	**City Web:**	
Lat/Long Spatial ID:	51388436	**Postal Code Web:**	
Latitude Selected:		**Foreign State:**	
Longitude Selected:		**Foreign Zone:**	
Comments:			
Tanks URL:			
Original Source:	UST		
Record Date:	02-DEC-2016		
Location Description:			

36	2 of8	ESE	0.28 / 1,463.32	1,417.69 / 7	**University of MN Duluth Sage Building** **5013 Miller Trunk Highway 3151** **Miller Trunk Hwy** **Duluth MN 55811**	HIST LUST

Prog Int ID:	60552293	**Address Source:**	CORE
Site ID:	220770	**Township Name:**	Whiteface Reservoir
State County Code:	69	**County Name:**	St. Louis
Country:	USA	**Lat/Long ID:**	163168
Interest Type Cd:	LS	**Interest Type Dsc:**	Leak Site
ADDR ID:	197387	**Lat Degrees:**	46
Tank Site:	18454	**Lat Minutes:**	50
Interest Phone:	NO CORE PI PH.	**Lat Seconds:**	9.56
Interest Start Dt:	07/22/2011 00:00:00	**Long Degrees:**	-92
Interest End Dt:	07/02/2014 13:33:07	**Long Minutes:**	12
Active?:	No	**Long Seconds:**	25.26
Timestamp Added:	07/22/2011 08:32:21	**Lat/Long Source:**	CORE
Timestamp Updt:	11/10/2014 08:17:06	**Lat/Long Site ID:**	220770
Staff ID Updt:	RGAGLE	**Lat/Long Spatial ID:**	60552294
Source:	CORE	**Collection Date:**	12/06/2011 08:06:44
Coord Src Type:		**Map Scale Code:**	
Coord Src Desc:		**Org Name Source:**	
Foreign State:		**Foreign Zone:**	
FIPS County Cd1:	137		

Addr Timestmp Add:	08/31/2006 11:19:10
Addr Timestamp Lst Updt:	11/04/2008 21:13:54
Addr Updater Staff ID:	SYSTEM
Lat/Long Timestamp Added:	03/29/2010 18:43:04
Lat/Long Tmstmp Last Upd:	12/06/2011 08:06:45
Lat/Long Updater Staff ID:	MAPTOOL
Lat/Long Desc:	
Coord Coll Method Desc:	Digitized - Map Tool
Coord Coll Method Code:	DM
Comments:	

Leak Site

Complete Site Closure Date:	11/22/2011 00:00:00
Cond Closure Date:	
Release Discovered Date:	07/08/2011 00:00:00
Leaksite Type Code:	1
Leaksite Type Desc:	Leak Site
Leak Report Date:	07/08/2011 00:00:00
Tank Reg Status Code:	N
TMSP Added:	07/22/2011 09:08:48
TMSP Last Updt:	12/12/2011 16:05:19
CU Yds Excavated Qty:	
ENF Action Begin Date:	07/27/2011 00:00:00

Residence Type Code:
File Archive Box:
File Archive Lot:
Soil Digout Date:
Staff ID Last Updt: LKANIA
Std Letter Response Date: 08/18/2011 00:00:00
VPIC Acres:
VPIC Application Date:
Contam Soils Remaining Flag: Y
Indoor Air Collected Flag:
LUST Trust Eligible Flag: No
Offsite Contam Flag: N
REIMB Awarded Flag: No
Release From AST Flag: No
Release From UST Flag: Yes
Soil Gas Action Level Flag:
Soil Gas Data Collected Flag: No
Sub Slab Sample Collected Flag:
Surface Water Impact Flag: N
Utility Project Flag: No
Vapor Intrusion Action Flag:
Vapor Intrusion Checked Flag: No
Leaksite Type Defn: Leak site (tank and petroleum contamination).
Soil Gas Data Comments:
Vapor Intrusion Comments:

Leak Product Rls

Product Rls Seq ID: 142900
Leak Product Desc: Fuel Oil 1 & 2
Leak Product Defn: The product is fuel oil 1 & 2.

Leak GW Info

Well Type Code:
Affected Non Res Props:
Affected Residential Props:
Staff ID Last Updt: LKANIA
Staff ID Wellhead Area Assess: 3301
TMSP Added: 11/18/2011 16:09:41
TMSP Last Updt: 11/18/2011 16:09:45
Water Supply Exceeds Ral Flag:
Cleanup Goal Achieved Flag:
DW Supply Contam Flag:
Free Product at Close Flag: No
Free Product Observed Flag:
Free Product Thickness:
Ground Water Contam Flag: N
GW Cleanup Goal:
GW Exceeds Cleanup Goal Flag:
Impacted Aquifer Code:
MTBE High Level Date:
MTBE High Ug Per Liter Char:
MTBE High Ug Per Liter Numb:
MTBE Present Historically Flag:
MTBE Present Now Flag:
Protected Area Flag: No
PWS Well Impacted Flag: No
Sensitive Area Flag: No

36	*3 of8*	*ESE*	*0.28 / 1,463.32*	*1,417.69 / 7*	***University of MN Duluth Sage Building*** ***5013 Miller Trunk Highway 3151***	***LST*** ***REM SITE***

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Miller Trunk Hwy
Duluth MN 55811

Item ID:	116768-AREA0000000001	***Unpermitted Dump?:***	
Project ID:	LS0018454	***State Reg:***	
Project Type:	Leak Site	***Federal Reg:***	
Project ID (RAP):		***Fed State Reg:***	
Project Type (RAP):		***Non Reg:***	Yes
Site Status:	Closed	***NPL:***	
Perm List of Prio?:		***Site County:***	St. Louis
Petrol Brownfield?:		***County (RAP):***	
VIC Site?:		***Latitude:***	46.83599568
Sf Voluntary:		***Longitude:***	-92.20701741
Inst Controls?:		***Latitude (RAP):***	
SEMS?:		***Longitude (RAP):***	
Project Name:	University of MN Duluth Sage Building		
Project Managers:	Lauralin Kania (former)		
Site Address 1:	5013 Miller Trunk Highway		
Site Address 2:	3151 Miller Trunk Hwy		
Site City:	Duluth		
Site State:	MN		
Site ZIP:	55811		
Project Name(RAP):			
Address1 (RAP):			
Address2 (RAP):			
City (RAP):			
State (RAP):			
ZIP (RAP):			
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

Activity ID:	116768	***Object ID:***	6987
SI ID:	1	***Cong Dist:***	8
Si Cat:	AREA	***House Dist:***	3B
SI Type:	LEAK	***Senate Dis:***	3
Site Type:	CON	***HUC 8:***	04010201
Acreage:		***HUC 10:***	0401020116
HRS Score:		***HUC 12:***	040102011604
Score Year:		***Gdb Geomattr Data:***	
DWSMA Code:		***MNTBA:***	
AI Name:	NRRI- Sage Building- University of Duluth		
DWSMA Name:			
Hydrologists:			
Huc 8 Name:	St. Louis River		
Huc12 Name:	Saint Louis River		
Method Desc:	Digitized - MPCA internal map		
Loc Desc:			
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/116768		

Spatial Remediation Activity

AI ID:	116768	***Object ID:***	18242
Site ID:	LS0018454	***Remedy Imp:***	
SI ID:	1	***Remedy Sel:***	
SI Cat:	AREA	***ASMT Compl:***	
NFA Decisi:		***Received:***	
Site Start:	2011-07-08 00:00:00	***NPL List:***	
Site Close:	2011-11-22 00:00:00	***NPL Delete:***	
Leak Discovered:	2011-07-08 00:00:00	***PLP List:***	
Leak Reported:	2011-07-08 00:00:00	***PLP Delist:***	
Leak Reopened:		***Staff Assi:***	
Activity No:	1	***FF Aproved:***	
Activity ID:	SIW20110001	***FF Closed:***	
Activity Type:	Leak Site Investigation	***Inv Comple:***	
Activity Code:	SIW	***App Comple:***	
Activity Year:	2011	***Er Site Ev:***	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
Discovered:						
36	4 of8	ESE	0.28 / 1,463.32	1,417.69 / 7	NRRI- Sage Building- University of Duluth 5013 Miller Trunk Highway 3151 Miller Trunk Hwy Duluth MN 55811	MPCA AI

Agency Interest ID:	116768
Name (Map):	NRRI- Sage Building- University of Duluth
Address (Map):	5013 Miller Trunk Highway 3151 Miller Trunk Hwy
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8359911
Longitude (Map):	-92.2070174
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	NRRI- Sage Building- University of Duluth
Address (Site):	5013 Miller Trunk Highway 3151 Miller Trunk Hwy
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8359911
Longitude (Site):	-92.2070174
County (Site):	St. Louis
Name (Req):	NRRI- Sage Building- University of Duluth
Address (Req):	5013 Miller Trunk Highway
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8359911
Longitude (Req):	-92.2070174
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	116768-AISI0000116768	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	116768
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	8/31/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	51386119	**User Updt:**	spatial_

Name:	NRRI- Sage Building- University of Duluth
Program List:	PR, UT
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	

Method Code: DM
Method Desc: Digitized - MPCA internal map

My Neighborhood Site Details

Active FLA: Yes
MPCA ID: Multiple IDs
Program Co: SR; TL
Program Name: Multiple Programs
Address: MN
Addr ZIP: 55811
City: Hermantown
County: St. Louis
HUC 8: 04010201
Cong Distr: 8
Senate Dis: 3
House Dist: 3B
IC Flag: No
Coord Coll: DM
Latitude: 46.8359911
Longitude: -92.2070174
Activity: Multiple Activities
Addr St: 5013 Miller Trunk Highway 3151 Miller Trunk Hwy
Addr City: Duluth
MPCA ID List: LS0018454; TS0009459
Program 1: Investigation and Cleanup; Tanks
Name: NRRI- Sage Building- University of Duluth
Watershed : St. Louis River
Coord Co 1: Digitized - MPCA internal map
Activity L: Aboveground Tanks; Petroleum Remediation, Leak Site; Underground Tanks
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/116768

Agency Interests: File Request Details

Item ID: 116768-AISI0000116768
Status: Active
Status Date:
Program: Multiple Programs
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 9/27/2015
Tmsp Created: 8/31/2006
User Created: DELTA_M_R1
Tmsp Updt: 4/26/2016
Spatial ID: 51386119
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 116768
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: spatial_
Name: NRRI- Sage Building- University of Duluth
Program List: PR, UT
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: DM
Method Desc: Digitized - MPCA internal map

36	5 of8	ESE	0.28 / 1,463.32	1,417.69 / 7	U of M - NRRI 5013 Miller Trunk Hwy Hermantown MN 55811	MPCA AI

Agency Interest ID: 38587
Name (Map): U of M - NRRI
Address (Map): 5013 Miller Trunk Hwy
City (Map): Hermantown
State (Map): MN

ZIP (Map):	55811
Latitude (Map):	46.8359865
Longitude (Map):	-92.2070109
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	U of M - NRRI
Address (Site):	5013 Miller Trunk Hwy
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811-1442
Latitude (Site):	46.8359865
Longitude (Site):	-92.2070109
County (Site):	St. Louis
Name (Req):	U of M - NRRI
Address (Req):	5013 Miller Trunk Hwy
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8359865
Longitude (Req):	-92.2070109
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	38587-AISI0000038587	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	38587
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:		**TRDSQQ:**	
Tmsp Created:	8/3/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/13/2017	**Verified:**	No
Spatial ID:	46031	**User Updt:**	RSP
Name:	U of M - NRRI		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	MND175344886	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	3
Program Name:	Hazardous Waste	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-1442	**Coord Coll:**	DM
City:	Hermantown	**Latitude:**	46.8359865
County:	St. Louis	**Longitude:**	-92.2070109

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Activity:	Hazardous Waste, Small quantity generator
Addr St:	5013 Miller Trunk Hwy
Addr City:	Hermantown
MPCA ID List:	MND175344886
Program 1:	Hazardous Waste
Name:	U of M - NRRI
Watershed :	St. Louis River
Coord Co 1:	Digitized - MPCA internal map
Activity L:	Hazardous Waste, Small quantity generator
Industrial:	Colleges, Universities, and Professional Schools
Site URL:	https://webapp.pca.state.mn.us/wimn/site/38587

Agency Interests: File Request Details

Item ID:	38587-AISI0000038587	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	38587
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:		**Ref Code:**	GEN
Tmsp Created:	8/3/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/13/2017	**User Updt:**	RSP
Spatial ID:	46031		

Name:	U of M - NRRI
Program List:	HW
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	DM
Method Desc:	Digitized - MPCA internal map

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
36	6 of8	ESE	0.28 / 1,463.32	1,417.69 / 7	Natural Resources Research Institute 5013 Miller Trunk Hwy Duluth MN 55811	MPCA AI

Agency Interest ID:	128508
Name (Map):	
Address (Map):	
City (Map):	
State (Map):	
ZIP (Map):	
Latitude (Map):	
Longitude (Map):	
County (Map):	
County Code (Map):	
Loc Desc (Map):	
Name (Site):	
Address (Site):	
City (Site):	
State (Site):	
ZIP (Site):	
Latitude (Site):	
Longitude (Site):	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

County (Site):
Name (Req): Natural Resources Research Institute
Address (Req): 5013 Miller Trunk Hwy
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req):
Longitude (Req):
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026)

Agency Interests: File Request Details

Item ID: 128508-AISI0000128508
Status: Active
Status Date:
Program: Multiple Programs
CTU Code:
CTU Name:
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date:
Tmsp Created: 9/28/2010
User Created: DELTA_M_R1
Tmsp Updt: 2/19/2016
Spatial ID:
Name: Natural Resources Research Institute
Program List: CA, WW
HUC 8:
HUC 8 Name:
HUC 10:
HUC 10 Name:
HUC 12:
HUC 12 Name:
SI Type Desc: Large Area Site
DWSMA Code:
DWSMA Name:
Method Code:
Method Desc:

Int Doc ID: 0
SI Type: BIG
SI Cat: AISI
SI ID: 128508
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist:
House Dist:
Senate Dist:
TRDSQQ:
Ref Code:
Ref Desc:
Verified: No
User Updt: kkircho

36	7 of8	ESE	0.28 / 1,463.32	1,417.69 / 7	Thomas J Malterer 5013 Miller Trunk Hwy. Duluth MN 55811	MPCA AI

Agency Interest ID: 204091
Name (Map):
Address (Map):
City (Map):
State (Map):
ZIP (Map):
Latitude (Map):
Longitude (Map):
County (Map):
County Code (Map):
Loc Desc (Map):
Name (Site):
Address (Site):
City (Site):
State (Site):
ZIP (Site):
Latitude (Site):
Longitude (Site):

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

County (Site):	
Name (Req):	Thomas J Malterer
Address (Req):	5013 Miller Trunk Hwy.
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	
Longitude (Req):	
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026)

Agency Interests: File Request Details

Item ID:	204091-AISI0000204091	**Int Doc ID:**	0
Status:	Active	**SI Type:**	LCP
Status Date:		**SI Cat:**	AISI
Program:		**SI ID:**	204091
CTU Code:		**SI Cat Desc:**	Agency Interest
CTU Name:		**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	
Range Dir:		**House Dist:**	
Section:		**Senate Dist:**	
Quarters:		**TRDSQQ:**	
Collection Date:		**Ref Code:**	
Tmsp Created:	4/25/2016	**Ref Desc:**	
User Created:	DELTA_M_R2	**Verified:**	No
Tmsp Updt:	4/25/2016	**User Updt:**	SSTS

Spatial ID:	
Name:	Thomas J Malterer
Program List:	
HUC 8:	
HUC 8 Name:	
HUC 10:	
HUC 10 Name:	
HUC 12:	
HUC 12 Name:	
SI Type Desc:	Licensed / Certified Person
DWSMA Code:	
DWSMA Name:	
Method Code:	
Method Desc:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
36	8 of8	ESE	0.28 / 1,463.32	1,417.69 / 7	UMD NRRI Upper Lot Resurvacing 5013 Miller Trunk Hwy Hermantown MN 55811	MPCA AI

Agency Interest ID:	260762
Name (Map):	UMD NRRI Upper Lot Resurvacing
Address (Map):	5013 Miller Trunk Hwy
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.836546
Longitude (Map):	-92.20695
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	UMD NRRI Upper Lot Resurvacing
Address (Site):	5013 Miller Trunk Hwy
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811-1442
Latitude (Site):	46.836546
Longitude (Site):	-92.20695

County (Site):	St. Louis
Name (Req):	UMD NRRI Upper Lot Resurvacing
Address (Req):	5013 Miller Trunk Hwy
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.836546
Longitude (Req):	-92.20695
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	260762-AISI0000260762	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	260762
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	8/19/2024	**TRDSQQ:**	
Tmsp Created:	8/19/2024	**Ref Code:**	CEN
User Created:	RSP	**Ref Desc:**	Center of Feature Represented
Tmsp Updt:	8/19/2024	**Verified:**	No
Spatial ID:		**User Updt:**	geo_nc

Name:	UMD NRRI Upper Lot Resurvacing
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	DP
Method Desc:	Digitized - MPCA online map

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00070397	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-1442	**Coord Coll:**	DP
City:	Hermantown	**Latitude:**	46.836546
County:	St. Louis	**Longitude:**	-92.20695

Activity:	Construction Stormwater
Addr St:	5013 Miller Trunk Hwy
Addr City:	Hermantown
MPCA ID List:	C00070397
Program 1:	Stormwater
Name:	UMD NRRI Upper Lot Resurvacing
Watershed :	St. Louis River
Coord Co 1:	Digitized - MPCA online map
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/260762

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Agency Interests: File Request Details

Item ID:	260762-AISI0000260762	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	260762
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B
Section:		***Senate Dist:***	3
Quarters:		***TRDSQQ:***	
Collection Date:	8/19/2024	***Ref Code:***	CEN
Tmsp Created:	8/19/2024	***Ref Desc:***	Center of Feature Represented
User Created:	RSP	***Verified:***	No
Tmsp Updt:	8/19/2024	***User Updt:***	geo_nc
Spatial ID:			

Name:	UMD NRRI Upper Lot Resurvacing
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	DP
Method Desc:	Digitized - MPCA online map

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
37	1 of1	WSW	0.28 / 1,465.50	1,420.09 / 9	Hermantown Molding & Millwork 5191 Miller Trunk Highway Hermantown MN 55811	MPCA AI

Agency Interest ID:	57520
Name (Map):	Hermantown Molding & Millwork
Address (Map):	5191 Miller Trunk Highway
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.836864
Longitude (Map):	-92.2276552
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Hermantown Molding & Millwork
Address (Site):	5191 Miller Trunk Highway
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.836864
Longitude (Site):	-92.2276552
County (Site):	St. Louis
Name (Req):	Hermantown Molding & Millwork
Address (Req):	5191 Miller Trunk Highway
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.836864
Longitude (Req):	-92.2276552
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	57520-AISI0000057520	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Hazardous Waste	***SI ID:***	57520
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	9/27/2015	***TRDSQQ:***	
Tmsp Created:	8/22/2000	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	4/26/2016	***Verified:***	No
Spatial ID:	54596	***User Updt:***	spatial_
Name:	Hermantown Molding & Millwork		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	Yes	***HUC 8:***	04010201
MPCA ID:	MNR000100800	***Cong Distr:***	8
Program Co:	HW	***Senate Dis:***	3
Program Name:	Hazardous Waste	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	A1
City:	Hermantown	***Latitude:***	46.836864
County:	St. Louis	***Longitude:***	-92.2276552
Activity:	Hazardous Waste		
Addr St:	5191 Miller Trunk Highway		
Addr City:	Hermantown		
MPCA ID List:	MNR000100800		
Program 1:	Hazardous Waste		
Name:	Hermantown Molding & Millwork		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Hazardous Waste		
Industrial:	Other Millwork (including Flooring)		
Site URL:	https://webapp.pca.state.mn.us/wimn/site/57520		

Agency Interests: File Request Details

Item ID:	57520-AISI0000057520	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Hazardous Waste	***SI ID:***	57520
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B
Section:		***Senate Dist:***	3
Quarters:		***TRDSQQ:***	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	8/22/2000	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	54596		
Name:	Hermantown Molding & Millwork		
Program List:	HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

38	1 of2	S	0.28 / 1,481.35	1,427.75 / 17	**Stephen G Dahlgren DDS** **5086 Miller Trunk Hwy Ste 1** **Hermantown MN 55811**	MPCA AI

Agency Interest ID:	134203
Name (Map):	Stephen G Dahlgren DDS
Address (Map):	5086 Miller Trunk Hwy Ste 1
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8364994
Longitude (Map):	-92.215755
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Stephen G Dahlgren DDS
Address (Site):	5086 Miller Trunk Hwy Ste 1
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8364994
Longitude (Site):	-92.215755
County (Site):	St. Louis
Name (Req):	Stephen G Dahlgren DDS
Address (Req):	5086 Miller Trunk Hwy Ste 1
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8364994
Longitude (Req):	-92.215755
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	134203-AISI0000134203	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	134203
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B

Quarters:		**Senate Dist:**	3
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	4/22/2009	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	55664516	**User Updt:**	spatial_

Name: Stephen G Dahlgren DDS
Program List: HW
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020114
HUC 12: 040102011401
HUC 12 Name: Upper Midway River
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	MNS000144774	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	3
Program Name:	Hazardous Waste	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Hermantown	**Latitude:**	46.8364994
County:	St. Louis	**Longitude:**	-92.215755

Activity: Hazardous Waste
Addr St: 5086 Miller Trunk Hwy Ste 1
Addr City: Hermantown
MPCA ID List: MNS000144774
Program 1: Hazardous Waste
Name: Stephen G Dahlgren DDS
Watershed : St. Louis River
Coord Co 1: Address Matching House Number
Activity L: Hazardous Waste
Industrial: Offices of Dentists
Site URL: https://webapp.pca.state.mn.us/wimn/site/134203

Agency Interests: File Request Details

Item ID:	134203-AISI0000134203	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	134203
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	4/22/2009	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	55664516		

Name: Stephen G Dahlgren DDS
Program List: HW
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020114
HUC 10 Name: Midway River
HUC 12: 40102011401
HUC 12 Name: Upper Midway River
SI Type Desc: Conventional Site

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
DWSMA Code:						
DWSMA Name:						
Method Code:		A1				
Method Desc:		Address Matching House Number				
38	2 of2	S	0.28 / 1,481.35	1,427.75 / 17	Miller Trunk Family Dentistry 5086 Miller Trunk Hwy Hermantown MN 55811	MPCA AI

Agency Interest ID: 24943
Name (Map): Miller Trunk Family Dentistry
Address (Map): 5086 Miller Trunk Hwy
City (Map): Hermantown
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83650771
Longitude (Map): -92.21576285
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Miller Trunk Family Dentistry
Address (Site): 5086 Miller Trunk Hwy
City (Site): Hermantown
State (Site): MN
ZIP (Site): 55811-1490
Latitude (Site): 46.83650771
Longitude (Site): -92.21576285
County (Site): St. Louis
Name (Req): Miller Trunk Family Dentistry
Address (Req): 5086 Miller Trunk Hwy
City (Req): Hermantown
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.83650771
Longitude (Req): -92.21576285
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 24943-AISI0000024943
Status: Active
Status Date:
Program: Hazardous Waste
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 9/28/2015
Tmsp Created: 7/26/1999
User Created: DELTA_M_R1
Tmsp Updt: 4/26/2016
Spatial ID: 18977
Name: Miller Trunk Family Dentistry
Program List: HW
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020114
HUC 12: 040102011401
HUC 12 Name: Upper Midway River
DWSMA Code:
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 24943
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: spatial_

DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

My Neighborhood Site Details

Active FLA:	Yes	***HUC 8:***	04010201
MPCA ID:	MNS000211300	***Cong Distr:***	8
Program Co:	HW	***Senate Dis:***	3
Program Name:	Hazardous Waste	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811-1490	***Coord Coll:***	A1
City:	Hermantown	***Latitude:***	46.83650771
County:	St. Louis	***Longitude:***	-92.21576285

Activity: Hazardous Waste, Minimal quantity generator
Addr St: 5086 Miller Trunk Hwy
Addr City: Hermantown
MPCA ID List: MNS000211300
Program 1: Hazardous Waste
Name: Miller Trunk Family Dentistry
Watershed : St. Louis River
Coord Co 1: Address Matching House Number
Activity L: Hazardous Waste, Minimal quantity generator
Industrial: Offices of Dentists
Site URL: https://webapp.pca.state.mn.us/wimn/site/24943

Agency Interests: File Request Details

Item ID:	24943-AISI0000024943	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Hazardous Waste	***SI ID:***	24943
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B
Section:		***Senate Dist:***	3
Quarters:		***TRDSQQ:***	
Collection Date:	9/28/2015	***Ref Code:***	GEN
Tmsp Created:	7/26/1999	***Ref Desc:***	General Location
User Created:	DELTA_M_R1	***Verified:***	No
Tmsp Updt:	4/26/2016	***User Updt:***	spatial_
Spatial ID:	18977		

Name: Miller Trunk Family Dentistry
Program List: HW
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020114
HUC 10 Name: Midway River
HUC 12: 40102011401
HUC 12 Name: Upper Midway River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

39	***1 of5***	***SE***	***0.28 / 1,504.51***	***1,422.42 / 12***	***Kolar Garage 5020 Miller Trunk Highway Hermantown MN***	***DELISTED LST***

Delisted MPCA Remediation Leak Sites

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Item ID:	187095-AREA0000000001	**Perm List of Prio?:**	
Project ID:	LS0011105	**Petrol Brownfield?:**	
Project Type:	Leak Site	**VIC Site?:**	
Project Name:	Kolar Garage	**Sf Volunta:**	
Site Address 1:	5020 Miller Trunk Highway	**Inst Controls?:**	
Site Address 2:		**SEMS?:**	
Site City:	Hermantown	**Unpermitted Dump?:**	
Site State:	MN	**State Reg:**	
Site ZIP:	55811	**Federal Re:**	Yes
Site Status:	Closed	**Fed State:**	
Project ID (RAP):		**Non Reg:**	
Project Type (RAP):		**NPL:**	
Project Name(RAP):		**Site County:**	St. Louis
Address1 (RAP):		**County (RAP):**	
Address2(RAP):		**Latitude (RAP):**	
City (RAP):		**Longitude (RAP):**	
State (RAP):		**Latitude:**	46.83542574
ZIP (RAP):		**Longitude:**	-92.20998523
Project Manager:	Steve Leppala (no longer at MPCA)		
Data Source:	MPCA Remediation Sites		
Original Source:	LSTR		
Record Date:	08-JUN-2022		

39	2 of5	SE	0.28 / 1,504.51	1,422.42 / 12	**Kolar Garage** **5020 Miller Trunk Highway** **Hermantown MN 55811**	**HIST LEAKSITES**

Prog Int ID:	223527	**Address Source:**	CORE
Site ID:	246533	**Township Name:**	Whiteface Reservoir
State County Code:	69	**County Name:**	St. Louis
Country:	USA	**Lat/Long ID:**	133030
Interest Type Cd:	LS	**Interest Type Dsc:**	Leak Site
ADDR ID:	270519	**Lat Degrees:**	46
Tank Site:	11105	**Lat Minutes:**	50
Interest Phone:	NO CORE PI PH.	**Lat Seconds:**	7.56
Interest Start Dt:	10/14/1998 11:10:04	**Long Degrees:**	-92
Interest End Dt:	11/30/2006 07:11:37	**Long Minutes:**	12
Active?:	No	**Long Seconds:**	35.94
Timestamp Added:	11/30/2006 07:11:37	**Lat/Long Source:**	CORE
Timestamp Updt:	11/10/2014 08:17:06	**Lat/Long Site ID:**	246533
Staff ID Updt:	RGAGLE	**Lat/Long Spatial ID:**	51833655
Source:	CORE	**Collection Date:**	06/03/2008 10:29:46
Coord Src Type:		**Map Scale Code:**	
Coord Src Desc:		**Org Name Source:**	
Foreign State:		**Foreign Zone:**	
FIPS County Cd1:	137		
Addr Timestmp Add:	11/30/2006 07:11:23		
Addr Timestamp Lst Updt:	11/04/2008 21:13:55		
Addr Updater Staff ID:	SYSTEM		
Lat/Long Timestamp Added:	11/30/2006 07:11:52		
Lat/Long Tmstmp Last Upd:	06/03/2008 10:29:46		
Lat/Long Updater Staff ID:	MAPTOOL		
Lat/Long Desc:			
Coord Coll Method Desc:	Digitized - Map Tool		
Coord Coll Method Code:	DM		
Comments:			

Leak Site

Complete Site Closure Date:	10/14/1998 00:00:00
Cond Closure Date:	
Release Discovered Date:	02/20/1998 00:00:00
Leaksite Type Code:	1
Leaksite Type Desc:	Leak Site
Leak Report Date:	02/20/1998 00:00:00
Tank Reg Status Code:	F
TMSP Added:	12/04/1999 14:03:51

TMSP Last Updt:	06/25/2014 14:17:31
CU Yds Excavated Qty:	
ENF Action Begin Date:	03/02/1998 00:00:00
Residence Type Code:	
File Archive Box:	
File Archive Lot:	
Soil Digout Date:	
Staff ID Last Updt:	DBOETTC
Std Letter Response Date:	03/24/1998 00:00:00
VPIC Acres:	
VPIC Application Date:	
Contam Soils Remaining Flag:	U
Indoor Air Collected Flag:	
LUST Trust Eligible Flag:	Yes
Offsite Contam Flag:	U
REIMB Awarded Flag:	No
Release From AST Flag:	No
Release From UST Flag:	No
Soil Gas Action Level Flag:	
Soil Gas Data Collected Flag:	
Sub Slab Sample Collected Flag:	
Surface Water Impact Flag:	U
Utility Project Flag:	No
Vapor Intrusion Action Flag:	
Vapor Intrusion Checked Flag:	
Leaksite Type Defn:	Leak site (tank and petroleum contamination).
Soil Gas Data Comments:	
Vapor Intrusion Comments:	

Leak Product Rls

Product Rls Seq ID:	35822
Leak Product Desc:	Hydraulic Fluid
Leak Product Defn:	The product is hydraulic fluid.

Leak GW Info

Well Type Code:	
Affected Non Res Props:	
Affected Residential Props:	
Staff ID Last Updt:	RSUCHAN
Staff ID Wellhead Area Assess:	
TMSP Added:	12/04/1999 14:07:35
TMSP Last Updt:	11/04/2003 12:57:08
Water Supply Exceeds Ral Flag:	
Cleanup Goal Achieved Flag:	
DW Supply Contam Flag:	
Free Product at Close Flag:	
Free Product Observed Flag:	
Free Product Thickness:	
Ground Water Contam Flag:	N
GW Cleanup Goal:	0
GW Exceeds Cleanup Goal Flag:	
Impacted Aquifer Code:	
MTBE High Level Date:	
MTBE High Ug Per Liter Char:	
MTBE High Ug Per Liter Numb:	
MTBE Present Historically Flag:	
MTBE Present Now Flag:	
Protected Area Flag:	
PWS Well Impacted Flag:	
Sensitive Area Flag:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
39	3 of5	SE	0.28 / 1,504.51	1,422.42 / 12	Kolar Garage 5020 Miller Trunk Highway Hermantown MN 55811	LST REM SITE

Item ID:	187095-AREA0000000001	**Unpermitted Dump?:**	
Project ID:	LS0011105	**State Reg:**	
Project Type:	Leak Site	**Federal Reg:**	Yes
Project ID (RAP):		**Fed State Reg:**	
Project Type (RAP):		**Non Reg:**	
Site Status:	Closed	**NPL:**	
Perm List of Prio?:		**Site County:**	St. Louis
Petrol Brownfield?:		**County (RAP):**	
VIC Site?:		**Latitude:**	46.83542574
Sf Voluntary:		**Longitude:**	-92.20998523
Inst Controls?:		**Latitude (RAP):**	
SEMS?:		**Longitude (RAP):**	
Project Name:	Kolar Garage		
Project Managers:	Steve Leppala (no longer at MPCA)		
Site Address 1:	5020 Miller Trunk Highway		
Site Address 2:			
Site City:	Hermantown		
Site State:	MN		
Site ZIP:	55811		
Project Name(RAP):			
Address1 (RAP):			
Address2 (RAP):			
City (RAP):			
State (RAP):			
ZIP (RAP):			
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

Activity ID:	187095	**Object ID:**	26429
SI ID:	1	**Cong Dist:**	8
Si Cat:	AREA	**House Dist:**	3B
SI Type:	LEAK	**Senate Dis:**	3
Site Type:	CON	**HUC 8:**	04010201
Acreage:		**HUC 10:**	0401020116
HRS Score:		**HUC 12:**	040102011604
Score Year:		**Gdb Geomattr Data:**	
DWSMA Code:		**MNTBA:**	
AI Name:	Xtreme Auto Inc		
DWSMA Name:			
Hydrologists:	Jonathan Smith (no longer at MPCA)		
Huc 8 Name:	St. Louis River		
Huc12 Name:	Saint Louis River		
Method Desc:	Digitized - MPCA internal map		
Loc Desc:			
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/187095		

Spatial Remediation Activity

AI ID:	187095	**Object ID:**	23551
Site ID:	LS0011105	**Remedy Imp:**	
SI ID:	1	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	
Site Start:	1998-02-20 00:00:00	**NPL List:**	
Site Close:	1998-10-14 00:00:00	**NPL Delete:**	
Leak Discovered:	1998-02-20 00:00:00	**PLP List:**	
Leak Reported:	1998-02-20 00:00:00	**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	
Activity No:	1	**FF Aproved:**	
Activity ID:	SIW19980001	**FF Closed:**	
Activity Type:	Leak Site Investigation	**Inv Comple:**	
Activity Code:	SIW	**App Comple:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
Activity Year: 1998				**Er Site Ev:**		
Discovered:						

39	**4 of5**	**SE**	**0.28 / 1,504.51**	**1,422.42 / 12**	**Xtreme Auto Inc** **5020 Miller Trunk Highway** **Hermantown MN 55811**	**MPCA AI**

Agency Interest ID:	187095
Name (Map):	Xtreme Auto Inc
Address (Map):	5020 Miller Trunk Highway
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8354344
Longitude (Map):	-92.2099851
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Xtreme Auto Inc
Address (Site):	5020 Miller Trunk Highway
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8354344
Longitude (Site):	-92.2099851
County (Site):	St. Louis
Name (Req):	Xtreme Auto Inc
Address (Req):	5020 Miller Trunk Highway
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8354344
Longitude (Req):	-92.2099851
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	187095-AISI0000187095	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	PetroleumRemediation	**SI ID:**	187095
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	4/25/2016	**TRDSQQ:**	
Tmsp Created:	11/30/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R2	**Ref Desc:**	General Location
Tmsp Updt:	1/29/2020	**Verified:**	No
Spatial ID:	51833654	**User Updt:**	smuelle

Name:	Xtreme Auto Inc
Program List:	PR
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	DM

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Method Desc: Digitized - MPCA internal map

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	LS0011105	**Cong Distr:**	8
Program Co:	SR	**Senate Dis:**	3
Program Name:	Investigation and Cleanup	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	DM
City:	Hermantown	**Latitude:**	46.8354344
County:	St. Louis	**Longitude:**	-92.2099851

Activity: Petroleum Remediation, Leak Site
Addr St: 5020 Miller Trunk Highway
Addr City: Hermantown
MPCA ID List: LS0011105
Program 1: Investigation and Cleanup
Name: Xtreme Auto Inc
Watershed : St. Louis River
Coord Co 1: Digitized - MPCA internal map
Activity L: Petroleum Remediation, Leak Site
Industrial: Used Car Dealers ; General Automotive Repair
Site URL: https://webapp.pca.state.mn.us/wimn/site/187095

Agency Interests: File Request Details

Item ID:	187095-AISI0000187095	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	PetroleumRemediation	**SI ID:**	187095
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	4/25/2016	**Ref Code:**	GEN
Tmsp Created:	11/30/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R2	**Verified:**	No
Tmsp Updt:	1/29/2020	**User Updt:**	smuelle
Spatial ID:	51833654		

Name: Xtreme Auto Inc
Program List: PR
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: DM
Method Desc: Digitized - MPCA internal map

39	***5 of5***	***SE***	***0.28 / 1,504.51***	***1,422.42 / 12***	***Skyline Motors Inc 5020 Miller Trunk Hwy Duluth MN 55811***	***MPCA AI***

Agency Interest ID: 28078
Name (Map): Skyline Motors Inc
Address (Map): 5020 Miller Trunk Hwy
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811

Latitude (Map):	46.8359309
Longitude (Map):	-92.2097116
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Skyline Motors Inc
Address (Site):	5020 Miller Trunk Hwy
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811-1490
Latitude (Site):	46.8359309
Longitude (Site):	-92.2097116
County (Site):	St. Louis
Name (Req):	Skyline Motors Inc
Address (Req):	5020 Miller Trunk Hwy
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8359309
Longitude (Req):	-92.2097116
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	28078-AISI0000028078	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	1999-07-27 18:24:16	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	28078
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	4/7/2016	**TRDSQQ:**	
Tmsp Created:	7/26/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	18279	**User Updt:**	spatial_
Name:	Skyline Motors Inc		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	148179435	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	3
Program Name:	Hazardous Waste	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-1490	**Coord Coll:**	A1
City:	Hermantown	**Latitude:**	46.8359309
County:	St. Louis	**Longitude:**	-92.2097116
Activity:	Hazardous Waste		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Addr St:	5020 Miller Trunk Hwy
Addr City:	Duluth
MPCA ID List:	148179435
Program 1:	Hazardous Waste
Name:	Skyline Motors Inc
Watershed :	St. Louis River
Coord Co 1:	Address Matching House Number
Activity L:	Hazardous Waste
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/28078

Agency Interests: File Request Details

Item ID:	28078-AISI0000028078	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	7/27/1999	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	28078
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	4/7/2016	**Ref Code:**	GEN
Tmsp Created:	7/26/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	18279		

Name:	Skyline Motors Inc
Program List:	HW
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	A1
Method Desc:	Address Matching House Number

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
40	1 of1	WSW	0.29 / 1,526.54	1,420.12 / 10	Dennis Eckstrom Fill Site - Hermantown See location description Hermantown MN 55811	MPCA AI

Agency Interest ID:	119629
Name (Map):	Dennis Eckstrom Fill Site - Hermantown
Address (Map):	See location description
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8374
Longitude (Map):	-92.2247
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Dennis Eckstrom Fill Site - Hermantown
Address (Site):	See location description
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8374
Longitude (Site):	-92.2247
County (Site):	St. Louis

Name (Req):	Dennis Eckstrom Fill Site - Hermantown
Address (Req):	See location description
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8374
Longitude (Req):	-92.2247
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	119629-AISI0000119629	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	119629
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	9/4/2009	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	56528726	**User Updt:**	spatial_

Name:	Dennis Eckstrom Fill Site - Hermantown
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	G8
Method Desc:	GPS - Other

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00028603	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	G8
City:	Hermantown	**Latitude:**	46.8374
County:	St. Louis	**Longitude:**	-92.2247

Activity:	Construction Stormwater
Addr St:	See location description
Addr City:	Hermantown
MPCA ID List:	C00028603
Program 1:	Stormwater
Name:	Dennis Eckstrom Fill Site - Hermantown
Watershed :	St. Louis River
Coord Co 1:	GPS - Other
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/119629

Agency Interests: File Request Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Item ID:	119629-AISI0000119629	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	119629
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	9/4/2009	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	56528726		

Name:	Dennis Eckstrom Fill Site - Hermantown
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	G8
Method Desc:	GPS - Other

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
41	1 of1	S	0.29 / 1,526.68	1,428.93 / 18	Bulldog Collision 5082 Miller Trunk Hwy Hermantown MN 55811	MPCA AI

Agency Interest ID:	29945
Name (Map):	Bulldog Collision
Address (Map):	5082 Miller Trunk Hwy
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83651034
Longitude (Map):	-92.21532919
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Bulldog Collision
Address (Site):	5082 Miller Trunk Hwy
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811-1490
Latitude (Site):	46.83651034
Longitude (Site):	-92.21532919
County (Site):	St. Louis
Name (Req):	Bulldog Collision
Address (Req):	5082 Miller Trunk Hwy
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83651034
Longitude (Req):	-92.21532919
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	29945-AISI0000029945	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Hazardous Waste	***SI ID:***	29945
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:	050	***Description:***	
Range :	15	***SI Designation:***	
Range Dir:	W	***Cong Dist:***	8
Section:	11	***House Dist:***	3B
Quarters:	bb	***Senate Dist:***	3
Collection Date:	7/29/2025	***TRDSQQ:***	05015211bb
Tmsp Created:	7/26/1999	***Ref Code:***	ENT
User Created:	DELTA_M_R1	***Ref Desc:***	Primary Entrance
Tmsp Updt:	7/29/2025	***Verified:***	No
Spatial ID:	20037	***User Updt:***	geo_nc
Name:	Bulldog Collision		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020114		
HUC 12:	040102011401		
HUC 12 Name:	Upper Midway River		
DWSMA Code:			
DWSMA Name:			
Method Code:	DP		
Method Desc:	Digitized - MPCA online map		

My Neighborhood Site Details

Active FLA:	Yes	***HUC 8:***	04010201
MPCA ID:	MNR000004150	***Cong Distr:***	8
Program Co:	HW	***Senate Dis:***	3
Program Name:	Hazardous Waste	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811-1490	***Coord Coll:***	DP
City:	Hermantown	***Latitude:***	46.83651034
County:	St. Louis	***Longitude:***	-92.21532919
Activity:	Hazardous Waste, Minimal quantity generator		
Addr St:	5082 Miller Trunk Hwy		
Addr City:	Hermantown		
MPCA ID List:	MNR000004150		
Program 1:	Hazardous Waste		
Name:	Bulldog Collision		
Watershed :	St. Louis River		
Coord Co 1:	Digitized - MPCA online map		
Activity L:	Hazardous Waste, Minimal quantity generator		
Industrial:	Automotive Body, Paint, and Interior Repair and Maintenance		
Site URL:	https://webapp.pca.state.mn.us/wimn/site/29945		

Agency Interests: File Request Details

Item ID:	29945-AISI0000029945	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Hazardous Waste	***SI ID:***	29945
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:	50	***SI Designation:***	
Range :	15	***Cong Dist:***	8
Range Dir:	W	***House Dist:***	3B
Section:	11	***Senate Dist:***	3
Quarters:	bb	***TRDSQQ:***	05015211bb
Collection Date:	7/29/2025	***Ref Code:***	ENT

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Tmsp Created:	7/26/1999	**Ref Desc:**	Primary Entrance
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	7/29/2025	**User Updt:**	geo_nc
Spatial ID:	20037		
Name:	Bulldog Collision		
Program List:	HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020114		
HUC 10 Name:	Midway River		
HUC 12:	40102011401		
HUC 12 Name:	Upper Midway River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	DP		
Method Desc:	Digitized - MPCA online map		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
42	1 of3	SW	0.29 / 1,529.42	1,424.03 / 13	Hermantown Federal Credit Union 5116 Miller Trunk Highway Hermantown MN 55811	HIST LEAKSITES

Prog Int ID:	219198	**Address Source:**	CORE
Site ID:	243411	**Township Name:**	Whiteface Reservoir
State County Code:	69	**County Name:**	St. Louis
Country:	USA	**Lat/Long ID:**	131092
Interest Type Cd:	LS	**Interest Type Dsc:**	Leak Site
ADDR ID:	277765	**Lat Degrees:**	46
Tank Site:	6562	**Lat Minutes:**	49
Interest Phone:	NO CORE PI PH.	**Lat Seconds:**	54.87
Interest Start Dt:	08/14/1996 00:00:00	**Long Degrees:**	-92
Interest End Dt:	11/17/2006 07:35:56	**Long Minutes:**	12
Active?:	No	**Long Seconds:**	9
Timestamp Added:	11/17/2006 07:35:56	**Lat/Long Source:**	CORE
Timestamp Updt:	11/10/2014 08:17:06	**Lat/Long Site ID:**	243411
Staff ID Updt:	RGAGLE	**Lat/Long Spatial ID:**	51754135
Source:	CORE	**Collection Date:**	03/30/2010 19:00:17
Coord Src Type:		**Map Scale Code:**	
Coord Src Desc:		**Org Name Source:**	
Foreign State:		**Foreign Zone:**	
FIPS County Cd1:	137		
Addr Timestmp Add:	11/17/2006 07:35:37		
Addr Timestamp Lst Updt:	11/04/2008 21:13:54		
Addr Updater Staff ID:	SYSTEM		
Lat/Long Timestamp Added:	11/17/2006 07:36:06		
Lat/Long Tmstmp Last Upd:	03/30/2010 19:28:39		
Lat/Long Updater Staff ID:	MAPT_NC		
Lat/Long Desc:			
Coord Coll Method Desc:	Address Matching House Number		
Coord Coll Method Code:	A1		
Comments:			

Leak Site

Complete Site Closure Date:	08/17/1994 00:00:00
Cond Closure Date:	
Release Discovered Date:	07/14/1993 00:00:00
Leaksite Type Code:	1
Leaksite Type Desc:	Leak Site
Leak Report Date:	07/15/1993 00:00:00
Tank Reg Status Code:	U
TMSP Added:	12/04/1999 14:03:48
TMSP Last Updt:	05/04/2002 09:22:04
CU Yds Excavated Qty:	200
ENF Action Begin Date:	07/27/1993 00:00:00
Residence Type Code:	
File Archive Box:	08

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

File Archive Lot:	97/11
Soil Digout Date:	07/15/1993 00:00:00
Staff ID Last Updt:	TANKS
Std Letter Response Date:	
VPIC Acres:	
VPIC Application Date:	
Contam Soils Remaining Flag:	Y
Indoor Air Collected Flag:	
LUST Trust Eligible Flag:	No
Offsite Contam Flag:	U
REIMB Awarded Flag:	No
Release From AST Flag:	No
Release From UST Flag:	No
Soil Gas Action Level Flag:	
Soil Gas Data Collected Flag:	
Sub Slab Sample Collected Flag:	
Surface Water Impact Flag:	U
Utility Project Flag:	No
Vapor Intrusion Action Flag:	
Vapor Intrusion Checked Flag:	
Leaksite Type Defn:	Leak site (tank and petroleum contamination).
Soil Gas Data Comments:	
Vapor Intrusion Comments:	

Leak Product Rls

Product Rls Seq ID:	321605
Leak Product Desc:	Fuel Oil 1 & 2
Leak Product Defn:	The product is fuel oil 1 & 2.

Leak GW Info

Well Type Code:	
Affected Non Res Props:	
Affected Residential Props:	
Staff ID Last Updt:	RSUCHAN
Staff ID Wellhead Area Assess:	
TMSP Added:	12/04/1999 14:07:31
TMSP Last Updt:	11/04/2003 12:57:07
Water Supply Exceeds Ral Flag:	
Cleanup Goal Achieved Flag:	
DW Supply Contam Flag:	
Free Product at Close Flag:	
Free Product Observed Flag:	N
Free Product Thickness:	
Ground Water Contam Flag:	N
GW Cleanup Goal:	0
GW Exceeds Cleanup Goal Flag:	
Impacted Aquifer Code:	
MTBE High Level Date:	
MTBE High Ug Per Liter Char:	
MTBE High Ug Per Liter Numb:	
MTBE Present Historically Flag:	
MTBE Present Now Flag:	
Protected Area Flag:	
PWS Well Impacted Flag:	
Sensitive Area Flag:	

42	**2 of3**	**SW**	**0.29 / 1,529.42**	**1,424.03 / 13**	**Hermantown Federal Credit Union** **5116 Miller Trunk Highway** **Hermantown MN 55811**	**LST** **REM SITE**

Item ID: 188163-AREA0000000001 **Unpermitted Dump?:**

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Project ID:	LS0006562	**State Reg:**	
Project Type:	Leak Site	**Federal Reg:**	
Project ID (RAP):		**Fed State Reg:**	
Project Type (RAP):		**Non Reg:**	
Site Status:	Closed	**NPL:**	
Perm List of Prio?:		**Site County:**	St. Louis
Petrol Brownfield?:		**County (RAP):**	
VIC Site?:		**Latitude:**	46.8364892
Sf Voluntary:		**Longitude:**	-92.21908499
Inst Controls?:		**Latitude (RAP):**	
SEMS?:		**Longitude (RAP):**	
Project Name:	Hermantown Federal Credit Union		
Project Managers:	Dawn Duncanson-Davison (no longer at MPCA)		
Site Address 1:	5116 Miller Trunk Highway		
Site Address 2:			
Site City:	Hermantown		
Site State:	MN		
Site ZIP:	55811		
Project Name(RAP):			
Address1 (RAP):			
Address2 (RAP):			
City (RAP):			
State (RAP):			
ZIP (RAP):			
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

Activity ID:	188163	**Object ID:**	23269
SI ID:	1	**Cong Dist:**	8
Si Cat:	AREA	**House Dist:**	3B
SI Type:	LEAK	**Senate Dis:**	3
Site Type:	CON	**HUC 8:**	04010201
Acreage:		**HUC 10:**	0401020114
HRS Score:		**HUC 12:**	040102011401
Score Year:		**Gdb Geomattr Data:**	
DWSMA Code:		**MNTBA:**	
AI Name:	Hermantown Federal Credit Union		
DWSMA Name:			
Hydrologists:			
Huc 8 Name:	St. Louis River		
Huc12 Name:	Upper Midway River		
Method Desc:	Address Matching House Number		
Loc Desc:			
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/188163		

Spatial Remediation Activity

AI ID:	188163	**Object ID:**	24780
Site ID:	LS0006562	**Remedy Imp:**	
SI ID:	1	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	
Site Start:	1993-07-15 00:00:00	**NPL List:**	
Site Close:	1994-08-17 00:00:00	**NPL Delete:**	
Leak Discovered:	1993-07-14 00:00:00	**PLP List:**	
Leak Reported:	1993-07-15 00:00:00	**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	
Activity No:	1	**FF Aproved:**	
Activity ID:	SIW19930001	**FF Closed:**	
Activity Type:	Leak Site Investigation	**Inv Comple:**	
Activity Code:	SIW	**App Comple:**	
Activity Year:	1993	**Er Site Ev:**	
Discovered:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
42	3 of3	SW	0.29 / 1,529.42	1,424.03 / 13	Hermantown Federal Credit Union 5116 Miller Trunk Highway Hermantown MN 55811	MPCA AI

Agency Interest ID:	188163
Name (Map):	Hermantown Federal Credit Union
Address (Map):	5116 Miller Trunk Highway
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8319097
Longitude (Map):	-92.2025
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Hermantown Federal Credit Union
Address (Site):	5116 Miller Trunk Highway
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8319097
Longitude (Site):	-92.2025
County (Site):	St. Louis
Name (Req):	Hermantown Federal Credit Union
Address (Req):	5116 Miller Trunk Highway
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8319097
Longitude (Req):	-92.2025
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	188163-AISI0000188163	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	PetroleumRemediation	**SI ID:**	188163
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	4/25/2016	**TRDSQQ:**	
Tmsp Created:	11/17/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R2	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	51754134	**User Updt:**	spatial_
Name:	Hermantown Federal Credit Union		
Program List:	PR		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	LS0006562	**Cong Distr:**	8
Program Co:	SR	**Senate Dis:**	3
Program Name:	Investigation and Cleanup	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Hermantown	**Latitude:**	46.8319097
County:	St. Louis	**Longitude:**	-92.2025
Activity:	Petroleum Remediation, Leak Site		
Addr St:	5116 Miller Trunk Highway		
Addr City:	Hermantown		
MPCA ID List:	LS0006562		
Program 1:	Investigation and Cleanup		
Name:	Hermantown Federal Credit Union		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Petroleum Remediation, Leak Site		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/188163		

Agency Interests: File Request Details

Item ID:	188163-AISI0000188163	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	PetroleumRemediation	**SI ID:**	188163
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	4/25/2016	**Ref Code:**	GEN
Tmsp Created:	11/17/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R2	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	51754134		
Name:	Hermantown Federal Credit Union		
Program List:	PR		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

43	**1 of2**	**SE**	**0.29 / 1,547.22**	**1,420.27 / 10**	**Miller Trunk Auto Inc 5014 Miller Trunk Highway Hermantown MN 55811**	**MPCA AI**

Agency Interest ID:	2208
Name (Map):	Miller Trunk Auto Inc
Address (Map):	5014 Miller Trunk Highway
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8349515
Longitude (Map):	-92.2091975
County (Map):	St. Louis
County Code (Map):	137

Loc Desc (Map):	CSLL: Site along road used for address match *** Note:many records provided by the department have a truncated LOC_DESC field.
Name (Site):	Miller Trunk Auto Inc
Address (Site):	5014 Miller Trunk Highway
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8349515
Longitude (Site):	-92.2091975
County (Site):	St. Louis
Name (Req):	Miller Trunk Auto Inc
Address (Req):	5014 Miller Trunk Highway
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	CSLL: Site along road used for address match
Latitude (Req):	46.8349515
Longitude (Req):	-92.2091975
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	2208-AISI0000002208	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Multiple Programs	***SI ID:***	2208
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	9/27/2015	***TRDSQQ:***	
Tmsp Created:	6/11/1996	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	4/26/2016	***Verified:***	Yes
Spatial ID:	2546	***User Updt:***	spatial_
Name:	Miller Trunk Auto Inc		
Program List:	AQ, HW, SA, SF		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

My Neighborhood Site Details

Active FLA:	Yes	***HUC 8:***	04010201
MPCA ID:	Multiple IDs	***Cong Distr:***	8
Program Co:	AQ; HW; SR	***Senate Dis:***	3
Program Name:	Multiple Programs	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	DM
City:	Hermantown	***Latitude:***	46.8349515
County:	St. Louis	***Longitude:***	-92.2091975
Activity:	Multiple Activities		
Addr St:	5014 Miller Trunk Highway		
Addr City:	Hermantown		
MPCA ID List:	13700271; MND985713015; SA0000116; SR0000310		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program 1: Air Quality; Hazardous Waste; Investigation and Cleanup
Name: Miller Trunk Auto Inc
Watershed : St. Louis River
Coord Co 1: Digitized - MPCA internal map
Activity L: Air Quality; Hazardous Waste; Site Assessment; Superfund, Superfund Program Non-listed Sites
Industrial: Automotive Body, Paint, and Interior Repair and Maintenance
Site URL: https://webapp.pca.state.mn.us/wimn/site/2208

Agency Interests: File Request Details

Item ID:	2208-AISI0000002208	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	2208
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	6/11/1996	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	Yes
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	2546		

Name: Miller Trunk Auto Inc
Program List: AQ, HW, SA, SF
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: DM
Method Desc: Digitized - MPCA internal map

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
43	2 of2	SE	0.29 / 1,547.22	1,420.27 / 10	**BULLYAN HOMES (SF)** **5014 Miller Trunk Highway** **Hermantown MN 55811**	SHWS

Item ID:	2208-AREA0000000002	**Project Name:**	BULLYAN HOMES (SF)
Project ID:	SR0000310	**Project Type:**	Superfund Site
NPL:		**Latitude:**	46.83527641
PermList of Prior?:		**Longitude:**	-92.20856034
Petrol Brownfield?:		**SEMS?:**	
VIC Site?:		**Unpermitted Dump?:**	
Federal Reg:		**Fed State Reg:**	
State Reg:		**Non Reg:**	
Sf Voluntary:		**Inst Controls?:**	
Project Name(RAP):		**Address1 (RAP):**	
Project Type (RAP):		**Address2(RAP):**	
Latitude (RAP):		**City (RAP):**	
Longitude (RAP):		**State (RAP):**	
Project ID (RAP):		**Zip (RAP):**	
Site Status:	Closed	**County (RAP):**	

Data Source: MPCA Remediation Sites
Site Address 1: 5014 Miller Trunk Highway
Site Address 2:
Site City: Hermantown
Site State: MN
Site Zip: 55811
Site County: St. Louis
Project Managers: Edward Olson (no longer at MPCA)

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Remediation Sites Details

Activity ID:	2208	***SI Cat:***	AREA
SI ID:	2	***AI Name:***	Miller Trunk Auto Inc
SI Type:	SUPE	***Site Type:***	CON
Acreage:		***Cong Dist:***	8
House Dist:	3B	***Senate Dis:***	3
DWSMA Code:		***Method Des:***	Address Matching House Number
DWSMA Name:		***HUC 8:***	04010201
HRS Score:		***HUC 10:***	0401020116
Score Year:		***HUC 12:***	040102011604
MNTBA:			
Loc Desc:			
Huc8 Name:	St. Louis River		
Huc12 Name:	Saint Louis River		
Hydrologis:	Edward Olson (no longer at MPCA)		
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/2208		

Spatial Remediation Activity

AI ID:	2208	***Discovered:***	
Activity No:	1	***Site Start:***	2013-05-06 00:00:00
Activity ID:	SIW20130001	***Remedy Imp:***	
Site ID:	SR0000310	***Remedy Sel:***	
SI ID:	2	***ASMT Compl:***	
SI Cat:	AREA	***NPL Delete:***	
Activity Code:	SIW	***PLP List:***	
Activity Year:	2013	***PLP Delist:***	
Received:	2013-05-06 00:00:00	***Staff Assi:***	2013-05-06 00:00:00
NPL List:		***FF Aproved:***	
NFA Decisi:		***FF Closed:***	
Site Close:	2013-07-01 00:00:00	***Inv Comple:***	
Leak Discovered:		***App Comple:***	2013-05-06 00:00:00
Leak Reported:		***Er Site Ev:***	
Leak Reopened:			
Activity Type:	Superfund Investigation/Cleanup		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
44	1 of12	SSW	0.29 / 1,555.33	1,428.58 / 18	***Hawks Landing*** ***5106 Miller Trunk Highway*** ***Hermantown MN 55811***	***BROWNFIELDS***

Item ID:	117740-AREA0000000002	***Federal Reg:***	
Project ID:	BF0001657	***Fed State Reg:***	
Project Type:	Brownfield Site	***Non Reg:***	
Project ID (RAP):		***SEMS?:***	
Project Type (RAP):		***NPL:***	
Site Status:	Closed	***Unpermitted Dump?:***	
Perm List of Prior?:		***Latitude:***	46.8361142
Petrol Brownfield?:	Yes	***Longitude:***	-92.21772195
VIC Site?:		***County (RAP):***	
Sf Voluntary:		***Latitude (RAP):***	
Inst Controls?:		***Longitude (RAP):***	
State Reg:			
Project Name:	Hawks Landing		
Site Address 1:	5106 Miller Trunk Highway		
Site Address 2:			
Site City:	Hermantown		
Site State:	MN		
Site Zip:	55811		
Site County:	St. Louis		
Project Name(RAP):			
Address1 (RAP):			
Address2(RAP):			
City (RAP):			
State (RAP):			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Zip (RAP):
Project Managers: Jayme Hammond (former)
Data Source: MPCA Remediation Sites

Remediation Sites Details

Activity ID: 117740
AI Name: Hawk's Landing BP
SI ID: 2
SI Cat: AREA
SI Type: BROW
Site Type: CON
Acreage: 1.31
HRS Score:
Score Year:
MNTBA:
Loc Desc:
HUC 8 Name: St. Louis River
HUC 12 Name: Upper Midway River
Hydrologist: Erik Brenegan (former)
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/117740

DWSMA Name:
Cong Dist: 8
House Dist: 3B
Senate Dis: 3
HUC 8: 04010201
HUC 10: 0401020114
HUC 12: 040102011401
DWSMA Code:
Method Des: Address Matching House Number

Spatial Remediation Activity

AI ID: 117740
Site ID: BF0001657
SI ID: 2
SI Cat: AREA
NFA Decisi:
Site Close: 2021-06-04 00:00:00
Leak Discovered:
Leak Reported:
Leak Reopened:
Activity No: 1
Activity ID: SIW20200001
Activity Type: Brownfield Site
Activity Code: SIW
Activity Year: 2020
Discovered:

Site Start: 2020-09-15 00:00:00
Remedy Imp:
Remedy Sel:
ASMT Compl:
Received:
NPL List:
NPL Delete:
PLP List:
PLP Delist:
Staff Assi: 2020-09-15 00:00:00
FF Aproved:
FF Closed:
Inv Comple:
App Comple: 2020-09-15 00:00:00
Er Site Ev:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
44	2 of12	SSW	0.29 / 1,555.33	1,428.58 / 18	Hawks Landing BP 5106 Miller Trunk Hwy Hermantown MN 55811	BROWNFIELDS

Item ID: 117740-AREA0000000005
Project ID: BF0001800
Project Type: Brownfield Site
Project ID (RAP):
Project Type (RAP):
Site Status: Closed
Perm List of Prior?:
Petrol Brownfield?:
VIC Site?: Yes
Sf Voluntary:
Inst Controls?:
State Reg:
Project Name: Hawks Landing BP
Site Address 1: 5106 Miller Trunk Hwy
Site Address 2:
Site City: Hermantown
Site State: MN
Site Zip: 55811
Site County: St. Louis
Project Name(RAP):
Address1 (RAP):
Address2(RAP):

Federal Reg:
Fed State Reg:
Non Reg:
SEMS?:
NPL:
Unpermitted Dump?:
Latitude: 46.83612169
Longitude: -92.21780367
County (RAP):
Latitude (RAP):
Longitude (RAP):

City (RAP):
State (RAP):
Zip (RAP):
Project Managers: Amy Hadiaris (former), Jayme Hammond (former)
Data Source: MPCA Remediation Sites

Remediation Sites Details

Activity ID: 117740
AI Name: Hawk's Landing BP
SI ID: 5
SI Cat: AREA
SI Type: BROW
Site Type: CON
Acreage: 1.31
HRS Score:
Score Year:
MNTBA:
Loc Desc:
HUC 8 Name: St. Louis River
HUC 12 Name: Upper Midway River
Hydrologist:
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/117740

DWSMA Name:
Cong Dist: 8
House Dist: 3B
Senate Dis: 3
HUC 8: 04010201
HUC 10: 0401020114
HUC 12: 040102011401
DWSMA Code:
Method Des: Digitized - MPCA internal map

Spatial Remediation Activity

AI ID: 117740
Site ID: BF0001800
SI ID: 5
SI Cat: AREA
NFA Decisi:
Site Close: 2021-05-21 00:00:00
Leak Discovered:
Leak Reported:
Leak Reopened:
Activity No: 1
Activity ID: SIW20210001
Activity Type: Brownfield Site
Activity Code: SIW
Activity Year: 2021
Discovered:

Site Start: 2021-03-11 00:00:00
Remedy Imp:
Remedy Sel:
ASMT Compl:
Received:
NPL List:
NPL Delete:
PLP List:
PLP Delist:
Staff Assi: 2021-03-11 00:00:00
FF Aproved:
FF Closed:
Inv Comple:
App Comple: 2021-03-11 00:00:00
Er Site Ev:

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44 | ***3 of12*** | ***SSW*** | ***0.29 / 1,555.33*** | ***1,428.58 / 18*** | ***Midwest Golf Cars
5106 Miller Trunk Hwy
Hermantown MN 55811*** | ***BROWNFIELDS***

Item ID: 117740-AREA0000000006
Project ID: BF0002720
Project Type: Brownfield Site
Project ID (RAP):
Project Type (RAP):
Site Status: Closed
Perm List of Prior?:
Petrol Brownfield?: Yes
VIC Site?:
Sf Voluntary:
Inst Controls?:
State Reg:
Project Name: Midwest Golf Cars
Site Address 1: 5106 Miller Trunk Hwy
Site Address 2:
Site City: Hermantown
Site State: MN
Site Zip: 55811
Site County: St. Louis
Project Name(RAP):

Federal Reg:
Fed State Reg:
Non Reg:
SEMS?:
NPL:
Unpermitted Dump?:
Latitude: 46.83610581
Longitude: -92.21771417
County (RAP):
Latitude (RAP):
Longitude (RAP):

Address1 (RAP):
Address2(RAP):
City (RAP):
State (RAP):
Zip (RAP):
Project Managers: Mark Koplitz (no longer at MPCA)
Data Source: MPCA Remediation Sites

Remediation Sites Details

Activity ID: 117740
AI Name: Hawk's Landing BP
SI ID: 6
SI Cat: AREA
SI Type: BROW
Site Type: CON
Acreage: 1.39
HRS Score:
Score Year:
MNTBA:
Loc Desc:
DWSMA Name:
Cong Dist: 8
House Dist: 3B
Senate Dis: 3
HUC 8: 04010201
HUC 10: 0401020114
HUC 12: 040102011401
DWSMA Code:
Method Des: Address Matching House Number
HUC 8 Name: St. Louis River
HUC 12 Name: Upper Midway River
Hydrologist: Victor Henao (former)
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/117740

Spatial Remediation Activity

AI ID: 117740
Site ID: BF0002720
SI ID: 6
SI Cat: AREA
NFA Decisi:
Site Close: 2024-03-14 00:00:00
Leak Discovered:
Leak Reported:
Leak Reopened:
Activity No: 1
Activity ID: SIW20240001
Activity Type: Brownfield Site
Activity Code: SIW
Activity Year: 2024
Discovered:
Site Start: 2024-02-13 00:00:00
Remedy Imp:
Remedy Sel:
ASMT Compl:
Received:
NPL List:
NPL Delete:
PLP List:
PLP Delist:
Staff Assi: 2024-02-13 00:00:00
FF Aproved:
FF Closed:
Inv Comple:
App Comple: 2024-02-13 00:00:00
Er Site Ev:

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44 | ***4 of12*** | ***SSW*** | ***0.29 / 1,555.33*** | ***1,428.58 / 18*** | ***Midwest Golf Cars 2 5106 Miller Trunk Hwy Hermantown MN 55811*** | ***BROWNFIELDS***

Item ID: 117740-AREA0000000007
Project ID: BF0003155
Project Type: Brownfield Site
Project ID (RAP):
Project Type (RAP):
Site Status: Active / Existing
Perm List of Prior?:
Petrol Brownfield?: Yes
VIC Site?: Yes
Sf Voluntary:
Inst Controls?:
State Reg:
Project Name: Midwest Golf Cars 2
Site Address 1: 5106 Miller Trunk Hwy
Site Address 2:
Site City: Hermantown
Site State: MN
Site Zip: 55811
Federal Reg:
Fed State Reg:
Non Reg:
SEMS?:
NPL:
Unpermitted Dump?:
Latitude: 46.83610581
Longitude: -92.21771418
County (RAP):
Latitude (RAP):
Longitude (RAP):

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Site County: St. Louis
Project Name(RAP):
Address1 (RAP):
Address2(RAP):
City (RAP):
State (RAP):
Zip (RAP):
Project Managers: David Knight (current), Jayme Hammond (former)
Data Source: MPCA Remediation Sites

Remediation Sites Details

Activity ID: 117740
AI Name: Hawk's Landing BP
SI ID: 7
SI Cat: AREA
SI Type: BROW
Site Type: CON
Acreage: 1.39
HRS Score:
Score Year:
MNTBA:
Loc Desc:
HUC 8 Name: St. Louis River
HUC 12 Name: Upper Midway River
Hydrologist:
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/117740

DWSMA Name:
Cong Dist: 8
House Dist: 3B
Senate Dis: 3
HUC 8: 04010201
HUC 10: 0401020114
HUC 12: 040102011401
DWSMA Code:
Method Des: Address Matching House Number

Spatial Remediation Activity

AI ID: 117740
Site ID: BF0003155
SI ID: 7
SI Cat: AREA
NFA Decisi:
Site Close:
Leak Discovered:
Leak Reported:
Leak Reopened:
Activity No: 1
Activity ID: SIW20250001
Activity Type: Brownfield Site
Activity Code: SIW
Activity Year: 2025
Discovered:

Site Start: 2025-10-16 00:00:00
Remedy Imp:
Remedy Sel:
ASMT Compl:
Received:
NPL List:
NPL Delete:
PLP List:
PLP Delist:
Staff Assi: 2025-10-16 00:00:00
FF Aproved:
FF Closed:
Inv Comple:
App Comple: 2025-10-16 00:00:00
Er Site Ev:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
44	5 of12	SSW	0.29 / 1,555.33	1,428.58 / 18	Hawk's Landing BP 5106 Miller Trunk Hwy Hermantown MN	DELISTED LST

Delisted MPCA Remediation Leak Sites

Item ID: 117740-AREA0000000003
Project ID: LS0021370
Project Type: Leak Site
Project Name: Hawk's Landing BP
Site Address 1: 5106 Miller Trunk Hwy
Site Address 2:
Site City: Hermantown
Site State: MN
Site ZIP: 55811
Site Status: Closed
Project ID (RAP):
Project Type (RAP):

Perm List of Prio?:
Petrol Brownfield?:
VIC Site?:
Sf Volunta:
Inst Controls?:
SEMS?:
Unpermitted Dump?:
State Reg:
Federal Re: Yes
Fed State:
Non Reg:
NPL:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Project Name(RAP):		**Site County:**	St. Louis
Address1 (RAP):		**County (RAP):**	
Address2(RAP):		**Latitude (RAP):**	
City (RAP):		**Longitude (RAP):**	
State (RAP):		**Latitude:**	46.83604264
ZIP (RAP):		**Longitude:**	-92.21771431
Project Manager:	Lauralin Kania (former)		
Data Source:	MPCA Remediation Sites		
Original Source:	LSTR		
Record Date:	08-JUN-2022		

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44 | **6 of12** | **SSW** | **0.29 / 1,555.33** | **1,428.58 / 18** | **Spur No 5054**
5106 Miller Trunk Highway
Hermantown MN 55811 | **HIST LUST**

Prog Int ID:	229300	**Address Source:**	CORE
Site ID:	227553	**Township Name:**	Whiteface Reservoir
State County Code:	69	**County Name:**	St. Louis
Country:	USA	**Lat/Long ID:**	165863
Interest Type Cd:	LS	**Interest Type Dsc:**	Leak Site
ADDR ID:	205931	**Lat Degrees:**	46
Tank Site:	13771	**Lat Minutes:**	50
Interest Phone:	NO CORE PI PH.	**Lat Seconds:**	11.34
Interest Start Dt:	11/29/2000 00:00:00	**Long Degrees:**	-92
Interest End Dt:	12/04/2006 08:13:34	**Long Minutes:**	13
Active?:	No	**Long Seconds:**	5.18
Timestamp Added:	12/04/2006 08:13:34	**Lat/Long Source:**	CORE
Timestamp Updt:	11/10/2014 08:17:05	**Lat/Long Site ID:**	227553
Staff ID Updt:	RGAGLE	**Lat/Long Spatial ID:**	51858126
Source:	CORE	**Collection Date:**	03/29/2010 17:52:47
Coord Src Type:		**Map Scale Code:**	
Coord Src Desc:		**Org Name Source:**	
Foreign State:		**Foreign Zone:**	
FIPS County Cd1:	137		

Addr Timestmp Add:	09/13/2006 12:50:20
Addr Timestamp Lst Updt:	11/04/2008 21:13:54
Addr Updater Staff ID:	SYSTEM
Lat/Long Timestamp Added:	03/29/2010 18:44:39
Lat/Long Tmstmp Last Upd:	03/29/2010 18:44:39
Lat/Long Updater Staff ID:	MAPT_NC
Lat/Long Desc:	
Coord Coll Method Desc:	Address Matching House Number
Coord Coll Method Code:	A1
Comments:	

Leak Site

Complete Site Closure Date:	01/23/2003 00:00:00
Cond Closure Date:	
Release Discovered Date:	11/20/2000 00:00:00
Leaksite Type Code:	1
Leaksite Type Desc:	Leak Site
Leak Report Date:	11/20/2000 00:00:00
Tank Reg Status Code:	F
TMSP Added:	11/29/2000 14:15:59
TMSP Last Updt:	03/19/2004 10:50:29
CU Yds Excavated Qty:	
ENF Action Begin Date:	12/08/2000 00:00:00
Residence Type Code:	
File Archive Box:	
File Archive Lot:	
Soil Digout Date:	
Staff ID Last Updt:	SEWERT
Std Letter Response Date:	12/26/2000 00:00:00
VPIC Acres:	
VPIC Application Date:	
Contam Soils Remaining Flag:	Y

Indoor Air Collected Flag:	
LUST Trust Eligible Flag:	Yes
Offsite Contam Flag:	N
REIMB Awarded Flag:	No
Release From AST Flag:	No
Release From UST Flag:	Yes
Soil Gas Action Level Flag:	
Soil Gas Data Collected Flag:	
Sub Slab Sample Collected Flag:	
Surface Water Impact Flag:	N
Utility Project Flag:	No
Vapor Intrusion Action Flag:	
Vapor Intrusion Checked Flag:	
Leaksite Type Defn:	Leak site (tank and petroleum contamination).
Soil Gas Data Comments:	
Vapor Intrusion Comments:	

Leak Product Rls

Product Rls Seq ID:	31412
Leak Product Desc:	Gasoline, Unleaded
Leak Product Defn:	Unleaded Gasoline

Leak GW Info

Well Type Code:	
Affected Non Res Props:	
Affected Residential Props:	
Staff ID Last Updt:	RSUCHAN
Staff ID Wellhead Area Assess:	
TMSP Added:	11/29/2000 14:15:59
TMSP Last Updt:	11/04/2003 12:57:09
Water Supply Exceeds Ral Flag:	
Cleanup Goal Achieved Flag:	
DW Supply Contam Flag:	
Free Product at Close Flag:	
Free Product Observed Flag:	
Free Product Thickness:	
Ground Water Contam Flag:	N
GW Cleanup Goal:	
GW Exceeds Cleanup Goal Flag:	
Impacted Aquifer Code:	
MTBE High Level Date:	
MTBE High Ug Per Liter Char:	
MTBE High Ug Per Liter Numb:	
MTBE Present Historically Flag:	
MTBE Present Now Flag:	
Protected Area Flag:	
PWS Well Impacted Flag:	
Sensitive Area Flag:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
44	7 of12	SSW	0.29 / 1,555.33	1,428.58 / 18	Spur No 5054 5106 Miller Trunk Highway Hermantown MN 55811	LST REM SITE

Item ID:	117740-AREA0000000001	***Unpermitted Dump?:***	
Project ID:	LS0013771	***State Reg:***	
Project Type:	Leak Site	***Federal Reg:***	Yes
Project ID (RAP):		***Fed State Reg:***	
Project Type (RAP):		***Non Reg:***	
Site Status:	Closed	***NPL:***	
Perm List of Prio?:		***Site County:***	St. Louis
Petrol Brownfield?:		***County (RAP):***	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

VIC Site?:		**Latitude:**	46.8361142
Sf Voluntary:		**Longitude:**	-92.21772195
Inst Controls?:		**Latitude (RAP):**	
SEMS?:		**Longitude (RAP):**	
Project Name:	Spur No 5054		
Project Managers:	Sarah Larsen (former)		
Site Address 1:	5106 Miller Trunk Highway		
Site Address 2:			
Site City:	Hermantown		
Site State:	MN		
Site ZIP:	55811		
Project Name(RAP):			
Address1 (RAP):			
Address2 (RAP):			
City (RAP):			
State (RAP):			
ZIP (RAP):			
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

Activity ID:	117740	**Object ID:**	12807
SI ID:	1	**Cong Dist:**	8
Si Cat:	AREA	**House Dist:**	3B
SI Type:	LEAK	**Senate Dis:**	3
Site Type:	CON	**HUC 8:**	04010201
Acreage:		**HUC 10:**	0401020114
HRS Score:		**HUC 12:**	040102011401
Score Year:		**Gdb Geomattr Data:**	
DWSMA Code:		**MNTBA:**	
AI Name:	Hawk's Landing BP		
DWSMA Name:			
Hydrologists:	John Kaehler (no longer at MPCA)		
Huc 8 Name:	St. Louis River		
Huc12 Name:	Upper Midway River		
Method Desc:	Address Matching House Number		
Loc Desc:			
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/117740		

Spatial Remediation Activity

AI ID:	117740	**Object ID:**	18756
Site ID:	LS0013771	**Remedy Imp:**	
SI ID:	1	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	
Site Start:	2000-11-20 00:00:00	**NPL List:**	
Site Close:	2003-01-23 00:00:00	**NPL Delete:**	
Leak Discovered:	2000-11-20 00:00:00	**PLP List:**	
Leak Reported:	2000-11-20 00:00:00	**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	
Activity No:	1	**FF Aproved:**	
Activity ID:	SIW20000001	**FF Closed:**	
Activity Type:	Leak Site Investigation	**Inv Comple:**	
Activity Code:	SIW	**App Comple:**	
Activity Year:	2000	**Er Site Ev:**	
Discovered:			

44	8 of12	SSW	0.29 / 1,555.33	1,428.58 / 18	**Hawk's Landing BP** **5106 Miller Trunk Hwy** **Hermantown MN 55811**	**LST** **REM SITE**

Item ID:	117740-AREA0000000003	**Unpermitted Dump?:**	
Project ID:	LS0021370	**State Reg:**	
Project Type:	Leak Site	**Federal Reg:**	Yes
Project ID (RAP):		**Fed State Reg:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Project Type (RAP):		**Non Reg:**	
Site Status:	Closed	**NPL:**	
Perm List of Prio?:		**Site County:**	St. Louis
Petrol Brownfield?:		**County (RAP):**	
VIC Site?:		**Latitude:**	46.83604264
Sf Voluntary:		**Longitude:**	-92.21771431
Inst Controls?:		**Latitude (RAP):**	
SEMS?:		**Longitude (RAP):**	
Project Name:	Hawk's Landing BP		
Project Managers:	Lauralin Kania (former)		
Site Address 1:	5106 Miller Trunk Hwy		
Site Address 2:			
Site City:	Hermantown		
Site State:	MN		
Site ZIP:	55811		
Project Name(RAP):			
Address1 (RAP):			
Address2 (RAP):			
City (RAP):			
State (RAP):			
ZIP (RAP):			
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

Activity ID:	117740	**Object ID:**	33242
SI ID:	3	**Cong Dist:**	8
Si Cat:	AREA	**House Dist:**	3B
SI Type:	LEAK	**Senate Dis:**	3
Site Type:	CON	**HUC 8:**	04010201
Acreage:		**HUC 10:**	0401020114
HRS Score:		**HUC 12:**	040102011401
Score Year:		**Gdb Geomattr Data:**	
DWSMA Code:		**MNTBA:**	
AI Name:	Hawk's Landing BP		
DWSMA Name:			
Hydrologists:	Matthew Kadilak (no longer at MPCA)		
Huc 8 Name:	St. Louis River		
Huc12 Name:	Upper Midway River		
Method Desc:	Digitized - MPCA internal map		
Loc Desc:			
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/117740		

Spatial Remediation Activity

AI ID:	117740	**Object ID:**	18761
Site ID:	LS0021370	**Remedy Imp:**	
SI ID:	3	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	
Site Start:	2020-08-14 00:00:00	**NPL List:**	
Site Close:	2022-04-21 00:00:00	**NPL Delete:**	
Leak Discovered:	2020-08-14 00:00:00	**PLP List:**	
Leak Reported:	2020-08-14 00:00:00	**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	
Activity No:	2	**FF Aproved:**	
Activity ID:	SIW20200002	**FF Closed:**	
Activity Type:	Leak Site Investigation	**Inv Comple:**	
Activity Code:	SIW	**App Comple:**	
Activity Year:	2020	**Er Site Ev:**	
Discovered:			

44	**9 of12**	**SSW**	**0.29 / 1,555.33**	**1,428.58 / 18**	**Hawk's Landing BP 5106 Miller Trunk Hwy Hermantown MN 55811**	**MPCA AI**

Agency Interest ID:	117740
Name (Map):	Hawk's Landing BP
Address (Map):	5106 Miller Trunk Hwy
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83604347
Longitude (Map):	-92.21771774
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Hawk's Landing BP
Address (Site):	5106 Miller Trunk Hwy
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811-1241
Latitude (Site):	46.83604347
Longitude (Site):	-92.21771774
County (Site):	St. Louis
Name (Req):	Hawk's Landing BP
Address (Req):	5106 Miller Trunk Hwy
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83604347
Longitude (Req):	-92.21771774
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	117740-AISI0000117740	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Multiple Programs	***SI ID:***	117740
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	5/3/2022	***TRDSQQ:***	
Tmsp Created:	9/13/2006	***Ref Code:***	CEN
User Created:	DELTA_M_R1	***Ref Desc:***	Center of Feature Represented
Tmsp Updt:	10/16/2025	***Verified:***	Yes
Spatial ID:	51428724	***User Updt:***	smotton
Name:	Hawk's Landing BP		
Program List:	BV, PR, SA, UT		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020114		
HUC 12:	040102011401		
HUC 12 Name:	Upper Midway River		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

My Neighborhood Site Details

Active FLA:	Yes	***HUC 8:***	04010201
MPCA ID:	Multiple IDs	***Cong Distr:***	8
Program Co:	SR; TL	***Senate Dis:***	3

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program Name:	Multiple Programs	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-1241	**Coord Coll:**	DM
City:	Hermantown	**Latitude:**	46.83604347
County:	St. Louis	**Longitude:**	-92.21771774
Activity:	Multiple Activities		
Addr St:	5106 Miller Trunk Hwy		
Addr City:	Hermantown		
MPCA ID List:	BF0001657; BF0001800; BF0002720; BF0003155; LS0013771; LS0021370; SA0000749; TS0020406		
Program 1:	Investigation and Cleanup; Tanks		
Name:	Hawk's Landing BP		
Watershed :	St. Louis River		
Coord Co 1:	Digitized - MPCA internal map		
Activity L:	Brownfields, Petroleum Brownfield; Brownfields, Petroleum Brownfield and Voluntary Investigation and Cleanup; Brownfields, Voluntary Investigation and Cleanup; Petroleum Remediation, Leak Site; Site Assessment; Underground Tanks		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/117740		

Agency Interests: File Request Details

Item ID:	117740-AISI0000117740	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	117740
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	5/3/2022	**Ref Code:**	CEN
Tmsp Created:	9/13/2006	**Ref Desc:**	Center of Feature Represented
User Created:	DELTA_M_R1	**Verified:**	Yes
Tmsp Updt:	10/16/2025	**User Updt:**	smotton
Spatial ID:	51428724		
Name:	Hawk's Landing BP		
Program List:	BV, PR, SA, UT		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020114		
HUC 10 Name:	Midway River		
HUC 12:	40102011401		
HUC 12 Name:	Upper Midway River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
44	10 of12	SSW	0.29 / 1,555.33	1,428.58 / 18	Hermantown Service Ctr 5106 Miller Trunk Highway Duluth MN 55811	MPCA AI

Agency Interest ID:	13302
Name (Map):	Hermantown Service Ctr
Address (Map):	5106 Miller Trunk Highway
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.836523
Longitude (Map):	-92.2179035
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Hermantown Service Ctr

Address (Site):	5106 Miller Trunk Highway
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811-1241
Latitude (Site):	46.836523
Longitude (Site):	-92.2179035
County (Site):	St. Louis
Name (Req):	Hermantown Service Ctr
Address (Req):	5106 Miller Trunk Highway
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.836523
Longitude (Req):	-92.2179035
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	13302-AISI0000013302	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	1999-07-27 18:24:16	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	13302
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	7/26/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	19485	**User Updt:**	spatial_
Name:	Hermantown Service Ctr		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020114		
HUC 12:	040102011401		
HUC 12 Name:	Upper Midway River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	MND985682384	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	3
Program Name:	Hazardous Waste	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-1241	**Coord Coll:**	A1
City:	Hermantown	**Latitude:**	46.836523
County:	St. Louis	**Longitude:**	-92.2179035
Activity:	Hazardous Waste		
Addr St:	5106 Miller Trunk Highway		
Addr City:	Duluth		
MPCA ID List:	MND985682384		
Program 1:	Hazardous Waste		
Name:	Hermantown Service Ctr		
Watershed :	St. Louis River		

Coord Co 1: Address Matching House Number
Activity L: Hazardous Waste
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/13302

Agency Interests: File Request Details

Item ID:	13302-AISI0000013302	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	7/27/1999	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	13302
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	7/26/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	19485		

Name: Hermantown Service Ctr
Program List: HW
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020114
HUC 10 Name: Midway River
HUC 12: 40102011401
HUC 12 Name: Upper Midway River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

44	11 of12	SSW	0.29 / 1,555.33	1,428.58 / 18	**Hawks Landing BP** **5106 Miller Trunk Hwy** **Hermantown MN 55811**	VIC

Item ID:	117740-AREA0000000005	**Unpermitted Dump?:**	
Project ID:	BF0001800	**State Reg:**	
Project Type:	Brownfield Site	**Federal Reg:**	
Project ID (RAP):		**Fed State Reg:**	
Project Type (RAP):		**Non Reg:**	
Site Status:	Closed	**NPL:**	
Perm List of Prio?:		**Site County:**	St. Louis
Petrol Brownfield?:		**County (RAP):**	
VIC Site?:	Yes	**Latitude:**	46.83612169
Sf Voluntary:		**Longitude:**	-92.21780367
Inst Controls?:		**Latitude (RAP):**	
SEMS?:		**Longitude (RAP):**	

Project Name: Hawks Landing BP
Project Managers: Amy Hadiaris (former), Jayme Hammond (former)
Site Address 1: 5106 Miller Trunk Hwy
Site Address 2:
Site City: Hermantown
Site State: MN
Site Zip: 55811
Project Name(RAP):
Address1 (RAP):
Address2(RAP):
City (RAP):
State (RAP):
Zip (RAP):
Data Source: MPCA Remediation Sites

Remediation Sites Details

Activity ID:	117740	***Object ID:***	33461
SI ID:	5	***Cong Dist:***	8
SI Cat:	AREA	***House Dist:***	3B
SI Type:	BROW	***Senate Dis:***	3
Site Type:	CON	***HUC 8:***	04010201
Acreage:	1.31	***HUC 10:***	0401020114
HRS Score:		***HUC 12:***	040102011401
Score Year:		***Gdb Geomattr Data:***	
DWSMA Code:		***MNTBA:***	
AI Name:	Hawk's Landing BP		
Hydrologists:			
DWSMA Name:			
HUC 8 Name:	St. Louis River		
HUC 12 Name:	Upper Midway River		
Method Desc:	Digitized - MPCA internal map		
Loc Desc:			
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/117740		

Spatial Remediation Activity

AI ID:	117740	***Object ID:***	18758
Site ID:	BF0001800	***Remedy Imp:***	
SI ID:	5	***Remedy Sel:***	
SI Cat:	AREA	***ASMT Compl:***	
NFA Decisi:		***Received:***	
Site Start:	2021-03-11 00:00:00	***NPL List:***	
Site Close:	2021-05-21 00:00:00	***NPL Delete:***	
Leak Discovered:		***PLP List:***	
Leak Reported:		***PLP Delist:***	
Leak Reopened:		***Staff Assi:***	2021-03-11 00:00:00
Activity No:	1	***FF Aproved:***	
Activity ID:	SIW20210001	***FF Closed:***	
Activity Type:	Brownfield Site	***Inv Comple:***	
Activity Code:	SIW	***App Comple:***	2021-03-11 00:00:00
Activity Year:	2021	***Er Site Ev:***	
Discovered:			

44	12 of12	SSW	0.29 / 1,555.33	1,428.58 / 18	Midwest Golf Cars 2 5106 Miller Trunk Hwy Hermantown MN 55811	VIC

Item ID:	117740-AREA0000000007	***Unpermitted Dump?:***	
Project ID:	BF0003155	***State Reg:***	
Project Type:	Brownfield Site	***Federal Reg:***	
Project ID (RAP):		***Fed State Reg:***	
Project Type (RAP):		***Non Reg:***	
Site Status:	Active / Existing	***NPL:***	
Perm List of Prio?:		***Site County:***	St. Louis
Petrol Brownfield?:	Yes	***County (RAP):***	
VIC Site?:	Yes	***Latitude:***	46.83610581
Sf Voluntary:		***Longitude:***	-92.21771418
Inst Controls?:		***Latitude (RAP):***	
SEMS?:		***Longitude (RAP):***	
Project Name:	Midwest Golf Cars 2		
Project Managers:	David Knight (current), Jayme Hammond (former)		
Site Address 1:	5106 Miller Trunk Hwy		
Site Address 2:			
Site City:	Hermantown		
Site State:	MN		
Site Zip:	55811		
Project Name(RAP):			
Address1 (RAP):			
Address2(RAP):			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

City (RAP):
State (RAP):
Zip (RAP):
Data Source: MPCA Remediation Sites

Remediation Sites Details

Activity ID:	117740	**Object ID:**	37213
SI ID:	7	**Cong Dist:**	8
SI Cat:	AREA	**House Dist:**	3B
SI Type:	BROW	**Senate Dis:**	3
Site Type:	CON	**HUC 8:**	04010201
Acreage:	1.39	**HUC 10:**	0401020114
HRS Score:		**HUC 12:**	040102011401
Score Year:		**Gdb Geomattr Data:**	
DWSMA Code:		**MNTBA:**	
AI Name:	Hawk's Landing BP		
Hydrologists:			
DWSMA Name:			
HUC 8 Name:	St. Louis River		
HUC 12 Name:	Upper Midway River		
Method Desc:	Address Matching House Number		
Loc Desc:			
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/117740		

Spatial Remediation Activity

AI ID:	117740	**Object ID:**	18760
Site ID:	BF0003155	**Remedy Imp:**	
SI ID:	7	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	
Site Start:	2025-10-16 00:00:00	**NPL List:**	
Site Close:		**NPL Delete:**	
Leak Discovered:		**PLP List:**	
Leak Reported:		**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	2025-10-16 00:00:00
Activity No:	1	**FF Aproved:**	
Activity ID:	SIW20250001	**FF Closed:**	
Activity Type:	Brownfield Site	**Inv Comple:**	
Activity Code:	SIW	**App Comple:**	2025-10-16 00:00:00
Activity Year:	2025	**Er Site Ev:**	
Discovered:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
45	1 of7	SE	0.33 / 1,756.34	1,420.71 / 10	**Billman Construction Company** **5010 Miller Trunk Highway** **Hermantown MN 55811**	LST REM SITE

Item ID:	202262-AREA0000000001	**Unpermitted Dump?:**	
Project ID:	LS0014598	**State Reg:**	
Project Type:	Leak Site	**Federal Reg:**	Yes
Project ID (RAP):		**Fed State Reg:**	
Project Type (RAP):		**Non Reg:**	
Site Status:	Closed	**NPL:**	
Perm List of Prio?:		**Site County:**	St. Louis
Petrol Brownfield?:		**County (RAP):**	
VIC Site?:		**Latitude:**	46.83376771
Sf Voluntary:		**Longitude:**	-92.20910969
Inst Controls?:		**Latitude (RAP):**	
SEMS?:		**Longitude (RAP):**	
Project Name:	Billman Construction Company		
Project Managers:	Jim McCann (no longer at MPCA)		
Site Address 1:	5010 Miller Trunk Highway		
Site Address 2:			
Site City:	Hermantown		
Site State:	MN		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Site ZIP: 55811
Project Name(RAP):
Address1 (RAP):
Address2 (RAP):
City (RAP):
State (RAP):
ZIP (RAP):
Data Source: MPCA Remediation Sites

Remediation Sites Details

Activity ID: 202262
SI ID: 1
Si Cat: AREA
SI Type: LEAK
Site Type: CON
Acreage:
HRS Score:
Score Year:
DWSMA Code:
AI Name: Billman Construction Company
DWSMA Name:
Hydrologists:
Huc 8 Name: St. Louis River
Huc12 Name: Saint Louis River
Method Desc: Digitized - MPCA internal map
Loc Desc:
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/202262

Object ID: 16202
Cong Dist: 8
House Dist: 3B
Senate Dis: 3
HUC 8: 04010201
HUC 10: 0401020116
HUC 12: 040102011604
Gdb Geomattr Data:
MNTBA:

Spatial Remediation Activity

AI ID: 202262
Site ID: LS0014598
SI ID: 1
SI Cat: AREA
NFA Decisi:
Site Start: 2002-01-09 00:00:00
Site Close: 2002-10-07 00:00:00
Leak Discovered: 1997-09-02 00:00:00
Leak Reported: 2002-01-09 00:00:00
Leak Reopened:
Activity No: 1
Activity ID: SIW20020001
Activity Type: Leak Site Investigation
Activity Code: SIW
Activity Year: 2002
Discovered:

Object ID: 36191
Remedy Imp:
Remedy Sel:
ASMT Compl:
Received:
NPL List:
NPL Delete:
PLP List:
PLP Delist:
Staff Assi:
FF Aproved:
FF Closed:
Inv Comple:
App Comple:
Er Site Ev:

45	2 of7	SE	0.33 / 1,756.34	1,420.71 / 10	Billmans Construction 5010 Miller Trunk Highway Hermantown MN 55811	MPCA AI

Agency Interest ID: 134993
Name (Map): Billmans Construction
Address (Map): 5010 Miller Trunk Highway
City (Map): Hermantown
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.8350821
Longitude (Map): -92.2082428
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Billmans Construction
Address (Site): 5010 Miller Trunk Highway
City (Site): Hermantown

State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8350821
Longitude (Site):	-92.2082428
County (Site):	St. Louis
Name (Req):	Billmans Construction
Address (Req):	5010 Miller Trunk Highway
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8350821
Longitude (Req):	-92.2082428
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	134993-AISI0000134993	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Aboveground Tanks	**SI ID:**	134993
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	1/28/2010	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	57491177	**User Updt:**	spatial_
Name:	Billmans Construction		
Program List:	AT		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	TS0125270	**Cong Distr:**	8
Program Co:	TL	**Senate Dis:**	3
Program Name:	Tanks	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Hermantown	**Latitude:**	46.8350821
County:	St. Louis	**Longitude:**	-92.2082428
Activity:	Aboveground Tanks		
Addr St:	5010 Miller Trunk Highway		
Addr City:	Hermantown		
MPCA ID List:	TS0125270		
Program 1:	Tanks		
Name:	Billmans Construction		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Aboveground Tanks		

Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/134993

Agency Interests: File Request Details

Item ID:	134993-AISI0000134993	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Aboveground Tanks	***SI ID:***	134993
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B
Section:		***Senate Dist:***	3
Quarters:		***TRDSQQ:***	
Collection Date:	9/27/2015	***Ref Code:***	GEN
Tmsp Created:	1/28/2010	***Ref Desc:***	General Location
User Created:	DELTA_M_R1	***Verified:***	No
Tmsp Updt:	4/26/2016	***User Updt:***	spatial_
Spatial ID:	57491177		

Name: Billmans Construction
Program List: AT
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
45	3 of7	SE	0.33 / 1,756.34	1,420.71 / 10	Billman Home Center 5010 Miller Trunk Hwy Duluth MN 55811	MPCA AI

Agency Interest ID: 37013
Name (Map): Billman Home Center
Address (Map): 5010 Miller Trunk Hwy
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.8354231
Longitude (Map): -92.2084423
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Billman Home Center
Address (Site): 5010 Miller Trunk Hwy
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.8354231
Longitude (Site): -92.2084423
County (Site): St. Louis
Name (Req): Billman Home Center
Address (Req): 5010 Miller Trunk Hwy
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.8354231
Longitude (Req): -92.2084423
County (Req): St. Louis

County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 37013-AISI0000037013
Status: Inactive
Status Date: 2014-05-31 00:00:00
Program: Hazardous Waste
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 9/27/2015
Tmsp Created: 7/29/1999
User Created: DELTA_M_R1
Tmsp Updt: 4/26/2016
Spatial ID: 45582
Name: Billman Home Center
Program List: HW
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 37013
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: spatial_

My Neighborhood Site Details

Active FLA: No
MPCA ID: MN0000948000
Program Co: HW
Program Name: Hazardous Waste
Address: MN
Addr ZIP: 55811
City: Hermantown
County: St. Louis
Activity: Hazardous Waste
Addr St: 5010 Miller Trunk Hwy
Addr City: Duluth
MPCA ID List: MN0000948000
Program 1: Hazardous Waste
Name: Billman Home Center
Watershed : St. Louis River
Coord Co 1: Address Matching House Number
Activity L: Hazardous Waste
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/37013

HUC 8: 04010201
Cong Distr: 8
Senate Dis: 3
House Dist: 3B
IC Flag: No
Coord Coll: A1
Latitude: 46.8354231
Longitude: -92.2084423

Agency Interests: File Request Details

Item ID: 37013-AISI0000037013
Status: Inactive
Status Date: 5/31/2014
Program: Hazardous Waste
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 37013
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	7/29/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	45582		
Name:	Billman Home Center		
Program List:	HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

45	**4 of7**	**SE**	**0.33 / 1,756.34**	**1,420.71 / 10**	**Billman Construction Company 5010 Miller Trunk Highway Hermantown MN 55811**	**MPCA AI**

Agency Interest ID:	202262
Name (Map):	Billman Construction Company
Address (Map):	5010 Miller Trunk Highway
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8337733
Longitude (Map):	-92.2091096
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Billman Construction Company
Address (Site):	5010 Miller Trunk Highway
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8337733
Longitude (Site):	-92.2091096
County (Site):	St. Louis
Name (Req):	Billman Construction Company
Address (Req):	5010 Miller Trunk Highway
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8337733
Longitude (Req):	-92.2091096
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	202262-AISI0000202262	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	PetroleumRemediation	**SI ID:**	202262
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	

Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	4/26/2016	***TRDSQQ:***	
Tmsp Created:	12/4/2006	***Ref Code:***	GEN
User Created:	DELTA_M_R2	***Ref Desc:***	General Location
Tmsp Updt:	4/26/2016	***Verified:***	No
Spatial ID:	51858950	***User Updt:***	spatial_
Name:	Billman Construction Company		
Program List:	PR		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

My Neighborhood Site Details

Active FLA:	Yes	***HUC 8:***	04010201
MPCA ID:	LS0014598	***Cong Distr:***	8
Program Co:	SR	***Senate Dis:***	3
Program Name:	Investigation and Cleanup	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	DM
City:	Hermantown	***Latitude:***	46.8337733
County:	St. Louis	***Longitude:***	-92.2091096
Activity:	Petroleum Remediation, Leak Site		
Addr St:	5010 Miller Trunk Highway		
Addr City:	Hermantown		
MPCA ID List:	LS0014598		
Program 1:	Investigation and Cleanup		
Name:	Billman Construction Company		
Watershed :	St. Louis River		
Coord Co 1:	Digitized - MPCA internal map		
Activity L:	Petroleum Remediation, Leak Site		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/202262		

Agency Interests: File Request Details

Item ID:	202262-AISI0000202262	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	PetroleumRemediation	***SI ID:***	202262
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B
Section:		***Senate Dist:***	3
Quarters:		***TRDSQQ:***	
Collection Date:	4/26/2016	***Ref Code:***	GEN
Tmsp Created:	12/4/2006	***Ref Desc:***	General Location
User Created:	DELTA_M_R2	***Verified:***	No
Tmsp Updt:	4/26/2016	***User Updt:***	spatial_
Spatial ID:	51858950		
Name:	Billman Construction Company		
Program List:	PR		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
HUC 12:		40102011604				
HUC 12 Name:		Saint Louis River				
SI Type Desc:		Conventional Site				
DWSMA Code:						
DWSMA Name:						
Method Code:		DM				
Method Desc:		Digitized - MPCA internal map				
45	5 of7	SE	0.33 / 1,756.34	1,420.71 / 10	Billman Construction, Inc. 5010 Miller Trunk Hwy Hermantown MN 55811	MPCA AI

Agency Interest ID:	197738.0
Name (Map):	
Address (Map):	
City (Map):	
State (Map):	
ZIP (Map):	
Latitude (Map):	
Longitude (Map):	
County (Map):	
County Code (Map):	
Loc Desc (Map):	
Name (Site):	Billman Construction, Inc.
Address (Site):	5010 Miller Trunk Hwy
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83470475
Longitude (Site):	-92.2076145
County (Site):	St. Louis
Name (Req):	Billman Construction, Inc.
Address (Req):	5010 Miller Trunk Hwy
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83470475
Longitude (Req):	-92.2076145
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	L1328	**Cong Distr:**	8
Program Co:	SS	**Senate Dis:**	3
Program Name:	SSTS	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Hermantown	**Latitude:**	46.83470475
County:	St. Louis	**Longitude:**	-92.2076145

Activity:	SSTS, Licensed Organization
Addr St:	5010 Miller Trunk Hwy
Addr City:	Hermantown
MPCA ID List:	L1328
Program 1:	SSTS
Name:	Billman Construction, Inc.
Watershed :	St. Louis River
Coord Co 1:	Address Matching House Number
Activity L:	SSTS, Licensed Organization
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/197738

Agency Interests: File Request Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Item ID:	197738-AISI0000197738	**Int Doc ID:**	0
Status:	Active	**SI Type:**	LCO
Status Date:		**SI Cat:**	AISI
Program:	SSTS	**SI ID:**	197738
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/20/2017	**Ref Code:**	GEN
Tmsp Created:	4/25/2016	**Ref Desc:**	General Location
User Created:	DELTA_M_R2	**Verified:**	No
Tmsp Updt:	6/20/2017	**User Updt:**	geo_nc
Spatial ID:			

Name:	Billman Construction, Inc.
Program List:	SS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Licensed / Certified Organization
DWSMA Code:	
DWSMA Name:	
Method Code:	A1
Method Desc:	Address Matching House Number

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
45	6 of7	SE	0.33 / 1,756.34	1,420.71 / 10	Michael D Billman 5010 Miller Trunk Hermantown MN 55811	MPCA AI

Agency Interest ID:	200994
Name (Map):	
Address (Map):	
City (Map):	
State (Map):	
ZIP (Map):	
Latitude (Map):	
Longitude (Map):	
County (Map):	
County Code (Map):	
Loc Desc (Map):	
Name (Site):	
Address (Site):	
City (Site):	
State (Site):	
ZIP (Site):	
Latitude (Site):	
Longitude (Site):	
County (Site):	
Name (Req):	Michael D Billman
Address (Req):	5010 Miller Trunk
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	
Longitude (Req):	
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026)

Agency Interests: File Request Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Item ID:	200994-AISI0000200994	**Int Doc ID:**	0
Status:	Active	**SI Type:**	LCP
Status Date:		**SI Cat:**	AISI
Program:	SSTS	**SI ID:**	200994
CTU Code:		**SI Cat Desc:**	Agency Interest
CTU Name:		**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	
Range Dir:		**House Dist:**	
Section:		**Senate Dist:**	
Quarters:		**TRDSQQ:**	
Collection Date:		**Ref Code:**	
Tmsp Created:	4/25/2016	**Ref Desc:**	
User Created:	DELTA_M_R2	**Verified:**	No
Tmsp Updt:	4/25/2016	**User Updt:**	SSTS
Spatial ID:			
Name:	Michael D Billman		
Program List:	SS		
HUC 8:			
HUC 8 Name:			
HUC 10:			
HUC 10 Name:			
HUC 12:			
HUC 12 Name:			
SI Type Desc:	Licensed / Certified Person		
DWSMA Code:			
DWSMA Name:			
Method Code:			
Method Desc:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
45	7 of7	SE	0.33 / 1,756.34	1,420.71 / 10	Billman Construction Inc 5010 Miller Trunk Hwy Duluth MN 55811	MPCA AI

Agency Interest ID:	6679.0
Name (Map):	
Address (Map):	
City (Map):	
State (Map):	
ZIP (Map):	
Latitude (Map):	
Longitude (Map):	
County (Map):	
County Code (Map):	
Loc Desc (Map):	
Name (Site):	Billman Construction Inc
Address (Site):	5010 Miller Trunk Hwy
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8350821
Longitude (Site):	-92.2082428
County (Site):	St. Louis
Name (Req):	Billman Construction Inc
Address (Req):	5010 Miller Trunk Hwy
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	CSLL: Site along road used for address match
Latitude (Req):	46.8350821
Longitude (Req):	-92.2082428
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	
MPCA ID:	Multiple IDs	**Cong Distr:**	
Program Co:	ST; WW	**Senate Dis:**	
Program Name:	Multiple Programs	**House Dist:**	
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:		**Latitude:**	46.8350821
County:	St. Louis	**Longitude:**	-92.2082428
Activity:	Multiple Activities		
Addr St:	5010 Miller Trunk Hwy		
Addr City:	Duluth		
MPCA ID List:	MNG490105; MNR0537XZ		
Program 1:	Stormwater; Water Quality		
Name:	Billman Construction Inc		
Watershed :			
Coord Co 1:	Address Matching House Number		
Activity L:	Industrial Stormwater; Wastewater, Industrial NPDES/SDS Permit		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/6679		

Agency Interests: File Request Details

Item ID:	6679-AISI0000006679	**Int Doc ID:**	0
Status:	Active	**SI Type:**	MOB
Status Date:		**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	6679
CTU Code:		**SI Cat Desc:**	Agency Interest
CTU Name:		**Description:**	
PLS Twsp:	51	**SI Designation:**	
Range :	16	**Cong Dist:**	
Range Dir:	W	**House Dist:**	
Section:	7	**Senate Dist:**	
Quarters:	a	**TRDSQQ:**	05116207a
Collection Date:	3/12/2010	**Ref Code:**	GEN
Tmsp Created:	3/15/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	Yes
Tmsp Updt:	4/15/2015	**User Updt:**	SYSTEM
Spatial ID:	7961		
Name:	Billman Construction Inc		
Program List:	IS, WW		
HUC 8:			
HUC 8 Name:			
HUC 10:			
HUC 10 Name:			
HUC 12:			
HUC 12 Name:			
SI Type Desc:	Mobile, Portable or Multi-Location Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
46	1 of1	SSW	0.33 / 1,759.67	1,430.38 / 20	Centricity Credit Union 4477 Lavaque Rd Hermantown MN 55811	MPCA AI

Agency Interest ID:	255142
Name (Map):	Centricity Credit Union
Address (Map):	4477 Lavaque Rd
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83547
Longitude (Map):	-92.217368
County (Map):	St. Louis
County Code (Map):	137

Loc Desc (Map):	
Name (Site):	Centricity Credit Union
Address (Site):	4477 Lavaque Rd
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811-1318
Latitude (Site):	46.83547
Longitude (Site):	-92.217368
County (Site):	St. Louis
Name (Req):	Centricity Credit Union
Address (Req):	4477 Lavaque Rd
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83547
Longitude (Req):	-92.217368
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	255142-AISI0000255142	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Hazardous Waste	***SI ID:***	255142
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	4/24/2023	***TRDSQQ:***	
Tmsp Created:	4/24/2023	***Ref Code:***	DAS
User Created:	smotton	***Ref Desc:***	Driveway at Street
Tmsp Updt:	4/24/2023	***Verified:***	No
Spatial ID:		***User Updt:***	geo_nc
Name:	Centricity Credit Union		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020114		
HUC 12:	040102011401		
HUC 12 Name:	Upper Midway River		
DWSMA Code:			
DWSMA Name:			
Method Code:	DP		
Method Desc:	Digitized - MPCA online map		

My Neighborhood Site Details

Active FLA:	Yes	***HUC 8:***	04010201
MPCA ID:	MNS000351304	***Cong Distr:***	8
Program Co:	HW	***Senate Dis:***	3
Program Name:	Hazardous Waste	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811-1318	***Coord Coll:***	DP
City:	Hermantown	***Latitude:***	46.83547
County:	St. Louis	***Longitude:***	-92.217368
Activity:	Hazardous Waste		
Addr St:	4477 Lavaque Rd		
Addr City:	Hermantown		
MPCA ID List:	MNS000351304		
Program 1:	Hazardous Waste		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Name: Centricity Credit Union
Watershed : St. Louis River
Coord Co 1: Digitized - MPCA online map
Activity L: Hazardous Waste
Industrial: Credit Unions
Site URL: https://webapp.pca.state.mn.us/wimn/site/255142

Agency Interests: File Request Details

Item ID:	255142-AISI0000255142	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	255142
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	4/24/2023	**Ref Code:**	DAS
Tmsp Created:	4/24/2023	**Ref Desc:**	Driveway at Street
User Created:	smotton	**Verified:**	No
Tmsp Updt:	4/24/2023	**User Updt:**	geo_nc

Spatial ID:
Name: Centricity Credit Union
Program List: HW
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020114
HUC 10 Name: Midway River
HUC 12: 40102011401
HUC 12 Name: Upper Midway River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: DP
Method Desc: Digitized - MPCA online map

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
47	1 of1	SW	0.34 / 1,772.02	1,421.24 / 11	AD Shrine Facility 5152 Miller Trunk Highway Duluth MN 55811	MPCA AI

Agency Interest ID: 103001
Name (Map): AD Shrine Facility
Address (Map): 5152 Miller Trunk Highway
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.836459
Longitude (Map): -92.2232371
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): AD Shrine Facility
Address (Site): 5152 Miller Trunk Highway
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.836459
Longitude (Site): -92.2232371
County (Site): St. Louis
Name (Req): AD Shrine Facility
Address (Req): 5152 Miller Trunk Highway
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811

Loc Desc (Req):
Latitude (Req): 46.836459
Longitude (Req): -92.2232371
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	103001-AISI0000103001	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	103001
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	9/27/2015	***TRDSQQ:***	
Tmsp Created:	10/31/2005	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	4/26/2016	***Verified:***	No
Spatial ID:	103393	***User Updt:***	spatial_

Name: AD Shrine Facility
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020114
HUC 12: 040102011401
HUC 12 Name: Upper Midway River
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

My Neighborhood Site Details

Active FLA:	Yes	***HUC 8:***	04010201
MPCA ID:	C00016897	***Cong Distr:***	8
Program Co:	ST	***Senate Dis:***	3
Program Name:	Stormwater	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	A1
City:	Hermantown	***Latitude:***	46.836459
County:	St. Louis	***Longitude:***	-92.2232371

Activity: Construction Stormwater
Addr St: 5152 Miller Trunk Highway
Addr City: Duluth
MPCA ID List: C00016897
Program 1: Stormwater
Name: AD Shrine Facility
Watershed : St. Louis River
Coord Co 1: Address Matching House Number
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/103001

Agency Interests: File Request Details

Item ID:	103001-AISI0000103001	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	103001

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	10/31/2005	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	103393		
Name:	AD Shrine Facility		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020114		
HUC 10 Name:	Midway River		
HUC 12:	40102011401		
HUC 12 Name:	Upper Midway River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

48	1 of1	SE	0.36 / 1,882.63	1,419.15 / 9	**Billman Construction Company** **5010 Miller Trunk Highway** **Hermantown MN 55811**	HIST LUST

Prog Int ID:	232998	**Address Source:**	CORE
Site ID:	248161	**Township Name:**	Whiteface Reservoir
State County Code:	69	**County Name:**	St. Louis
Country:	USA	**Lat/Long ID:**	134543
Interest Type Cd:	LS	**Interest Type Dsc:**	Leak Site
ADDR ID:	296407	**Lat Degrees:**	46
Tank Site:	14598	**Lat Minutes:**	50
Interest Phone:	NO CORE PI PH.	**Lat Seconds:**	1.58
Interest Start Dt:	01/10/2002 00:00:00	**Long Degrees:**	-92
Interest End Dt:	12/04/2006 08:48:10	**Long Minutes:**	12
Active?:	No	**Long Seconds:**	32.79
Timestamp Added:	12/04/2006 08:48:10	**Lat/Long Source:**	CORE
Timestamp Updt:	11/10/2014 08:17:05	**Lat/Long Site ID:**	248161
Staff ID Updt:	RGAGLE	**Lat/Long Spatial ID:**	51858951
Source:	CORE	**Collection Date:**	06/03/2008 10:23:51
Coord Src Type:		**Map Scale Code:**	
Coord Src Desc:		**Org Name Source:**	
Foreign State:		**Foreign Zone:**	
FIPS County Cd1:	137		
Addr Timestmp Add:	12/04/2006 08:47:34		
Addr Timestamp Lst Updt:	11/04/2008 21:13:55		
Addr Updater Staff ID:	SYSTEM		
Lat/Long Timestamp Added:	12/04/2006 08:48:31		
Lat/Long Tmstmp Last Upd:	06/03/2008 10:23:52		
Lat/Long Updater Staff ID:	MAPTOOL		
Lat/Long Desc:			
Coord Coll Method Desc:	Digitized - Map Tool		
Coord Coll Method Code:	DM		
Comments:			

Leak Site

Complete Site Closure Date:	10/07/2002 00:00:00
Cond Closure Date:	
Release Discovered Date:	09/02/1997 00:00:00
Leaksite Type Code:	1
Leaksite Type Desc:	Leak Site

Leak Report Date: 01/09/2002 00:00:00
Tank Reg Status Code: F
TMSP Added: 01/10/2002 16:35:24
TMSP Last Updt: 10/07/2002 15:15:01
CU Yds Excavated Qty:
ENF Action Begin Date: 01/15/2002 00:00:00
Residence Type Code:
File Archive Box:
File Archive Lot:
Soil Digout Date:
Staff ID Last Updt: JMCCANN
Std Letter Response Date: 01/24/2002 00:00:00
VPIC Acres:
VPIC Application Date:
Contam Soils Remaining Flag: U
Indoor Air Collected Flag:
LUST Trust Eligible Flag: Yes
Offsite Contam Flag: U
REIMB Awarded Flag: No
Release From AST Flag: No
Release From UST Flag: Yes
Soil Gas Action Level Flag:
Soil Gas Data Collected Flag:
Sub Slab Sample Collected Flag:
Surface Water Impact Flag: U
Utility Project Flag: No
Vapor Intrusion Action Flag:
Vapor Intrusion Checked Flag:
Leaksite Type Defn: Leak site (tank and petroleum contamination).
Soil Gas Data Comments:
Vapor Intrusion Comments:

Leak Product Rls

Product Rls Seq ID: 29771
Leak Product Desc: Gasoline, Type Unknown
Leak Product Defn: The product is an unknown type of gasoline.

Product Rls Seq ID: 31569
Leak Product Desc: Diesel
Leak Product Defn: The product is diesel oil.

Leak GW Info

Well Type Code:
Affected Non Res Props:
Affected Residential Props:
Staff ID Last Updt: RSUCHAN
Staff ID Wellhead Area Assess:
TMSP Added: 01/10/2002 16:35:24
TMSP Last Updt: 11/04/2003 12:57:09
Water Supply Exceeds Ral Flag:
Cleanup Goal Achieved Flag:
DW Supply Contam Flag: N
Free Product at Close Flag: No
Free Product Observed Flag: N
Free Product Thickness:
Ground Water Contam Flag: Y
GW Cleanup Goal:
GW Exceeds Cleanup Goal Flag:
Impacted Aquifer Code:
MTBE High Level Date:
MTBE High Ug Per Liter Char:
MTBE High Ug Per Liter Numb:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

MTBE Present Historically Flag: N
MTBE Present Now Flag: N
Protected Area Flag:
PWS Well Impacted Flag:
Sensitive Area Flag:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
49	1 of5	SE	0.37 / 1,927.41	1,418.63 / 8	Curtis Oil & Tire and Propane Co 4995 Miller Trunk Highway Hermantown MN 55811	DELISTED TANK

Delisted Aboveground Storage Tanks

Tank Site ID: TS0019949
AI ID: 95144
Tank Type: Aboveground Storage Tank
County: St. Louis
Owner: Curtis Oil Company
Owner Address: 4985 Miller Trunk Highway
Location Description:
AI Name(Map):
Address1(Map):
Address2(Map):
City(Map):
State(Map):
Zip(Map):
County Code(Map):
County(Map):
Latitude(Map):
Longitude(Map):
Data Source:
Tanks URL: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0019949
Record Date: 04-SEP-2020
Original Source: AST

Owner City: Hermantown
Owner State: MN
Owner Zip: 558110000
Address2:
Address3:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
49	2 of5	SE	0.37 / 1,927.41	1,418.63 / 8	Curtis Oil Bulk Facility 4995 Miller Trunk Highway Hermantown MN 55811	HIST LAST

Prog Int ID: 221222
Site ID: 148802
State County Code: 69
Country: USA
Interest Type Cd: LS
ADDR ID: 273298
Tank Site: 8660
Interest Phone: NO CORE PI PH.
Interest Start Dt: 11/13/1998 00:00:00
Interest End Dt: 11/28/2006 07:33:39
Active?: No
Timestamp Added: 11/28/2006 07:33:39
Timestamp Updt: 08/20/2015 17:08:24
Staff ID Updt: SFRYE
Source: CORE
Coord Src Type:
Coord Src Desc:
Foreign State:
FIPS County Cd1: 137
Addr Timestmp Add: 09/13/2006 12:12:37
Addr Timestamp Lst Updt: 11/04/2008 21:13:54
Addr Updater Staff ID: SYSTEM
Lat/Long Timestamp Added: 03/17/2009 11:54:34
Lat/Long Tmstmp Last Upd: 03/14/2011 08:11:16
Lat/Long Updater Staff ID: MAPTOOL
Lat/Long Desc:
Coord Coll Method Desc: Digitized - Map Tool

Address Source: CORE
Township Name:
County Name: St. Louis
Lat/Long ID: 144600
Interest Type Dsc: Leak Site
Lat Degrees: 46
Lat Minutes: 50
Lat Seconds: 4.26
Long Degrees: -92
Long Minutes: 12
Long Seconds: 21.06
Lat/Long Source: CORE
Lat/Long Site ID: 148802
Lat/Long Spatial ID: 51827604
Collection Date: 03/14/2011 08:11:16
Map Scale Code:
Org Name Source:
Foreign Zone:

Coord Coll Method Code:	DM
Comments:	

Leak Site

Complete Site Closure Date:	04/11/2011 00:00:00
Cond Closure Date:	
Release Discovered Date:	08/16/1994 00:00:00
Leaksite Type Code:	1
Leaksite Type Desc:	Leak Site
Leak Report Date:	08/07/1995 00:00:00
Tank Reg Status Code:	F
TMSP Added:	12/04/1999 14:03:49
TMSP Last Updt:	12/06/2012 14:28:35
CU Yds Excavated Qty:	
ENF Action Begin Date:	08/25/1995 00:00:00
Residence Type Code:	
File Archive Box:	
File Archive Lot:	
Soil Digout Date:	
Staff ID Last Updt:	AVANCLE
Std Letter Response Date:	08/07/1995 00:00:00
VPIC Acres:	
VPIC Application Date:	
Contam Soils Remaining Flag:	Y
Indoor Air Collected Flag:	
LUST Trust Eligible Flag:	Yes
Offsite Contam Flag:	N
REIMB Awarded Flag:	No
Release From AST Flag:	Yes
Release From UST Flag:	No
Soil Gas Action Level Flag:	
Soil Gas Data Collected Flag:	No
Sub Slab Sample Collected Flag:	
Surface Water Impact Flag:	N
Utility Project Flag:	No
Vapor Intrusion Action Flag:	
Vapor Intrusion Checked Flag:	No
Leaksite Type Defn:	Leak site (tank and petroleum contamination).
Soil Gas Data Comments:	
Vapor Intrusion Comments:	The area within 100 feet of the contaminant plume consists of bulk oil facilities and other petroleum activities.

Leak Product Release

Product Rls Seq ID:	101617
Leak Product Desc:	Diesel
Leak Product Defn:	The product is diesel oil.

Leak GW Info

Well Type Code:	
Affected Non Res Props:	4
Affected Residential Props:	0
Staff ID Last Updt:	GZARLIN
Staff ID Wellhead Area Assess:	3371
TMSP Added:	12/04/1999 14:07:33
TMSP Last Updt:	04/11/2011 15:08:35
Water Supply Exceeds Ral Flag:	
Cleanup Goal Achieved Flag:	
DW Supply Contam Flag:	
Free Product at Close Flag:	No
Free Product Observed Flag:	Y
Free Product Thickness:	5

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Ground Water Contam Flag: Y
GW Cleanup Goal: 0
GW Exceeds Cleanup Goal Flag:
Impacted Aquifer Code:
MTBE High Level Date:
MTBE High Ug Per Liter Char:
MTBE High Ug Per Liter Numb:
MTBE Present Historically Flag: N
MTBE Present Now Flag: N
Protected Area Flag: No
PWS Well Impacted Flag: No
Sensitive Area Flag: No

Leak Cleanup Act

Leak Action Seq ID: 47022
Leak Action Desc: Soil Hot-Spot Removal
Leak Action Apprv Dt: 04/09/1999 00:00:00
Leak Action Begin Dt: 08/10/1999 00:00:00
Leak Action End Dt: 09/01/1999 00:00:00
Product Rcvred Gal:
Product Rmved Gal:
Treated Water Gal:
Corrective Rsn Cd: 4

Leak Action Seq ID: 47021
Leak Action Desc: Soil Hot-Spot Removal
Leak Action Apprv Dt: 08/07/1995 00:00:00
Leak Action Begin Dt: 09/20/1995 00:00:00
Leak Action End Dt: 09/21/1995 00:00:00
Product Rcvred Gal:
Product Rmved Gal:
Treated Water Gal:
Corrective Rsn Cd: 5

49	3 of5	SE	0.37 / 1,927.41	1,418.63 / 8	Curtis Oil Bulk Facility 4995 Miller Trunk Highway Hermantown MN 55811	LST REM SITE

Item ID: 95144-AREA0000000005
Project ID: LS0008660
Project Type: Leak Site
Project ID (RAP):
Project Type (RAP):
Site Status: Closed
Perm List of Prio?:
Petrol Brownfield?:
VIC Site?:
Sf Voluntary:
Inst Controls?:
SEMS?:
Unpermitted Dump?:
State Reg:
Federal Reg: Yes
Fed State Reg:
Non Reg:
NPL:
Site County: St. Louis
County (RAP):
Latitude: 46.83541275
Longitude: -92.20598652
Latitude (RAP):
Longitude (RAP):
Project Name: Curtis Oil Bulk Facility
Project Managers: Gary Zarling (no longer at MPCA)
Site Address 1: 4995 Miller Trunk Highway
Site Address 2:
Site City: Hermantown
Site State: MN
Site ZIP: 55811
Project Name(RAP):
Address1 (RAP):
Address2 (RAP):
City (RAP):
State (RAP):
ZIP (RAP):
Data Source: MPCA Remediation Sites

Remediation Sites Details

Activity ID: 95144
SI ID: 5
Si Cat: AREA
SI Type: LEAK
Site Type: CON
Object ID: 1448
Cong Dist: 8
House Dist: 3B
Senate Dis: 3
HUC 8: 04010201

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Acreage:		**HUC 10:**	0401020116
HRS Score:		**HUC 12:**	040102011604
Score Year:		**Gdb Geomattr Data:**	
DWSMA Code:		**MNTBA:**	
AI Name:	Curtis Oil & Tire and Propane Co		
DWSMA Name:			
Hydrologists:	Jim Pennino (no longer at MPCA)		
Huc 8 Name:	St. Louis River		
Huc12 Name:	Saint Louis River		
Method Desc:	Digitized - MPCA internal map		
Loc Desc:			
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/95144		

Spatial Remediation Activity

AI ID:	95144	**Object ID:**	10999
Site ID:	LS0008660	**Remedy Imp:**	
SI ID:	5	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	
Site Start:	1995-08-07 00:00:00	**NPL List:**	
Site Close:	2011-04-11 00:00:00	**NPL Delete:**	
Leak Discovered:	1994-08-16 00:00:00	**PLP List:**	
Leak Reported:	1995-08-07 00:00:00	**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	
Activity No:	1	**FF Aproved:**	
Activity ID:	SIW19950001	**FF Closed:**	
Activity Type:	Leak Site Investigation	**Inv Comple:**	
Activity Code:	SIW	**App Comple:**	
Activity Year:	1995	**Er Site Ev:**	
Discovered:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
49	4 of5	SE	0.37 / 1,927.41	1,418.63 / 8	**Curtis Oil & Tire and Propane Co** **4995 Miller Trunk Highway** **Hermantown MN 55811**	MPCA AI

Agency Interest ID:	95144
Name (Map):	Curtis Oil & Tire and Propane Co
Address (Map):	4995 Miller Trunk Highway
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8345178
Longitude (Map):	-92.2058508
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Curtis Oil & Tire and Propane Co
Address (Site):	4995 Miller Trunk Highway
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8345178
Longitude (Site):	-92.2058508
County (Site):	St. Louis
Name (Req):	Curtis Oil & Tire and Propane Co
Address (Req):	4995 Miller Trunk Highway
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8345178
Longitude (Req):	-92.2058508
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	95144-AISI0000095144	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Multiple Programs	***SI ID:***	95144
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:	050	***Description:***	
Range :	15	***SI Designation:***	
Range Dir:	W	***Cong Dist:***	8
Section:	11	***House Dist:***	3B
Quarters:	b	***Senate Dist:***	3
Collection Date:	8/25/2017	***TRDSQQ:***	05015211b
Tmsp Created:	10/28/2004	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	8/25/2017	***Verified:***	No
Spatial ID:	97915	***User Updt:***	geo_nc
Name:	Curtis Oil & Tire and Propane Co		
Program List:	AT, IS, PR, UT		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

My Neighborhood Site Details

Active FLA:	Yes	***HUC 8:***	04010201
MPCA ID:	Multiple IDs	***Cong Distr:***	8
Program Co:	SR; ST; TL	***Senate Dis:***	3
Program Name:	Multiple Programs	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	DM
City:	Hermantown	***Latitude:***	46.8345178
County:	St. Louis	***Longitude:***	-92.2058508
Activity:	Multiple Activities		
Addr St:	4995 Miller Trunk Highway		
Addr City:	Hermantown		
MPCA ID List:	A00013762; CS0010800; LS0008660; TS0019949; TS0055873		
Program 1:	Investigation and Cleanup; Stormwater; Tanks		
Name:	Curtis Oil & Tire and Propane Co		
Watershed :	St. Louis River		
Coord Co 1:	Digitized - MPCA internal map		
Activity L:	Aboveground Tanks; Industrial Stormwater; Petroleum Remediation, Contaminated Soil Treatment Facility; Petroleum Remediation, Leak Site; Underground Tanks		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/95144		

Agency Interests: File Request Details

Item ID:	95144-AISI0000095144	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Multiple Programs	***SI ID:***	95144
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:	50	***SI Designation:***	
Range :	15	***Cong Dist:***	8
Range Dir:	W	***House Dist:***	3B
Section:	11	***Senate Dist:***	3

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Quarters:	b	**TRDSQQ:**	05015211b
Collection Date:	8/25/2017	**Ref Code:**	GEN
Tmsp Created:	10/28/2004	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	8/25/2017	**User Updt:**	geo_nc
Spatial ID:	97915		
Name:	Curtis Oil & Tire and Propane Co		
Program List:	AT, IS, PR, UT		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

49	5 of5	SE	0.37 / 1,927.41	1,418.63 / 8	**Pro Tire** **4995 Miller Trunk Highway** **Hermantown MN 55811**	MPCA AI

Agency Interest ID:	27945
Name (Map):	Pro Tire
Address (Map):	4995 Miller Trunk Highway
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8345232
Longitude (Map):	-92.2058507
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Pro Tire
Address (Site):	4995 Miller Trunk Highway
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8345232
Longitude (Site):	-92.2058507
County (Site):	St. Louis
Name (Req):	Pro Tire
Address (Req):	4995 Miller Trunk Highway
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8345232
Longitude (Req):	-92.2058507
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	27945-AISI0000027945	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	27945
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8

Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	4/7/2016	**TRDSQQ:**	
Tmsp Created:	7/26/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	20096	**User Updt:**	spatial_
Name:	Pro Tire		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	MND022763486	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	3
Program Name:	Hazardous Waste	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	DM
City:	Hermantown	**Latitude:**	46.8345232
County:	St. Louis	**Longitude:**	-92.2058507
Activity:	Hazardous Waste		
Addr St:	4995 Miller Trunk Highway		
Addr City:	Hermantown		
MPCA ID List:	MND022763486		
Program 1:	Hazardous Waste		
Name:	Pro Tire		
Watershed :	St. Louis River		
Coord Co 1:	Digitized - MPCA internal map		
Activity L:	Hazardous Waste		
Industrial:	General Automotive Repair		
Site URL:	https://webapp.pca.state.mn.us/wimn/site/27945		

Agency Interests: File Request Details

Item ID:	27945-AISI0000027945	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	27945
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	4/7/2016	**Ref Code:**	GEN
Tmsp Created:	7/26/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	20096		
Name:	Pro Tire		
Program List:	HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: DM
Method Desc: Digitized - MPCA internal map

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50 | ***1 of6*** | ***SE*** | ***0.37 / 1,950.88*** | ***1,417.95 / 7*** | ***Food N Fuel***
4997 Miller Trunk Highway
Duluth MN 55811 | ***HIST LEAKSITES***

Prog Int ID: 221296
Site ID: 57679832
State County Code: 69
Country: USA
Interest Type Cd: LS
ADDR ID: 279809
Tank Site: 8737
Interest Phone: NO CORE PI PH.
Interest Start Dt: 11/15/1999 00:00:00
Interest End Dt: 03/29/2010 16:34:16
Active?: No
Timestamp Added: 03/29/2010 16:34:16
Timestamp Updt: 11/10/2014 08:17:06
Staff ID Updt: RGAGLE
Source: CORE
Coord Src Type:
Coord Src Desc:
Foreign State:
FIPS County Cd1: 137
Addr Timestmp Add: 03/29/2010 16:34:15
Addr Timestamp Lst Updt: 03/29/2010 16:34:15
Addr Updater Staff ID: CMCLAIN
Lat/Long Timestamp Added: 03/29/2010 16:34:17
Lat/Long Tmstmp Last Upd: 03/14/2011 08:13:47
Lat/Long Updater Staff ID: MAPTOOL
Lat/Long Desc:
Coord Coll Method Desc: Digitized - Map Tool
Coord Coll Method Code: DM
Comments:

Address Source: CORE
Township Name: Stuntz
County Name: St. Louis
Lat/Long ID: 161521
Interest Type Dsc: Leak Site
Lat Degrees: 46
Lat Minutes: 50
Lat Seconds: 4.26
Long Degrees: -92
Long Minutes: 12
Long Seconds: 21.06
Lat/Long Source: CORE
Lat/Long Site ID: 57679832
Lat/Long Spatial ID: 57679834
Collection Date: 03/14/2011 08:13:47
Map Scale Code:
Org Name Source:
Foreign Zone: None

Leak Site

Complete Site Closure Date: 02/07/2000 00:00:00
Cond Closure Date:
Release Discovered Date: 08/30/1995 00:00:00
Leaksite Type Code: 1
Leaksite Type Desc: Leak Site
Leak Report Date: 08/30/1995 00:00:00
Tank Reg Status Code: F
TMSP Added: 12/04/1999 14:03:49
TMSP Last Updt: 06/26/2014 07:39:15
CU Yds Excavated Qty: 0
ENF Action Begin Date:
Residence Type Code:
File Archive Box:
File Archive Lot:
Soil Digout Date:
Staff ID Last Updt: DBOETTC
Std Letter Response Date:
VPIC Acres:
VPIC Application Date:
Contam Soils Remaining Flag: Y
Indoor Air Collected Flag:
LUST Trust Eligible Flag: Yes
Offsite Contam Flag: N
REIMB Awarded Flag: No
Release From AST Flag: No

Release From UST Flag:	No
Soil Gas Action Level Flag:	
Soil Gas Data Collected Flag:	
Sub Slab Sample Collected Flag:	
Surface Water Impact Flag:	N
Utility Project Flag:	No
Vapor Intrusion Action Flag:	
Vapor Intrusion Checked Flag:	
Leaksite Type Defn:	Leak site (tank and petroleum contamination).
Soil Gas Data Comments:	
Vapor Intrusion Comments:	

Leak Product Rls

Product Rls Seq ID:	325036
Leak Product Desc:	Diesel
Leak Product Defn:	The product is diesel oil.
Product Rls Seq ID:	322973
Leak Product Desc:	Gasoline, Type Unknown
Leak Product Defn:	The product is an unknown type of gasoline.

Leak GW Info

Well Type Code:	
Affected Non Res Props:	
Affected Residential Props:	
Staff ID Last Updt:	RSUCHAN
Staff ID Wellhead Area Assess:	
TMSP Added:	12/04/1999 14:07:33
TMSP Last Updt:	11/04/2003 12:57:08
Water Supply Exceeds Ral Flag:	
Cleanup Goal Achieved Flag:	
DW Supply Contam Flag:	N
Free Product at Close Flag:	
Free Product Observed Flag:	N
Free Product Thickness:	
Ground Water Contam Flag:	S
GW Cleanup Goal:	0
GW Exceeds Cleanup Goal Flag:	
Impacted Aquifer Code:	3
MTBE High Level Date:	
MTBE High Ug Per Liter Char:	
MTBE High Ug Per Liter Numb:	
MTBE Present Historically Flag:	
MTBE Present Now Flag:	
Protected Area Flag:	
PWS Well Impacted Flag:	
Sensitive Area Flag:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
50	2 of6	SE	0.37 / 1,950.88	1,417.95 / 7	**Food And Fuel** **4997 Miller Trunk Highway** **Hermantown MN 55811**	HIST LEAKSITES

Prog Int ID:	223397	***Address Source:***	CORE
Site ID:	246480	***Township Name:***	Whiteface Reservoir
State County Code:	69	***County Name:***	St. Louis
Country:	USA	***Lat/Long ID:***	132977
Interest Type Cd:	LS	***Interest Type Dsc:***	Leak Site
ADDR ID:	270391	***Lat Degrees:***	46
Tank Site:	10973	***Lat Minutes:***	50
Interest Phone:	NO CORE PI PH.	***Lat Seconds:***	4.05
Interest Start Dt:	08/20/1999 00:00:00	***Long Degrees:***	-92

Interest End Dt:	11/30/2006 06:52:06	**Long Minutes:**	12
Active?:	No	**Long Seconds:**	21.45
Timestamp Added:	11/30/2006 06:52:06	**Lat/Long Source:**	CORE
Timestamp Updt:	11/10/2014 08:17:06	**Lat/Long Site ID:**	246480
Staff ID Updt:	RGAGLE	**Lat/Long Spatial ID:**	51833363
Source:	CORE	**Collection Date:**	06/03/2008 10:10:42
Coord Src Type:		**Map Scale Code:**	
Coord Src Desc:		**Org Name Source:**	
Foreign State:		**Foreign Zone:**	
FIPS County Cd1:	137		

Addr Timestmp Add:	11/30/2006 06:51:54
Addr Timestamp Lst Updt:	11/04/2008 21:13:55
Addr Updater Staff ID:	SYSTEM
Lat/Long Timestamp Added:	11/30/2006 06:52:14
Lat/Long Tmstmp Last Upd:	06/03/2008 10:10:41
Lat/Long Updater Staff ID:	MAPTOOL
Lat/Long Desc:	
Coord Coll Method Desc:	Digitized - Map Tool
Coord Coll Method Code:	DM
Comments:	

Leak Site

Complete Site Closure Date:	08/06/1998 00:00:00
Cond Closure Date:	
Release Discovered Date:	11/18/1997 00:00:00
Leaksite Type Code:	1
Leaksite Type Desc:	Leak Site
Leak Report Date:	11/19/1997 00:00:00
Tank Reg Status Code:	F
TMSP Added:	12/04/1999 14:03:51
TMSP Last Updt:	04/08/2008 09:25:00
CU Yds Excavated Qty:	
ENF Action Begin Date:	12/01/1997 00:00:00
Residence Type Code:	
File Archive Box:	12
File Archive Lot:	01/124
Soil Digout Date:	
Staff ID Last Updt:	SCHILD
Std Letter Response Date:	01/08/1998 00:00:00
VPIC Acres:	
VPIC Application Date:	
Contam Soils Remaining Flag:	U
Indoor Air Collected Flag:	
LUST Trust Eligible Flag:	Yes
Offsite Contam Flag:	U
REIMB Awarded Flag:	No
Release From AST Flag:	No
Release From UST Flag:	No
Soil Gas Action Level Flag:	
Soil Gas Data Collected Flag:	
Sub Slab Sample Collected Flag:	
Surface Water Impact Flag:	U
Utility Project Flag:	No
Vapor Intrusion Action Flag:	
Vapor Intrusion Checked Flag:	
Leaksite Type Defn:	Leak site (tank and petroleum contamination).
Soil Gas Data Comments:	
Vapor Intrusion Comments:	

Leak Product Rls

Product Rls Seq ID:	34264
Leak Product Desc:	Waste Oil
Leak Product Defn:	The product is waste oil.

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Leak GW Info

Well Type Code:
Affected Non Res Props:
Affected Residential Props:
Staff ID Last Updt: RSUCHAN
Staff ID Wellhead Area Assess:
TMSP Added: 12/04/1999 14:07:34
TMSP Last Updt: 11/04/2003 12:57:08
Water Supply Exceeds Ral Flag:
Cleanup Goal Achieved Flag:
DW Supply Contam Flag:
Free Product at Close Flag:
Free Product Observed Flag:
Free Product Thickness:
Ground Water Contam Flag:
GW Cleanup Goal: 0
GW Exceeds Cleanup Goal Flag:
Impacted Aquifer Code:
MTBE High Level Date:
MTBE High Ug Per Liter Char:
MTBE High Ug Per Liter Numb:
MTBE Present Historically Flag:
MTBE Present Now Flag:
Protected Area Flag:
PWS Well Impacted Flag:
Sensitive Area Flag:

50	3 of6	SE	0.37 / 1,950.88	1,417.95 / 7	**Food N Fuel** **4997 Miller Trunk Highway** **Duluth MN 55811**	LST REM SITE

Item ID: 190406-AREA0000000001
Project ID: LS0008737
Project Type: Leak Site
Project ID (RAP):
Project Type (RAP):
Site Status: Closed
Perm List of Prio?:
Petrol Brownfield?:
VIC Site?:
Sf Voluntary:
Inst Controls?:
SEMS?:
Project Name: Food N Fuel
Project Managers: Gary Zarling (no longer at MPCA)
Site Address 1: 4997 Miller Trunk Highway
Site Address 2:
Site City: Duluth
Site State: MN
Site ZIP: 55811
Project Name(RAP):
Address1 (RAP):
Address2 (RAP):
City (RAP):
State (RAP):
ZIP (RAP):
Data Source: MPCA Remediation Sites

Unpermitted Dump?:
State Reg:
Federal Reg: Yes
Fed State Reg:
Non Reg:
NPL:
Site County: St. Louis
County (RAP):
Latitude: 46.83450723
Longitude: -92.20585102
Latitude (RAP):
Longitude (RAP):

Remediation Sites Details

Activity ID: 190406
SI ID: 1
Si Cat: AREA
Object ID: 4177
Cong Dist: 8
House Dist: 3B

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

SI Type:	LEAK	**Senate Dis:**	3
Site Type:	CON	**HUC 8:**	04010201
Acreage:		**HUC 10:**	0401020116
HRS Score:		**HUC 12:**	040102011604
Score Year:		**Gdb Geomattr Data:**	
DWSMA Code:		**MNTBA:**	
AI Name:	Food N Fuel		
DWSMA Name:			
Hydrologists:	Jonathan Smith (no longer at MPCA)		
Huc 8 Name:	St. Louis River		
Huc12 Name:	Saint Louis River		
Method Desc:	Digitized - MPCA internal map		
Loc Desc:			
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/190406		

Spatial Remediation Activity

AI ID:	190406	**Object ID:**	27387
Site ID:	LS0008737	**Remedy Imp:**	
SI ID:	1	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	
Site Start:	1995-08-30 00:00:00	**NPL List:**	
Site Close:	1998-09-29 00:00:00	**NPL Delete:**	
Leak Discovered:	1995-08-30 00:00:00	**PLP List:**	
Leak Reported:	1995-08-30 00:00:00	**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	
Activity No:	1	**FF Aproved:**	
Activity ID:	SIW19950001	**FF Closed:**	
Activity Type:	Leak Site Investigation	**Inv Comple:**	
Activity Code:	SIW	**App Comple:**	
Activity Year:	1995	**Er Site Ev:**	
Discovered:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
50	4 of6	SE	0.37 / 1,950.88	1,417.95 / 7	**Food And Fuel** **4997 Miller Trunk Highway** **Hermantown MN 55811**	LST REM SITE

Item ID:	189272-AREA0000000001	**Unpermitted Dump?:**	
Project ID:	LS0010973	**State Reg:**	
Project Type:	Leak Site	**Federal Reg:**	Yes
Project ID (RAP):		**Fed State Reg:**	
Project Type (RAP):		**Non Reg:**	
Site Status:	Closed	**NPL:**	
Perm List of Prio?:		**Site County:**	St. Louis
Petrol Brownfield?:		**County (RAP):**	
VIC Site?:		**Latitude:**	46.83443957
Sf Voluntary:		**Longitude:**	-92.20595072
Inst Controls?:		**Latitude (RAP):**	
SEMS?:		**Longitude (RAP):**	
Project Name:	Food And Fuel		
Project Managers:	Elizabeth Clysdale (no longer at MPCA)		
Site Address 1:	4997 Miller Trunk Highway		
Site Address 2:			
Site City:	Hermantown		
Site State:	MN		
Site ZIP:	55811		
Project Name(RAP):			
Address1 (RAP):			
Address2 (RAP):			
City (RAP):			
State (RAP):			
ZIP (RAP):			
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Activity ID:	189272	**Object ID:**	5802
SI ID:	1	**Cong Dist:**	8
Si Cat:	AREA	**House Dist:**	3B
SI Type:	LEAK	**Senate Dis:**	3
Site Type:	CON	**HUC 8:**	04010201
Acreage:		**HUC 10:**	0401020116
HRS Score:		**HUC 12:**	040102011604
Score Year:		**Gdb Geomattr Data:**	
DWSMA Code:		**MNTBA:**	
AI Name:	Food And Fuel		
DWSMA Name:			
Hydrologists:			
Huc 8 Name:	St. Louis River		
Huc12 Name:	Saint Louis River		
Method Desc:	Digitized - MPCA internal map		
Loc Desc:			
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/189272		

Spatial Remediation Activity

AI ID:	189272	**Object ID:**	26058
Site ID:	LS0010973	**Remedy Imp:**	
SI ID:	1	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	
Site Start:	1997-11-19 00:00:00	**NPL List:**	
Site Close:	1998-08-06 00:00:00	**NPL Delete:**	
Leak Discovered:	1997-11-18 00:00:00	**PLP List:**	
Leak Reported:	1997-11-19 00:00:00	**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	
Activity No:	1	**FF Aproved:**	
Activity ID:	SIW19970001	**FF Closed:**	
Activity Type:	Leak Site Investigation	**Inv Comple:**	
Activity Code:	SIW	**App Comple:**	
Activity Year:	1997	**Er Site Ev:**	
Discovered:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
50	5 of6	SE	0.37 / 1,950.88	1,417.95 / 7	**Food N Fuel** **4997 Miller Trunk Highway** **Duluth MN 55811**	MPCA AI

Agency Interest ID:	190406
Name (Map):	Food N Fuel
Address (Map):	4997 Miller Trunk Highway
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8345178
Longitude (Map):	-92.2058508
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Food N Fuel
Address (Site):	4997 Miller Trunk Highway
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8345178
Longitude (Site):	-92.2058508
County (Site):	St. Louis
Name (Req):	Food N Fuel
Address (Req):	4997 Miller Trunk Highway
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	

Latitude (Req):	46.8345178
Longitude (Req):	-92.2058508
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	190406-AISI0000190406	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	PetroleumRemediation	**SI ID:**	190406
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	4/25/2016	**TRDSQQ:**	
Tmsp Created:	3/29/2010	**Ref Code:**	GEN
User Created:	DELTA_M_R2	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	57679833	**User Updt:**	spatial_
Name:	Food N Fuel		
Program List:	PR		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	LS0008737	**Cong Distr:**	8
Program Co:	SR	**Senate Dis:**	3
Program Name:	Investigation and Cleanup	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	DM
City:	Hermantown	**Latitude:**	46.8345178
County:	St. Louis	**Longitude:**	-92.2058508
Activity:	Petroleum Remediation, Leak Site		
Addr St:	4997 Miller Trunk Highway		
Addr City:	Duluth		
MPCA ID List:	LS0008737		
Program 1:	Investigation and Cleanup		
Name:	Food N Fuel		
Watershed :	St. Louis River		
Coord Co 1:	Digitized - MPCA internal map		
Activity L:	Petroleum Remediation, Leak Site		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/190406		

Agency Interests: File Request Details

Item ID:	190406-AISI0000190406	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	PetroleumRemediation	**SI ID:**	190406
CTU Code:	239436	**SI Cat Desc:**	Agency Interest

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	4/25/2016	**Ref Code:**	GEN
Tmsp Created:	3/29/2010	**Ref Desc:**	General Location
User Created:	DELTA_M_R2	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	57679833		
Name:	Food N Fuel		
Program List:	PR		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

50	6 of6	SE	0.37 / 1,950.88	1,417.95 / 7	**Food And Fuel** **4997 Miller Trunk Highway** **Hermantown MN 55811**	MPCA AI

Agency Interest ID:	189272
Name (Map):	Food And Fuel
Address (Map):	4997 Miller Trunk Highway
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8344597
Longitude (Map):	-92.2059601
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Food And Fuel
Address (Site):	4997 Miller Trunk Highway
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8344597
Longitude (Site):	-92.2059601
County (Site):	St. Louis
Name (Req):	Food And Fuel
Address (Req):	4997 Miller Trunk Highway
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8344597
Longitude (Req):	-92.2059601
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	189272-AISI0000189272	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	PetroleumRemediation	**SI ID:**	189272

CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	4/25/2016	**TRDSQQ:**	
Tmsp Created:	11/30/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R2	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	51833362	**User Updt:**	spatial_
Name:	Food And Fuel		
Program List:	PR		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	LS0010973	**Cong Distr:**	8
Program Co:	SR	**Senate Dis:**	3
Program Name:	Investigation and Cleanup	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	DM
City:	Hermantown	**Latitude:**	46.8344597
County:	St. Louis	**Longitude:**	-92.2059601
Activity:	Petroleum Remediation, Leak Site		
Addr St:	4997 Miller Trunk Highway		
Addr City:	Hermantown		
MPCA ID List:	LS0010973		
Program 1:	Investigation and Cleanup		
Name:	Food And Fuel		
Watershed :	St. Louis River		
Coord Co 1:	Digitized - MPCA internal map		
Activity L:	Petroleum Remediation, Leak Site		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/189272		

Agency Interests: File Request Details

Item ID:	189272-AISI0000189272	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	PetroleumRemediation	**SI ID:**	189272
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	4/25/2016	**Ref Code:**	GEN
Tmsp Created:	11/30/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R2	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	51833362		
Name:	Food And Fuel		
Program List:	PR		
HUC 8:	4010201		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	DM
Method Desc:	Digitized - MPCA internal map

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
51	1 of1	WSW	0.37 / 1,967.19	1,439.15 / 29	Midnight Sun 5197 Miller Trunk Highway Hermantown MN 55811	MPCA AI

Agency Interest ID:	253440
Name (Map):	Midnight Sun
Address (Map):	5197 Miller Trunk Highway
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.837191
Longitude (Map):	-92.226578
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Midnight Sun
Address (Site):	5197 Miller Trunk Highway
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.837191
Longitude (Site):	-92.226578
County (Site):	St. Louis
Name (Req):	Midnight Sun
Address (Req):	5197 Miller Trunk Highway
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.837191
Longitude (Req):	-92.226578
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	253440-AISI0000253440	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	253440
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	9/29/2022	**TRDSQQ:**	
Tmsp Created:	9/29/2022	**Ref Code:**	CEN
User Created:	RSP	**Ref Desc:**	Center of Feature Represented
Tmsp Updt:	9/29/2022	**Verified:**	No
Spatial ID:		**User Updt:**	geo_nc
Name:	Midnight Sun		
Program List:	CS		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: DP
Method Desc: Digitized - MPCA online map

My Neighborhood Site Details

Active FLA: Yes
MPCA ID: C00065118
Program Co: ST
Program Name: Stormwater
Address: MN
Addr ZIP: 55811
City: Hermantown
County: St. Louis
Activity: Construction Stormwater
Addr St: 5197 Miller Trunk Highway
Addr City: Hermantown
MPCA ID List: C00065118
Program 1: Stormwater
Name: Midnight Sun
Watershed : St. Louis River
Coord Co 1: Digitized - MPCA online map
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/253440

HUC 8: 04010201
Cong Distr: 8
Senate Dis: 3
House Dist: 3B
IC Flag: No
Coord Coll: DP
Latitude: 46.837191
Longitude: -92.226578

Agency Interests: File Request Details

Item ID: 253440-AISI0000253440
Status: Active
Status Date:
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 9/29/2022
Tmsp Created: 9/29/2022
User Created: RSP
Tmsp Updt: 9/29/2022
Spatial ID:
Name: Midnight Sun
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: DP
Method Desc: Digitized - MPCA online map

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 253440
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: CEN
Ref Desc: Center of Feature Represented
Verified: No
User Updt: geo_nc

52	1 of3	ESE	0.39 / 2,048.31	1,410.31 / 0	Cirrus Design Corp aka Cirrus Aircraft	MPCA AI

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
					4515 Taylor Cir Hermantown MN 55811	

Agency Interest ID:	37928
Name (Map):	Cirrus Design Corp aka Cirrus Aircraft
Address (Map):	4515 Taylor Cir
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83832843
Longitude (Map):	-92.20363491
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Cirrus Design Corp aka Cirrus Aircraft
Address (Site):	4515 Taylor Cir
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811-1548
Latitude (Site):	46.83832843
Longitude (Site):	-92.20363491
County (Site):	St. Louis
Name (Req):	Cirrus Design Corp aka Cirrus Aircraft
Address (Req):	4515 Taylor Cir
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83832843
Longitude (Req):	-92.20363491
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	37928-AISI0000037928	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	37928
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	8/12/2025	**TRDSQQ:**	
Tmsp Created:	7/29/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	8/12/2025	**Verified:**	No
Spatial ID:	45612	**User Updt:**	jgyasi
Name:	Cirrus Design Corp aka Cirrus Aircraft		
Program List:	AQ, AT, HW, IS, WW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	Multiple IDs	**Cong Distr:**	8
Program Co:	AQ; HW; PP; ST; TL; WW	**Senate Dis:**	8
Program Name:	Multiple Programs	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-1548	**Coord Coll:**	A1
City:	Duluth	**Latitude:**	46.83832843
County:	St. Louis	**Longitude:**	-92.20363491

Activity: Multiple Activities
Addr St: 4515 Taylor Cir
Addr City: Hermantown
MPCA ID List: 13700343; 5581WCRRSD495MI; MN0000275115; MNR0536HW; MNR053CLL; SIU000623; TS0123098
Program 1: Air Quality; Hazardous Waste; Pollution Prevention; Stormwater; Tanks; Water Quality
Name: Cirrus Design Corp aka Cirrus Aircraft
Watershed : St. Louis River
Coord Co 1: Address Matching House Number
Activity L: Aboveground Tanks; Air Quality; Hazardous Waste, Large quantity generator; Industrial Stormwater; Toxics Reduction; Wastewater
Industrial: Aircraft Manufacturing
Site URL: https://webapp.pca.state.mn.us/wimn/site/37928

Agency Interests: File Request Details

Item ID:	37928-AISI0000037928	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	37928
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	8/12/2025	**Ref Code:**	GEN
Tmsp Created:	7/29/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	8/12/2025	**User Updt:**	jgyasi
Spatial ID:	45612		

Name: Cirrus Design Corp aka Cirrus Aircraft
Program List: AQ, AT, HW, IS, WW
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
52	2 of3	ESE	0.39 / 2,048.31	1,410.31 / 0	***Cirrus Design Corp/ Duluth Proj 8976SA96 4515 Taylor Cir Duluth MN 55811***	MPCA AI

Agency Interest ID:	2805
Name (Map):	Cirrus Design Corp/ Duluth Proj 8976SA96
Address (Map):	4515 Taylor Cir
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8376454
Longitude (Map):	-92.2061144
County (Map):	St. Louis

County Code (Map):	137
Loc Desc (Map):	CSLL: Site along road used for address match *** Note:many records provided by the department have a truncated LOC_DESC field.
Name (Site):	Cirrus Design Corp/ Duluth Proj 8976SA96
Address (Site):	4515 Taylor Cir
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8376454
Longitude (Site):	-92.2061144
County (Site):	St. Louis
Name (Req):	Cirrus Design Corp/ Duluth Proj 8976SA96
Address (Req):	4515 Taylor Cir
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	CSLL: Site along road used for address match
Latitude (Req):	46.8376454
Longitude (Req):	-92.2061144
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	2805-AISI0000002805	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	2006-09-25 16:15:27	***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	2805
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	8B
Quarters:		***Senate Dist:***	8
Collection Date:	4/25/2016	***TRDSQQ:***	
Tmsp Created:	2/9/1999	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	4/26/2016	***Verified:***	Yes
Spatial ID:	7251	***User Updt:***	spatial_

Name:	Cirrus Design Corp/ Duluth Proj 8976SA96
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	A1
Method Desc:	Address Matching House Number

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	C00004085	***Cong Distr:***	8
Program Co:	ST	***Senate Dis:***	8
Program Name:	Stormwater	***House Dist:***	8B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	A1
City:	Duluth	***Latitude:***	46.8376454
County:	St. Louis	***Longitude:***	-92.2061144

Activity:	Construction Stormwater
Addr St:	4515 Taylor Cir
Addr City:	Duluth

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

MPCA ID List: C00004085
Program 1: Stormwater
Name: Cirrus Design Corp/ Duluth Proj 8976SA96
Watershed : St. Louis River
Coord Co 1: Address Matching House Number
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/2805

Agency Interests: File Request Details

Item ID:	2805-AISI0000002805	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	9/25/2006	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	2805
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	4/25/2016	**Ref Code:**	GEN
Tmsp Created:	2/9/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	Yes
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	7251		

Name: Cirrus Design Corp/ Duluth Proj 8976SA96
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

52	3 of3	ESE	0.39 / 2,048.31	1,410.31 / 0	**CIRRUS DESIGN CORP** **4515 TAYLOR CIR** **HERMANTOWN MN 55811-1548**	**RCRA TSD**

Handler ID: MN0000275115
Generator Status: LQG
Recycler Activity?: YES
Recycler Activity Note: This facility has been identified as a Recycler Facility with indication of Reclamation and Recovery in the RCRA Biennial Report Module for Management Methods
H010 - Metals recovery including retorting, smelting, chemical, etc.
H011 - Mercury recovery (includes mercury retorting, bulb/lamp crushing and mercury vapor recovery, thermostat recovery, mercury from medical equipment recovery, mercury car switch recovery, etc.)
H015 - Deployment/deactivation of airbag waste followed by metals recovery
H020 - Solvents recovery
H039 - Other recovery or reclamation for reuse including acid regeneration, organics recovery, etc.
H050 - Energy recovery at this site; used as fuel (includes on-site fuel blending before energy recovery)
H061 - Fuel blending prior to energy recovery at another site (waste generated on-site or received from off-site)

Violation/Evaluation Summary

Note: VIOLATION or UNDETERMINED: There are VIOLATION or UNDETERMINED details or records associated with this facility (EPA ID) in the Compliance Monitoring and Enforcement table dated Nov 2025.

Violation Details

Viol Type: 262.C
Citation:
Determined Date: 20170831
Scheduled Compliance Date:
Eval Activity Location: MN
Viol Determined By Agency: EPA
Viol Short Desc: Generators - Pre-transport
Actual Rtc Date: 20180330
Found Violation: Yes
Rtc Qualifier: Documented

Enforcement Details

Enf Type: 120
Enf Type Desc: WRITTEN INFORMAL
Enf Action Date: 20180110
Disposition Status Desc:
Disposition Status Date:
Enf Agency: EPA
Proposed Amount:
Final Amount:
Paid Amount:

Violation Details

Viol Type: 273.B
Citation:
Determined Date: 20170831
Scheduled Compliance Date:
Eval Activity Location: MN
Viol Determined By Agency: EPA
Viol Short Desc: Universal Waste - Small Quantity Handlers
Actual Rtc Date: 20180330
Found Violation: Yes
Rtc Qualifier: Documented

Enforcement Details

Enf Type: 120
Enf Type Desc: WRITTEN INFORMAL
Enf Action Date: 20180110
Disposition Status Desc:
Disposition Status Date:
Enf Agency: EPA
Proposed Amount:
Final Amount:
Paid Amount:

Violation Details

Viol Type: 262.A
Citation:
Determined Date: 20130416
Scheduled Compliance Date:
Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - General
Actual Rtc Date: 20130904
Found Violation: Yes
Rtc Qualifier: Documented

Enforcement Details

Enf Type: 213
Enf Type Desc: FORGIVEABLE & NON-FORGIVEABLE APO
Enf Action Date: 20130716
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:

Paid Amount:

Violation Details

Viol Type: 262.C
Citation:
Determined Date: 20130416
Scheduled Compliance Date:
Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - Pre-transport
Actual Rtc Date: 20130904
Found Violation: Yes
Rtc Qualifier: Documented

Enforcement Details

Enf Type: 213
Enf Type Desc: FORGIVEABLE & NON-FORGIVEABLE APO
Enf Action Date: 20130716
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Violation Details

Viol Type: 262.A
Citation:
Determined Date: 20100819
Scheduled Compliance Date:
Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - General
Actual Rtc Date: 20101112
Found Violation: Yes
Rtc Qualifier: Documented

Enforcement Details

Enf Type: 213
Enf Type Desc: FORGIVEABLE & NON-FORGIVEABLE APO
Enf Action Date: 20101001
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount: 3525
Paid Amount: 3525

Enf Type: 123
Enf Type Desc: TEN DAY LETTER
Enf Action Date: 20100825
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Violation Details

Viol Type: 262.C
Citation:
Determined Date: 20100819
Scheduled Compliance Date:
Eval Activity Location: MN
Actual Rtc Date: 20101112
Found Violation: Yes
Rtc Qualifier: Documented

Viol Determined By Agency: State
Viol Short Desc: Generators - Pre-transport

Enforcement Details

Enf Type: 213
Enf Type Desc: FORGIVEABLE & NON-FORGIVEABLE APO
Enf Action Date: 20101001
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount: 3525
Paid Amount: 3525

Enf Type: 123
Enf Type Desc: TEN DAY LETTER
Enf Action Date: 20100825
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Violation Details

Viol Type: 262.A
Citation:
Determined Date: 20060419
Scheduled Compliance Date:
Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - General
Actual Rtc Date: 20060623
Found Violation: Yes
Rtc Qualifier: Documented

Violation Details

Viol Type: 262.A
Citation:
Determined Date: 20060419
Scheduled Compliance Date:
Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - General
Actual Rtc Date: 20060623
Found Violation: Yes
Rtc Qualifier: Observed

Enforcement Details

Enf Type: 123
Enf Type Desc: TEN DAY LETTER
Enf Action Date: 20060421
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Enf Type: 213
Enf Type Desc: FORGIVEABLE & NON-FORGIVEABLE APO
Enf Action Date: 20060518
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:

Final Amount: 810
Paid Amount: 810

Violation Details

Viol Type: 262.C
Citation:
Determined Date: 20060419
Scheduled Compliance Date:
Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - Pre-transport
Actual Rtc Date: 20060623
Found Violation: Yes
Rtc Qualifier: Observed

Enforcement Details

Enf Type: 123
Enf Type Desc: TEN DAY LETTER
Enf Action Date: 20060421
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Enf Type: 213
Enf Type Desc: FORGIVEABLE & NON-FORGIVEABLE APO
Enf Action Date: 20060518
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount: 810
Paid Amount: 810

Violation Details

Viol Type: 262.D
Citation:
Determined Date: 20060419
Scheduled Compliance Date:
Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - Records/Reporting
Actual Rtc Date: 20060623
Found Violation: Yes
Rtc Qualifier: Observed

Enforcement Details

Enf Type: 213
Enf Type Desc: FORGIVEABLE & NON-FORGIVEABLE APO
Enf Action Date: 20060518
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount: 810
Paid Amount: 810

Enf Type: 123
Enf Type Desc: TEN DAY LETTER
Enf Action Date: 20060421
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:

Final Amount:
Paid Amount:

Violation Details

Viol Type: 262.A
Citation:
Determined Date: 20040309
Scheduled Compliance Date:
Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - General
Actual Rtc Date: 20040419
Found Violation: Yes
Rtc Qualifier: Observed

Enforcement Details

Enf Type: 121
Enf Type Desc: Letter of Warning (LOW)
Enf Action Date: 20040309
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Violation Details

Viol Type: 262.C
Citation:
Determined Date: 20040309
Scheduled Compliance Date:
Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - Pre-transport
Actual Rtc Date: 20040419
Found Violation: Yes
Rtc Qualifier: Observed

Enforcement Details

Enf Type: 121
Enf Type Desc: Letter of Warning (LOW)
Enf Action Date: 20040309
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Violation Details

Viol Type: 262.A
Citation:
Determined Date: 20011030
Scheduled Compliance Date: 20011119
Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - General
Actual Rtc Date: 20020107
Found Violation: Yes
Rtc Qualifier: Observed

Enforcement Details

Enf Type: 211
Enf Type Desc: FORGIVEABLE ADMN PENALTY ORDER(APO)
Enf Action Date: 20011119

Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Violation Details

Viol Type: 262.B
Citation:
Determined Date: 20011030
Scheduled Compliance Date: 20011119
Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - Manifest
Actual Rtc Date: 20020107
Found Violation: Yes
Rtc Qualifier: Observed

Enforcement Details

Enf Type: 211
Enf Type Desc: FORGIVEABLE ADMN PENALTY ORDER(APO)
Enf Action Date: 20011119
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Violation Details

Viol Type: 262.C
Citation:
Determined Date: 19980611
Scheduled Compliance Date: 19980820
Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - Pre-transport
Actual Rtc Date: 19980723
Found Violation: Yes
Rtc Qualifier: Observed

Enforcement Details

Enf Type: 121
Enf Type Desc: Letter of Warning (LOW)
Enf Action Date: 19980820
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Evaluation Details

Eval Start Date: 20220215
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:
Actual Rtc Date:
Eval Agency: State

Eval Start Date: 20180419
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:
Actual Rtc Date:

Eval Agency:	State
Eval Start Date:	20170831
Eval Type Desc:	COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:	Generators - Pre-transport
Actual Rtc Date:	20180330
Eval Agency:	EPA
Eval Start Date:	20170831
Eval Type Desc:	COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:	Universal Waste - Small Quantity Handlers
Actual Rtc Date:	20180330
Eval Agency:	EPA
Eval Start Date:	20130416
Eval Type Desc:	COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:	Generators - General
Actual Rtc Date:	20130904
Eval Agency:	State
Eval Start Date:	20130416
Eval Type Desc:	COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:	Generators - Pre-transport
Actual Rtc Date:	20130904
Eval Agency:	State
Eval Start Date:	20100819
Eval Type Desc:	COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:	Generators - Pre-transport
Actual Rtc Date:	20101112
Eval Agency:	State
Eval Start Date:	20100819
Eval Type Desc:	COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:	Generators - General
Actual Rtc Date:	20101112
Eval Agency:	State
Eval Start Date:	20060621
Eval Type Desc:	NO LONGER A SIGNIFICANT NON-COMPLIER
Viol Short Desc:	
Actual Rtc Date:	
Eval Agency:	State
Eval Start Date:	20060419
Eval Type Desc:	COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:	Generators - General
Actual Rtc Date:	20060623
Eval Agency:	State
Eval Start Date:	20060419
Eval Type Desc:	COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:	Generators - Pre-transport
Actual Rtc Date:	20060623
Eval Agency:	State
Eval Start Date:	20060419
Eval Type Desc:	SIGNIFICANT NON-COMPLIER
Viol Short Desc:	
Actual Rtc Date:	
Eval Agency:	State
Eval Start Date:	20060419
Eval Type Desc:	COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:	Generators - Records/Reporting
Actual Rtc Date:	20060623
Eval Agency:	State
Eval Start Date:	20040309

Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc: Generators - General
Actual Rtc Date: 20040419
Eval Agency: State

Eval Start Date: 20040309
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc: Generators - Pre-transport
Actual Rtc Date: 20040419
Eval Agency: State

Eval Start Date: 20011030
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc: Generators - Manifest
Actual Rtc Date: 20020107
Eval Agency: State

Eval Start Date: 20011030
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc: Generators - General
Actual Rtc Date: 20020107
Eval Agency: State

Eval Start Date: 19980611
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc: Generators - Pre-transport
Actual Rtc Date: 19980723
Eval Agency: State

Handler Summary

Importer:	No	***Used Oil Transpor:***	No
Mixed Waste Gen:	No	***Used Oil Trans Fac:***	No
Transporter:	No	***Used Oil Processor:***	No
Transfer Facility:	No	***Used Oil Refiner:***	No
Recycler:	No	***Used Oil Burner:***	No
Onsite Burner Exem:	No	***Commercial TSD:***	No
Furnace Exemption:	No	***Recycl Nonstorage:***	No
Underground Injec:	No		
Used Oil Market Burner:	No		
Used Oil Spec Marketer:	No		

Additional Handler Summary Details

Source Type:	B	***NAIC 1:***	336411
Seq No:	11	***NAIC 2:***	
Non Notifier:		***NAIC 3:***	
Receive Date:	20241018	***NAIC 4:***	
Active Site:	H----	***State:***	MN
Land Type:	P	***Location Latitude:***	46.837646
In Handler Univ:	Y	***Location Longitude:***	-92.206089
In A Universe:	Y	***Loc GIS Primary:***	N
Gen Status:	LQG	***Loc GIS Origin:***	UC
Report Cycle:	2023	***State District Owner:***	
Accessibility:		***State District:***	
Region:	05		
Fed Waste Gen Owner:	HQ		
State Waste Generator Owner:	MN		
State Waste Generator:	1		
Short Term Generator:	N		
Uni Waste:	N		
Universal Waste Dest Facility:	N		
Federal Universal Waste:	N		
As Federally Regulated Tsdf:	------		
As Converter Tsdf:	------		
As State Regulated Tsdf:	------		
As State Regulated Handler:	---		

Federal Indicator:	---
Hsm:	N
Subpart K:	----
GPRA Permit:	N
GPRA Renewal:	N
Permit Renewal Wrkld:	------
Permwrk ID:	------
Perm Prog:	------
Pcwrkld:	------
Closwrkld:	------
GPRA Ca:	N
Cawrkld:	N
Subjca Tsd Discretion:	N
NCAPS:	N
EC Indicator:	N
Ca725 Indicator:	N
Ca750 Indicator:	N
Operating Tsdf:	------
Full Enforcement:	------
Snc:	N
Unaddressed Snc:	N
Addressed Snc:	N
Snc With Comp Sched:	N
Fa Required:	-----
Hhandler Last Change:	20241018
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	EN
Handler Name:	CIRRUS DESIGN CORP
Location Street No:	
Location Street1:	4515 TAYLOR CIR
Location Street2:	
Location City:	HERMANTOWN
Location State:	MN
Location Zip:	55811-1548
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	US
Contact Name:	ROSS PETERSON
Contact Street No:	
Contact Street1:	4515 TAYLOR CIR
Contact Street2:	
Contact City:	DULUTH
Contact State:	MN
Contact Zip:	55811-1548
Contact Country:	US
Contact Phone & Ext:	218-461-6781
Contact Fax:	
Contact Email Address:	RTPETERSON@CIRRUSAIRCRAFT.COM
Contact Title:	MANAGER
Owner Name:	CIRRUS DESIGN CORP.
Owner Type:	P
Owner Seq:	1
Operator Name:	CIRRUS DESIGN CORP
Operator Type:	P
Operator Seq:	2
Public Notes:	

Hazardous Waste Handler Details

Seq No:	1
Receive Date:	19940506
Handler Name:	CIRRUS DESIGN CORP

Fed Waste Generator: 1
Generator Code Description: Large Quantity Generator
Tsd Activity: N
Source Type: Notification

Waste Code Details

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: D002
Waste Code Desc: CORROSIVE WASTE

Waste Code: D009
Waste Code Desc: MERCURY

Waste Code: F001
Waste Code Desc: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F003
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F005
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Hazardous Waste Handler Details

Seq No: 1
Receive Date: 20040602
Handler Name: CIRRUS DESIGN CORPORATION
Fed Waste Generator: 1
Generator Code Description: Large Quantity Generator
Tsd Activity: Y
Source Type: Annual/Biennial Report

Waste Code Details

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: D002
Waste Code Desc: CORROSIVE WASTE

Waste Code: D005
Waste Code Desc: BARIUM

Waste Code: D006
Waste Code Desc: CADMIUM

Waste Code: D007
Waste Code Desc: CHROMIUM

Waste Code: D008
Waste Code Desc: LEAD

Waste Code: D035
Waste Code Desc: METHYL ETHYL KETONE

Waste Code: F003
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F005
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Hazardous Waste Handler Details

Seq No: 1
Receive Date: 20060126
Handler Name: CIRRUS DESIGN CORPORATION
Fed Waste Generator: 1
Generator Code Description: Large Quantity Generator
Tsd Activity: N
Source Type: Annual/Biennial Report update with Notification

Waste Code Details

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: D002
Waste Code Desc: CORROSIVE WASTE

Waste Code: D005
Waste Code Desc: BARIUM

Waste Code: D007
Waste Code Desc: CHROMIUM

Waste Code: D018
Waste Code Desc: BENZENE

Waste Code: D035
Waste Code Desc: METHYL ETHYL KETONE

Waste Code: F003
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F005
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Hazardous Waste Handler Details

Seq No: 5
Receive Date: 20100215
Handler Name: CIRRUS DESIGN CORPORATION
Fed Waste Generator: 1
Generator Code Description: Large Quantity Generator
Tsd Activity: Y
Source Type: Annual/Biennial Report update with Notification

Waste Code Details

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: D002
Waste Code Desc: CORROSIVE WASTE

Waste Code: D035
Waste Code Desc: METHYL ETHYL KETONE

Waste Code: F003
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F005
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Hazardous Waste Handler Details

Seq No: 1
Receive Date: 20100819
Handler Name: CIRRUS DESIGN CORPORATION
Fed Waste Generator: 1
Generator Code Description: Large Quantity Generator
Tsd Activity: Y
Source Type: Implementer

Waste Code Details

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: D002
Waste Code Desc: CORROSIVE WASTE

Waste Code: D035
Waste Code Desc: METHYL ETHYL KETONE

Waste Code: F003
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F005
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Hazardous Waste Handler Details

Seq No: 6
Receive Date: 20120215
Handler Name: CIRRUS DESIGN CORPORATION
Fed Waste Generator: 1
Generator Code Description: Large Quantity Generator
Tsd Activity: N
Source Type: Annual/Biennial Report update with Notification

Waste Code Details

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: D002
Waste Code Desc: CORROSIVE WASTE

Waste Code: D035
Waste Code Desc: METHYL ETHYL KETONE

Waste Code: F003
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F005
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Hazardous Waste Handler Details

Seq No: 2
Receive Date: 20130416
Handler Name: CIRRUS DESIGN CORPORATION
Fed Waste Generator: 1

Generator Code Description: Large Quantity Generator
Tsd Activity: N
Source Type: Notification

Waste Code Details

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: D002
Waste Code Desc: CORROSIVE WASTE

Waste Code: D035
Waste Code Desc: METHYL ETHYL KETONE

Waste Code: F003
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F005
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Hazardous Waste Handler Details

Seq No: 7
Receive Date: 20140226
Handler Name: CIRRUS DESIGN CORPORATION
Fed Waste Generator: 1
Generator Code Description: Large Quantity Generator
Tsd Activity: N
Source Type: Annual/Biennial Report update with Notification

Waste Code Details

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: D002
Waste Code Desc: CORROSIVE WASTE

Waste Code: D035
Waste Code Desc: METHYL ETHYL KETONE

Waste Code: F003
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F005
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON

DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Hazardous Waste Handler Details

Seq No: 8
Receive Date: 20180215
Handler Name: CIRRUS DESIGN CORPORATION
Fed Waste Generator: 1
Generator Code Description: Large Quantity Generator
Tsd Activity: N
Source Type: Annual/Biennial Report update with Notification

Waste Code Details

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: D002
Waste Code Desc: CORROSIVE WASTE

Waste Code: D035
Waste Code Desc: METHYL ETHYL KETONE

Waste Code: F003
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F005
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Hazardous Waste Handler Details

Seq No: 9
Receive Date: 20200923
Handler Name: CIRRUS DESIGN CORPORATION
Fed Waste Generator: 1
Generator Code Description: Large Quantity Generator
Tsd Activity: N
Source Type: Annual/Biennial Report update with Notification

Waste Code Details

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: D002
Waste Code Desc: CORROSIVE WASTE

Waste Code: D035
Waste Code Desc: METHYL ETHYL KETONE

Waste Code: F003
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F005
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Hazardous Waste Handler Details

Seq No: 10
Receive Date: 20220223
Handler Name: CIRRUS DESIGN CORPORATION
Fed Waste Generator: 1
Generator Code Description: Large Quantity Generator
Tsd Activity: N
Source Type: Annual/Biennial Report update with Notification

Waste Code Details

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: D002
Waste Code Desc: CORROSIVE WASTE

Waste Code: D035
Waste Code Desc: METHYL ETHYL KETONE

Waste Code: F003
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F005
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Hazardous Waste Handler Details

Seq No: 53
Receive Date: 20231218
Handler Name: CIRRUS DESIGN CORP
Fed Waste Generator: 1
Generator Code Description: Large Quantity Generator
Tsd Activity: N

Source Type: Implementer

Hazardous Waste Handler Details

Seq No: 11
Receive Date: 20241018
Handler Name: CIRRUS DESIGN CORP
Fed Waste Generator: 1
Generator Code Description: Large Quantity Generator
Tsd Activity: N
Source Type: Annual/Biennial Report update with Notification

Waste Code Details

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: D002
Waste Code Desc: CORROSIVE WASTE

Waste Code: D035
Waste Code Desc: METHYL ETHYL KETONE

Waste Code: F003
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F005
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Owner/Operator Details

Owner/Operator Ind: Current Owner
Type: Private
Name: CIRRUS
Dt Became Current: 19940101
Dt Ended Current:
Phone:
Source Type: Annual/Biennial Report update with Notification
Street No: 4515
Street1: TAYLOR CIRCLE
Street2:
City: DULUTH
State: MN
Country: US
Zip: 55811

Owner/Operator Ind: Current Owner
Type: Private
Name: CIRRUS DESIGN CORP.
Dt Became Current:
Dt Ended Current:
Phone:
Source Type: Annual/Biennial Report update with Notification
Street No:
Street1: 4515 TAYLOR CIRCLE
Street2:
City: DULUTH
State: MN
Country: US
Zip: 55811

Owner/Operator Ind: Current Owner
Type: Private
Name: CIRRUS
Dt Became Current: 19940101
Dt Ended Current:
Phone:
Source Type: Implementer
Street No: 4515
Street1: TAYLOR CIRCLE
Street2:
City: DULUTH
State: MN
Country:
Zip: 55811

Owner/Operator Ind:	Current Operator	**Street No:**	4515
Type:	Private	**Street1:**	TAYLOR CIRCLE
Name:	CIRRUS	**Street2:**	
Dt Became Current:	19940101	**City:**	DULUTH
Dt Ended Current:		**State:**	MN
Phone:		**Country:**	
Source Type:	Notification	**Zip:**	55811

Owner/Operator Ind:	Current Operator	**Street No:**	
Type:	Private	**Street1:**	4515 TRYLOR CICLE
Name:	JASON BARSNESS	**Street2:**	
Dt Became Current:	19940101	**City:**	DULUTH
Dt Ended Current:		**State:**	MN
Phone:		**Country:**	US
Source Type:	Annual/Biennial Report update with Notification	**Zip:**	55811

Owner/Operator Ind:	Current Operator	**Street No:**	4515
Type:	Private	**Street1:**	TAYLOR CIRCLE
Name:	CIRRUS	**Street2:**	
Dt Became Current:	19940101	**City:**	DULUTH
Dt Ended Current:		**State:**	MN
Phone:		**Country:**	US
Source Type:	Annual/Biennial Report update with Notification	**Zip:**	55811

Owner/Operator Ind:	Current Operator	**Street No:**	4515
Type:	Private	**Street1:**	TAYLOR CIRCLE
Name:	CIRRUS	**Street2:**	
Dt Became Current:	19940101	**City:**	DULUTH
Dt Ended Current:		**State:**	MN
Phone:		**Country:**	
Source Type:	Annual/Biennial Report update with Notification	**Zip:**	55811

Owner/Operator Ind:	Current Owner	**Street No:**	4515
Type:	Private	**Street1:**	TAYLOR CIRCLE
Name:	CIRRUS	**Street2:**	
Dt Became Current:	19940101	**City:**	DULUTH
Dt Ended Current:		**State:**	MN
Phone:		**Country:**	
Source Type:	Annual/Biennial Report update with Notification	**Zip:**	55811

Owner/Operator Ind:	Current Operator	**Street No:**	4515
Type:	Private	**Street1:**	TAYLOR CIRCLE
Name:	CIRRUS	**Street2:**	
Dt Became Current:	19940101	**City:**	DULUTH
Dt Ended Current:		**State:**	MN
Phone:		**Country:**	
Source Type:	Implementer	**Zip:**	55811

Owner/Operator Ind:	Current Owner	**Street No:**	
Type:	Private	**Street1:**	4515 TRYLOR CICLE
Name:	JASON BARSNESS	**Street2:**	
Dt Became Current:	19940101	**City:**	DULUTH
Dt Ended Current:		**State:**	MN
Phone:		**Country:**	US
Source Type:	Annual/Biennial Report update with Notification	**Zip:**	55811

Owner/Operator Ind:	Current Operator	**Street No:**	
Type:	Private	**Street1:**	4515 TAYLOR CIR
Name:	CIRRUS DESIGN CORP	**Street2:**	
Dt Became Current:	19990729	**City:**	DULUTH
Dt Ended Current:		**State:**	MN
Phone:	218-788-3191	**Country:**	US
Source Type:	Notification	**Zip:**	55811

Owner/Operator Ind:	Current Owner	**Street No:**	4515
Type:	Private	**Street1:**	TAYLOR CIRCLE
Name:	CIRRUS	**Street2:**	
Dt Became Current:	19940101	**City:**	DULUTH

Dt Ended Current:		***State:***	MN
Phone:		***Country:***	US
Source Type:	Annual/Biennial Report	***Zip:***	55811
Owner/Operator Ind:	Current Operator	***Street No:***	
Type:	Private	***Street1:***	4515 TAYLOR CIRCLE
Name:	CIRRUS DESIGN CORP	***Street2:***	
Dt Became Current:		***City:***	DULUTH
Dt Ended Current:		***State:***	MN
Phone:		***Country:***	US
Source Type:	Annual/Biennial Report update with Notification	***Zip:***	55811
Owner/Operator Ind:	Current Owner	***Street No:***	4515
Type:	Private	***Street1:***	TAYLOR CIRCLE
Name:	CIRRUS	***Street2:***	
Dt Became Current:	19940101	***City:***	DULUTH
Dt Ended Current:		***State:***	MN
Phone:		***Country:***	
Source Type:	Notification	***Zip:***	55811
Owner/Operator Ind:	Current Operator	***Street No:***	4515
Type:	Private	***Street1:***	TAYLOR CIRCLE
Name:	CIRRUS	***Street2:***	
Dt Became Current:	19940101	***City:***	DULUTH
Dt Ended Current:		***State:***	MN
Phone:		***Country:***	US
Source Type:	Annual/Biennial Report	***Zip:***	55811

Historical Handler Details

Receive Dt:	20231218
Generator Code Description:	Large Quantity Generator
Handler Name:	CIRRUS DESIGN CORP
Receive Dt:	20220223
Generator Code Description:	Large Quantity Generator
Handler Name:	CIRRUS DESIGN CORPORATION
Receive Dt:	20200923
Generator Code Description:	Large Quantity Generator
Handler Name:	CIRRUS DESIGN CORPORATION
Receive Dt:	20180215
Generator Code Description:	Large Quantity Generator
Handler Name:	CIRRUS DESIGN CORPORATION
Receive Dt:	20140226
Generator Code Description:	Large Quantity Generator
Handler Name:	CIRRUS DESIGN CORPORATION
Receive Dt:	20130416
Generator Code Description:	Large Quantity Generator
Handler Name:	CIRRUS DESIGN CORPORATION
Receive Dt:	20120215
Generator Code Description:	Large Quantity Generator
Handler Name:	CIRRUS DESIGN CORPORATION
Receive Dt:	20100819
Generator Code Description:	Large Quantity Generator
Handler Name:	CIRRUS DESIGN CORPORATION
Receive Dt:	20100215
Generator Code Description:	Large Quantity Generator
Handler Name:	CIRRUS DESIGN CORPORATION
Receive Dt:	20060126
Generator Code Description:	Large Quantity Generator

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Handler Name: CIRRUS DESIGN CORPORATION

Receive Dt: 20040602
Generator Code Description: Large Quantity Generator
Handler Name: CIRRUS DESIGN CORPORATION

Receive Dt: 19940506
Generator Code Description: Large Quantity Generator
Handler Name: CIRRUS DESIGN CORP

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
53	1 of6	SE	0.40 / 2,110.40	1,414.24 / 4	Curtis Convenience Store 4991 Miller Trunk Highway Hermantown MN	DELISTED LST

Delisted MPCA Remediation Leak Sites

Item ID:	110983-AREA0000000002	**Perm List of Prio?:**	
Project ID:	LS0020519	**Petrol Brownfield?:**	
Project Type:	Leak Site	**VIC Site?:**	
Project Name:	Curtis Convenience Store	**Sf Volunta:**	
Site Address 1:	4991 Miller Trunk Highway	**Inst Controls?:**	
Site Address 2:		**SEMS?:**	
Site City:	Hermantown	**Unpermitted Dump?:**	
Site State:	MN	**State Reg:**	
Site ZIP:	55811	**Federal Re:**	Yes
Site Status:	Closed	**Fed State:**	
Project ID (RAP):		**Non Reg:**	
Project Type (RAP):		**NPL:**	
Project Name(RAP):		**Site County:**	St. Louis
Address1 (RAP):		**County (RAP):**	
Address2(RAP):		**Latitude (RAP):**	
City (RAP):		**Longitude (RAP):**	
State (RAP):		**Latitude:**	46.83451277
ZIP (RAP):		**Longitude:**	-92.20604863

Project Manager: Roberta Wirth-Feeney (former), Ryan Lundgren (former)
Data Source: MPCA Remediation Sites
Original Source: LSTR
Record Date: 08-JUN-2022

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
53	2 of6	SE	0.40 / 2,110.40	1,414.24 / 4	Miller Trunk Food N Fuel 4991 Miller Trunk Highway Hermantown MN 55811	HIST LEAKSITES

Prog Int ID:	223736	**Address Source:**	CORE
Site ID:	217956	**Township Name:**	Whiteface Reservoir
State County Code:	69	**County Name:**	St. Louis
Country:	USA	**Lat/Long ID:**	139915
Interest Type Cd:	LS	**Interest Type Dsc:**	Leak Site
ADDR ID:	193909	**Lat Degrees:**	46
Tank Site:	11321	**Lat Minutes:**	50
Interest Phone:	NO CORE PI PH.	**Lat Seconds:**	3.98
Interest Start Dt:	09/01/1999 15:19:53	**Long Degrees:**	-92
Interest End Dt:	11/30/2006 07:11:45	**Long Minutes:**	12
Active?:	No	**Long Seconds:**	21.43
Timestamp Added:	11/30/2006 07:11:45	**Lat/Long Source:**	CORE
Timestamp Updt:	11/10/2014 08:17:05	**Lat/Long Site ID:**	217956
Staff ID Updt:	RGAGLE	**Lat/Long Spatial ID:**	51833907
Source:	CORE	**Collection Date:**	06/03/2008 10:12:42
Coord Src Type:		**Map Scale Code:**	
Coord Src Desc:		**Org Name Source:**	
Foreign State:		**Foreign Zone:**	
FIPS County Cd1:	137		

Addr Timestmp Add: 08/30/2006 08:50:36
Addr Timestamp Lst Updt: 11/04/2008 21:13:54
Addr Updater Staff ID: SYSTEM

Lat/Long Timestamp Added:	06/03/2008 10:12:07
Lat/Long Tmstmp Last Upd:	06/03/2008 10:12:42
Lat/Long Updater Staff ID:	MAPTOOL
Lat/Long Desc:	
Coord Coll Method Desc:	Digitized - Map Tool
Coord Coll Method Code:	DM
Comments:	

Leak Site

Complete Site Closure Date:	09/14/1998 00:00:00
Cond Closure Date:	
Release Discovered Date:	05/25/1998 00:00:00
Leaksite Type Code:	1
Leaksite Type Desc:	Leak Site
Leak Report Date:	05/25/1998 00:00:00
Tank Reg Status Code:	F
TMSP Added:	12/04/1999 14:03:51
TMSP Last Updt:	04/07/2014 14:07:25
CU Yds Excavated Qty:	
ENF Action Begin Date:	06/04/1998 00:00:00
Residence Type Code:	
File Archive Box:	
File Archive Lot:	
Soil Digout Date:	
Staff ID Last Updt:	LKANIA
Std Letter Response Date:	06/25/1998 00:00:00
VPIC Acres:	
VPIC Application Date:	
Contam Soils Remaining Flag:	U
Indoor Air Collected Flag:	
LUST Trust Eligible Flag:	Yes
Offsite Contam Flag:	U
REIMB Awarded Flag:	No
Release From AST Flag:	No
Release From UST Flag:	No
Soil Gas Action Level Flag:	
Soil Gas Data Collected Flag:	
Sub Slab Sample Collected Flag:	
Surface Water Impact Flag:	U
Utility Project Flag:	No
Vapor Intrusion Action Flag:	
Vapor Intrusion Checked Flag:	
Leaksite Type Defn:	Leak site (tank and petroleum contamination).
Soil Gas Data Comments:	
Vapor Intrusion Comments:	

Leak Product Rls

Product Rls Seq ID:	35828
Leak Product Desc:	Unknown
Leak Product Defn:	The product is unknown.

Leak GW Info

Well Type Code:	
Affected Non Res Props:	
Affected Residential Props:	
Staff ID Last Updt:	RSUCHAN
Staff ID Wellhead Area Assess:	
TMSP Added:	12/04/1999 14:07:35
TMSP Last Updt:	11/04/2003 12:57:08
Water Supply Exceeds Ral Flag:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Cleanup Goal Achieved Flag:
DW Supply Contam Flag:
Free Product at Close Flag:
Free Product Observed Flag:
Free Product Thickness:
Ground Water Contam Flag:
GW Cleanup Goal: 0
GW Exceeds Cleanup Goal Flag:
Impacted Aquifer Code:
MTBE High Level Date:
MTBE High Ug Per Liter Char:
MTBE High Ug Per Liter Numb:
MTBE Present Historically Flag:
MTBE Present Now Flag:
Protected Area Flag:
PWS Well Impacted Flag:
Sensitive Area Flag:

53	3 of6	SE	0.40 / 2,110.40	1,414.24 / 4	**Curtis Oil** **4991 MILLER TRUNK Highway MN** **Duluth MN 55811**	LST INCIDENT

Incident ID: 76795
Incident Status: Closed or Completed
AI ID:
Incident Types: Leaking Tank
Incident Date: 10/22/2009
Program: Emergency Response
Closure Type: Response/Action Completed
County: St. Louis

Source Address: 4985 Miller Trunk Highway
Source City: Duluth
Source State: MN
Source ZIP: 55811
Latitude:
Longitude:
Coord Method:

Lead Investigator and Duty Officer

Substances: unknown units Gasoline, Unleaded
Duty Officer No: 106988
Lead Investigator: Steve Leppala
Source List: Curtis Oil (Duluth, MN)

53	4 of6	SE	0.40 / 2,110.40	1,414.24 / 4	**Miller Trunk Food N Fuel** **4991 Miller Trunk Highway** **Hermantown MN 55811**	LST REM SITE

Item ID: 110983-AREA0000000001
Project ID: LS0011321
Project Type: Leak Site
Project ID (RAP):
Project Type (RAP):
Site Status: Closed
Perm List of Prio?:
Petrol Brownfield?:
VIC Site?:
Sf Voluntary:
Inst Controls?:
SEMS?:
Project Name: Miller Trunk Food N Fuel
Project Managers: Steve Leppala (no longer at MPCA)
Site Address 1: 4991 Miller Trunk Highway
Site Address 2:
Site City: Hermantown
Site State: MN
Site ZIP: 55811
Project Name(RAP):
Address1 (RAP):
Address2 (RAP):
City (RAP):

Unpermitted Dump?:
State Reg:
Federal Reg: Yes
Fed State Reg:
Non Reg:
NPL:
Site County: St. Louis
County (RAP):
Latitude: 46.83444633
Longitude: -92.20596039
Latitude (RAP):
Longitude (RAP):

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

State (RAP):
ZIP (RAP):
Data Source: MPCA Remediation Sites

Remediation Sites Details

Activity ID:	110983	**Object ID:**	24417
SI ID:	1	**Cong Dist:**	8
Si Cat:	AREA	**House Dist:**	3B
SI Type:	LEAK	**Senate Dis:**	3
Site Type:	CON	**HUC 8:**	04010201
Acreage:		**HUC 10:**	0401020116
HRS Score:		**HUC 12:**	040102011604
Score Year:		**Gdb Geomattr Data:**	
DWSMA Code:		**MNTBA:**	

AI Name: Curtis Convenience Store
DWSMA Name:
Hydrologists:
Huc 8 Name: St. Louis River
Huc12 Name: Saint Louis River
Method Desc: Digitized - MPCA internal map
Loc Desc:
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/110983

Spatial Remediation Activity

AI ID:	110983	**Object ID:**	15474
Site ID:	LS0011321	**Remedy Imp:**	
SI ID:	1	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	
Site Start:	1998-05-25 00:00:00	**NPL List:**	
Site Close:	1998-09-14 00:00:00	**NPL Delete:**	
Leak Discovered:	1998-05-25 00:00:00	**PLP List:**	
Leak Reported:	1998-05-25 00:00:00	**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	
Activity No:	1	**FF Aproved:**	
Activity ID:	SIW19980001	**FF Closed:**	
Activity Type:	Leak Site Investigation	**Inv Comple:**	
Activity Code:	SIW	**App Comple:**	
Activity Year:	1998	**Er Site Ev:**	
Discovered:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
53	5 of6	SE	0.40 / 2,110.40	1,414.24 / 4	**Curtis Convenience Store** **4991 Miller Trunk Highway** **Hermantown MN 55811**	LST REM SITE

Item ID:	110983-AREA0000000002	**Unpermitted Dump?:**	
Project ID:	LS0020519	**State Reg:**	
Project Type:	Leak Site	**Federal Reg:**	Yes
Project ID (RAP):		**Fed State Reg:**	
Project Type (RAP):		**Non Reg:**	
Site Status:	Closed	**NPL:**	
Perm List of Prio?:		**Site County:**	St. Louis
Petrol Brownfield?:		**County (RAP):**	
VIC Site?:		**Latitude:**	46.83451277
Sf Voluntary:		**Longitude:**	-92.20604863
Inst Controls?:		**Latitude (RAP):**	
SEMS?:		**Longitude (RAP):**	

Project Name: Curtis Convenience Store
Project Managers: Roberta Wirth-Feeney (no longer at MPCA), Ryan Lundgren (no longer at MPCA)
Site Address 1: 4991 Miller Trunk Highway
Site Address 2:
Site City: Hermantown
Site State: MN
Site ZIP: 55811

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Project Name(RAP):
Address1 (RAP):
Address2 (RAP):
City (RAP):
State (RAP):
ZIP (RAP):
Data Source: MPCA Remediation Sites

Remediation Sites Details

Activity ID:	110983	***Object ID:***	29920
SI ID:	2	***Cong Dist:***	8
Si Cat:	AREA	***House Dist:***	3B
SI Type:	LEAK	***Senate Dis:***	3
Site Type:	CON	***HUC 8:***	04010201
Acreage:		***HUC 10:***	0401020116
HRS Score:		***HUC 12:***	040102011604
Score Year:		***Gdb Geomattr Data:***	
DWSMA Code:		***MNTBA:***	

AI Name: Curtis Convenience Store
DWSMA Name:
Hydrologists: Victor Henao (former)
Huc 8 Name: St. Louis River
Huc12 Name: Saint Louis River
Method Desc: Digitized - MPCA internal map
Loc Desc:
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/110983

Spatial Remediation Activity

AI ID:	110983	***Object ID:***	15475
Site ID:	LS0020519	***Remedy Imp:***	
SI ID:	2	***Remedy Sel:***	
SI Cat:	AREA	***ASMT Compl:***	
NFA Decisi:		***Received:***	
Site Start:	2017-08-09 00:00:00	***NPL List:***	
Site Close:	2019-06-20 00:00:00	***NPL Delete:***	
Leak Discovered:	2017-08-08 00:00:00	***PLP List:***	
Leak Reported:	2017-08-09 00:00:00	***PLP Delist:***	
Leak Reopened:		***Staff Assi:***	
Activity No:	1	***FF Aproved:***	
Activity ID:	SIW20170001	***FF Closed:***	
Activity Type:	Leak Site Investigation	***Inv Comple:***	
Activity Code:	SIW	***App Comple:***	
Activity Year:	2017	***Er Site Ev:***	
Discovered:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
53	6 of6	SE	0.40 / 2,110.40	1,414.24 / 4	Curtis Convenience Store 4991 Miller Trunk Highway Hermantown MN 55811	MPCA AI

Agency Interest ID: 110983
Name (Map): Curtis Convenience Store
Address (Map): 4991 Miller Trunk Highway
City (Map): Hermantown
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83451644
Longitude (Map): -92.20604863
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Curtis Convenience Store
Address (Site): 4991 Miller Trunk Highway
City (Site): Hermantown
State (Site): MN

ZIP (Site):	55811-1491
Latitude (Site):	46.83451644
Longitude (Site):	-92.20604863
County (Site):	St. Louis
Name (Req):	Curtis Convenience Store
Address (Req):	4991 Miller Trunk Highway
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83451644
Longitude (Req):	-92.20604863
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	110983-AISI0000110983	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	110983
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:	050	**Description:**	
Range :	15	**SI Designation:**	
Range Dir:	W	**Cong Dist:**	8
Section:	03	**House Dist:**	3B
Quarters:	bb	**Senate Dist:**	3
Collection Date:	3/6/2020	**TRDSQQ:**	05015203bb
Tmsp Created:	8/30/2006	**Ref Code:**	CEN
User Created:	DELTA_M_R1	**Ref Desc:**	Center of Feature Represented
Tmsp Updt:	3/6/2020	**Verified:**	Yes
Spatial ID:		**User Updt:**	vsetter
Name:	Curtis Convenience Store		
Program List:	PR, SA, UT		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	Multiple IDs	**Cong Distr:**	8
Program Co:	SR; TL	**Senate Dis:**	3
Program Name:	Multiple Programs	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-1491	**Coord Coll:**	DM
City:	Hermantown	**Latitude:**	46.83451644
County:	St. Louis	**Longitude:**	-92.20604863
Activity:	Multiple Activities		
Addr St:	4991 Miller Trunk Highway		
Addr City:	Hermantown		
MPCA ID List:	LS0011321; LS0020519; SA0000632; TS0005743		
Program 1:	Investigation and Cleanup; Tanks		
Name:	Curtis Convenience Store		
Watershed :	St. Louis River		
Coord Co 1:	Digitized - MPCA internal map		
Activity L:	Petroleum Remediation, Leak Site; Site Assessment; Underground Tanks		
Industrial:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Site URL: https://webapp.pca.state.mn.us/wimn/site/110983

Agency Interests: File Request Details

Item ID:	110983-AISI0000110983	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	110983
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:	50	**SI Designation:**	
Range :	15	**Cong Dist:**	8
Range Dir:	W	**House Dist:**	3B
Section:	3	**Senate Dist:**	3
Quarters:	bb	**TRDSQQ:**	05015203bb
Collection Date:	3/6/2020	**Ref Code:**	CEN
Tmsp Created:	8/30/2006	**Ref Desc:**	Center of Feature Represented
User Created:	DELTA_M_R1	**Verified:**	Yes
Tmsp Updt:	3/6/2020	**User Updt:**	vsetter
Spatial ID:			

Name:	Curtis Convenience Store
Program List:	PR, SA, UT
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	DM
Method Desc:	Digitized - MPCA internal map

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
54	1 of1	ESE	0.41 / 2,147.61	1,410.28 / 0	**Curtis Oil** **4985 Miller Trunk Highway** **Hermantown MN 55811**	MPCA AI

Agency Interest ID:	136596
Name (Map):	Curtis Oil
Address (Map):	4985 Miller Trunk Highway
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8325687
Longitude (Map):	-92.2035588
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Curtis Oil
Address (Site):	4985 Miller Trunk Highway
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8325687
Longitude (Site):	-92.2035588
County (Site):	St. Louis
Name (Req):	Curtis Oil
Address (Req):	4985 Miller Trunk Highway
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8325687
Longitude (Req):	-92.2035588
County (Req):	St. Louis
County Code (Req):	137

Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	136596-AISI0000136596	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2014-05-31 00:00:00	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	136596
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	8/3/2010	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	58347662	**User Updt:**	spatial_
Name:	Curtis Oil		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	MNS000159103	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	3
Program Name:	Hazardous Waste	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Hermantown	**Latitude:**	46.8325687
County:	St. Louis	**Longitude:**	-92.2035588
Activity:	Hazardous Waste		
Addr St:	4985 Miller Trunk Highway		
Addr City:	Hermantown		
MPCA ID List:	MNS000159103		
Program 1:	Hazardous Waste		
Name:	Curtis Oil		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Hazardous Waste		
Industrial:	Fuel Dealers		
Site URL:	https://webapp.pca.state.mn.us/wimn/site/136596		

Agency Interests: File Request Details

Item ID:	136596-AISI0000136596	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	5/31/2014	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	136596
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	8/3/2010	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	58347662		
Name:	Curtis Oil		
Program List:	HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
55	1 of1	ESE	0.41 / 2,183.07	1,410.60 / 0	Plating Specialties Inc 4505 Taylor Cir Duluth MN 55811	MPCA AI

Agency Interest ID:	13500
Name (Map):	Plating Specialties Inc
Address (Map):	4505 Taylor Cir
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.837441
Longitude (Map):	-92.2060893
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Plating Specialties Inc
Address (Site):	4505 Taylor Cir
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811-1548
Latitude (Site):	46.837441
Longitude (Site):	-92.2060893
County (Site):	St. Louis
Name (Req):	Plating Specialties Inc
Address (Req):	4505 Taylor Cir
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.837441
Longitude (Req):	-92.2060893
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	13500-AISI0000013500	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	1999-07-27 18:24:16	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	13500
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	

Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	7/26/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	18670	**User Updt:**	spatial_
Name:	Plating Specialties Inc		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	MND099789802	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	8
Program Name:	Hazardous Waste	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-1548	**Coord Coll:**	A1
City:	Duluth	**Latitude:**	46.837441
County:	St. Louis	**Longitude:**	-92.2060893
Activity:	Hazardous Waste		
Addr St:	4505 Taylor Cir		
Addr City:	Duluth		
MPCA ID List:	MND099789802		
Program 1:	Hazardous Waste		
Name:	Plating Specialties Inc		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Hazardous Waste		
Industrial:	Electroplating, Plating, Polishing, Anodizing, and Coloring		
Site URL:	https://webapp.pca.state.mn.us/wimn/site/13500		

Agency Interests: File Request Details

Item ID:	13500-AISI0000013500	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	7/27/1999	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	13500
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	7/26/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	18670		
Name:	Plating Specialties Inc		
Program List:	HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
56	1 of1	E	0.43 / 2,259.47	1,418.28 / 8	Duluth Air Force Base Duluth International Airport Duluth MN 55811	LST REM SITE

Item ID: 37342-AREA0000000002
Project ID: LS0006647
Project Type: Leak Site
Project ID (RAP):
Project Type (RAP):
Site Status: Closed
Perm List of Prio?:
Petrol Brownfield?:
VIC Site?:
Sf Voluntary:
Inst Controls?:
SEMS?:
Project Name: Duluth Air Force Base
Project Managers: Dawn Duncanson-Davison (no longer at MPCA)
Site Address 1: Duluth International Airport
Site Address 2:
Site City: Duluth
Site State: MN
Site ZIP: 55811
Project Name(RAP):
Address1 (RAP):
Address2 (RAP):
City (RAP):
State (RAP):
ZIP (RAP):
Data Source: MPCA Remediation Sites

Unpermitted Dump?:
State Reg:
Federal Reg: Yes
Fed State Reg:
Non Reg:
NPL:
Site County: St. Louis
County (RAP):
Latitude: 46.83879471
Longitude: -92.20134735
Latitude (RAP):
Longitude (RAP):

Remediation Sites Details

Activity ID: 37342
SI ID: 2
Si Cat: AREA
SI Type: LEAK
Site Type: CON
Acreage:
HRS Score:
Score Year:
DWSMA Code:
AI Name: Duluth International Airport Usaf
DWSMA Name:
Hydrologists:
Huc 8 Name: St. Louis River
Huc12 Name: Saint Louis River
Method Desc: Digitized-DRG
Loc Desc: Site Center
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/37342

Object ID: 23028
Cong Dist: 8
House Dist: 8B
Senate Dis: 8
HUC 8: 04010201
HUC 10: 0401020116
HUC 12: 040102011604
Gdb Geomattr Data:
MNTBA:

Spatial Remediation Activity

AI ID: 37342
Site ID: LS0006647
SI ID: 2
SI Cat: AREA
NFA Decisi:
Site Start: 1993-08-11 00:00:00

Object ID: 8508
Remedy Imp:
Remedy Sel:
ASMT Compl:
Received:
NPL List:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Site Close:	1996-03-15 00:00:00	**NPL Delete:**	
Leak Discovered:	1993-08-11 00:00:00	**PLP List:**	
Leak Reported:	1993-08-11 00:00:00	**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	
Activity No:	1	**FF Aproved:**	
Activity ID:	SIW19930001	**FF Closed:**	
Activity Type:	Leak Site Investigation	**Inv Comple:**	
Activity Code:	SIW	**App Comple:**	
Activity Year:	1993	**Er Site Ev:**	
Discovered:			

57	1 of6	SE	0.43 / 2,273.22	1,415.83 / 5	**Kwik Trip Store 220** **4978 Miller Trunk Highway** **Hermantown MN 55811**	**BROWNFIELDS**

Item ID:	186588-AREA0000000002	**Federal Reg:**	
Project ID:	PB4555	**Fed State Reg:**	
Project Type:	Brownfield Site	**Non Reg:**	
Project ID (RAP):	PB4555	**SEMS?:**	
Project Type (RAP):	Brownfield Site	**NPL:**	
Site Status:	Closed	**Unpermitted Dump?:**	
Perm List of Prior?:		**Latitude:**	46.83367304
Petrol Brownfield?:	Yes	**Longitude:**	-92.20707805
VIC Site?:		**County (RAP):**	St. Louis
Sf Voluntary:		**Latitude (RAP):**	46.83367304
Inst Controls?:		**Longitude (RAP):**	-92.20707805
State Reg:			

Project Name:	Kwik Trip Store 220
Site Address 1:	4978 Miller Trunk Highway
Site Address 2:	
Site City:	Hermantown
Site State:	MN
Site Zip:	55811
Site County:	St. Louis
Project Name(RAP):	Kwik Trip Store 220
Address1 (RAP):	4978 Miller Trunk Highway
Address2(RAP):	
City (RAP):	Hermantown
State (RAP):	MN
Zip (RAP):	55811
Project Managers:	Brittney Schuller (former)
Data Source:	MPCA Remediation Sites; MPCA Remediation Sites with RAP approvals

Remediation Sites Details

Activity ID:	186588	**DWSMA Name:**	
AI Name:	Kwik Trip Store 220	**Cong Dist:**	8
SI ID:	2	**House Dist:**	3B
SI Cat:	AREA	**Senate Dis:**	3
SI Type:	BROW	**HUC 8:**	04010201
Site Type:	CON	**HUC 10:**	0401020116
Acreage:	8.28	**HUC 12:**	040102011604
HRS Score:		**DWSMA Code:**	
Score Year:		**Method Des:**	Digitized - MPCA internal map
MNTBA:			
Loc Desc:			

HUC 8 Name:	St. Louis River
HUC 12 Name:	Saint Louis River
Hydrologist:	Bassou Oulgout (no longer at MPCA)
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/186588

Remediation Sites with RAP Approval

Activity ID:	186588	**Rap Date:**	
No Assoc Date:		**Site Start:**	4/8/2014
No Assoc Letter:	No	**Rap Approved:**	5/23/2014

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Has Rp:	No	**Rap Completed:**	1/29/2015
Coord Collect Methd:	Digitized - MPCA internal map	**Site Closed:**	2/1/2015
Parcels:			
WIMN:	https://webapp.pca.state.mn.us/wimn/site/186588		
AI Name:	Kwik Trip Store 220		
Rp Names:			

Spatial Remediation Activity

AI ID:	186588	**Site Start:**	2014-04-08 00:00:00
Site ID:	PB4555	**Remedy Imp:**	
SI ID:	2	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	
Site Close:	2015-02-01 00:00:00	**NPL List:**	
Leak Discovered:		**NPL Delete:**	
Leak Reported:		**PLP List:**	
Leak Reopened:		**PLP Delist:**	
Activity No:	1	**Staff Assi:**	2014-04-08 00:00:00
Activity ID:	SIW20140001	**FF Aproved:**	
Activity Type:	Brownfield Site	**FF Closed:**	
Activity Code:	SIW	**Inv Comple:**	
Activity Year:	2014	**App Comple:**	2014-04-08 00:00:00
Discovered:		**Er Site Ev:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
57	2 of6	SE	0.43 / 2,273.22	1,415.83 / 5	Kwik Trip #220 Carwash Addition 4978 Miller Trunk Highway Hermantown MN 55811	BROWNFIELDS

Item ID:	186588-AREA0000000003	**Federal Reg:**	
Project ID:	BF0000272	**Fed State Reg:**	
Project Type:	Brownfield Site	**Non Reg:**	
Project ID (RAP):	BF0000272	**SEMS?:**	
Project Type (RAP):	Brownfield Site	**NPL:**	
Site Status:	Closed	**Unpermitted Dump?:**	
Perm List of Prior?:		**Latitude:**	46.83364592
Petrol Brownfield?:	Yes	**Longitude:**	-92.20710756
VIC Site?:		**County (RAP):**	St. Louis
Sf Voluntary:		**Latitude (RAP):**	46.83364592
Inst Controls?:		**Longitude (RAP):**	-92.20710756
State Reg:			
Project Name:	Kwik Trip #220 Carwash Addition		
Site Address 1:	4978 Miller Trunk Highway		
Site Address 2:			
Site City:	Hermantown		
Site State:	MN		
Site Zip:	55811		
Site County:	St. Louis		
Project Name(RAP):	Kwik Trip #220 Carwash Addition		
Address1 (RAP):	4978 Miller Trunk Highway		
Address2(RAP):			
City (RAP):	Hermantown		
State (RAP):	MN		
Zip (RAP):	55811		
Project Managers:	Brittney Schuller (former)		
Data Source:	MPCA Remediation Sites; MPCA Remediation Sites with RAP approvals		

Remediation Sites Details

Activity ID:	186588	**DWSMA Name:**	
AI Name:	Kwik Trip Store 220	**Cong Dist:**	8
SI ID:	3	**House Dist:**	3B
SI Cat:	AREA	**Senate Dis:**	3
SI Type:	BROW	**HUC 8:**	04010201
Site Type:	CON	**HUC 10:**	0401020116
Acreage:	8.00	**HUC 12:**	040102011604

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HRS Score: | **DWSMA Code:**
Score Year: | **Method Des:** Digitized - MPCA internal map
MNTBA:
Loc Desc:
HUC 8 Name: St. Louis River
HUC 12 Name: Saint Louis River
Hydrologist: Bassou Oulgout (no longer at MPCA)
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/186588

Remediation Sites with RAP Approval

Activity ID: 186588 | **Rap Date:**
No Assoc Date: | **Site Start:** 2/13/2017
No Assoc Letter: No | **Rap Approved:** 2/23/2017
Has Rp: No | **Rap Completed:**
Coord Collect Methd: Digitized - MPCA internal map | **Site Closed:** 5/8/2019
Parcels: 395001002941
WIMN: https://webapp.pca.state.mn.us/wimn/site/186588
AI Name: Kwik Trip Store 220
Rp Names:

Spatial Remediation Activity

AI ID: 186588 | **Site Start:** 2017-02-13 00:00:00
Site ID: BF0000272 | **Remedy Imp:**
SI ID: 3 | **Remedy Sel:**
SI Cat: AREA | **ASMT Compl:**
NFA Decisi: | **Received:**
Site Close: 2019-05-08 00:00:00 | **NPL List:**
Leak Discovered: | **NPL Delete:**
Leak Reported: | **PLP List:**
Leak Reopened: | **PLP Delist:**
Activity No: 1 | **Staff Assi:** 2017-02-13 00:00:00
Activity ID: SIW20170001 | **FF Aproved:**
Activity Type: Brownfield Site | **FF Closed:**
Activity Code: SIW | **Inv Comple:**
Activity Year: 2017 | **App Comple:** 2017-02-13 00:00:00
Discovered: | **Er Site Ev:**

57	3 of6	SE	0.43 / 2,273.22	1,415.83 / 5	**Kwik Trip Store 220** **4978 Miller Trunk Highway** **Hermantown MN 55811**	**BROWNFIELDS**

Item ID: 186588-AREA0000000001 | **Federal Reg:**
Project ID: VP31160 | **Fed State Reg:**
Project Type: Brownfield Site | **Non Reg:**
Project ID (RAP): VP31160 | **SEMS?:**
Project Type (RAP): Brownfield Site | **NPL:**
Site Status: Closed | **Unpermitted Dump?:**
Perm List of Prior?: | **Latitude:** 46.83344679
Petrol Brownfield?: | **Longitude:** -92.20744149
VIC Site?: Yes | **County (RAP):** St. Louis
Sf Voluntary: | **Latitude (RAP):** 46.83344679
Inst Controls?: | **Longitude (RAP):** -92.20744149
State Reg:
Project Name: Kwik Trip Store 220
Site Address 1: 4978 Miller Trunk Highway
Site Address 2:
Site City: Hermantown
Site State: MN
Site Zip: 55811
Site County: St. Louis
Project Name(RAP): Kwik Trip Store 220
Address1 (RAP): 4978 Miller Trunk Highway
Address2(RAP):
City (RAP): Hermantown

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

State (RAP): MN
Zip (RAP): 55811
Project Managers: Andrew Nichols (former)
Data Source: MPCA Remediation Sites; MPCA Remediation Sites with RAP approvals

Remediation Sites Details

Activity ID: 186588
AI Name: Kwik Trip Store 220
SI ID: 1
SI Cat: AREA
SI Type: BROW
Site Type: CON
Acreage: 8.28
HRS Score:
Score Year:
MNTBA:
Loc Desc:
HUC 8 Name: St. Louis River
HUC 12 Name: Saint Louis River
Hydrologist:
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/186588

DWSMA Name:
Cong Dist: 8
House Dist: 3B
Senate Dis: 3
HUC 8: 04010201
HUC 10: 0401020116
HUC 12: 040102011604
DWSMA Code:
Method Des: Digitized - MPCA internal map

Remediation Sites with RAP Approval

Activity ID: 186588
No Assoc Date:
No Assoc Letter: No
Has Rp: No
Coord Collect Methd: Digitized - MPCA internal map
Parcels: 395-0010-02941; 395-0010-02942; 395-0010-02990; 395-0010-02995; 395-0010-03052
WIMN: https://webapp.pca.state.mn.us/wimn/site/186588
AI Name: Kwik Trip Store 220
Rp Names:

Rap Date:
Site Start: 4/8/2014
Rap Approved: 5/21/2014
Rap Completed: 2/2/2015
Site Closed: 2/2/2015

Spatial Remediation Activity

AI ID: 186588
Site ID: VP31160
SI ID: 1
SI Cat: AREA
NFA Decisi:
Site Close: 2015-02-02 00:00:00
Leak Discovered:
Leak Reported:
Leak Reopened:
Activity No: 2
Activity ID: SIW20140002
Activity Type: Brownfield Site
Activity Code: SIW
Activity Year: 2014
Discovered:

Site Start: 2014-04-08 00:00:00
Remedy Imp:
Remedy Sel:
ASMT Compl:
Received: 2014-04-08 00:00:00
NPL List:
NPL Delete:
PLP List:
PLP Delist:
Staff Assi: 2014-04-08 00:00:00
FF Aproved:
FF Closed:
Inv Comple:
App Comple: 2014-04-08 00:00:00
Er Site Ev:

57	4 of6	SE	0.43 / 2,273.22	1,415.83 / 5	Kwik Trip #220 4978 Miller Trunk Highway Hermantown MN 55811	LST INCIDENT

Incident ID: 188817
Incident Status: Closed or Completed
AI ID: 186588
Incident Types: Leaking Tank
Incident Date: 12/30/2018
Program: Emergency Response
Closure Type:

Source Address: 4978 Miller Trunk Hwy
Source City: Hermantown
Source State: MN
Source ZIP: 55811
Latitude: 46.83343414
Longitude: -92.20745834
Coord Method: Digitized - MPCA internal map

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

County: St. Louis

Lead Investigator and Duty Officer

Substances: 854 gallons Diesel Exhaust Fluid (DEF)
Duty Officer No: 179893
Lead Investigator: Kevin Mustonen
Source List: Kwik Trip #220 (Hermantown, MN)

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
57	5 of6	SE	0.43 / 2,273.22	1,415.83 / 5	Kwik Trip Store 220 4978 Miller Trunk Highway Hermantown MN 55811	MPCA AI

Agency Interest ID: 186588
Name (Map): Kwik Trip Store 220
Address (Map): 4978 Miller Trunk Highway
City (Map): Hermantown
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83343414
Longitude (Map): -92.20745834
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Kwik Trip Store 220
Address (Site): 4978 Miller Trunk Highway
City (Site): Hermantown
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83343414
Longitude (Site): -92.20745834
County (Site): St. Louis
Name (Req): Kwik Trip Store 220
Address (Req): 4978 Miller Trunk Highway
City (Req): Hermantown
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.83343414
Longitude (Req): -92.20745834
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 186588-AISI0000186588
Status: Active
Status Date:
Program: Multiple Programs
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 3/25/2025
Tmsp Created: 4/17/2014
User Created: DELTA_M_R2
Tmsp Updt: 3/25/2025
Spatial ID: 68490175
Name: Kwik Trip Store 220
Program List: BV, CS, ER, UT
HUC 8: 04010201

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 186588
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: DM
Method Desc: Digitized - MPCA internal map

My Neighborhood Site Details

Active FLA: Yes
MPCA ID: Multiple IDs
Program Co: SR; ST; TL
Program Name: Multiple Programs
Address: MN
Addr ZIP: 55811
City: Hermantown
County: St. Louis
HUC 8: 04010201
Cong Distr: 8
Senate Dis: 3
House Dist: 3B
IC Flag: No
Coord Coll: DM
Latitude: 46.83343414
Longitude: -92.20745834
Activity: Multiple Activities
Addr St: 4978 Miller Trunk Highway
Addr City: Hermantown
MPCA ID List: BF0000272; C00037603; C00045546; ER-gen; PB4555; TS0126115; VP31160
Program 1: Investigation and Cleanup; Stormwater; Tanks
Name: Kwik Trip Store 220
Watershed : St. Louis River
Coord Co 1: Digitized - MPCA internal map
Activity L: Brownfields, Petroleum Brownfield; Brownfields, Voluntary Investigation and Cleanup; Construction Stormwater; Emergency Response; Underground Tanks
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/186588

Agency Interests: File Request Details

Item ID: 186588-AISI0000186588
Status: Active
Status Date:
Program: Multiple Programs
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 3/25/2025
Tmsp Created: 4/17/2014
User Created: DELTA_M_R2
Tmsp Updt: 3/25/2025
Spatial ID: 68490175
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 186588
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc
Name: Kwik Trip Store 220
Program List: BV, CS, ER, UT
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: DM
Method Desc: Digitized - MPCA internal map

57	6 of6	SE	0.43 / 2,273.22	1,415.83 / 5	Kwik Trip Store 220 4978 Miller Trunk Highway	VIC

Hermantown MN 55811

Item ID:	186588-AREA0000000001	***Unpermitted Dump?:***	
Project ID:	VP31160	***State Reg:***	
Project Type:	Brownfield Site	***Federal Reg:***	
Project ID (RAP):	VP31160	***Fed State Reg:***	
Project Type (RAP):	Brownfield Site	***Non Reg:***	
Site Status:	Closed	***NPL:***	
Perm List of Prio?:		***Site County:***	St. Louis
Petrol Brownfield?:		***County (RAP):***	St. Louis
VIC Site?:	Yes	***Latitude:***	46.83344679
Sf Voluntary:		***Longitude:***	-92.20744149
Inst Controls?:		***Latitude (RAP):***	46.83344679
SEMS?:		***Longitude (RAP):***	-92.20744149

Project Name:	Kwik Trip Store 220
Project Managers:	Andrew Nichols (former)
Site Address 1:	4978 Miller Trunk Highway
Site Address 2:	
Site City:	Hermantown
Site State:	MN
Site Zip:	55811
Project Name(RAP):	Kwik Trip Store 220
Address1 (RAP):	4978 Miller Trunk Highway
Address2(RAP):	
City (RAP):	Hermantown
State (RAP):	MN
Zip (RAP):	55811
Data Source:	MPCA Remediation Sites; MPCA Remediation Sites with RAP approvals

Remediation Sites Details

Activity ID:	186588	***Object ID:***	18883
SI ID:	1	***Cong Dist:***	8
SI Cat:	AREA	***House Dist:***	3B
SI Type:	BROW	***Senate Dis:***	3
Site Type:	CON	***HUC 8:***	04010201
Acreage:	8.28	***HUC 10:***	0401020116
HRS Score:		***HUC 12:***	040102011604
Score Year:		***Gdb Geomattr Data:***	
DWSMA Code:		***MNTBA:***	

AI Name:	Kwik Trip Store 220
Hydrologists:	
DWSMA Name:	
HUC 8 Name:	St. Louis River
HUC 12 Name:	Saint Louis River
Method Desc:	Digitized - MPCA internal map
Loc Desc:	
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/186588

Remediation Sites with RAP Approval

Activity ID:	186588	***Rap Approved:***	
No Association Dt:		***Rap Completed:***	
No Associatn Lettr:	No	***Site Start:***	
Rap Date:		***Site Closed:***	
Has RP:	No		
RP Names:			

AI Name:	Kwik Trip Store 220
Parcels:	395-0010-02941; 395-0010-02942; 395-0010-02990; 395-0010-02995; 395-0010-03052
Coord Collection Method:	Digitized - MPCA internal map
WIMN:	https://webapp.pca.state.mn.us/wimn/site/186588

Spatial Remediation Activity

AI ID:	186588	***Object ID:***	22969

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Site ID:	VP31160		**Remedy Imp:**		
SI ID:	1		**Remedy Sel:**		
SI Cat:	AREA		**ASMT Compl:**		
NFA Decisi:			**Received:**	2014-04-08 00:00:00	
Site Start:	2014-04-08 00:00:00		**NPL List:**		
Site Close:	2015-02-02 00:00:00		**NPL Delete:**		
Leak Discovered:			**PLP List:**		
Leak Reported:			**PLP Delist:**		
Leak Reopened:			**Staff Assi:**	2014-04-08 00:00:00	
Activity No:	2		**FF Aproved:**		
Activity ID:	SIW20140002		**FF Closed:**		
Activity Type:	Brownfield Site		**Inv Comple:**		
Activity Code:	SIW		**App Comple:**	2014-04-08 00:00:00	
Activity Year:	2014		**Er Site Ev:**		
Discovered:					

58	1 of4	E	0.46 / 2,440.76	1,415.96 / 5	**Hk Enterprises Inc Hertz System Lic** **4701 Airport Dr** **Duluth MN 55811**	MPCA AI

Agency Interest ID:	39025
Name (Map):	Hk Enterprises Inc Hertz System Lic
Address (Map):	4701 Airport Dr
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8366114
Longitude (Map):	-92.1530614
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Hk Enterprises Inc Hertz System Lic
Address (Site):	4701 Airport Dr
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8366114
Longitude (Site):	-92.1530614
County (Site):	St. Louis
Name (Req):	Hk Enterprises Inc Hertz System Lic
Address (Req):	4701 Airport Dr
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8366114
Longitude (Req):	-92.1530614
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	39025-AISI0000039025	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2014-05-31 00:00:00	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	39025
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	9/27/2015	**TRDSQQ:**	

Tmsp Created:	7/29/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	45728	**User Updt:**	spatial_
Name:	Hk Enterprises Inc Hertz System Lic		
Program List:	HW		
HUC 8:	04010102		
HUC 8 Name:	Lake Superior - South		
HUC 10:	0401010204		
HUC 12:	040101020405		
HUC 12 Name:	City of Duluth-Frontal Lake Superior		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010102
MPCA ID:	HWLIC1400290	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	8
Program Name:	Hazardous Waste	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Duluth	**Latitude:**	46.8366114
County:	St. Louis	**Longitude:**	-92.1530614
Activity:	Hazardous Waste		
Addr St:	4701 Airport Dr		
Addr City:	Duluth		
MPCA ID List:	HWLIC1400290		
Program 1:	Hazardous Waste		
Name:	Hk Enterprises Inc Hertz System Lic		
Watershed :	Lake Superior - South		
Coord Co 1:	Address Matching House Number		
Activity L:	Hazardous Waste		
Industrial:	Passenger Car Rental		
Site URL:	https://webapp.pca.state.mn.us/wimn/site/39025		

Agency Interests: File Request Details

Item ID:	39025-AISI0000039025	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	5/31/2014	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	39025
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	7/29/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	45728		
Name:	Hk Enterprises Inc Hertz System Lic		
Program List:	HW		
HUC 8:	4010102		
HUC 8 Name:	Lake Superior - South		
HUC 10:	401010204		
HUC 10 Name:	City of Duluth-Frontal Lake Superior		
HUC 12:	40101020405		
HUC 12 Name:	City of Duluth-Frontal Lake Superior		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
Method Code:		A1				
Method Desc:		Address Matching House Number				
58	2 of4	E	0.46 / 2,440.76	1,415.96 / 5	**Delta Global Services** **4701 Airport Dr** **Duluth MN 55811**	MPCA AI

Agency Interest ID:	37752
Name (Map):	Delta Global Services
Address (Map):	4701 Airport Dr
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8366114
Longitude (Map):	-92.1530614
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Delta Global Services
Address (Site):	4701 Airport Dr
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8366114
Longitude (Site):	-92.1530614
County (Site):	St. Louis
Name (Req):	Delta Global Services
Address (Req):	4701 Airport Dr
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8366114
Longitude (Req):	-92.1530614
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	37752-AISI0000037752	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	37752
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	10/14/2025	**TRDSQQ:**	
Tmsp Created:	7/29/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	10/14/2025	**Verified:**	No
Spatial ID:	45859	**User Updt:**	eu01100468

Name:	Delta Global Services
Program List:	HW
HUC 8:	04010102
HUC 8 Name:	Lake Superior - South
HUC 10:	0401010204
HUC 12:	040101020405
HUC 12 Name:	City of Duluth-Frontal Lake Superior
DWSMA Code:	
DWSMA Name:	
Method Code:	A1

Method Desc: Address Matching House Number

My Neighborhood Site Details

Active FLA:	Yes	***HUC 8:***	04010102
MPCA ID:	MNS000217273	***Cong Distr:***	8
Program Co:	HW	***Senate Dis:***	8
Program Name:	Hazardous Waste	***House Dist:***	8B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	A1
City:	Duluth	***Latitude:***	46.8366114
County:	St. Louis	***Longitude:***	-92.1530614

Activity: Hazardous Waste
Addr St: 4701 Airport Dr
Addr City: Duluth
MPCA ID List: MNS000217273
Program 1: Hazardous Waste
Name: Delta Global Services
Watershed : Lake Superior - South
Coord Co 1: Address Matching House Number
Activity L: Hazardous Waste
Industrial: Scheduled Freight Air Transportation
Site URL: https://webapp.pca.state.mn.us/wimn/site/37752

Agency Interests: File Request Details

Item ID:	37752-AISI0000037752	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Hazardous Waste	***SI ID:***	37752
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	8B
Section:		***Senate Dist:***	8
Quarters:		***TRDSQQ:***	
Collection Date:	10/14/2025	***Ref Code:***	GEN
Tmsp Created:	7/29/1999	***Ref Desc:***	General Location
User Created:	DELTA_M_R1	***Verified:***	No
Tmsp Updt:	10/14/2025	***User Updt:***	eu01100468
Spatial ID:	45859		

Name: Delta Global Services
Program List: HW
HUC 8: 4010102
HUC 8 Name: Lake Superior - South
HUC 10: 401010204
HUC 10 Name: City of Duluth-Frontal Lake Superior
HUC 12: 40101020405
HUC 12 Name: City of Duluth-Frontal Lake Superior
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

58	***3 of4***	***E***	***0.46 / 2,440.76***	***1,415.96 / 5***	***Northwest Storage Area Duluth Iap 4701 Airport Rd Duluth MN 55802***	***MPCA AI***

Agency Interest ID: 189430
Name (Map): Northwest Storage Area Duluth Iap
Address (Map): 4701 Airport Rd
City (Map): Duluth
State (Map): MN
ZIP (Map): 55802

Latitude (Map):	46.8391911
Longitude (Map):	-92.1785899
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Northwest Storage Area Duluth Iap
Address (Site):	4701 Airport Rd
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55802
Latitude (Site):	46.8391911
Longitude (Site):	-92.1785899
County (Site):	St. Louis
Name (Req):	Northwest Storage Area Duluth Iap
Address (Req):	4701 Airport Rd
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55802
Loc Desc (Req):	
Latitude (Req):	46.8391911
Longitude (Req):	-92.1785899
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	189430-AISI0000189430	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	PetroleumRemediation	**SI ID:**	189430
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	4/25/2016	**TRDSQQ:**	
Tmsp Created:	11/29/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R2	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	51830737	**User Updt:**	spatial_
Name:	Northwest Storage Area Duluth Iap		
Program List:	PR		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	LS0010276	**Cong Distr:**	8
Program Co:	SR	**Senate Dis:**	8
Program Name:	Investigation and Cleanup	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55802	**Coord Coll:**	DM
City:	Duluth	**Latitude:**	46.8391911
County:	St. Louis	**Longitude:**	-92.1785899
Activity:	Petroleum Remediation, Leak Site		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Addr St:	4701 Airport Rd
Addr City:	Duluth
MPCA ID List:	LS0010276
Program 1:	Investigation and Cleanup
Name:	Northwest Storage Area Duluth Iap
Watershed :	St. Louis River
Coord Co 1:	Digitized - MPCA internal map
Activity L:	Petroleum Remediation, Leak Site
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/189430

Agency Interests: File Request Details

Item ID:	189430-AISI0000189430	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	PetroleumRemediation	**SI ID:**	189430
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	4/25/2016	**Ref Code:**	GEN
Tmsp Created:	11/29/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R2	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	51830737		
Name:	Northwest Storage Area Duluth Iap		
Program List:	PR		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
58	4 of4	E	0.46 / 2,440.76	1,415.96 / 5	Avis Rent a Car 4701 Airport Rd Duluth MN 55811	MPCA AI

Agency Interest ID:	137286
Name (Map):	Avis Rent a Car
Address (Map):	4701 Airport Rd
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8372592
Longitude (Map):	-92.179409
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Avis Rent a Car
Address (Site):	4701 Airport Rd
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8372592
Longitude (Site):	-92.179409
County (Site):	St. Louis
Name (Req):	Avis Rent a Car

Address (Req):	4701 Airport Rd
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8372592
Longitude (Req):	-92.179409
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	137286-AISI0000137286	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2011-04-14 13:19:43	**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	137286
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	3/24/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	59811303	**User Updt:**	spatial_
Name:	Avis Rent a Car		
Program List:	PR, UT		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	Multiple IDs	**Cong Distr:**	8
Program Co:	SR; TL	**Senate Dis:**	8
Program Name:	Multiple Programs	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	DM
City:	Duluth	**Latitude:**	46.8372592
County:	St. Louis	**Longitude:**	-92.179409
Activity:	Multiple Activities		
Addr St:	4701 Airport Rd		
Addr City:	Duluth		
MPCA ID List:	LS0005937; TS0012553		
Program 1:	Investigation and Cleanup; Tanks		
Name:	Avis Rent a Car		
Watershed :	St. Louis River		
Coord Co 1:	Digitized - MPCA internal map		
Activity L:	Petroleum Remediation, Leak Site; Underground Tanks		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/137286		

Agency Interests: File Request Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Item ID:	137286-AISI0000137286	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	4/14/2011	**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	137286
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	3/24/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	59811303		
Name:	Avis Rent a Car		
Program List:	PR, UT		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
59	1 of6	E	0.49 / 2,591.56	1,414.06 / 3	Duluth International Airport See location description Duluth MN 55811	HIST LEAKSITES

Prog Int ID:	218826	**Address Source:**	CORE
Site ID:	243274	**Township Name:**	Whiteface Reservoir
State County Code:	69	**County Name:**	St. Louis
Country:	USA	**Lat/Long ID:**	130956
Interest Type Cd:	LS	**Interest Type Dsc:**	Leak Site
ADDR ID:	24026	**Lat Degrees:**	46
Tank Site:	6182	**Lat Minutes:**	50
Interest Phone:	NO CORE PI PH.	**Lat Seconds:**	44.49
Interest Start Dt:	06/20/1996 00:00:00	**Long Degrees:**	-92
Interest End Dt:	04/14/2011 13:35:44	**Long Minutes:**	11
Active?:	No	**Long Seconds:**	55.73
Timestamp Added:	11/17/2006 07:20:14	**Lat/Long Source:**	CORE
Timestamp Updt:	11/10/2014 08:17:05	**Lat/Long Site ID:**	243274
Staff ID Updt:	RGAGLE	**Lat/Long Spatial ID:**	51753702
Source:	CORE	**Collection Date:**	04/28/2011 10:21:26
Coord Src Type:		**Map Scale Code:**	
Coord Src Desc:		**Org Name Source:**	
Foreign State:		**Foreign Zone:**	
FIPS County Cd1:	137		
Addr Timestmp Add:	03/02/1999 08:14:45		
Addr Timestamp Lst Updt:	08/01/2007 21:43:50		
Addr Updater Staff ID:	SYSTEM		
Lat/Long Timestamp Added:	11/17/2006 07:20:19		
Lat/Long Tmstmp Last Upd:	04/28/2011 10:21:26		
Lat/Long Updater Staff ID:	MAPTOOL		
Lat/Long Desc:			
Coord Coll Method Desc:	Digitized - Map Tool		
Coord Coll Method Code:	DM		
Comments:	Site is located towards the western portion of the runway on the north side off of a service road going to the runway that heads east by the bend in the service road. Site is known as the "RAPCON" facility at the Duluth International Airport.		

Leak Site

Complete Site Closure Date: 03/03/1994 00:00:00
Cond Closure Date:
Release Discovered Date: 03/25/1993 00:00:00
Leaksite Type Code: 1
Leaksite Type Desc: Leak Site
Leak Report Date: 03/26/1993 00:00:00
Tank Reg Status Code: U
TMSP Added: 12/04/1999 14:03:47
TMSP Last Updt: 04/26/2011 10:18:12
CU Yds Excavated Qty: 45
ENF Action Begin Date: 04/08/1993 00:00:00
Residence Type Code:
File Archive Box: 08
File Archive Lot: 96/307
Soil Digout Date: 03/26/1993 00:00:00
Staff ID Last Updt: GZARLIN
Std Letter Response Date:
VPIC Acres:
VPIC Application Date:
Contam Soils Remaining Flag: N
Indoor Air Collected Flag:
LUST Trust Eligible Flag: No
Offsite Contam Flag: U
REIMB Awarded Flag: No
Release From AST Flag: No
Release From UST Flag: No
Soil Gas Action Level Flag:
Soil Gas Data Collected Flag:
Sub Slab Sample Collected Flag:
Surface Water Impact Flag: U
Utility Project Flag: No
Vapor Intrusion Action Flag:
Vapor Intrusion Checked Flag:
Leaksite Type Defn: Leak site (tank and petroleum contamination).
Soil Gas Data Comments:
Vapor Intrusion Comments:

Leak Product Rls

Product Rls Seq ID: 403883
Leak Product Desc: Fuel Oil 1 & 2
Leak Product Defn: The product is fuel oil 1 & 2.

Leak GW Info

Well Type Code:
Affected Non Res Props:
Affected Residential Props:
Staff ID Last Updt: RSUCHAN
Staff ID Wellhead Area Assess:
TMSP Added: 12/04/1999 14:07:31
TMSP Last Updt: 11/04/2003 12:57:07
Water Supply Exceeds Ral Flag:
Cleanup Goal Achieved Flag:
DW Supply Contam Flag:
Free Product at Close Flag:
Free Product Observed Flag:
Free Product Thickness:
Ground Water Contam Flag: N
GW Cleanup Goal: 0
GW Exceeds Cleanup Goal Flag:
Impacted Aquifer Code:
MTBE High Level Date:

MTBE High Ug Per Liter Char:
MTBE High Ug Per Liter Numb:
MTBE Present Historically Flag:
MTBE Present Now Flag:
Protected Area Flag:
PWS Well Impacted Flag:
Sensitive Area Flag:

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59 | ***2 of6*** | ***E*** | ***0.49 / 2,591.56*** | ***1,414.06 / 3*** | ***Duluth Intl Airport Radar Tower***
See location description
Duluth MN 55811 | ***HIST LEAKSITES***

Prog Int ID:	222056	***Address Source:***	CORE
Site ID:	59556326	***Township Name:***	
State County Code:	69	***County Name:***	St. Louis
Country:	USA	***Lat/Long ID:***	193876
Interest Type Cd:	LS	***Interest Type Dsc:***	Leak Site
ADDR ID:	24026	***Lat Degrees:***	46
Tank Site:	9527	***Lat Minutes:***	50
Interest Phone:	NO CORE PI PH.	***Lat Seconds:***	37.96
Interest Start Dt:	01/27/1999 00:00:00	***Long Degrees:***	-92
Interest End Dt:	03/10/2011 14:05:08	***Long Minutes:***	11
Active?:	No	***Long Seconds:***	50.71
Timestamp Added:	10/16/2007 17:12:06	***Lat/Long Source:***	CORE
Timestamp Updt:	11/10/2014 08:17:06	***Lat/Long Site ID:***	59556326
Staff ID Updt:	RGAGLE	***Lat/Long Spatial ID:***	53792781
Source:	CORE	***Collection Date:***	04/28/2011 09:36:23
Coord Src Type:		***Map Scale Code:***	
Coord Src Desc:		***Org Name Source:***	
Foreign State:		***Foreign Zone:***	
FIPS County Cd1:	137		

Addr Timestmp Add:	03/02/1999 08:14:45
Addr Timestamp Lst Updt:	08/01/2007 21:43:50
Addr Updater Staff ID:	SYSTEM
Lat/Long Timestamp Added:	03/10/2011 14:03:09
Lat/Long Tmstmp Last Upd:	04/28/2011 09:36:23
Lat/Long Updater Staff ID:	MAPTOOL
Lat/Long Desc:	
Coord Coll Method Desc:	Digitized - Map Tool
Coord Coll Method Code:	DM
Comments:	FAA-ASR-8 Radar Tower

Leak Site

Complete Site Closure Date:	01/28/1999 00:00:00
Cond Closure Date:	
Release Discovered Date:	06/20/1996 00:00:00
Leaksite Type Code:	1
Leaksite Type Desc:	Leak Site
Leak Report Date:	07/31/1996 00:00:00
Tank Reg Status Code:	F
TMSP Added:	12/04/1999 14:03:50
TMSP Last Updt:	06/17/2014 14:28:23
CU Yds Excavated Qty:	30
ENF Action Begin Date:	08/09/1996 00:00:00
Residence Type Code:	
File Archive Box:	
File Archive Lot:	
Soil Digout Date:	06/18/1996 00:00:00
Staff ID Last Updt:	DBOETTC
Std Letter Response Date:	08/08/1996 00:00:00
VPIC Acres:	
VPIC Application Date:	
Contam Soils Remaining Flag:	S
Indoor Air Collected Flag:	
LUST Trust Eligible Flag:	Yes
Offsite Contam Flag:	U

REIMB Awarded Flag:	No
Release From AST Flag:	No
Release From UST Flag:	No
Soil Gas Action Level Flag:	
Soil Gas Data Collected Flag:	
Sub Slab Sample Collected Flag:	
Surface Water Impact Flag:	U
Utility Project Flag:	No
Vapor Intrusion Action Flag:	
Vapor Intrusion Checked Flag:	
Leaksite Type Defn:	Leak site (tank and petroleum contamination).
Soil Gas Data Comments:	
Vapor Intrusion Comments:	

Leak Product Rls

Product Rls Seq ID:	323416
Leak Product Desc:	Fuel Oil 1 & 2
Leak Product Defn:	The product is fuel oil 1 & 2.

Leak GW Info

Well Type Code:	
Affected Non Res Props:	
Affected Residential Props:	
Staff ID Last Updt:	RSUCHAN
Staff ID Wellhead Area Assess:	
TMSP Added:	12/04/1999 14:07:33
TMSP Last Updt:	11/04/2003 12:57:08
Water Supply Exceeds Ral Flag:	
Cleanup Goal Achieved Flag:	
DW Supply Contam Flag:	
Free Product at Close Flag:	
Free Product Observed Flag:	
Free Product Thickness:	
Ground Water Contam Flag:	N
GW Cleanup Goal:	0
GW Exceeds Cleanup Goal Flag:	
Impacted Aquifer Code:	
MTBE High Level Date:	
MTBE High Ug Per Liter Char:	
MTBE High Ug Per Liter Numb:	
MTBE Present Historically Flag:	
MTBE Present Now Flag:	
Protected Area Flag:	
PWS Well Impacted Flag:	
Sensitive Area Flag:	

59	***3 of6***	***E***	***0.49 / 2,591.56***	***1,414.06 / 3***	***Duluth International Airport See location description Duluth MN 55811***	***LST REM SITE***

Item ID:	194375-AREA0000000001	***Unpermitted Dump?:***	
Project ID:	LS0006182	***State Reg:***	
Project Type:	Leak Site	***Federal Reg:***	
Project ID (RAP):		***Fed State Reg:***	
Project Type (RAP):		***Non Reg:***	
Site Status:	Closed	***NPL:***	
Perm List of Prio?:		***Site County:***	St. Louis
Petrol Brownfield?:		***County (RAP):***	
VIC Site?:		***Latitude:***	46.84569228
Sf Voluntary:		***Longitude:***	-92.19881414
Inst Controls?:		***Latitude (RAP):***	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

SEMS?: **Longitude (RAP):**
Project Name: Duluth International Airport
Project Managers: Sandy Kushman (no longer at MPCA)
Site Address 1: See location description
Site Address 2:
Site City: Duluth
Site State: MN
Site ZIP: 55811
Project Name(RAP):
Address1 (RAP):
Address2 (RAP):
City (RAP):
State (RAP):
ZIP (RAP):
Data Source: MPCA Remediation Sites

Remediation Sites Details

Activity ID: 194375
SI ID: 1
Si Cat: AREA
SI Type: LEAK
Site Type: CON
Acreage:
HRS Score:
Score Year:
DWSMA Code:
AI Name: Duluth International Airport
DWSMA Name:
Hydrologists:
Huc 8 Name: Cloquet River
Huc12 Name: Wild Rice Lake Reservoir
Method Desc: Digitized - MPCA internal map
Loc Desc:
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/194375

Object ID: 2318
Cong Dist: 8
House Dist: 8B
Senate Dis: 8
HUC 8: 04010202
HUC 10: 0401020205
HUC 12: 040102020501
Gdb Geomattr Data:
MNTBA:

Spatial Remediation Activity

AI ID: 194375
Site ID: LS0006182
SI ID: 1
SI Cat: AREA
NFA Decisi:
Site Start: 1993-03-26 00:00:00
Site Close: 1994-03-03 00:00:00
Leak Discovered: 1993-03-25 00:00:00
Leak Reported: 1993-03-26 00:00:00
Leak Reopened:
Activity No: 1
Activity ID: SIW19930001
Activity Type: Leak Site Investigation
Activity Code: SIW
Activity Year: 1993
Discovered:

Object ID: 31894
Remedy Imp:
Remedy Sel:
ASMT Compl:
Received:
NPL List:
NPL Delete:
PLP List:
PLP Delist:
Staff Assi:
FF Aproved:
FF Closed:
Inv Comple:
App Comple:
Er Site Ev:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
59	4 of6	E	0.49 / 2,591.56	1,414.06 / 3	Duluth Intl Airport Radar Tower See location description Duluth MN 55811	LST REM SITE

Item ID: 188827-AREA0000000001
Project ID: LS0009527
Project Type: Leak Site
Project ID (RAP):
Project Type (RAP):
Site Status: Closed
Perm List of Prio?:

Unpermitted Dump?:
State Reg:
Federal Reg: Yes
Fed State Reg:
Non Reg:
NPL:
Site County: St. Louis

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Petrol Brownfield?:
VIC Site?:
Sf Voluntary:
Inst Controls?:
SEMS?:
Project Name: Duluth Intl Airport Radar Tower
Project Managers: Gary Zarling (no longer at MPCA)
Site Address 1: See location description
Site Address 2:
Site City: Duluth
Site State: MN
Site ZIP: 55811
Project Name(RAP):
Address1 (RAP):
Address2 (RAP):
City (RAP):
State (RAP):
ZIP (RAP):
Data Source: MPCA Remediation Sites
County (RAP):
Latitude: 46.84387973
Longitude: -92.19742024
Latitude (RAP):
Longitude (RAP):

Remediation Sites Details

Activity ID: 188827
SI ID: 1
Si Cat: AREA
SI Type: LEAK
Site Type: CON
Acreage:
HRS Score:
Score Year:
DWSMA Code:
AI Name: Duluth Intl Airport Radar Tower
DWSMA Name:
Hydrologists:
Huc 8 Name: Cloquet River
Huc12 Name: Wild Rice Lake Reservoir
Method Desc: Digitized - MPCA internal map
Loc Desc:
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/188827
Object ID: 20894
Cong Dist: 8
House Dist: 8B
Senate Dis: 8
HUC 8: 04010202
HUC 10: 0401020205
HUC 12: 040102020501
Gdb Geomattr Data:
MNTBA:

Spatial Remediation Activity

AI ID: 188827
Site ID: LS0009527
SI ID: 1
SI Cat: AREA
NFA Decisi:
Site Start: 1996-07-31 00:00:00
Site Close: 1999-01-28 00:00:00
Leak Discovered: 1996-06-20 00:00:00
Leak Reported: 1996-07-31 00:00:00
Leak Reopened:
Activity No: 1
Activity ID: SIW19960001
Activity Type: Leak Site Investigation
Activity Code: SIW
Activity Year: 1996
Discovered:
Object ID: 25569
Remedy Imp:
Remedy Sel:
ASMT Compl:
Received:
NPL List:
NPL Delete:
PLP List:
PLP Delist:
Staff Assi:
FF Aproved:
FF Closed:
Inv Comple:
App Comple:
Er Site Ev:

59	5 of6	E	0.49 / 2,591.56	1,414.06 / 3	Duluth Intl Airport Radar Tower See location description Duluth MN 55811	MPCA AI

Agency Interest ID: 188827
Name (Map): Duluth Intl Airport Radar Tower
Address (Map): See location description

City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8438797
Longitude (Map):	-92.1974202
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Duluth Intl Airport Radar Tower
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8438797
Longitude (Site):	-92.1974202
County (Site):	St. Louis
Name (Req):	Duluth Intl Airport Radar Tower
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8438797
Longitude (Req):	-92.1974202
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	188827-AISI0000188827	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	PetroleumRemediation	***SI ID:***	188827
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	8B
Quarters:		***Senate Dist:***	8
Collection Date:	4/25/2016	***TRDSQQ:***	
Tmsp Created:	10/16/2007	***Ref Code:***	GEN
User Created:	DELTA_M_R2	***Ref Desc:***	General Location
Tmsp Updt:	4/26/2016	***Verified:***	No
Spatial ID:	59556327	***User Updt:***	spatial_
Name:	Duluth Intl Airport Radar Tower		
Program List:	PR		
HUC 8:	04010202		
HUC 8 Name:	Cloquet River		
HUC 10:	0401020205		
HUC 12:	040102020501		
HUC 12 Name:	Wild Rice Lake Reservoir		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

My Neighborhood Site Details

Active FLA:	Yes	***HUC 8:***	04010202
MPCA ID:	LS0009527	***Cong Distr:***	8
Program Co:	SR	***Senate Dis:***	8
Program Name:	Investigation and Cleanup	***House Dist:***	8B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	DM

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

City:	Duluth	**Latitude:**	46.8438797
County:	St. Louis	**Longitude:**	-92.1974202
Activity:	Petroleum Remediation, Leak Site		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	LS0009527		
Program 1:	Investigation and Cleanup		
Name:	Duluth Intl Airport Radar Tower		
Watershed :	Cloquet River		
Coord Co 1:	Digitized - MPCA internal map		
Activity L:	Petroleum Remediation, Leak Site		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/188827		

Agency Interests: File Request Details

Item ID:	188827-AISI0000188827	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	PetroleumRemediation	**SI ID:**	188827
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	4/25/2016	**Ref Code:**	GEN
Tmsp Created:	10/16/2007	**Ref Desc:**	General Location
User Created:	DELTA_M_R2	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	59556327		
Name:	Duluth Intl Airport Radar Tower		
Program List:	PR		
HUC 8:	4010202		
HUC 8 Name:	Cloquet River		
HUC 10:	401020205		
HUC 10 Name:	Fish Lake Reservoir-Beaver River		
HUC 12:	40102020501		
HUC 12 Name:	Wild Rice Lake Reservoir		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

59	6 of6	E	0.49 / 2,591.56	1,414.06 / 3	**Duluth International Airport** **See location description** **Duluth MN 55811**	MPCA AI

Agency Interest ID:	194375
Name (Map):	Duluth International Airport
Address (Map):	See location description
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8456922
Longitude (Map):	-92.1988141
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Duluth International Airport
Address (Site):	See location description
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8456922

Longitude (Site):	-92.1988141
County (Site):	St. Louis
Name (Req):	Duluth International Airport
Address (Req):	See location description
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8456922
Longitude (Req):	-92.1988141
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	194375-AISI0000194375	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	PetroleumRemediation	**SI ID:**	194375
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	4/25/2016	**TRDSQQ:**	
Tmsp Created:	11/17/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R2	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	51753701	**User Updt:**	spatial_
Name:	Duluth International Airport		
Program List:	PR		
HUC 8:	04010202		
HUC 8 Name:	Cloquet River		
HUC 10:	0401020205		
HUC 12:	040102020501		
HUC 12 Name:	Wild Rice Lake Reservoir		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010202
MPCA ID:	LS0006182	**Cong Distr:**	8
Program Co:	SR	**Senate Dis:**	8
Program Name:	Investigation and Cleanup	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	DM
City:	Duluth	**Latitude:**	46.8456922
County:	St. Louis	**Longitude:**	-92.1988141
Activity:	Petroleum Remediation, Leak Site		
Addr St:	See location description		
Addr City:	Duluth		
MPCA ID List:	LS0006182		
Program 1:	Investigation and Cleanup		
Name:	Duluth International Airport		
Watershed :	Cloquet River		
Coord Co 1:	Digitized - MPCA internal map		
Activity L:	Petroleum Remediation, Leak Site		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/194375		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Agency Interests: File Request Details

Item ID:	194375-AISI0000194375	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	PetroleumRemediation	***SI ID:***	194375
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	8B
Section:		***Senate Dist:***	8
Quarters:		***TRDSQQ:***	
Collection Date:	4/25/2016	***Ref Code:***	GEN
Tmsp Created:	11/17/2006	***Ref Desc:***	General Location
User Created:	DELTA_M_R2	***Verified:***	No
Tmsp Updt:	4/26/2016	***User Updt:***	spatial_
Spatial ID:	51753701		
Name:	Duluth International Airport		
Program List:	PR		
HUC 8:	4010202		
HUC 8 Name:	Cloquet River		
HUC 10:	401020205		
HUC 10 Name:	Fish Lake Reservoir-Beaver River		
HUC 12:	40102020501		
HUC 12 Name:	Wild Rice Lake Reservoir		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

60	***1 of1***	***W***	***0.94 / 4,942.32***	***1,420.12 / 10***	***Arrowhead Refinery See location description Hermantown MN 55810***	***DEL PLP***

Delisted Delisted Permanent List of Priorities (PLP)

Project ID:	VP17160	***SEMS?:***	
Item ID:	194350-AREA0000000003	***Inst Controls?:***	
Agency Interest ID:	194350	***Petrol Brownfield?:***	
AI Name:	Arrowhead Refinery Co	***Unpermitted Dump?:***	
Site Status:	Closed	***Acreage:***	3.6
Remed Site Type:	Brownfield Site	***Project Manager:***	Susan Johnson (former)
NPL?:	Yes	***Hydrogeol/Hydrol:***	Mike Bares (former)
Perm List of Prior?:	Yes	***Site County:***	St. Louis
VIC Site?:	Yes	***Latitude:***	46.83686703
EPA HRS Score:	40	***Longitude:***	-92.24013704
HRS Score Year:	2003	***Coord Collec Meth:***	Address Matching House Number
What's in My Neighborhood:	https://cf.pca.state.mn.us/wimn/siteInfo.cfm?siteid=194350		
Location Description:	8 miles northwest of Duluth on U.S. Highway 53, Hermantown, Minnesota. Just west of the Dututh airport 8 miles northwest of Duluth on U.S. Highway 53, Hermantown, Minnesota. Just west of the Dututh airport **Note: Many records provided by the department have a truncated LOC_DESC field.		
Source Orig:	PLP		
Record Date:	03-MAY-2019		

61	***1 of1***	***E***	***0.95 / 5,027.01***	***1,424.47 / 14***	***DULUTH AIR FORCE BASE Site 29 - (FUDS)Site 102 TCE Lots 2 and 3 Block 4 and 5 of the Airport Division Duluth MN 55811***	***DEL PLP***

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Delisted Permanent List of Priorities (PLP)

Project ID:	SR355	***Created By:***	Mark Elliott
Site ID2:		***Created Date:***	5/31/2006
Core Prgm Int ID:	55132344	***Last Update:***	2/19/2016
Item ID:		***Site City:***	272
Link ID:	455	***Site County:***	69
Active:	FALSE	***Legal District:***	06B
Remed Site Type:	Military Base	***PLS Method:***	M
Agency Interest ID:		***Pls Scal:***	A
AI Name:		***Township:***	50
EPA ID:		***Range:***	15
Site Type:		***Range E W:***	W
MPCA Region:	Duluth	***Section:***	2
EPA HRS Score:		***Qtr 160:***	SE
NPL:	FALSE	***Qtr 40:***	SE
Perm List of Prior?:	TRUE	***Qtr 10:***	NW
PLP Listed Dt:		***Qtr 2 5:***	
PLP Delisted Dt:		***Quad:***	771
NPL Listed Dt:		***NAD No:***	83
NPL Deleted Dt:		***Coord Pt Desc:***	
Site Closed Dt:		***Coord Src Type:***	
Agency Interest Own:		***Coord Src Org:***	
Leak Discovered Dt:		***Meth Col:***	
Leak Reported Dt:		***Coldate:***	
Application Received:		***Hydrogeol/Hydrol:***	
District:	North	***Project Manager:***	
Pgm Ref from:	Other	***File Location:***	Regional Office
Pgm Int:	SF	***Congression Dist:***	8
Reservation:	FALSE	***VIC App GIS:***	FALSE
Reservation Name:		***Latitude:***	
MPCA Wells:	FALSE	***Longitude:***	
Federal Facility:	TRUE	***UTM Source:***	2
Primary Fund:	4	***UTM Method:***	I1
Basin Code:	1	***UTM Scale:***	A
Major Watershed:	3	***UTM East:***	561741.33001
Minor Watershed:	3001	***UTM North:***	5188021.6282
PBP:	FALSE	***UTM Zone:***	15
ENF Lead Agency:	MPCA	***Site Size:***	3
Fed Def Pilot:	FALSE	***Pay Complete:***	TRUE
Site Class A:	FALSE	***Owner Address:***	
Site Class B:	FALSE	***Owner City:***	
Site Class C:	TRUE	***Owner State:***	
Site Class D:	TRUE	***Owner ZIP:***	
NATRESDMG:	FALSE	***County Name:***	St. Louis
Fund Fin:	FALSE		
Migrated from Old Database:			
Coord Collection Method:			
What's in My Neighborhood:			
Physical Location:	OU29 is also known as the Lot 3 Project Area (LP3) or the Building 102 Site. It is located in the southwest part of the DAB. This area is owned by the DAA and currently occupied by two lease holders, Cirrus Design Corp. and the Commorative Air Force.		
Source Orig:	PLP		
Record Date:	04-AUG-2016		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
62	1 of2	W	0.98 / 5,177.67	1,420.12 / 10	***ARROWHEAD REFINERY CO.*** ***5315 Hwy 53*** ***Hermantown MN 55811***	***PLP***

Item ID:	194350-AREA0000000002	***Federal Reg:***	
Project ID:	SR0000067	***Fed State Reg:***	
Project Type:	Superfund Site	***Non Reg:***	
Project ID (RAP):	SR0000067	***SEMS?:***	
Project Type (RAP):	Superfund Site	***NPL:***	Yes
Site Status:	Active / Existing	***Unpermitted Dump?:***	
Perm List of Prior?:	Yes	***Latitude:***	46.83858732
Petrol Brownfield?:		***Longitude:***	-92.24080934
VIC Site?:		***County (RAP):***	St. Louis

Sf Voluntary:		**Latitude (RAP):**	46.83858732
Inst Controls?:	Yes	**Longitude (RAP):**	-92.24080934
State Reg:			
Project Name:	ARROWHEAD REFINERY CO.		
Site Address 1:	5315 Hwy 53		
Site Address 2:			
Site City:	Hermantown		
Site State:	MN		
Site ZIP:	55811		
Site County:	St. Louis		
Project Name(RAP):	ARROWHEAD REFINERY CO.		
Address1 (RAP):	5315 Hwy 53		
Address2(RAP):			
City (RAP):	Hermantown		
State (RAP):	MN		
ZIP(RAP):	55811		
Project Managers:	Carly Lintner (current), Thomas Reppe (current), Andrew Eddy (former), Beth Aschinger (no longer at MPCA), Jane Mosel (no longer at MPCA), John Moeger (no longer at MPCA), Maureen Johnson (no longer at MPCA), Wayne Sarappo (no longer at MPCA)		
Data Source:	MPCA Remediation Sites; MPCA Remediation Sites with RAP approvals		

Remediation Sites Details

AI Name:	Arrowhead Refinery Co	**DWSMA Code:**	
Activity ID:	194350	**DWSMA Name:**	
SI ID:	2	**Cong Dist:**	8
SI Cat:	AREA	**House Dist:**	3B
SI Type:	SUPE	**Senate Dis:**	3
Site Type:	CON	**HUC 8:**	04010201
Acreage:		**HUC 10:**	0401020114
HRS Score:	40.00	**HUC 12:**	040102011401
Score Year:	1967	**Method Des:**	Digitized - MPCA internal map
MNTBA:			
Loc Desc:	NW Cor Hwy 53 & Ugstad Rd 3519 Miller Trunk Highway		
HUC 8 Name:	St. Louis River		
HUC 12 Name:	Upper Midway River		
Hydrologist(s):	Susan Johnson (former), Barb Gnabasik (no longer at MPCA), Mike Bares (no longer at MPCA), Pat Lannon (no longer at MPCA)		
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/194350		

Remediation Sites with RAP Approval

Activity ID:	194350	**Rap Date:**	
No Assoc Date:		**Site Start:**	
No Assoc Letter:	No	**Rap Approved:**	
Has Rp:	Yes	**Rap Completed:**	
Coord Collect Methd:	Digitized - MPCA internal map	**Site Closed:**	
Parcels:	395001000850; 395001000853; 395001000854		
WIMN:	https://webapp.pca.state.mn.us/wimn/site/194350		
AI Name:	Arrowhead Refinery Co		
Rp Names:	(TBD)		

Spatial Remediation Activity

AI ID:	194350	**Site Start:**	1967-12-31 00:00:00
Site ID:	SR0000067	**Remedy Imp:**	
SI ID:	2	**Remedy Sel:**	2008-06-30 00:00:00
SI Cat:	AREA	**ASMT Compl:**	1986-08-30 00:00:00
NFA Decisi:	2013-06-30 00:00:00	**Received:**	1980-12-11 00:00:00
Site Close:		**NPL List:**	1984-09-21 00:00:00
Leak Discovered:		**NPL Delete:**	2021-09-14 00:00:00
Leak Reported:		**PLP List:**	1984-10-30 00:00:00
Leak Reopened:		**PLP Delist:**	
Activity No:	1	**Staff Assi:**	1990-06-01 00:00:00
Activity ID:	SIW19900001	**FF Aproved:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Activity Type:	Superfund Investigation/Cleanup	**FF Closed:**	
Activity Code:	SIW	**Inv Comple:**	1996-10-31 00:00:00
Activity Year:	1990	**App Comple:**	1990-06-01 00:00:00
Discovered:	1967-12-31 00:00:00	**Er Site Ev:**	

62	2 of2	W	0.98 / 5,177.67	1,420.12 / 10	ARROWHEAD REFINERY CO. NW CORNER HWY 53 & UGSTAD ROAD HERMANTOWN MN 5581	SUPERFUND ROD

EPA ID:	MND980823975
Site ID:	0503894
NPL Status:	Deleted
Non NPL Status:	
Region:	05
EPA ID (SFDB):	MND980823975
Site Name (SFDB):	ARROWHEAD REFINERY CO.
State (SFDB):	MN
Region (SFDB):	05
Data Source(s):	SEMS Superfund Public User Database (as of 30 Jan 2026); Searchable Superfund Decision Documents Database (SFDB) (as of 26 Jan 2026)

Superfund Decision Documents Details (SFDB)

Doc ID:	86148
Date:	09/30/1986
Pub No:	
Description:	
PDF Link:	https://semspub.epa.gov/src/document/05/86148
Title:	RECORD OF DECISION (ROD) (SIGNED) - ARROWHEAD REFINERY CO

Completed RODs, ROD Amendments and ESDs (FOIA 2) Details

Seq ID:	1
Actual Comp Date:	9/30/1986 4:00:00 AM
Action Name:	Record of Decision (ROD)
Operable Unit Name:	GROUNDWATER

Unplottable Summary

Total: 30 Unplottable sites

DB	Company Name/Site Name	Address	City	Zip	ERIS ID
FINDS/FRS	2021 TAXIWAY A RECONSTRUCTION	DULUTH AIRPORT ***Registry ID:*** 110071494411	DULUTH MN	55811	921909125
FINDS/FRS	DULUTH INTERNATIONAL AIRPORT	AIRPORT ROAD ***Registry ID:*** 110068244778	HERMANTOWN MN	55811	857943254
FINDS/FRS	DULUTH INTERNATIONAL AIRPORT	SEE LOCATION DESCRIPTION ***Registry ID:*** 110068770789	HERMANTOWN MN	55811	857934831
FINDS/FRS	RUNWAY 9/27 RECONSTRUCTION, P	DULUTH AIRPORT ***Registry ID:*** 110068971991	HERMANTOWN MN	55811	857916165
FINDS/FRS	NORTH COUNTRY AVIATION	DULUTH INTERNATIONAL AIRPORT ***Registry ID:*** 110069063872	HERMANTOWN MN	55811	857911908
FINDS/FRS	DULUTH AIRPORT TERMINAL EXPAN	ADDRESS UNKNOWN ***Registry ID:*** 110068631626	DULUTH MN	55811	857899709
FINDS/FRS	DULUTH INTERNATIONAL AIRPORT	DULUTH INTERNATIONAL AIRPORT ***Registry ID:*** 110067857545	DULUTH MN	55811	857897206
FINDS/FRS	ELY MUNICIPAL AIRPORT	 ***Registry ID:*** 110052293718	MN		825545687
FINDS/FRS	MSAS 199 - AIRPORT ROAD RECON	SEE LOCATION DESCRIPTION ***Registry ID:*** 110068208549	HERMANTOWN MN	55811	857947844
FINDS/FRS	SITE 4 REMEDIAL ACTION - 148T	AIRPORT RD ***Registry ID:*** 110068376929	DULUTH MN	55811	857952985
FINDS/FRS	DULUTH INTERNATIONAL	SEE LOCATION DESCRIPTION	DULUTH MN	55811	857962306

	AIRPORT	***Registry ID:*** 110068189999			
FINDS/FRS	DULUTH INTERNATIONAL AIRPORT	DULUTH INTERNATIONAL AIRPORT ***Registry ID:*** 110068922740	DULUTH MN	55811	857973890
FINDS/FRS	AIRPORT ROAD PARKING LOT	SEE LOCATION DESCRIPTION ***Registry ID:*** 110068294205	HERMANTOWN MN	55811	857978199
FINDS/FRS	DULUTH INTL AIRPORT RADAR TOW	SEE LOCATION DESCRIPTION ***Registry ID:*** 110068441207	DULUTH MN	55811	858003479
FINDS/FRS	RECONDITIONING OF AIRPORT RD	SEE LOCATION DESCRIPTION ***Registry ID:*** 110068024435	DULUTH MN	55802	858019155
FINDS/FRS	NORTH COUNTRY AVIATION	HANGAR 1 DULUTH INTL AIRPORT ***Registry ID:*** 110068554380	HERMANTOWN MN	55811	858019411
FINDS/FRS	TAXI A PHASE 2 & 4	DULUTH AIRPORT ***Registry ID:*** 110071491491	DULUTH MN	55811	921907749
FINDS/FRS	SPEE DEE DELIVERY	AIRPORT ROAD ***Registry ID:*** 110071495060	DULUTH MN	55811	921909050
FINDS/FRS	DULUTH INTERNATIONAL AIRPORT	AIRPORT ROAD, SITE 102 ***Registry ID:*** 110068541812	HERMANTOWN MN	55811	857943255
HIST SPL	148TH FIGHTER GROUP	Airport Duluth ***Program Int ID:*** 171874	Duluth MN		819459732
HIST SPL	Duluth International Airport	Gate 3 ***Program Int ID:*** 288013	Duluth MN		819440142
HIST SPL	COMMERCIAL - DULUTH INTERNATIONAL AIRPORT	GATE 1 - DULUTH IAP ***Program Int ID:*** 183145	DULUTH MN		819433159
HIST SPL	COMMERCIAL	Duluth Intl Airport ***Program Int ID:*** 186672	Duluth MN	55811	819432448

HIST SPL	NATIONAL GUARD MINNESOTA AIR	Airport Duluth ***Program Int ID:*** 171188	Duluth MN	819468246
HMIRS		DULUTH INTERNATIONAL AIRPORT	DULUTH MN	818264585
MINES	WASH PLANT	From the intersection of Hwy 53 and Hwy 194 travel west from Hermantown about 4 miles, pit on left side ***Mine ID:*** 2103460	Hermantown MN	848275292
SPILLS	148TH FIGHTER GROUP	Airport Duluth MN ***Incident ID*** **|** ***Incident Status:*** 13483	Closed or Completed	Duluth MN	860693583
SPILLS		Hwy 53 and Hwy 194 MN ***Incident ID*** **|** ***Incident Status:*** 68847	Closed or Completed	Hermantown MN	860682325
SPILLS		Duluth Intl Airport MN 55811 ***Incident ID*** **|** ***Incident Status:*** 29597	Closed or Completed	Duluth MN	860656112
SPILLS	NATIONAL GUARD MINNESOTA AIR	Airport Duluth MN ***Incident ID*** **|** ***Incident Status:*** 12738	Closed or Completed	Duluth MN	860713359

Unplottable Report

Site: ***2021 TAXIWAY A RECONSTRUCTION***
DULUTH AIRPORT DULUTH MN 55811

FINDS/FRS

Registry ID:	110071494411
FIPS Code:	27137
HUC Code:	
Site Type Name:	
Location Description:	
Supplemental Location:	
Create Date:	04-OCT-23
Update Date:	
Interest Types:	STATE MASTER
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	
Census Block Code:	
EPA Region Code:	05
County Name:	ST. LOUIS
US/Mexico Border Ind:	
Latitude:	
Longitude:	
Reference Point:	
Coord Collection Method:	
Accuracy Value:	
Datum:	NAD83
Source:	
Frs Facility Detail Report URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110071494411
Program Acronyms:	

MN-TEMPO:251251

Site: ***DULUTH INTERNATIONAL AIRPORT***
AIRPORT ROAD HERMANTOWN MN 55811

FINDS/FRS

Registry ID:	110068244778
FIPS Code:	27137
HUC Code:	
Site Type Name:	STATIONARY
Location Description:	CSLL: CENTER OF SITE
Supplemental Location:	
Create Date:	02-JUN-16
Update Date:	
Interest Types:	STATE MASTER
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	

Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068244778
Program Acronyms:

MN-TEMPO:189213

Site: ***DULUTH INTERNATIONAL AIRPORT***
SEE LOCATION DESCRIPTION HERMANTOWN MN 55811

FINDS/FRS

Registry ID: 110068770789
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 02-JUN-16
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068770789
Program Acronyms:

MN-TEMPO:208489

Site: ***RUNWAY 9/27 RECONSTRUCTION, P***
DULUTH AIRPORT HERMANTOWN MN 55811

FINDS/FRS

Registry ID: 110068971991
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description: RUNWAY 9/27 RECONSTRUCTION
Supplemental Location: 4701 GRINDEN DR.
Create Date: 03-JUN-16
Update Date:

Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068971991
Program Acronyms:

MN-TEMPO:212423

Site: ***NORTH COUNTRY AVIATION***
DULUTH INTERNATIONAL AIRPORT HERMANTOWN MN 55811 FINDS/FRS

Registry ID: 110069063872
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 03-JUN-16
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110069063872
Program Acronyms:

MN-TEMPO:116062, MN-TEMPO:263516

Site: ***DULUTH AIRPORT TERMINAL EXPAN***

ADDRESS UNKNOWN DULUTH MN 55811 FINDS/FRS

Registry ID:	110068631626
FIPS Code:	27137
HUC Code:	
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	02-JUN-16
Update Date:	
Interest Types:	STATE MASTER
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	
Census Block Code:	
EPA Region Code:	05
County Name:	ST. LOUIS
US/Mexico Border Ind:	
Latitude:	
Longitude:	
Reference Point:	
Coord Collection Method:	
Accuracy Value:	
Datum:	NAD83
Source:	
Frs Facility Detail Report URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068631626
Program Acronyms:	

MN-TEMPO:137956

Site: ***DULUTH INTERNATIONAL AIRPORT***
DULUTH INTERNATIONAL AIRPORT DULUTH MN 55811 FINDS/FRS

Registry ID:	110067857545
FIPS Code:	27137
HUC Code:	
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	02-JUN-16
Update Date:	
Interest Types:	STATE MASTER
SIC Codes:	0096
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	
Census Block Code:	
EPA Region Code:	05
County Name:	ST. LOUIS
US/Mexico Border Ind:	
Latitude:	
Longitude:	
Reference Point:	
Coord Collection Method:	
Accuracy Value:	

Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110067857545
Program Acronyms:

MN-TEMPO:37342

Site: ***ELY MUNICIPAL AIRPORT***
MN

FINDS/FRS

Registry ID: 110052293718
FIPS Code:
HUC Code:
Site Type Name: WATER SYSTEM
Location Description:
Supplemental Location:
Create Date: 27-OCT-12
Update Date: 10-MAY-20
Interest Types: TRANSIENT NON-COMMUNITY WATER SYSTEM
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110052293718
Program Acronyms:

SFDW:MN5690385

Site: ***MSAS 199 - AIRPORT ROAD RECON***
SEE LOCATION DESCRIPTION HERMANTOWN MN 55811

FINDS/FRS

Registry ID: 110068208549
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 02-JUN-16
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:

Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068208549
Program Acronyms:

MN-TEMPO:120957

Site: ***SITE 4 REMEDIAL ACTION - 148T***
AIRPORT RD DULUTH MN 55811

FINDS/FRS

Registry ID: 110068376929
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 02-JUN-16
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068376929
Program Acronyms:

MN-TEMPO:144465

Site: ***DULUTH INTERNATIONAL AIRPORT***
SEE LOCATION DESCRIPTION DULUTH MN 55811

FINDS/FRS

Registry ID: 110068189999
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 02-JUN-16
Update Date:

Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068189999
Program Acronyms:

MN-TEMPO:194375

Site: ***DULUTH INTERNATIONAL AIRPORT***
DULUTH INTERNATIONAL AIRPORT DULUTH MN 55811 FINDS/FRS

Registry ID: 110068922740
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 03-JUN-16
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068922740
Program Acronyms:

MN-TEMPO:11034

Site: ***AIRPORT ROAD PARKING LOT***

SEE LOCATION DESCRIPTION HERMANTOWN MN 55811 FINDS/FRS

Registry ID:	110068294205
FIPS Code:	27137
HUC Code:	
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	02-JUN-16
Update Date:	
Interest Types:	STATE MASTER
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	
Census Block Code:	
EPA Region Code:	05
County Name:	ST. LOUIS
US/Mexico Border Ind:	
Latitude:	
Longitude:	
Reference Point:	
Coord Collection Method:	
Accuracy Value:	
Datum:	NAD83
Source:	
Frs Facility Detail Report URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068294205
Program Acronyms:	

MN-TEMPO:106663

Site: ***DULUTH INTL AIRPORT RADAR TOW***
SEE LOCATION DESCRIPTION DULUTH MN 55811 FINDS/FRS

Registry ID:	110068441207
FIPS Code:	27137
HUC Code:	
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	02-JUN-16
Update Date:	
Interest Types:	STATE MASTER
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	
Census Block Code:	
EPA Region Code:	05
County Name:	ST. LOUIS
US/Mexico Border Ind:	
Latitude:	
Longitude:	
Reference Point:	
Coord Collection Method:	
Accuracy Value:	

Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068441207
Program Acronyms:

MN-TEMPO:188827

Site: ***RECONDITIONING OF AIRPORT RD***
SEE LOCATION DESCRIPTION DULUTH MN 55802

FINDS/FRS

Registry ID: 110068024435
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 02-JUN-16
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068024435
Program Acronyms:

MN-TEMPO:126137

Site: ***NORTH COUNTRY AVIATION***
HANGAR 1 DULUTH INTL AIRPORT HERMANTOWN MN 55811

FINDS/FRS

Registry ID: 110068554380
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 02-JUN-16
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:

Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068554380
Program Acronyms:

MN-TEMPO:116052

Site: ***TAXI A PHASE 2 & 4***
DULUTH AIRPORT DULUTH MN 55811

FINDS/FRS

Registry ID: 110071491491
FIPS Code: 27137
HUC Code:
Site Type Name:
Location Description:
Supplemental Location:
Create Date: 04-OCT-23
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110071491491
Program Acronyms:

MN-TEMPO:253437

Site: ***SPEE DEE DELIVERY***
AIRPORT ROAD DULUTH MN 55811

FINDS/FRS

Registry ID: 110071495060
FIPS Code: 27137
HUC Code:
Site Type Name:
Location Description:
Supplemental Location:
Create Date: 04-OCT-23
Update Date:

Interest Types:
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110071495060
Program Acronyms:

MN-TEMPO:224097

Site: ***DULUTH INTERNATIONAL AIRPORT***
AIRPORT ROAD, SITE 102 HERMANTOWN MN 55811 FINDS/FRS

Registry ID: 110068541812
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description: CSLL: CENTER OF SITE
Supplemental Location:
Create Date: 02-JUN-16
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068541812
Program Acronyms:

MN-TEMPO:193566

Site: ***148TH FIGHTER GROUP***

Airport Duluth Duluth MN HIST SPL

Program Int ID:	171874	***Tmsp Added:***	03/21/1996 00:00:00
Site ID:	0	***TMSP Update:***	11/18/2003 10:27:09
Interest Type:	Spill Site	***Prgm Int Source:***	TALES
Preferred ID:	13483	***Address Source:***	TALES
Active?:		***Interest Phone:***	
Interest Start:	03/21/1996 00:00:00	***Township:***	
Interest End:		***County:***	St. Louis
Comments:			

Spill Site

Spill Site Closure Date:	01/01/1996 00:00:00
Spill Date:	03/21/1990 00:00:00
Spill Reported Date:	03/30/1990 00:00:00
Priority Code:	4
MPCA Involvement:	
Initial Cause:	OVERFILL
Initial Source:	
Public Safety Spill ID:	
Duty Officer Report Number:	
Spill Reported by:	GARY NIEMI
Report Taken By Initials:	3258
Rpt Taken by Duty Officer Flag:	
MPCA Project Manager:	3258
Tmsp Added:	03/21/1996 00:00:00
Tmsp Last Updt:	04/11/2007 08:22:51
Staff ID Last Updt:	RSUCHAN
Rep Name:	
Rep Phone:	
Archive Lot:	
Archive Box:	
Response Desc:	

Spill Released Product

Spill Product:	Petroleum, Unspecified
Spill Released Quantity:	20
Spill Qty Units:	Gallons
Spill Incident Accuracy:	Known
Date Added:	03/21/1996 00:00:00
Last Update:	05/04/2002 06:44:21
Staff ID Last Update:	TANKS

Site: ***Duluth International Airport Gate 3 Duluth MN*** HIST SPL

Program Int ID:	288013	***Tmsp Added:***	04/20/2004 09:19:06
Site ID:	0	***TMSP Update:***	10/27/2005 10:58:20
Interest Type:	Spill Site	***Prgm Int Source:***	TALES
Preferred ID:	60878	***Address Source:***	TALES
Active?:		***Interest Phone:***	
Interest Start:	04/20/2004 09:19:06	***Township:***	
Interest End:		***County:***	St. Louis
Comments:	**No file** Caller Reporting spill of fuel from tanker. Cause of spill was a broken line (weld) on tanker that was filling airplane (NWA). Spill has been cleaned and placed into containers for disposal.		

Spill Site

Spill Site Closure Date:	04/02/2004 00:00:00
Spill Date:	04/02/2004 00:00:00
Spill Reported Date:	04/02/2004 04:00:00
Priority Code:	
MPCA Involvement:	None
Initial Cause:	
Initial Source:	Other
Public Safety Spill ID:	12972

Duty Officer Report Number: 58912
Spill Reported by: Mike
Report Taken By Initials:
Rpt Taken by Duty Officer Flag: Yes
MPCA Project Manager: 3094
Tmsp Added: 04/20/2004 09:19:06
Tmsp Last Updt: 04/11/2007 08:23:07
Staff ID Last Updt: RSUCHAN
Rep Name: Mike
Rep Phone: 2187887434
Archive Lot:
Archive Box:
Response Desc:

Spill Released Product

Spill Product: Jet Fuel (Kerosene Based)
Spill Released Quantity: 20
Spill Qty Units: Gallons
Spill Incident Accuracy: Estimated
Date Added: 04/20/2004 09:19:07
Last Update: 04/20/2004 09:19:07
Staff ID Last Update: SLEPPAL

Spill Incident Affected

Spill Incident Affect: Paved, Not Street
Date Added: 04/20/2004 09:19:07
Last Update: 04/20/2004 09:19:07
Staff ID Last Update: SLEPPAL

Site: ***COMMERCIAL - DULUTH INTERNATIONAL AIRPORT***
GATE 1 - DULUTH IAP DULUTH MN

HIST SPL

Program Int ID: 183145
Site ID: 0
Interest Type: Spill Site
Preferred ID: 25730
Active?:
Interest Start: 06/23/1997 13:38:47
Interest End:
Tmsp Added: 06/23/1997 13:38:47
TMSP Update: 05/04/2002 07:19:35
Prgm Int Source: TALES
Address Source: TALES
Interest Phone:
Township:
County: St. Louis
Comments: RELEASE OF APPROXIMATELY 100 GALLONS OF JET FUEL TO CONCRETE\n\nAPRON. CAUSE ATTRIBUTED TO MALFUNCTIONING TRASFER VALVE.

Spill Site

Spill Site Closure Date: 06/18/1997 00:00:00
Spill Date: 06/18/1997 00:00:00
Spill Reported Date: 06/18/1997 00:00:00
Priority Code: 2
MPCA Involvement:
Initial Cause: EQUIPMENT FAILURE
Initial Source: Aircraft
Public Safety Spill ID:
Duty Officer Report Number:
Spill Reported by: MINNESOTA AIR NATIONAL GUARD - DULUTH IAP, FIRE RESPONSE TEAM
Report Taken By Initials: 2829
Rpt Taken by Duty Officer Flag:
MPCA Project Manager: 2829
Tmsp Added: 06/23/1997 13:38:47
Tmsp Last Updt: 04/11/2007 08:22:59
Staff ID Last Updt: RSUCHAN
Rep Name:
Rep Phone:
Archive Lot:
Archive Box:
Response Desc:

Spill Released Product

Spill Product:	Other (Described In Remarks)
Spill Released Quantity:	100
Spill Qty Units:	Gallons
Spill Incident Accuracy:	Estimated
Date Added:	06/23/1997 13:38:47
Last Update:	05/04/2002 07:19:35
Staff ID Last Update:	TANKS

Spill Incident Affected

Spill Incident Affect:	Street, Parking Lot
Date Added:	06/23/1997 13:38:47
Last Update:	05/04/2002 07:19:35
Staff ID Last Update:	TANKS

Spill Action

Spill Action:	Consulted/Advised
Spill Action Person:	
Date Added:	06/23/1997 13:38:47
Last Update:	05/04/2002 07:19:35
Staff ID Last Update:	TANKS

Site: ***COMMERCIAL***
Duluth Intl Airport Duluth MN 55811

HIST SPL

Program Int ID:	186672	***Tmsp Added:***	12/21/1998 10:18:17
Site ID:	0	***TMSP Update:***	05/04/2002 07:30:48
Interest Type:	Spill Site	***Prgm Int Source:***	TALES
Preferred ID:	29597	***Address Source:***	TALES
Active?:		***Interest Phone:***	
Interest Start:	12/21/1998 10:18:17	***Township:***	
Interest End:		***County:***	St. Louis
Comments:	TRANSFER OF FUEL FROM 1 WING TO ANOTHER. CLEAN UP IN PROGRESS.		

Spill Site

Spill Site Closure Date:	12/19/1998 00:00:00
Spill Date:	12/19/1998 00:00:00
Spill Reported Date:	12/19/1998 00:00:00
Priority Code:	3
MPCA Involvement:	
Initial Cause:	UNKNOWN
Initial Source:	Truck/Vehicle Fuel
Public Safety Spill ID:	
Duty Officer Report Number:	
Spill Reported by:	CARL ANDERSON, DULUTH AIR GUARD
Report Taken By Initials:	3297
Rpt Taken by Duty Officer Flag:	
MPCA Project Manager:	3094
Tmsp Added:	12/21/1998 10:18:17
Tmsp Last Updt:	04/11/2007 08:23:02
Staff ID Last Updt:	RSUCHAN
Rep Name:	
Rep Phone:	
Archive Lot:	
Archive Box:	
Response Desc:	

Spill Released Product

Spill Product:	Aviation Gas (High Octane)
Spill Released Quantity:	30
Spill Qty Units:	Square Feet

Spill Incident Accuracy: Known
Date Added: 12/21/1998 10:18:17
Last Update: 05/04/2002 07:30:48
Staff ID Last Update: TANKS

Spill Incident Affected

Spill Incident Affect: Street, Parking Lot
Date Added: 12/21/1998 10:18:17
Last Update: 05/04/2002 07:30:48
Staff ID Last Update: TANKS

Spill Action

Spill Action: None, No File
Spill Action Person:
Date Added: 12/21/1998 10:18:17
Last Update: 05/04/2002 07:30:48
Staff ID Last Update: TANKS

Site: ***NATIONAL GUARD MINNESOTA AIR Airport Duluth Duluth MN***

HIST SPL

Program Int ID: 171188
Site ID: 0
Interest Type: Spill Site
Preferred ID: 12738
Active?:
Interest Start: 03/21/1996 00:00:00
Interest End:
Comments:

Tmsp Added: 03/21/1996 00:00:00
TMSP Update: 05/04/2002 06:42:14
Prgm Int Source: TALES
Address Source: TALES
Interest Phone:
Township:
County: St. Louis

Spill Site

Spill Site Closure Date: 01/01/1996 00:00:00
Spill Date: 11/22/1989 00:00:00
Spill Reported Date: 11/22/1989 00:00:00
Priority Code: 4
MPCA Involvement:
Initial Cause: UNKNOWN
Initial Source:
Public Safety Spill ID:
Duty Officer Report Number:
Spill Reported by: GARY NIEMI
Report Taken By Initials: 3297
Rpt Taken by Duty Officer Flag:
MPCA Project Manager: 3297
Tmsp Added: 03/21/1996 00:00:00
Tmsp Last Updt: 04/11/2007 08:22:51
Staff ID Last Updt: RSUCHAN
Rep Name:
Rep Phone:
Archive Lot:
Archive Box:
Response Desc:

Spill Released Product

Spill Product: Unknown
Spill Released Quantity: 1
Spill Qty Units: Pounds
Spill Incident Accuracy: Known
Date Added: 03/21/1996 00:00:00
Last Update: 05/04/2002 06:42:14
Staff ID Last Update: TANKS

Site:

DULUTH INTERNATIONAL AIRPORT DULUTH MN

Incident County: ST LOUIS

HMIR Historical Reports

Report No:	I-1989120518	***Fed DOT Agency Nm:***	
Report Type:	A hazardous material incident	***Fed DOT Report No:***	
Date of Incident:	1989-12-19	***Report Submit Src:***	Paper
Time of Incident:	1600	***Inc Multiple Rows:***	No
Haz Class Code:		***Inc Non US State:***	
Hazardous Class:	3	***Mode Transport:***	Highway
Commodity Short Nm:	FUEL, AVIATION, TURBINE	***Transport Phase:***	Unloading
Commodity Long Nm:	FUEL, AVIATION, TURBINE ENGINE	***Incident Occrrnce:***	
Trade Name:	JP-4	***Mat Ship Approval?:***	No
ID No:	UN1863	***Mat Ship Approv No:***	
Haz Waste Ind:	No	***Undecl Hazmat Ship?:***	No
Haz Waste EPA No:		***Packaging Type:***	Cargo Tank Motor Vehicle (CTMV)
HMIS Tox Inhalation?:	No	***Packing Group:***	
TIH Hazard Zone:		***Carrier Reporter:***	INDIANHEAD TRUCK LINE INC
Qty Released:	25	***CR Street Name:***	PO BOX 64355
Unit of Measure:	Liquid - Gallon	***CR City:***	ST PAUL
What Failed:	;	***CR State:***	MN
What Failed Desc:	;	***CR Postal Code:***	55164
How Failed Code:	;	***CR Non US State:***	
How Failed Desc:	;	***CR Fed DOT ID:***	107910
Failure Cause Code:	514; 538	***CR Hazmat Reg ID:***	
Failure Cause Desc:	Freezing; Water Damage	***CR Country:***	US
Ident. Markings:		***Shipper Name:***	CONTINENTAL SERVICE CO
Cont1 Pkging Type:		***Shipper Street Name:***	RR #2 BOX 31
Cont1 Const Mat:		***Shipper City:***	GRAND FORKS
Cont1 Head Type:		***Shipper State:***	ND
Cont1 Pkg Capacity:	9400	***Shipper Postal:***	58201
C1 Capacity UOM:	LGA	***Shipper Non US St:***	
Cont1 Pkg Amt:	0	***Shipper Country:***	US
C1 Pkg Amt UOM:		***Shipper Waybill:***	GF 10005
Cont1 Pkg No:	1	***Ship Hazmat Reg ID:***	
C1 Pkg NO Failed:	1	***Origin City:***	GRAND FORKS
Cont1 Pkg Mnfctr:	FRUEHAUF CORP	***Origin State:***	ND
Cont1 Pkg Mnfct Dt:	0-00-00 00:00:00	***Origin Postal:***	
Cont1 Pkg Serial NO:		***Origin Non US St:***	
C1 Pkg Last Test Dt:	1989-12-08 00:00:00	***Origin Country:***	US
C1 Test Const Mat:		***Destination City:***	DULUTH
C1 Pkg Dsign Pres.:	0	***Destination State:***	MINNESOTA
C1 Dsign Press UOM:		***Destination Postal:***	
C1 Pkg Shell Thick:	0	***Destination Non US:***	
C1 Shell Thick UOM:		***Destination Country:***	US
C1 Head Thickness:	0	***Cont2 Package Type:***	
C1 Head Thick UOM:		***Cont2 Const Mat:***	
C1 Pkg Srvc Pres.:	0	***Cont2 Pkg Capacity:***	0
C1 Srvc Press UOM:		***Cont2 Capacity UOM:***	
C1 Valve/Device Fail?:	No	***Cont2 Pkg Amount:***	0
C1 Device Type:		***Cont2 Pkg Amt UOM:***	
C1 Device Mnfctr:		***Cont2 Pkg No:***	0
C1 Device Model:		***Cont2 Pkg No Failed:***	0
NRC No:			

RAM Pkg Category:		***Haz NonHosp Public:***	0
RAM Pkg Cert.:	FALSE	***Haz NonHosp Old:***	
RAM Pkg Cert. NBR:		***Tot Haz Non Hosp Inj:***	
RAM Nuclide S:		***Total Hazmat Injuries:***	0
RAM Transport Index:		***Evacuation Indicator:***	No
RAM UOM:		***Public Evacuated:***	0
RAM Activity Rpted:	0	***Employees Evac:***	0
RAM UOM Rpted:		***Total Evacuated:***	0
RAM Activity:	0	***Total Evacuation Hrs:***	0
RAM Activity UOM:		***Major Artery Closed:***	No
RAM Mat Safety:		***Mjr Artery Hrs Closed:***	0
Spillage Result:	Yes	***Material Involved:***	No

Fire Result:	No	***Estimated Speed:***	0
Explosion Result:	No	***Weather Conditions:***	
Water Sewer Result:	No	***Vehicle Overturn:***	No
Gas Dispersion:	No	***Vehicle Left Roadway:***	No
Environment Damage:	No	***Passenger Aircraft:***	No
No Release Result:	No	***Cargo Baggage:***	
Fire EMS Report:	No	***Ship Non Transport:***	No
Fire EMS EMS Report:		***Ship Air First Flight:***	No
Police Report:	No	***Ship Air Subflight:***	No
Police Report No:		***Ship Init Transport:***	No
In House Cleanup:	No	***Ship Phase Transfer:***	No
Other Cleanup:	No	***Contact Name:***	LESTER A WILSEY III
Damage > 500:	No	***Contact Title:***	VICE PRESIDENT
Material Loss:	25	***Contact Business:***	
Carrier Damage:	0	***Contact Street:***	
Property Damage:	0	***Contact City:***	
Response Cost:	0	***Contact State:***	
Remediation Cost:	100	***Contact Postal:***	
Damage Old Form:	0	***Contact Non US St:***	
Total Damages Amt:	125	***Contact Country:***	US
Hazmat Fatality:	No	***Inc. Report Prepared:***	
Haz Fatal Employees:	0	***HMIS Serious Incidnt:***	No
Haz Fatal Respndrs:	0	***HMIS Serious Fatality:***	No
Haz Fatal Gen Public:	0	***HMIS Serious Injury:***	No
Tot Hazmat Fatalities:	0	***HMIS Flight Plan:***	No
Non Hazmat Fatality:	No	***HMIS Serious Evacs:***	No
Non Hazmat Fatals:	0	***HMIS Major Artery:***	No
Hazmat Injury:	No	***HMIS Bulk Release:***	No
Haz Hospital Empl:	0	***HMIS Marine Pollutnt:***	No
Haz Hospital Resp:	0	***HMIS Radioactive:***	No
Haz Hosp Gen Public:	0	***HMIS Gen Pkg Type:***	TANK
Haz Hosp Old Form:	0	***HMIS Container Code:***	MC306
Total Haz Hosp Inj:	0	***HMIS Container Desc:***	Cargo tanks
Haz Non Hosp Empl:	0	***HMIS Bulk Incident:***	Yes
Haz Non Hosp Resp:	0	***Undeclared Shipment:***	No

Description of Events: PRODUCT IS BOTTOM LOADED AND DRIVER WAS UNAWARE THAT THE EXTERNAL VALVE WAS NOT SEATED PROPERLY UNTIL THE UNLOADING LINE CAP WAS REMOVED AT THE TIME O F DELIVERY. WET LINE LEAKED OUT, APPROX 25 GALLONS, UNLOADING HOSE WAS HOOK ED UP AND THEN PROCEEDED TO COMPLETE UNLOADING. AIRBASE PERSONNEL ASSISTED DRIVER IN CLEAN-UP WITH ABSORBENT MATERIAL. THE SPILL WAS CONTAINED ON A CO NCRETE SLAB UNTIL CLEANUP WAS COMPLETED. TEMPERATURE AT THE TIME OF THIS SH IPMENT WAS APPROX. -20 DEGREES F. MOISTURE GOT INTO VALVE THROUGH CONDENSA TION AND FROZE NOT PERMITTING A TIGHT SEAT ON PREVIOUS LOAD TRANSPORTED.

Recommend Actions Taken:

Site: ***WASH PLANT***
From the intersection of Hwy 53 and Hwy 194 travel west from Hermantown about 4 miles, pit on left side Hermantown MN

MINES

Mine ID:	2103460	***Miles from Office:***	16
Status Code:	2	***SIC:***	144200
Mine Status:	Intermittent (Included Seasonal)	***Primary SIC:***	Construction Sand and Gravel
Status Date:	20230614	***Primary SIC CD 1:***	1442
Operation Class:	2 - Non-coal mining	***Primary SIC CD SFX:***	00
Company Type:	Corporation	***Primary Canvass:***	SandAndGravel
Assess Ctrl No:	000474206	***Primary Canvass CD:***	5
Current Mine Type:	Surface	***Secondary SIC:***	
Currnt Mine Status:	Intermittent	***Secondary SIC 1:***	000000
Current Status Dt:	06/14/2023	***Secondary SIC 2:***	000000
Curr Controller ID:	M00893	***Secondary SIC 3:***	000000
Curr Cont Begin Dt:	12/18/2023	***Secondary SIC 4:***	000000
Curr Operator ID:	L16472	***Secondary SIC 5:***	000000
Coal Metal Ind:	M	***Secondary SIC CD:***	
Mine Gas Ctgry CD:		***Secondary SIC CD 1:***	
Miners Rep Ind:	No	***Sec SIC CD Sfx:***	
Mines Prim SIC CD:	144200	***Sec Canvass CD:***	
Mines State:	MN	***Secondary Canvass:***	
No Employees:	2	***Primary SIC CD:***	Construction Sand and Gravel
No Non-Prod Pits:		***Country:***	USA
No Producing Pits:		***Province:***	

No Tailing Ponds:	0	***Postal CD:***	
No of Pits:	000	***State Abbrev:***	MN
No of Plants:	0	***County Code:***	137
No of Shops:	0	***State Code:***	27
Current 103I:	Never Had 103I Status	***District:***	M4
Current 103I Dt:		***BOM State CD:***	21
Portable Operation:	Yes	***FIPS Cnty CD:***	137
Portble FIPS St CD:	27	***FIPS Cnty Nm:***	St Louis
Days Per Week:	5	***Cong Dist CD:***	
Hours Per Shift:	8	***Contact Title:***	Safety Director
Prod Shift Per Day:	1	***FIPS State CD:***	27
Maint Shift PerDay:	0	***Lat Deg:***	46
Part48 Training:	Yes	***Lat Min:***	51
Avg Mine Height:		***Lat Sec:***	42
Methane Liberation:		***Long Deg:***	092
Multiple Pits:	No	***Long Min:***	09
Safety Committ Ind:	No	***Long Sec:***	11
Office CD:	M4651	***Latitude:***	46.861667
Office Name:	Duluth MN Field Office	***Longitude:***	-92.153333

Entity Name: WASH PLANT
Current Mine Name: Wash Plant
Curr Controller Name: Mathy Construction Company
Curr Operator Name: Mathy Constr. Co. DBA Northland Constrs. of Duluth
Status Description: The mine is only being worked intermittently. Generally based on the demand for mined material.
Pillar Recovery Used: No
Highwall Miner Used: No
Directions to Mine: From the intersection of Hwy 53 and Hwy 194 travel west from Hermantown about 4 miles, pit on left side
Street: 4843 Rice Lake Rd.
City: Duluth
Po Box:
State Abbr: MN
State: Minnesota
Zip Code: 55803
Data Source: Master Index File;MINES Data Set

Violation Details

Event No:	1012227	***Contested Ind:***	No
Initial Viol No:		***Contested Dt:***	
Replaced by Ord No:		***Final Ord Issue Dt:***	09/12/2013
Controller ID:	M06640	***Fiscal Qtr:***	3
Contractor ID:		***Fiscal Yr:***	2013
Violation No:	6490549	***Violator Type CD:***	Operator
Violator ID:	L08350	***Viola Insp Day Cnt:***	1
Docket No:		***Violat Violatn Cnt:***	1
Docket Stat Cd:		***Violation Issue Dt:***	06/17/2013
Mine Type:	Surface	***Violatn Issue Time:***	1323
Likelihood:	Unlikely	***Violation Occur Dt:***	06/17/2013
Amount Due:	100	***Orig Term Due Dt:***	06/17/2013
Amount Paid:	100	***Orig Term Due Tm:***	1345
Asmt Generated Ind:	No	***Inspectn Begin Dt:***	06/17/2013
Asses Case Stat Cd:	Closed	***Inspection End Dt:***	06/18/2013
Bill Print Dt:	08/07/2013	***Last Action Cd:***	Paid
Cal Qtr:	2	***Last Action Dt:***	09/01/2013
Cal Yr:	2013	***Latest Term Due Dt:***	06/17/2013
Cit Ord Safe:	Citation	***Latest Term Due Tm:***	1345
Coal Metal Ind:	M	***Termination Dt:***	06/17/2013
Inj Illness:	Fatal	***Termination Time:***	1332
No Affected:	1	***Termination Type:***	Terminated
Negligence:	ModNegligence	***Vacate Dt:***	
Written Notice:		***Vacate Time:***	
Enforcement Area:		***Sig Sub:***	No
Special Assess:	No	***Part Section:***	56.12004
Primary or Mill:	Primary	***Section of Act:***	
Right to Conf Dt:		***Section of Act 1:***	104(a)
Proposed Penalty:	100	***Section of Act 2:***	

Mine Name: Wash Plant
Controller Name: James L Holmgren
Violator Name: Northland Crushing, Inc.

Violation Details

Event No:	6633550	***Contested Ind:***	No
Initial Viol No:		***Contested Dt:***	
Replaced by Ord No:		***Final Ord Issue Dt:***	10/15/2014
Controller ID:	M06640	***Fiscal Qtr:***	4
Contractor ID:		***Fiscal Yr:***	2014
Violation No:	8839157	***Violator Type CD:***	Operator
Violator ID:	L08350	***Viola Insp Day Cnt:***	4
Docket No:		***Violat Violatn Cnt:***	3
Docket Stat Cd:		***Violation Issue Dt:***	07/15/2014
Mine Type:	Surface	***Violatn Issue Time:***	1430
Likelihood:	Unlikely	***Violation Occur Dt:***	07/15/2014
Amount Due:	100	***Orig Term Due Dt:***	08/15/2014
Amount Paid:	100	***Orig Term Due Tm:***	0800
Asmt Generated Ind:	No	***Inspectn Begin Dt:***	07/15/2014
Asses Case Stat Cd:	Closed	***Inspection End Dt:***	07/16/2014
Bill Print Dt:	09/10/2014	***Last Action Cd:***	Paid
Cal Qtr:	3	***Last Action Dt:***	09/24/2014
Cal Yr:	2014	***Latest Term Due Dt:***	09/18/2014
Cit Ord Safe:	Citation	***Latest Term Due Tm:***	0800
Coal Metal Ind:	M	***Termination Dt:***	08/25/2014
Inj Illness:	Permanent	***Termination Time:***	0942
No Affected:	1	***Termination Type:***	Terminated
Negligence:	ModNegligence	***Vacate Dt:***	
Written Notice:		***Vacate Time:***	
Enforcement Area:		***Sig Sub:***	No
Special Assess:	No	***Part Section:***	56.13015(a)
Primary or Mill:	Primary	***Section of Act:***	
Right to Conf Dt:		***Section of Act 1:***	104(a)
Proposed Penalty:	100	***Section of Act 2:***	
Mine Name:	Wash Plant		
Controller Name:	James L Holmgren		
Violator Name:	Northland Crushing, Inc.		

Violation Details

Event No:	6750424	***Contested Ind:***	No
Initial Viol No:		***Contested Dt:***	
Replaced by Ord No:		***Final Ord Issue Dt:***	11/09/2018
Controller ID:	M06640	***Fiscal Qtr:***	4
Contractor ID:		***Fiscal Yr:***	2018
Violation No:	9381093	***Violator Type CD:***	Operator
Violator ID:	0135594	***Viola Insp Day Cnt:***	1
Docket No:		***Violat Violatn Cnt:***	0
Docket Stat Cd:		***Violation Issue Dt:***	08/06/2018
Mine Type:	Surface	***Violatn Issue Time:***	1321
Likelihood:	NoLikelihood	***Violation Occur Dt:***	08/06/2018
Amount Due:	118	***Orig Term Due Dt:***	08/07/2018
Amount Paid:	118	***Orig Term Due Tm:***	1000
Asmt Generated Ind:	No	***Inspectn Begin Dt:***	08/06/2018
Asses Case Stat Cd:	Closed	***Inspection End Dt:***	08/06/2018
Bill Print Dt:	10/03/2018	***Last Action Cd:***	Paid
Cal Qtr:	3	***Last Action Dt:***	10/28/2018
Cal Yr:	2018	***Latest Term Due Dt:***	08/07/2018
Cit Ord Safe:	Citation	***Latest Term Due Tm:***	1000
Coal Metal Ind:	M	***Termination Dt:***	08/06/2018
Inj Illness:	NoLostDays	***Termination Time:***	1623
No Affected:	0	***Termination Type:***	Terminated
Negligence:	LowNegligence	***Vacate Dt:***	
Written Notice:		***Vacate Time:***	
Enforcement Area:		***Sig Sub:***	No
Special Assess:	No	***Part Section:***	56.1000
Primary or Mill:	Primary	***Section of Act:***	
Right to Conf Dt:		***Section of Act 1:***	104(a)
Proposed Penalty:	118	***Section of Act 2:***	
Mine Name:	Wash Plant		
Controller Name:	James L Holmgren		
Violator Name:	Northland Constructors		

Violation Details

Event No:	6750424	***Contested Ind:***	No
Initial Viol No:		***Contested Dt:***	
Replaced by Ord No:		***Final Ord Issue Dt:***	11/09/2018
Controller ID:	M06640	***Fiscal Qtr:***	4
Contractor ID:		***Fiscal Yr:***	2018
Violation No:	9381096	***Violator Type CD:***	Operator
Violator ID:	0135594	***Viola Insp Day Cnt:***	1
Docket No:		***Violat Violatn Cnt:***	0
Docket Stat Cd:		***Violation Issue Dt:***	08/06/2018
Mine Type:	Surface	***Violatn Issue Time:***	1345
Likelihood:	Unlikely	***Violation Occur Dt:***	08/06/2018
Amount Due:	118	***Orig Term Due Dt:***	08/06/2018
Amount Paid:	118	***Orig Term Due Tm:***	1400
Asmt Generated Ind:	No	***Inspectn Begin Dt:***	08/06/2018
Asses Case Stat Cd:	Closed	***Inspection End Dt:***	08/06/2018
Bill Print Dt:	10/03/2018	***Last Action Cd:***	Paid
Cal Qtr:	3	***Last Action Dt:***	10/28/2018
Cal Yr:	2018	***Latest Term Due Dt:***	08/06/2018
Cit Ord Safe:	Citation	***Latest Term Due Tm:***	1400
Coal Metal Ind:	M	***Termination Dt:***	08/06/2018
Inj Illness:	Fatal	***Termination Time:***	1415
No Affected:	1	***Termination Type:***	Terminated
Negligence:	ModNegligence	***Vacate Dt:***	
Written Notice:		***Vacate Time:***	
Enforcement Area:		***Sig Sub:***	No
Special Assess:	No	***Part Section:***	56.12018
Primary or Mill:	Primary	***Section of Act:***	
Right to Conf Dt:		***Section of Act 1:***	104(a)
Proposed Penalty:	118	***Section of Act 2:***	
Mine Name:	Wash Plant		
Controller Name:	James L Holmgren		
Violator Name:	Northland Constructors		

Violation Details

Event No:	6708466	***Contested Ind:***	No
Initial Viol No:		***Contested Dt:***	
Replaced by Ord No:		***Final Ord Issue Dt:***	11/12/2016
Controller ID:	M06640	***Fiscal Qtr:***	4
Contractor ID:		***Fiscal Yr:***	2016
Violation No:	8840000	***Violator Type CD:***	Operator
Violator ID:	0135594	***Viola Insp Day Cnt:***	0
Docket No:		***Violat Violatn Cnt:***	0
Docket Stat Cd:		***Violation Issue Dt:***	08/08/2016
Mine Type:	Surface	***Violatn Issue Time:***	1241
Likelihood:	Reasonably	***Violation Occur Dt:***	08/08/2016
Amount Due:	124	***Orig Term Due Dt:***	08/08/2016
Amount Paid:	124	***Orig Term Due Tm:***	1250
Asmt Generated Ind:	No	***Inspectn Begin Dt:***	08/08/2016
Asses Case Stat Cd:	Closed	***Inspection End Dt:***	08/09/2016
Bill Print Dt:	09/28/2016	***Last Action Cd:***	Paid
Cal Qtr:	3	***Last Action Dt:***	10/14/2016
Cal Yr:	2016	***Latest Term Due Dt:***	08/08/2016
Cit Ord Safe:	Citation	***Latest Term Due Tm:***	1250
Coal Metal Ind:	M	***Termination Dt:***	08/08/2016
Inj Illness:	Permanent	***Termination Time:***	1245
No Affected:	1	***Termination Type:***	Terminated
Negligence:	ModNegligence	***Vacate Dt:***	
Written Notice:		***Vacate Time:***	
Enforcement Area:		***Sig Sub:***	Yes
Special Assess:	No	***Part Section:***	56.12004
Primary or Mill:	Primary	***Section of Act:***	
Right to Conf Dt:		***Section of Act 1:***	104(a)
Proposed Penalty:	124	***Section of Act 2:***	
Mine Name:	Wash Plant		
Controller Name:	James L Holmgren		

Violator Name: Northland Constructors

Violation Details

Event No:	6750424	***Contested Ind:***	No
Initial Viol No:		***Contested Dt:***	
Replaced by Ord No:		***Final Ord Issue Dt:***	11/09/2018
Controller ID:	M06640	***Fiscal Qtr:***	4
Contractor ID:		***Fiscal Yr:***	2018
Violation No:	9381094	***Violator Type CD:***	Operator
Violator ID:	0135594	***Viola Insp Day Cnt:***	1
Docket No:		***Violat Violatn Cnt:***	0
Docket Stat Cd:		***Violation Issue Dt:***	08/06/2018
Mine Type:	Surface	***Violatn Issue Time:***	1323
Likelihood:	Unlikely	***Violation Occur Dt:***	08/06/2018
Amount Due:	118	***Orig Term Due Dt:***	08/06/2018
Amount Paid:	118	***Orig Term Due Tm:***	1430
Asmt Generated Ind:	No	***Inspectn Begin Dt:***	08/06/2018
Asses Case Stat Cd:	Closed	***Inspection End Dt:***	08/06/2018
Bill Print Dt:	10/03/2018	***Last Action Cd:***	Paid
Cal Qtr:	3	***Last Action Dt:***	10/28/2018
Cal Yr:	2018	***Latest Term Due Dt:***	08/06/2018
Cit Ord Safe:	Citation	***Latest Term Due Tm:***	1430
Coal Metal Ind:	M	***Termination Dt:***	08/06/2018
Inj Illness:	Fatal	***Termination Time:***	1427
No Affected:	1	***Termination Type:***	Terminated
Negligence:	ModNegligence	***Vacate Dt:***	
Written Notice:		***Vacate Time:***	
Enforcement Area:		***Sig Sub:***	No
Special Assess:	No	***Part Section:***	56.4603(b)
Primary or Mill:	Primary	***Section of Act:***	
Right to Conf Dt:		***Section of Act 1:***	104(a)
Proposed Penalty:	118	***Section of Act 2:***	
Mine Name:	Wash Plant		
Controller Name:	James L Holmgren		
Violator Name:	Northland Constructors		

Violation Details

Event No:	6633615	***Contested Ind:***	No
Initial Viol No:		***Contested Dt:***	
Replaced by Ord No:		***Final Ord Issue Dt:***	02/12/2015
Controller ID:	M06640	***Fiscal Qtr:***	1
Contractor ID:		***Fiscal Yr:***	2015
Violation No:	8839793	***Violator Type CD:***	Operator
Violator ID:	L08350	***Viola Insp Day Cnt:***	2
Docket No:		***Violat Violatn Cnt:***	5
Docket Stat Cd:		***Violation Issue Dt:***	11/10/2014
Mine Type:	Surface	***Violatn Issue Time:***	1119
Likelihood:	Reasonably	***Violation Occur Dt:***	11/10/2014
Amount Due:	100	***Orig Term Due Dt:***	11/10/2014
Amount Paid:	100	***Orig Term Due Tm:***	1125
Asmt Generated Ind:	No	***Inspectn Begin Dt:***	11/10/2014
Asses Case Stat Cd:	Closed	***Inspection End Dt:***	11/10/2014
Bill Print Dt:	01/07/2015	***Last Action Cd:***	Paid
Cal Qtr:	4	***Last Action Dt:***	01/21/2015
Cal Yr:	2014	***Latest Term Due Dt:***	11/10/2014
Cit Ord Safe:	Citation	***Latest Term Due Tm:***	1125
Coal Metal Ind:	M	***Termination Dt:***	11/10/2014
Inj Illness:	LostDays	***Termination Time:***	1120
No Affected:	1	***Termination Type:***	Terminated
Negligence:	ModNegligence	***Vacate Dt:***	
Written Notice:		***Vacate Time:***	
Enforcement Area:		***Sig Sub:***	Yes
Special Assess:	Yes	***Part Section:***	56.14130(g)
Primary or Mill:	Primary	***Section of Act:***	
Right to Conf Dt:		***Section of Act 1:***	104(a)
Proposed Penalty:	100	***Section of Act 2:***	
Mine Name:	Wash Plant		

Controller Name: James L Holmgren
Violator Name: Northland Crushing, Inc.

Violation Details

Event No: 1012227
Initial Viol No:
Replaced by Ord No:
Controller ID: M06640
Contractor ID:
Violation No: 6490551
Violator ID: L08350
Docket No:
Docket Stat Cd:
Mine Type: Surface
Likelihood: Unlikely
Amount Due: 100
Amount Paid: 100
Asmt Generated Ind: No
Asses Case Stat Cd: Closed
Bill Print Dt: 08/07/2013
Cal Qtr: 2
Cal Yr: 2013
Cit Ord Safe: Citation
Coal Metal Ind: M
Inj Illness: LostDays
No Affected: 1
Negligence: ModNegligence
Written Notice:
Enforcement Area:
Special Assess: No
Primary or Mill: Primary
Right to Conf Dt:
Proposed Penalty: 100
Contested Ind: No
Contested Dt:
Final Ord Issue Dt: 09/12/2013
Fiscal Qtr: 3
Fiscal Yr: 2013
Violator Type CD: Operator
Viola Insp Day Cnt: 1
Violat Violatn Cnt: 1
Violation Issue Dt: 06/17/2013
Violatn Issue Time: 1523
Violation Occur Dt: 06/17/2013
Orig Term Due Dt: 06/17/2013
Orig Term Due Tm: 1530
Inspectn Begin Dt: 06/17/2013
Inspection End Dt: 06/18/2013
Last Action Cd: Paid
Last Action Dt: 09/01/2013
Latest Term Due Dt: 06/17/2013
Latest Term Due Tm: 1530
Termination Dt: 06/17/2013
Termination Time: 1530
Termination Type: Terminated
Vacate Dt:
Vacate Time:
Sig Sub: No
Part Section: 56.12004
Section of Act:
Section of Act 1: 104(a)
Section of Act 2:
Mine Name: Wash Plant
Controller Name: James L Holmgren
Violator Name: Northland Crushing, Inc.

Violation Details

Event No: 6708466
Initial Viol No:
Replaced by Ord No:
Controller ID: M06640
Contractor ID:
Violation No: 8839998
Violator ID: 0135594
Docket No:
Docket Stat Cd:
Mine Type: Surface
Likelihood: Unlikely
Amount Due: 114
Amount Paid: 114
Asmt Generated Ind: No
Asses Case Stat Cd: Closed
Bill Print Dt: 09/28/2016
Cal Qtr: 3
Cal Yr: 2016
Cit Ord Safe: Citation
Coal Metal Ind: M
Inj Illness: Permanent
No Affected: 1
Negligence: LowNegligence
Written Notice:
Enforcement Area:
Special Assess: No
Primary or Mill: Primary
Right to Conf Dt:
Proposed Penalty: 114
Contested Ind: No
Contested Dt:
Final Ord Issue Dt: 11/12/2016
Fiscal Qtr: 4
Fiscal Yr: 2016
Violator Type CD: Operator
Viola Insp Day Cnt: 0
Violat Violatn Cnt: 0
Violation Issue Dt: 08/08/2016
Violatn Issue Time: 1215
Violation Occur Dt: 08/08/2016
Orig Term Due Dt: 08/09/2016
Orig Term Due Tm: 0800
Inspectn Begin Dt: 08/08/2016
Inspection End Dt: 08/09/2016
Last Action Cd: Paid
Last Action Dt: 10/14/2016
Latest Term Due Dt: 08/09/2016
Latest Term Due Tm: 0800
Termination Dt: 08/09/2016
Termination Time: 1030
Termination Type: Terminated
Vacate Dt:
Vacate Time:
Sig Sub: No
Part Section: 56.14107(a)
Section of Act:
Section of Act 1: 104(a)
Section of Act 2:

Mine Name: Wash Plant
Controller Name: James L Holmgren
Violator Name: Northland Constructors

Violation Details

Event No: 1005549
Initial Viol No:
Replaced by Ord No:
Controller ID: M06640
Contractor ID:
Violation No: 6193187
Violator ID: L08350
Docket No:
Docket Stat Cd:
Mine Type: Surface
Likelihood: Reasonably
Amount Due: 243
Amount Paid: 243
Asmt Generated Ind: No
Asses Case Stat Cd: Closed
Bill Print Dt: 02/12/2008
Cal Qtr: 4
Cal Yr: 2007
Cit Ord Safe: Citation
Coal Metal Ind: M
Inj Illness: Fatal
No Affected: 1
Negligence: ModNegligence
Written Notice:
Enforcement Area:
Special Assess: No
Primary or Mill: Primary
Right to Conf Dt:
Proposed Penalty: 243
Contested Ind: No
Contested Dt:
Final Ord Issue Dt: 03/20/2008
Fiscal Qtr: 1
Fiscal Yr: 2008
Violator Type CD: Operator
Viola Insp Day Cnt: 0
Violat Violatn Cnt: 0
Violation Issue Dt: 10/11/2007
Violatn Issue Time: 0837
Violation Occur Dt: 10/11/2007
Orig Term Due Dt: 10/11/2007
Orig Term Due Tm: 0900
Inspectn Begin Dt: 10/11/2007
Inspection End Dt: 10/11/2007
Last Action Cd: Paid
Last Action Dt: 03/10/2008
Latest Term Due Dt: 10/11/2007
Latest Term Due Tm: 0900
Termination Dt: 10/11/2007
Termination Time: 1940
Termination Type: Terminated
Vacate Dt:
Vacate Time:
Sig Sub: Yes
Part Section: 56.12013(b)
Section of Act:
Section of Act 1: 104(a)
Section of Act 2:

Mine Name: Wash Plant
Controller Name: James L Holmgren
Violator Name: Northland Crushing, Inc.

Violation Details

Event No: 6633550
Initial Viol No:
Replaced by Ord No:
Controller ID: M06640
Contractor ID:
Violation No: 8839158
Violator ID: L08350
Docket No:
Docket Stat Cd:
Mine Type: Surface
Likelihood: Reasonably
Amount Due: 270
Amount Paid: 270
Asmt Generated Ind: No
Asses Case Stat Cd: Closed
Bill Print Dt: 09/10/2014
Cal Qtr: 3
Cal Yr: 2014
Cit Ord Safe: Order
Coal Metal Ind: M
Inj Illness: Fatal
No Affected: 1
Negligence: ModNegligence
Written Notice:
Enforcement Area:
Special Assess: No
Primary or Mill: Primary
Right to Conf Dt:
Contested Ind: No
Contested Dt:
Final Ord Issue Dt: 10/15/2014
Fiscal Qtr: 4
Fiscal Yr: 2014
Violator Type CD: Operator
Viola Insp Day Cnt: 4
Violat Violatn Cnt: 3
Violation Issue Dt: 07/15/2014
Violatn Issue Time: 1437
Violation Occur Dt: 07/15/2014
Orig Term Due Dt:
Orig Term Due Tm:
Inspectn Begin Dt: 07/15/2014
Inspection End Dt: 07/16/2014
Last Action Cd: Paid
Last Action Dt: 09/24/2014
Latest Term Due Dt:
Latest Term Due Tm:
Termination Dt: 08/18/2014
Termination Time: 1200
Termination Type: Terminated
Vacate Dt:
Vacate Time:
Sig Sub: Yes
Part Section: 46.5(a)
Section of Act:
Section of Act 1: 104(g)(1)

Proposed Penalty:	270	***Section of Act 2:***	
Mine Name:	Wash Plant		
Controller Name:	James L Holmgren		
Violator Name:	Northland Crushing, Inc.		

Violation Details

Event No:	6750424	***Contested Ind:***	No
Initial Viol No:		***Contested Dt:***	
Replaced by Ord No:		***Final Ord Issue Dt:***	11/09/2018
Controller ID:	M06640	***Fiscal Qtr:***	4
Contractor ID:		***Fiscal Yr:***	2018
Violation No:	9381095	***Violator Type CD:***	Operator
Violator ID:	0135594	***Viola Insp Day Cnt:***	1
Docket No:		***Violat Violatn Cnt:***	0
Docket Stat Cd:		***Violation Issue Dt:***	08/06/2018
Mine Type:	Surface	***Violatn Issue Time:***	1340
Likelihood:	Unlikely	***Violation Occur Dt:***	08/06/2018
Amount Due:	118	***Orig Term Due Dt:***	08/06/2018
Amount Paid:	118	***Orig Term Due Tm:***	1436
Asmt Generated Ind:	No	***Inspectn Begin Dt:***	08/06/2018
Asses Case Stat Cd:	Closed	***Inspection End Dt:***	08/06/2018
Bill Print Dt:	10/03/2018	***Last Action Cd:***	Paid
Cal Qtr:	3	***Last Action Dt:***	10/28/2018
Cal Yr:	2018	***Latest Term Due Dt:***	08/06/2018
Cit Ord Safe:	Citation	***Latest Term Due Tm:***	1436
Coal Metal Ind:	M	***Termination Dt:***	08/06/2018
Inj Illness:	LostDays	***Termination Time:***	1440
No Affected:	1	***Termination Type:***	Terminated
Negligence:	ModNegligence	***Vacate Dt:***	
Written Notice:		***Vacate Time:***	
Enforcement Area:		***Sig Sub:***	No
Special Assess:	No	***Part Section:***	56.14115(b)
Primary or Mill:	Primary	***Section of Act:***	
Right to Conf Dt:		***Section of Act 1:***	104(a)
Proposed Penalty:	118	***Section of Act 2:***	
Mine Name:	Wash Plant		
Controller Name:	James L Holmgren		
Violator Name:	Northland Constructors		

Violation Details

Event No:	6750424	***Contested Ind:***	No
Initial Viol No:		***Contested Dt:***	
Replaced by Ord No:		***Final Ord Issue Dt:***	11/09/2018
Controller ID:	M06640	***Fiscal Qtr:***	4
Contractor ID:		***Fiscal Yr:***	2018
Violation No:	9381097	***Violator Type CD:***	Operator
Violator ID:	0135594	***Viola Insp Day Cnt:***	1
Docket No:		***Violat Violatn Cnt:***	0
Docket Stat Cd:		***Violation Issue Dt:***	08/06/2018
Mine Type:	Surface	***Violatn Issue Time:***	1353
Likelihood:	Unlikely	***Violation Occur Dt:***	08/06/2018
Amount Due:	118	***Orig Term Due Dt:***	08/06/2018
Amount Paid:	118	***Orig Term Due Tm:***	1418
Asmt Generated Ind:	No	***Inspectn Begin Dt:***	08/06/2018
Asses Case Stat Cd:	Closed	***Inspection End Dt:***	08/06/2018
Bill Print Dt:	10/03/2018	***Last Action Cd:***	Paid
Cal Qtr:	3	***Last Action Dt:***	10/28/2018
Cal Yr:	2018	***Latest Term Due Dt:***	08/06/2018
Cit Ord Safe:	Citation	***Latest Term Due Tm:***	1418
Coal Metal Ind:	M	***Termination Dt:***	08/06/2018
Inj Illness:	Fatal	***Termination Time:***	1412
No Affected:	1	***Termination Type:***	Terminated
Negligence:	ModNegligence	***Vacate Dt:***	
Written Notice:		***Vacate Time:***	
Enforcement Area:		***Sig Sub:***	No
Special Assess:	No	***Part Section:***	56.12030
Primary or Mill:	Primary	***Section of Act:***	

Right to Conf Dt:		***Section of Act 1:***	104(a)
Proposed Penalty:	118	***Section of Act 2:***	
Mine Name:	Wash Plant		
Controller Name:	James L Holmgren		
Violator Name:	Northland Constructors		

Violation Details

Event No:	6708466	***Contested Ind:***	No
Initial Viol No:		***Contested Dt:***	
Replaced by Ord No:		***Final Ord Issue Dt:***	11/12/2016
Controller ID:	M06640	***Fiscal Qtr:***	4
Contractor ID:		***Fiscal Yr:***	2016
Violation No:	8839999	***Violator Type CD:***	Operator
Violator ID:	0135594	***Viola Insp Day Cnt:***	0
Docket No:		***Violat Violatn Cnt:***	0
Docket Stat Cd:		***Violation Issue Dt:***	08/08/2016
Mine Type:	Surface	***Violatn Issue Time:***	1230
Likelihood:	Unlikely	***Violation Occur Dt:***	08/08/2016
Amount Due:	114	***Orig Term Due Dt:***	08/09/2016
Amount Paid:	114	***Orig Term Due Tm:***	0800
Asmt Generated Ind:	No	***Inspectn Begin Dt:***	08/08/2016
Asses Case Stat Cd:	Closed	***Inspection End Dt:***	08/09/2016
Bill Print Dt:	09/28/2016	***Last Action Cd:***	Paid
Cal Qtr:	3	***Last Action Dt:***	10/14/2016
Cal Yr:	2016	***Latest Term Due Dt:***	08/09/2016
Cit Ord Safe:	Citation	***Latest Term Due Tm:***	0800
Coal Metal Ind:	M	***Termination Dt:***	08/09/2016
Inj Illness:	Fatal	***Termination Time:***	1020
No Affected:	1	***Termination Type:***	Terminated
Negligence:	LowNegligence	***Vacate Dt:***	
Written Notice:		***Vacate Time:***	
Enforcement Area:		***Sig Sub:***	No
Special Assess:	No	***Part Section:***	56.12004
Primary or Mill:	Primary	***Section of Act:***	
Right to Conf Dt:		***Section of Act 1:***	104(a)
Proposed Penalty:	114	***Section of Act 2:***	
Mine Name:	Wash Plant		
Controller Name:	James L Holmgren		
Violator Name:	Northland Constructors		

Violation Details

Event No:	6519851	***Contested Ind:***	No
Initial Viol No:		***Contested Dt:***	
Replaced by Ord No:		***Final Ord Issue Dt:***	11/10/2011
Controller ID:	M06640	***Fiscal Qtr:***	4
Contractor ID:		***Fiscal Yr:***	2011
Violation No:	6564129	***Violator Type CD:***	Operator
Violator ID:	L08350	***Viola Insp Day Cnt:***	1
Docket No:		***Violat Violatn Cnt:***	1
Docket Stat Cd:		***Violation Issue Dt:***	08/17/2011
Mine Type:	Surface	***Violatn Issue Time:***	0948
Likelihood:	Unlikely	***Violation Occur Dt:***	08/17/2011
Amount Due:	100	***Orig Term Due Dt:***	08/17/2011
Amount Paid:	100	***Orig Term Due Tm:***	1030
Asmt Generated Ind:	No	***Inspectn Begin Dt:***	08/17/2011
Asses Case Stat Cd:	Closed	***Inspection End Dt:***	08/17/2011
Bill Print Dt:	10/05/2011	***Last Action Cd:***	Paid
Cal Qtr:	3	***Last Action Dt:***	12/27/2011
Cal Yr:	2011	***Latest Term Due Dt:***	08/17/2011
Cit Ord Safe:	Citation	***Latest Term Due Tm:***	1030
Coal Metal Ind:	M	***Termination Dt:***	08/17/2011
Inj Illness:	Fatal	***Termination Time:***	1010
No Affected:	1	***Termination Type:***	Terminated
Negligence:	ModNegligence	***Vacate Dt:***	
Written Notice:		***Vacate Time:***	
Enforcement Area:		***Sig Sub:***	No
Special Assess:	No	***Part Section:***	56.12032

Primary or Mill:	Primary	***Section of Act:***	
Right to Conf Dt:		***Section of Act 1:***	104(a)
Proposed Penalty:	100	***Section of Act 2:***	
Mine Name:	Wash Plant		
Controller Name:	James L Holmgren		
Violator Name:	Northland Crushing, Inc.		

Violation Details

Event No:	1010335	***Contested Ind:***	No
Initial Viol No:		***Contested Dt:***	
Replaced by Ord No:		***Final Ord Issue Dt:***	11/11/2010
Controller ID:	M06640	***Fiscal Qtr:***	4
Contractor ID:		***Fiscal Yr:***	2010
Violation No:	6556622	***Violator Type CD:***	Operator
Violator ID:	L08350	***Viola Insp Day Cnt:***	1
Docket No:		***Violat Violatn Cnt:***	1
Docket Stat Cd:		***Violation Issue Dt:***	08/19/2010
Mine Type:	Surface	***Violatn Issue Time:***	1135
Likelihood:	Reasonably	***Violation Occur Dt:***	08/19/2010
Amount Due:	108	***Orig Term Due Dt:***	08/19/2010
Amount Paid:	108	***Orig Term Due Tm:***	1145
Asmt Generated Ind:	No	***Inspectn Begin Dt:***	08/19/2010
Asses Case Stat Cd:	Closed	***Inspection End Dt:***	08/19/2010
Bill Print Dt:	10/06/2010	***Last Action Cd:***	Paid
Cal Qtr:	3	***Last Action Dt:***	11/01/2010
Cal Yr:	2010	***Latest Term Due Dt:***	08/19/2010
Cit Ord Safe:	Citation	***Latest Term Due Tm:***	1145
Coal Metal Ind:	M	***Termination Dt:***	08/19/2010
Inj Illness:	Permanent	***Termination Time:***	1145
No Affected:	1	***Termination Type:***	Terminated
Negligence:	ModNegligence	***Vacate Dt:***	
Written Notice:		***Vacate Time:***	
Enforcement Area:		***Sig Sub:***	Yes
Special Assess:	No	***Part Section:***	56.14112(a)(1)
Primary or Mill:	Primary	***Section of Act:***	
Right to Conf Dt:		***Section of Act 1:***	104(a)
Proposed Penalty:	108	***Section of Act 2:***	
Mine Name:	Wash Plant		
Controller Name:	James L Holmgren		
Violator Name:	Northland Crushing, Inc.		

Violation Details

Event No:	1012227	***Contested Ind:***	No
Initial Viol No:		***Contested Dt:***	
Replaced by Ord No:		***Final Ord Issue Dt:***	09/12/2013
Controller ID:	M06640	***Fiscal Qtr:***	3
Contractor ID:		***Fiscal Yr:***	2013
Violation No:	6490548	***Violator Type CD:***	Operator
Violator ID:	L08350	***Viola Insp Day Cnt:***	1
Docket No:		***Violat Violatn Cnt:***	1
Docket Stat Cd:		***Violation Issue Dt:***	06/17/2013
Mine Type:	Surface	***Violatn Issue Time:***	1236
Likelihood:	Reasonably	***Violation Occur Dt:***	06/17/2013
Amount Due:	100	***Orig Term Due Dt:***	06/17/2013
Amount Paid:	100	***Orig Term Due Tm:***	1330
Asmt Generated Ind:	No	***Inspectn Begin Dt:***	06/17/2013
Asses Case Stat Cd:	Closed	***Inspection End Dt:***	06/18/2013
Bill Print Dt:	08/07/2013	***Last Action Cd:***	Paid
Cal Qtr:	2	***Last Action Dt:***	09/01/2013
Cal Yr:	2013	***Latest Term Due Dt:***	06/17/2013
Cit Ord Safe:	Citation	***Latest Term Due Tm:***	1330
Coal Metal Ind:	M	***Termination Dt:***	06/18/2013
Inj Illness:	LostDays	***Termination Time:***	0832
No Affected:	1	***Termination Type:***	Terminated
Negligence:	ModNegligence	***Vacate Dt:***	
Written Notice:		***Vacate Time:***	
Enforcement Area:		***Sig Sub:***	Yes

Special Assess:	No	***Part Section:***	56.9300(b)
Primary or Mill:	Primary	***Section of Act:***	
Right to Conf Dt:		***Section of Act 1:***	104(a)
Proposed Penalty:	100	***Section of Act 2:***	
Mine Name:	Wash Plant		
Controller Name:	James L Holmgren		
Violator Name:	Northland Crushing, Inc.		

Violation Details

Event No:	6511352	***Contested Ind:***	No
Initial Viol No:		***Contested Dt:***	
Replaced by Ord No:		***Final Ord Issue Dt:***	12/23/2009
Controller ID:	M06640	***Fiscal Qtr:***	4
Contractor ID:		***Fiscal Yr:***	2009
Violation No:	6491648	***Violator Type CD:***	Operator
Violator ID:	L08350	***Viola Insp Day Cnt:***	0
Docket No:		***Violat Violatn Cnt:***	0
Docket Stat Cd:		***Violation Issue Dt:***	09/16/2009
Mine Type:	Surface	***Violatn Issue Time:***	1338
Likelihood:	Reasonably	***Violation Occur Dt:***	09/16/2009
Amount Due:	243	***Orig Term Due Dt:***	09/16/2009
Amount Paid:	243	***Orig Term Due Tm:***	1500
Asmt Generated Ind:	No	***Inspectn Begin Dt:***	09/16/2009
Asses Case Stat Cd:	Closed	***Inspection End Dt:***	09/16/2009
Bill Print Dt:	11/17/2009	***Last Action Cd:***	Paid
Cal Qtr:	3	***Last Action Dt:***	12/02/2009
Cal Yr:	2009	***Latest Term Due Dt:***	09/16/2009
Cit Ord Safe:	Citation	***Latest Term Due Tm:***	1500
Coal Metal Ind:	M	***Termination Dt:***	09/16/2009
Inj Illness:	Fatal	***Termination Time:***	1415
No Affected:	1	***Termination Type:***	Terminated
Negligence:	ModNegligence	***Vacate Dt:***	
Written Notice:		***Vacate Time:***	
Enforcement Area:		***Sig Sub:***	Yes
Special Assess:	No	***Part Section:***	56.9300(b)
Primary or Mill:	Primary	***Section of Act:***	
Right to Conf Dt:		***Section of Act 1:***	104(a)
Proposed Penalty:	243	***Section of Act 2:***	
Mine Name:	Wash Plant		
Controller Name:	James L Holmgren		
Violator Name:	Northland Crushing, Inc.		

Violation Details

Event No:	6519956	***Contested Ind:***	No
Initial Viol No:		***Contested Dt:***	
Replaced by Ord No:		***Final Ord Issue Dt:***	11/15/2012
Controller ID:	M06640	***Fiscal Qtr:***	4
Contractor ID:		***Fiscal Yr:***	2012
Violation No:	6556632	***Violator Type CD:***	Operator
Violator ID:	L08350	***Viola Insp Day Cnt:***	1
Docket No:		***Violat Violatn Cnt:***	1
Docket Stat Cd:		***Violation Issue Dt:***	08/28/2012
Mine Type:	Surface	***Violatn Issue Time:***	1505
Likelihood:	Unlikely	***Violation Occur Dt:***	08/28/2012
Amount Due:	100	***Orig Term Due Dt:***	08/29/2012
Amount Paid:	100	***Orig Term Due Tm:***	1000
Asmt Generated Ind:	No	***Inspectn Begin Dt:***	08/28/2012
Asses Case Stat Cd:	Closed	***Inspection End Dt:***	08/29/2012
Bill Print Dt:	10/10/2012	***Last Action Cd:***	Paid
Cal Qtr:	3	***Last Action Dt:***	10/28/2012
Cal Yr:	2012	***Latest Term Due Dt:***	08/29/2012
Cit Ord Safe:	Citation	***Latest Term Due Tm:***	1000
Coal Metal Ind:	M	***Termination Dt:***	08/29/2012
Inj Illness:	Fatal	***Termination Time:***	1150
No Affected:	1	***Termination Type:***	Terminated
Negligence:	ModNegligence	***Vacate Dt:***	
Written Notice:		***Vacate Time:***	

Enforcement Area:		***Sig Sub:***	No
Special Assess:	No	***Part Section:***	56.14132(b)(2)
Primary or Mill:	Primary	***Section of Act:***	
Right to Conf Dt:		***Section of Act 1:***	104(a)
Proposed Penalty:	100	***Section of Act 2:***	
Mine Name:	Wash Plant		
Controller Name:	James L Holmgren		
Violator Name:	Northland Crushing, Inc.		

Site: ***148TH FIGHTER GROUP***
Airport Duluth MN Duluth MN

SPILLS

Incident ID:	13483	***AI ID Source:***	
Incident Status:	Closed or Completed	***Source Address:***	
Incident Type:	Spill or Release	***Source City:***	
Incident Date:	3/21/1990	***Source State:***	
Program:	Emergency Response	***Source Zip:***	
Closure Type:		***Latitude:***	
County:	St. Louis	***Longitude:***	
Coord Method:			
Location:	Airport Duluth MN		

Lead Investigator and Duty Officer

Substances:	20 gallons Petroleum Other
Duty Officer No:	
Lead Investigator:	Walter Haas
Linked Incidents:	
Source List:	148TH FIGHTER GROUP
Address:	
Ai ID Location:	
State:	
Zip:	

Site:
Hwy 53 and Hwy 194 MN Hermantown MN

SPILLS

Incident ID:	68847	***AI ID Source:***	
Incident Status:	Closed or Completed	***Source Address:***	
Incident Type:	Leaking Container	***Source City:***	
Incident Date:	12/29/2006	***Source State:***	
Program:	Emergency Response	***Source Zip:***	
Closure Type:	Response/Action Completed	***Latitude:***	
County:	St. Louis	***Longitude:***	
Coord Method:			
Location:	Hwy 53 and Hwy 194 MN		

Lead Investigator and Duty Officer

Substances:	5 gallons Other substance
Duty Officer No:	86449
Lead Investigator:	Steve Leppala
Linked Incidents:	
Source List:	
Address:	
Ai ID Location:	
State:	
Zip:	

Site:
Duluth Intl Airport MN 55811 Duluth MN

SPILLS

Incident ID:	29597	***AI ID Source:***	
Incident Status:	Closed or Completed	***Source Address:***	
Incident Type:	Transportation Accident - Saddle Tank	***Source City:***	

Incident Date: 12/19/1998
Program: Emergency Response
Closure Type: Response/Action Completed
County: St. Louis
Coord Method:
Location: Duluth Intl Airport
MN
55811

Source State:
Source Zip:
Latitude:
Longitude:

Lead Investigator and Duty Officer

Substances: 30 square feet Aviation Gas
Duty Officer No:
Lead Investigator: Steve Leppala
Linked Incidents:
Source List:
Address:
Ai ID Location:
State:
Zip:

Site: ***NATIONAL GUARD MINNESOTA AIR***
Airport Duluth MN Duluth MN

SPILLS

Incident ID: 12738
Incident Status: Closed or Completed
Incident Type: Spill or Release
Incident Date: 11/22/1989
Program: Emergency Response
Closure Type:
County: St. Louis
Coord Method:
Location: Airport Duluth
MN

AI ID Source:
Source Address:
Source City:
Source State:
Source Zip:
Latitude:
Longitude:

Lead Investigator and Duty Officer

Substances: 1 pounds Unknown substance
Duty Officer No:
Lead Investigator: Richard Kable
Linked Incidents:
Source List: NATIONAL GUARD MINNESOTA AIR
Address:
Ai ID Location:
State:
Zip:

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ERIS updates databases as set out in ASTM Standard E1527-13 and E1527-21, Section 8.1.8 Sources of Standard Source Information:

"Government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public."

Standard Environmental Record Sources

Federal

National Priority List: NPL

The U.S. Environmental Protection Agency (EPA)'s National Priorities List (NPL) includes the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program, based primarily on the score a site receives from EPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action. This data includes NPL sites represented as polygons, where available, that can be sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS), and is limited to those sites where the NPL Status reflects the site is 'Currently on the Final NPL (F)' and/or the 'Site is Part of NPL Site (A)'. These site boundaries represent the footprint of a whole site, the sum of all the Operable Units (OUs) and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. As site investigation and remediation progress, OUs may be added, modified or refined. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Jan 18, 2026

National Priority List - Proposed: PROPOSED NPL

Sites proposed by the U.S. Environmental Protection Agency (EPA), the state agency, or concerned citizens for addition to the National Priorities List (NPL) due to contamination by hazardous waste and identified by the EPA as a candidate for cleanup because it poses a risk to human health and/or the environment. Sites represented as polygons, where available, can be sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS). These site boundaries represent the footprint of a whole site, the sum of all the Operable Units (OUs) and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Jan 18, 2026

Deleted NPL: DELETED NPL

Sites deleted from the U.S. Environmental Protection Agency (EPA)'s National Priorities List (NPL). The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate. Sites represented as polygons, where available, can be sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS). These site boundaries represent the footprint of a whole site, the sum of all the Operable Units (OUs) and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

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SEMS List 8R Active Site Inventory: SEMS

The U.S. Environmental Protection Agency's (EPA) Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted. This data includes SEMS sites from the List 8R Active file as well as applicable sites from the EPA's Facility Registry Service map tool. This data may also include applicable sites represented as polygons sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS), and is limited to those sites where the NPL Status reflects the site is 'Not on the NPL (N)' , 'Removed from Proposed (R)', and/or 'Pre-Proposal Site (S)'. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Dec 26, 2025

Inventory of Open Dumps, June 1985: ODI

The Resource Conservation and Recovery Act (RCRA) provides for publication of an inventory of open dumps. The Act defines "open dumps" as facilities which do not comply with EPA's "Criteria for Classification of Solid Waste Disposal Facilities and Practices" (40 CFR 257).

Government Publication Date: Jun 1985

SEMS List 8R Archive Sites: SEMS ARCHIVE

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. This data includes sites from the List 8R Archived site file. This data may also include applicable sites represented as polygons sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS), and is limited to those sites where the NPL Status reflects the site is 'Not on the NPL (N)' , 'Removed from Proposed (R)', and/or 'Pre-Proposal Site (S)'. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Dec 26, 2025

Comprehensive Environmental Response, Compensation and Liability Information System - CERCLIS: CERCLIS

Superfund is a program administered by the United States Environmental Protection Agency (EPA) to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The EPA administers the Superfund program in cooperation with individual states and tribal governments; this database is made available by the EPA.

Government Publication Date: Oct 25, 2013

EPA Report on the Status of Open Dumps on Indian Lands: IODI

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified congressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

Government Publication Date: Dec 31, 1998

CERCLIS - No Further Remedial Action Planned: CERCLIS NFRAP

An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. The Archive designation means that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Government Publication Date: Oct 25, 2013

CERCLIS Liens: CERCLIS LIENS

A Federal Superfund lien exists at any property where EPA has incurred Superfund costs to address contamination ("Superfund site") and has provided notice of liability to the property owner. A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. This database is made available by the United States Environmental Protection Agency (EPA). This database was provided by the United States Environmental Protection Agency (EPA). Refer to SEMS LIEN as the current data source for Superfund Liens.

Government Publication Date: Jan 30, 2014

RCRA CORRACTS-Corrective Action: RCRA CORRACTS

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. At these sites, the Corrective Action Program ensures that cleanups occur. EPA and state regulators work with facilities and communities to design remedies based on the contamination, geology, and anticipated use unique to each site.

Government Publication Date: Nov 30, 2025

RCRA non-CORRACTS TSD Facilities: RCRA TSD

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. This database includes Non-Corrective Action sites that have indicated engagement in the treatment, storage, or disposal of hazardous waste which requires a RCRA hazardous waste permit.

Government Publication Date: Nov 30, 2025

RCRA Generator List: RCRA LQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste. This list also includes RCRAInfo sites that have notified as LQGs that do not have a registered Site Manager or Certifier in RCRAInfo.

Government Publication Date: Nov 30, 2025

RCRA Small Quantity Generators List: RCRA SQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month. This list also includes RCRAInfo sites that have notified as SQGs that do not have a registered Site Manager or Certifier in RCRAInfo.

Government Publication Date: Nov 30, 2025

RCRA Very Small Quantity Generators List: RCRA VSQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Very Small Quantity Generators (VSQG) generate 100 kilograms or less per month of hazardous waste, or one kilogram or less per month of acutely hazardous waste. Additionally, VSQG may not accumulate more than 1,000 kilograms of hazardous waste at any time.

Government Publication Date: Nov 30, 2025

RCRA Non-Generators: RCRA NON GEN

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Non-Generators do not presently generate hazardous waste.

Government Publication Date: Nov 30, 2025

RCRA Sites with Controls: RCRA CONTROLS

List of Resource Conservation and Recovery Act (RCRA) facilities with institutional controls in place. RCRA gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

Government Publication Date: Nov 30, 2025

Federal Engineering Controls-ECs: FED ENG

List of Engineering controls (ECs) made available by the United States Environmental Protection Agency (EPA). ECs encompass a variety of engineered and constructed physical barriers (e.g., soil capping, sub-surface venting systems, mitigation barriers, fences) to contain and/or prevent exposure to contamination on a property. The EC listing includes remedy component data from Superfund decision documents for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Jan 30, 2026

Federal Institutional Controls- ICs: FED INST

List of Institutional controls (ICs) made available by the United States Environmental Protection Agency (EPA). ICs are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site. The IC listing includes remedy component data from Superfund decision documents for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Jan 30, 2026

Land Use Controls Information System: LUCIS

The Land Use Controls Information System (LUCIS) database is sourced from the U.S. Department of the Navy (DON). This data contains information for former Base Realignment and Closure (BRAC) properties across the United States. DON's BRAC office was tasked with tracking certain base closures while requiring the prevention of risks to human health and the environment of those properties with LUCs in place. Regarding currently available LUC Sites data, the sites listing is limited to centroid point locations for the overall installation property boundaries. Formerly obtained LUC Sites data may reflect site details that applied previously for a BRAC property.

Government Publication Date: Jun 13, 2024

Institutional Control Boundaries at NPL sites: NPL IC

These boundaries of Institutional Control areas at sites on the U.S. Environmental Protection Agency's (EPA) National Priorities List (NPL), or as Proposed or Deleted, are sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS). The EPA's NPL includes the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. Institutional controls are non-engineered instruments such as administrative and legal controls that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes.

Government Publication Date: Jan 18, 2026

Emergency Response Notification System: ERNS 1982 TO 1986

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1982-1986

Emergency Response Notification System: ERNS 1987 TO 1989

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1987-1989

Emergency Response Notification System: ERNS

Database of oil and hazardous substances spill reports made available by the United States Coast Guard National Response Center (NRC). The NRC fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. These data contain initial incident data that has not been validated or investigated by a federal/state response agency.

Government Publication Date: Feb 8, 2026

The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database: FED BROWNFIELDS

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. This data is provided by the United States Environmental Protection Agency (EPA) and includes Brownfield sites from the Cleanups in My Community (CIMC) web application.

Government Publication Date: Sep 8, 2025

FEMA Underground Storage Tank Listing: FEMA UST

The Federal Emergency Management Agency (FEMA) of the Department of Homeland Security maintains a list of FEMA owned underground storage tanks.

Government Publication Date: Dec 31, 2017

Facility Response Plan: FRP

This listing contains facilities that have submitted Facility Response Plans (FRPs) to the U.S. Environmental Protection Agency (EPA). Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit FRPs. Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments. The list includes FRP facilities sourced from the EPA FOIA office and from previously available Homeland Infrastructure Foundation-Level Data (HIFLD) file/s. Disclaimer: Per the EPA FOIA Office, the verification process for current requested FRP data is undergoing review and revision, and any similar reporting will be made public in Fiscal Year 2026. For this reason, the latest available FOIA file may be incomplete.

Government Publication Date: Jun 1, 2025

Delisted Facility Response Plans: DELISTED FRP

Facilities that once appeared in - and have since been removed from - the list of facilities that have submitted Facility Response Plans (FRP) to EPA. Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit Facility Response Plans (FRPs). Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments.

Government Publication Date: Jun 1, 2025

Historical Gas Stations: HIST GAS STATIONS

This historic directory of service stations is provided by the Cities Service Company. The directory includes Cities Service filling stations that were located throughout the United States in 1930.

Government Publication Date: Jul 1, 1930

Petroleum Refineries: REFN

This list of petroleum refineries is sourced from the U.S. Energy Information Administration (EIA), Refinery Capacity Report. The listing includes operating and idle petroleum refineries (including new refineries under construction) and refineries shut down during the previous year. The geographic area the report covers is the 50 States, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, Guam, and other U.S. possessions. Per the EIA, the facility location data represents the approximate location based on research of publicly available information from sources such as Federal agencies, company websites, and satellite images on public websites.

Government Publication Date: Oct 31, 2024

Petroleum Product and Crude Oil Rail Terminals: BULK TERMINAL

A list of petroleum product and crude oil rail terminals from the U.S. Energy Information Administration (EIA), as well as petroleum terminals sourced from Oak Ridge National Laboratory hosted by the Homeland Infrastructure Foundation-Level Database. Data includes operable bulk petroleum product terminals with a total bulk shell storage capacity of 50,000 barrels or more, and/or the ability to receive volumes from tanker, barge, or pipeline; also rail terminals handling the loading and unloading of crude oil with activity between 2017 and 2018. EIA petroleum product terminal data comes from the EIA-815 Bulk Terminal and Blender Report, which includes working, shell in operation, and shell idle for several major product groupings.

Government Publication Date: Jun 5, 2025

LIEN on Property: SEMS LIEN

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) provides Lien details on applicable properties, such as the Superfund lien on property activity, the lien property information, and the parties associated with the lien.

Government Publication Date: Dec 26, 2025

Superfund Decision Documents: SUPERFUND ROD

This database contains a list of decision documents for Superfund sites. Decision documents serve to provide the reasoning for the choice of (or) changes to a Superfund Site cleanup plan. The decision documents include completed Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD) for active and archived sites stored in the Superfund Enterprise Management System (SEMS), along with other associated memos and files. This information is maintained and made available by the U.S. Environmental Protection Agency.

Government Publication Date: Jan 30, 2026

State

Minnesota Permanent List of Priorities: PLP

The state Superfund sites in Minnesota are listed on the Minnesota Permanent List of Priorities (PLP). The hazardous waste sites on the PLP are in various stages of remediation. At these sites investigation and cleanup are needed, cleanup is underway, or cleanup has been completed and long-term monitoring or maintenance continues. This data is made available by the Minnesota Pollution Control Agency (MPCA). This database serves a purpose similar to that of the federal NPL, functioning as a state-level counterpart for prioritizing cleanup efforts at hazardous substance release sites.

Government Publication Date: Feb 26, 2026

Delisted Permanent List of Priorities (PLP): DEL PLP

This list contains sites that were previously included - and have since been removed from - the Permanent List of Priorities (PLP) maintained by Minnesota's Pollution Control Agency (MPCA) but have now been delisted.

Government Publication Date: Feb 26, 2026

Minnesota Site Remediation Section Database: SHWS

The Site Remediation Section identifies, investigates, and determines appropriate cleanup plans for abandoned or uncontrolled hazardous waste sites where a release or potential release of a hazardous substance poses a risk to human health or the environment. This data is made available by the Minnesota Pollution Control Agency (MPCA)'s Site Remediation Section. This database serves a purpose similar to that of the federal Superfund Enterprise Management System (SEMS), functioning as a state-level counterpart for tracking potential hazardous substance release sites.

Government Publication Date: Feb 26, 2026

MPCA Site Assessment and Emergency Response Sites: SITE ASSESSMENT

List of active and closed sites that are currently under site assessment by Minnesota Pollution Control Agency (MPCA) and are a part of MPCA Remediation Sites list, and Emergency Management Sites where a chemical spill or some other environmental incident occurred that required immediate action to protect human health and the environment (includes only Emergency Management Sites that require significant staff involvement).

Government Publication Date: Feb 26, 2026

Permitted Solid Waste Facilities: SWF/LF

A list of permitted solid waste and landfill facilities made available by the Minnesota Pollution Control Agency (MPCA).

Government Publication Date: Mar 3, 2026

Closed Landfills Priority List: LCP

The Minnesota Legislature enacted the Landfill Cleanup Act (LCA) in 1994 to ensure the proper closure and post-closure care at up to 112 closed, permitted municipal sanitary landfills located throughout the state. Based on this legislation, the Minnesota Pollution Control Agency (MPCA) created the Closed Landfill Program (CLP) to administer the LCA mandates. This data made available by The Minnesota Pollution Control Agency (MPCA).

Government Publication Date: Jan 16, 2025

Unpermitted Dump Sites: UNPERMITTED LF

The Minnesota Pollution Control Agency (MPCA) defines "dumps" as those landfills that never held a valid permit from the MPCA. Generally, dumps existed prior to the permitting program established with the creation of the MPCA in 1967. This database is made available by MPCA.

Government Publication Date: Feb 26, 2026

Recycling Markets Directory: RECYCLING

The Recycling Markets Directory is provided by the Minnesota Pollution Control Agency (MPCA). The markets in this database accept large (commercial) quantities of materials.

Government Publication Date: Mar 4, 2026

Historical Leaking Underground Storage Tanks: HIST LUST

A list of leaking underground storage tanks (LUSTs) in the tanks database maintained by the Minnesota Pollution Control Agency (MPCA) up until Nov 01, 2016.

Government Publication Date: Nov 1, 2016

Deleted Leaking Underground Storage Tanks: DEL LUST

A list of leaking underground storage tanks that are often deleted for various reasons. Deletion occurs primarily due to a duplication, or that the source was determined to not be from a tank. This list was provided by Minnesota Pollution Control Agency.

Government Publication Date: Jan 5, 2016

Historical Leaking Aboveground Storage Tanks: HIST LAST

A list of leaking aboveground storage tanks (LASTs) in the tanks database maintained by the Minnesota Pollution Control Agency (MPCA) up until Nov 01, 2016.

Government Publication Date: Nov 1, 2016

Historical Leak Sites: HIST LEAKSITES

A list of leak sites that were neither determined as aboveground nor underground in the tanks database maintained by the Minnesota Pollution Control Agency (MPCA) up until Nov 01, 2016.

Government Publication Date: Nov 1, 2016

MPCA Remediation Leak Sites: LST REM SITE

This is list of leak sites in which the Minnesota Pollution Control Agency (MPCA) is involved in remediation activities. The MPCA publishes this listing.

Government Publication Date: Feb 26, 2026

MPCA Tank Incidents: LST INCIDENT

A list of leaking and registered tank sites in Minnesota that includes locations, details of tank installation and construction, and installed safety measures. This list is provided by Minnesota Pollution Control Agency (MPCA).

Government Publication Date: Feb 23, 2026

Delisted Leaking Storage Tanks: DELISTED LST

This database contains a list of closed leaking storage tank sites that were removed from the Minnesota Pollution Control Agency (MPCA).

Government Publication Date: Feb 26, 2026

Underground Storage Tanks: UST

In Minnesota, there are about 18,000 regulated underground storage tanks (USTs) currently in use. The Underground Storage Tank Program in the Minnesota Pollution Control Agency (MPCA) was created to help prevent contamination caused by leaking tanks. This is a list that contains all regulated USTs. Some types of USTs are exempt from state regulations, such as: tanks with capacity of 110 gallons or less; farm and residential tanks with a 1,100-gallon capacity or less, storing motor fuel for non-commercial purposes, or heating oil for on-site consumption; tanks that contain a minimum concentration of regulated substances; flow-through process tanks; oil-water separators. This data is made available by MPCA.

Government Publication Date: Feb 25, 2026

Minnesota Above Ground Storage Tanks: AST

There are more than 20,000 regulated above-ground storage tanks (ASTs) currently in use across Minnesota. Most tanks located above ground containing liquid substances (i.e., not gaseous or solid at ambient temperature and pressure) are subject to the Minnesota Pollution Control Agency's (MPCA) rules for design and operation of ASTs. This list contains ASTs regulated by MPCA. Some types of ASTs are exempt from the regulations, such as but not limited to the following: ASTs with a capacity of 500 gallons or less; Farm ASTs; Residential ASTs storing 1,100 gallons or less of motor fuel used for noncommercial purposes; ASTs containing hazardous wastes subject to a treatment or storage permit or containing agricultural chemicals regulated under MN Statutes 18B, 18C, 18D; Stormwater collection systems and septic systems. This data is made available by the MPCA.

Government Publication Date: Feb 23, 2026

Tank Sites: HIST TANK

A list of tank sites not included in AST or UST, this list maintained by the Minnesota Pollution Control Agency (MPCA) up until Dec 30, 2016.

Government Publication Date: Dec 30, 2016

Delisted Storage Tanks: DELISTED TANK

This database contains a list of storage tank sites that were removed from the Minnesota Pollution Control Agency (MPCA).

Government Publication Date: Feb 26, 2026

Sites with Institutional Control Events: INST

A list made available by the Minnesota Pollution Control Agency (MPCA) consisting of remediation sites that have various institutional controls in place.

Government Publication Date: Feb 27, 2026

Agricultural Contingency Sites Boundaries: AG CONTINGENCY

The Minnesota Department of Agriculture (MDA) Incident Response Unit (IRU) is the state lead agency for the investigation and remediation of incidents involving agricultural chemicals (pesticides and fertilizer). This MDA IRU database includes sites with a soil or ground water contingency, deed restriction, local ordinance, restrictive covenant or deed affidavit in place. The accuracy of the boundaries of these sites can be variable - in most cases, the site boundaries should be considered as only representing the vicinity of the soil or ground water contingency area or plume.

Government Publication Date: Nov 27, 2025

Petroleum Brownfields Program Sites: BROWNFIELDS

The Minnesota Pollution Control Agency (MPCA)'s Petroleum Brownfields Program handles petroleum contamination under the Petroleum Tank Release Cleanup Act (Minnesota Statutes § 115C). This data is made available by MPCA.

Government Publication Date: Feb 26, 2026

Voluntary Investigation and Cleanup Program List: VIC

The Minnesota Pollution Control Agency's (MPCA) Brownfield Program consists of an integrated program called the Voluntary Investigation and Cleanup (VIC) Program. This program handles hazardous substance contamination under Minnesota's Environmental Response and Liability Act (Minnesota Statutes § 115B). This database is made available by MPCA.

Government Publication Date: Feb 26, 2026

Potential Voluntary Investigation and Cleanup Program Sites: POTENTIAL VIC

This listing of Potential Voluntary Investigation and Cleanup Program sites is provided by the Minnesota Pollution Control Agency (MPCA). These potential sites have not yet entered into the VIC Program until an application has been received at the MPCA.

Government Publication Date: Apr 22, 2016

MPCA Agency Interests: MPCA AI

Facility, site and project locations from the Minnesota Pollution Control Agency's enterprise database, representing locations associated with waste water, storm water, hazardous waste, feedlot, solid waste, tanks, remediation, and other agency programs. Includes records from "What's In My Neighborhood Sites".

Government Publication Date: Jan 27, 2026

Tribal

Leaking Underground Storage Tanks on Tribal/Indian Lands: INDIAN LUST

This list of leaking underground storage tanks (LUSTs) on Tribal/Indian Lands in Region 5, which includes Minnesota, is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Nov 21, 2025

Underground Storage Tanks on Tribal/Indian Lands: INDIAN UST

This list of underground storage tanks (USTs) on Tribal/Indian Lands in Region 5, which includes Minnesota, is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Nov 21, 2025

Delisted Tribal Leaking Storage Tanks: DELISTED INDIAN LST

Leaking Underground Storage Tank (LUST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian LUST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Nov 21, 2025

Delisted Tribal Underground Storage Tanks: DELISTED INDIAN UST

Underground Storage Tank (UST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian UST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Nov 21, 2025

County

No County standard environmental record sources available for this State.

Additional Environmental Record Sources

Federal

PFAS Greenhouse Gas Emissions Data: PFAS GHG

The U.S. Environmental Protection Agency's (EPA) Greenhouse Gas Reporting Program (GHGRP) collects Greenhouse Gas (GHG) data from large emitting facilities (25,000 metric tons of carbon dioxide equivalent (CO2e) per year), and suppliers of fossil fuels and industrial gases that results in GHG emissions when used. This dataset is sourced from the EPA's PFAS Analytic Tools, and it includes GHG emissions data for facilities that emit or have emitted since 2010 chemicals identified as PFAS based on EPA's CompTox Chemicals Dashboard lists of PFAS with defined and undefined structures. PFAS emissions data has been identified for facilities engaged in the following industrial processes: Aluminum Production (GHGRP Subpart F), HCFC-22 Production and HFC-23 Destruction (Subpart O), Electronics Manufacturing (Subpart I), Fluorinated Gas Production (Subpart L), Magnesium Production (Subpart T), Electrical Transmission and Distribution Equipment Use (Subpart DD), and Manufacture of Electric Transmission and Distribution Equipment (Subpart SS). Over time, other industrial processes with required GHGRP reporting may include PFAS emissions data and the list of reportable gases may change over time. Note that some regulatory programs have specified chemical structure requirements that define PFAS differently than the lists in EPA's CompTox Chemicals Dashboard.

Government Publication Date: Mar 2, 2026

On-Scene Coordinator Response Sites: OSC RESPONSE

This list of On-Scene Coordinator (OSC) Response Sites is provided by the U.S. Environmental Protection Agency (EPA). OSCs are the federal officials responsible for monitoring or directing responses to all oil spills and hazardous substance releases reported to the federal government. OSCs coordinate all federal efforts with, and provide support and information to local, state, and regional response communities. An OSC is an agent of either EPA or the U.S. Coast Guard (USCG), depending on where the incident occurs. EPA's OSCs have primary responsibility for spills and releases to inland areas and waters. USCG OSCs have responsibility for coastal waters and the Great Lakes. In general, an OSC has the following key responsibilities during and after a response: Assessment, Monitoring, Response Assistance, and Evaluation.

Government Publication Date: Oct 8, 2025

Facility Registry Service/Facility Index: FINDS/FRS

The Facility Registry Service (FRS) is a centrally managed database that identifies facilities, sites, or places subject to environmental regulations or of environmental interest. FRS creates high-quality, accurate, and authoritative facility identification records through rigorous verification and management procedures that incorporate information from program national systems, state master facility records, and data collected from EPA's Central Data Exchange registrations and data management personnel. This list is made available by the U.S. Environmental Protection Agency (EPA).

Government Publication Date: Jan 1, 2026

Toxics Release Inventory (TRI) Program: TRIS

The U.S. Environmental Protection Agency's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of toxic chemicals from U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. There are currently 770 individually listed chemicals and 33 chemical categories covered by the TRI Program. Facilities that manufacture, process or otherwise use these chemicals in amounts above established levels must submit annual reporting forms for each chemical. Note that the TRI chemical list does not include all toxic chemicals used in the U.S. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment. This database includes TRI Reporting Data for calendar years 1987 through 2021 and Preliminary Data for 2022.

Government Publication Date: Sep 20, 2023

PFOA/PFOS Contaminated Sites: PFAS NPL

This list of Superfund Sites with Per- and Polyfluoroalkyl Substances (PFAS) detections is made available by the U.S. Environmental Protection Agency (EPA) in their PFAS Analytic Tools data, previously the list was obtained by EPA FOIA requests. EPA's Office of Land and Emergency Management and EPA Regional Offices maintain what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment. Limitations: Detections of PFAS at National Priorities List (NPL) sites do not mean that people are at risk from PFAS, are exposed to PFAS, or that the site is the source of the PFAS. The information in the Superfund NPL and Superfund Alternative Agreement (SAA) PFAS detection site list is years old and may not be accurate today. Site information such as site name, site ID, and location has been confirmed for accuracy; however, PFAS-related information such as media sampled, drinking water being above the health advisory, or mitigation efforts has not been verified. For Federal Facilities data, the other Federal agencies (OFA) are the lead agency for their data and provided them to EPA.

Government Publication Date: Dec 29, 2025

Federal Agency Locations with Known or Suspected PFAS Detections: PFAS FED SITES

This list of federal agency locations with known or suspected detections of Per- and Polyfluoroalkyl Substances (PFAS) is made available by the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools data. The EPA outlines that these data are gathered from several federal entities, such as the federal Superfund program, Department of Defense (DOD), National Aeronautics and Space Administration (NASA), Department of Transportation (DOT), and Department of Energy (DOE). The dates this data was extracted for the PFAS Analytic Tools range from 2022 to 2025 per agency entity dataset. Sites on this list do not necessarily reflect the source/s of PFAS contamination and detections do not indicate level of risk or human exposure at the site. Agricultural notifications in this data are limited to DOD sites only. At this time, the EPA is aware that this list is not comprehensive of all Federal agencies.

Government Publication Date: May 30, 2025

SSEHRI PFAS Contamination Sites: PFAS SSEHRI

This PFAS Contamination Site Tracker database is compiled by the PFAS Project Lab, part of the Social Science Environmental Health Research Institute (SSEHRI) at Northeastern University. According to the SSEHRI, the database records qualitative and quantitative data from each known site of PFAS contamination, including timeline of discovery, sources, levels, health impacts, community response, and government response. The goal of this database is to compile information and support public understanding of the rapidly unfolding issue of PFAS contamination. All data presented was extracted from government websites, news articles, or publicly available documents. Locations for the Known PFAS Contamination Sites are sourced from the PFAS Sites and Community Resources Map by the PFAS-REACH team, credited to PFAS Project Lab, Silent Spring Institute, and PFAS Exchange. Disclaimer: The source conveys the data undergoes regular updates as new information becomes available, some sites may be missing and/or contain information that is incorrect or outdated, as well as their information represents all contamination sites SSEHRI is aware of, not all possible contamination sites. This data is not intended to be used for legal purposes. Access the following source link for the most current information: https://pfasproject.com/pfas-sites-and-community-resources/

Government Publication Date: Aug 1, 2025

National Response Center PFAS Spills: PFAS ERNS

This Per- and Poly-Fluoroalkyl Substances (PFAS) Spills dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The National Response Center (NRC), operated by the U.S. Coast Guard, is the designated federal point of contact for reporting all oil, chemical, and other discharges into the environment, for the United States and its territories. This dataset contains NRC spill information from 1990 to the present that is restricted to records associated with PFAS and PFAS-containing materials. Incidents are filtered to include only records with a "Material Involved" or "Incident Description" related to Aqueous Film Forming Foam (AFFF). The keywords used to filter the data included "AFFF," "Fire Fighting Foam," "Aqueous Film Forming Foam," "Fire Suppressant Foam, "PFAS," "PERFL," "PFOA," "PFOS," and "Genx." Limitations: The data from the NRC website contains initial incident data that has not been validated or investigated by a federal/state response agency. Keyword searches may misidentify some incident reports that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS spills/release incidents.

Government Publication Date: Feb 16, 2026

PFAS NPDES Discharge Monitoring: PFAS NPDES

This list of National Pollutant Discharge Elimination System (NPDES) permitted facilities with required monitoring for Per- and Polyfluoroalkyl (PFAS) Substances is made available via the U.S. Environmental Protection Agency (EPA)'s PFAS Analytic Tools. Any point-source wastewater discharger to waters of the United States must have a NPDES permit, which defines a set of parameters for pollutants and monitoring to ensure that the discharge does not degrade water quality or impair human health. This list includes NPDES permitted facilities associated with permits that monitor for Per- and Polyfluoroalkyl Substances (PFAS), limited to the years 2007 - present. EPA further advises the following regarding these data: currently, fewer than half of states have required PFAS monitoring for at least one of their permittees, and fewer states have established PFAS effluent limits for permittees. For states that may have required monitoring, some reporting and data transfer issues may exist on a state-by-state basis.

Government Publication Date: Dec 16, 2024

Perfluorinated Alkyl Substances (PFAS) from Toxic Release Inventory: PFAS TRI

List of Toxics Release Inventory (TRI) facilities at which the reported chemical is a per- or polyfluoroalkyl (PFAS) substance included in the U.S. Environmental Protection Agency's (EPA) consolidated PFAS Master List of PFAS Substances. Encompasses Toxics Release Inventory records included in the EPA PFAS Analytic Tools. The EPA's TRI database currently tracks information on disposal or releases of 770 individually listed toxic chemicals and 33 chemical categories from thousands of U.S. facilities and details about how facilities manage those chemicals through recycling, energy recovery, and treatment. This listing includes TRI Reporting Data for calendar years 1987 through 2021 and Preliminary Data for 2022.

Government Publication Date: Sep 20, 2023

PFAS Water Quality Portal Sampling Data: PFAS WATER

This Per- and Poly-Fluoroalkyl Substances (PFAS) Environmental Media Sampling Data is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The Water Quality Portal (WQP), as a cooperative service sponsored by the United States Geological Survey, the EPA, and the National Water Quality Monitoring Council, is part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations, and individuals submit project details and sampling results to this public repository. Limitations: EPA did not carry out the sampling or testing of a majority of the data in the WQP PFAS dataset. EPA can only speak to the accuracy and completeness of the data from projects like the National Aquatic Resource Surveys for which EPA is the data owner/organization. Data may exist within the file on Quality Assurance Project Plans (QAPPs) and the approving agency of the QAPP, if a QAPP is entered.

Government Publication Date: Feb 2, 2026

PFAS TSCA Manufacture and Import Facilities: PFAS TSCA

The U.S. Environmental Protection Agency (EPA) issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. This list is specific only to TSCA Manufacture and Import Facilities with reported per- and poly-fluoroalkyl (PFAS) substances. Data file is sourced from EPA's PFAS Analytic Tools TSCA dataset which includes CDR/Inventory Update Reporting data from 1998 up to 2020. Disclaimer: This data file includes production and importation data for chemicals identified in EPA's CompTox Chemicals Dashboard list of PFAS without explicit structures and list of PFAS structures in DSSTox. Note that some regulations have specific chemical structure requirements that define PFAS differently than the lists in EPA's CompTox Chemicals Dashboard. Reporting information on manufactured or imported chemical substance amounts should not be compared between facilities, as some companies claim Chemical Data Reporting Rule data fields for PFAS information as Confidential Business Information.

Government Publication Date: Jan 5, 2023

PFAS Waste Transfers from RCRA e-Manifest: PFAS E-MANIFEST

This Per- and Poly-Fluoroalkyl Substances (PFAS) Waste Transfers dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. Every shipment of hazardous waste in the U.S. must be accompanied by a shipment manifest, which is a critical component of the cradle-to-grave tracking of wastes mandated by the Resource Conservation and Recovery Act (RCRA). According to the EPA, currently no Federal Waste Code exists for any PFAS compounds. To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: • PFAS • PFOA • PFOS • PERFL • AFFF • GENX • GEN-X (plus the Vermont state-specific waste codes). Limitations: Amount or concentration of PFAS being transferred cannot be determined from the manifest information. Keyword searches may misidentify some manifest records that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS waste transfers.

Government Publication Date: Feb 14, 2026

PFAS Industry Sectors: PFAS IND

This Per- and Poly-Fluoroalkyl Substances (PFAS) Industry Sectors dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The dataset was developed from various sources that show which industries may be handling PFAS including: EPA's Enforcement and Compliance History Online (ECHO) records restricted to potential PFAS-handling industry sectors, based on the North American Industry Classification System (NAICS) Codes and Standard Industrial Classification (SIC) Codes associated federal regulatory programs (e.g., Clean Water Act, Clean Air Act, and Resource Conservation and Recovery Act) at the facility level; ECHO records for Fire Training Sites identified where fire-fighting foam may have been used in training exercises; and 14 CFR Part 139 Airports compiled from historic and current records from the FAA Airport Data and Information Portal. Since July 2006, all certificated Part 139 Airports are required to have fire-fighting foam onsite that meet certain military specifications, which to date have been fluorinated (Aqueous Film Forming Foam). Limitations: Inclusion in this dataset does not indicate that PFAS are being manufactured, processed, used, or released by the facility. Listed facilities potentially handle PFAS based on their industrial profile but are unconfirmed by the EPA. Keyword searches in ECHO for Fire Training sites may misidentify some facilities and should not be considered to be an exhaustive list of fire training facilities in the U.S.

Government Publication Date: Feb 16, 2026

Hazardous Materials Information Reporting System: HMIRS

The Hazardous Materials Incident Reporting System (HMIRS) database contains unintentional hazardous materials release information reported to the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.

Government Publication Date: Jan 29, 2026

National Clandestine Drug Labs: NCDL

The U.S. Department of Justice ("the Department"), Drug Enforcement Administration (DEA), provides this data as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy.

Government Publication Date: Nov 30, 2023

Toxic Substances Control Act: TSCA

The U.S. Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule. The CDR enables EPA to collect and publish information on the manufacturing, processing, and use of commercial chemical substances and mixtures (referred to hereafter as chemical substances) on the TSCA Chemical Substance Inventory (TSCA Inventory). This includes current information on chemical substance production volumes, manufacturing sites, and how the chemical substances are used. This information helps the Agency determine whether people or the environment are potentially exposed to reported chemical substances. EPA publishes submitted CDR data that is not Confidential Business Information (CBI). EPA CDR collections occur approximately every four years and reporting requirements change per collection.

Government Publication Date: May 12, 2022

Hist TSCA: HIST TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.
The 2006 IUR data summary report includes information about chemicals manufactured or imported in quantities of 25,000 pounds or more at a single site during calendar year 2005. In addition to the basic manufacturing information collected in previous reporting cycles, the 2006 cycle is the first time EPA collected information to characterize exposure during manufacturing, processing and use of organic chemicals. The 2006 cycle also is the first time manufacturers of inorganic chemicals were required to report basic manufacturing information.
Government Publication Date: Dec 31, 2006

FTTS Administrative Case Listing: FTTS ADMIN
An administrative case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.
Government Publication Date: Jan 19, 2007

FTTS Inspection Case Listing: FTTS INSP
An inspection case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.
Government Publication Date: Jan 19, 2007

Potentially Responsible Parties List: PRP
Early in the site cleanup process, the U.S. Environmental Protection Agency (EPA) conducts a search to find the Potentially Responsible Parties (PRPs). The EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site. This listing contains PRPs, Noticed Parties, at sites in the EPA's Superfund Enterprise Management System (SEMS).
Government Publication Date: Dec 26, 2025

State Coalition for Remediation of Drycleaners Listing: SCRD DRYCLEANER
The State Coalition for Remediation of Drycleaners (SCRD) was established in 1998, with support from the U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation. Coalition members are states with mandated programs and funding for drycleaner site remediation. Current members are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin. Since 2017, the SCRD no longer maintains this data, refer to applicable state source data where available.
Government Publication Date: Nov 08, 2017

Integrated Compliance Information System (ICIS): ICIS
The Integrated Compliance Information System (ICIS) database contains integrated enforcement and compliance information across most of U.S. Environmental Protection Agency's (EPA) programs. The vision for ICIS is to replace EPA's independent databases that contain enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions and a subset of the Permit Compliance System (PCS), which supports the National Pollutant Discharge Elimination System (NPDES). This information is maintained by the EPA Headquarters and at the Regional offices. A future release of ICIS will completely replace PCS and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities that support compliance and enforcement programs, including incident tracking, compliance assistance, and compliance monitoring.
Government Publication Date: Oct 18, 2025

Drycleaner Facilities: FED DRYCLEANERS
A list of drycleaner facilities from Enforcement and Compliance History Online (ECHO) data as made available by the U.S. Environmental Protection Agency (EPA), sourced from the ECHO Exporter file. This EPA source file tracks facilities that possess NAICS and SIC codes that classify businesses as drycleaner establishments.
Government Publication Date: Jan 24, 2026

Delisted Drycleaner Facilities: DELISTED FED DRY
List of sites which once appeared on - and have since been removed from - the list of drycleaner facilities included in Enforcement and Compliance History Online (ECHO) data as made available by the U.S. Environmental Protection Agency (EPA), sourced from the ECHO Exporter file. This EPA source file tracks facilities that possess NAICS and SIC codes that classify businesses as drycleaner establishments.
Government Publication Date: Jan 24, 2026

Formerly Used Defense Sites: FUDS

Formerly Used Defense Sites (FUDS) are properties that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DOD) is responsible for an environmental restoration. The FUDS Annual Report to Congress (ARC) is published by the U.S. Army Corps of Engineers (USACE). This data is compiled from the USACE's Geospatial FUDS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) FUDS dataset which applies to the Fiscal Year 2021 FUDS Inventory.
Government Publication Date: May 15, 2023

FUDS Munitions Response Sites: FUDS MRS

Boundaries of Munitions Response Sites (MRS), published with the Formerly Used Defense Sites (FUDS) Annual Report to Congress (ARC) by the U.S. Army Corps of Engineers (USACE). An MRS is a discrete location within a Munitions response area (MRA) that is known to require a munitions response. An MRA means any area on a defense site that is known or suspected to contain unexploded ordnance (UXO), discarded military munitions (DMM), or munitions constituents (MC). This data is compiled from the USACE's Geospatial MRS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) MRS dataset.
Government Publication Date: May 15, 2023

Former Military Nike Missile Sites: FORMER NIKE

This information was taken from report DRXTH-AS-IA-83A016 (Historical Overview of the Nike Missile System, 12/1984) which was performed by Environmental Science and Engineering, Inc. for the U.S. Army Toxic and Hazardous Materials Agency Assessment Division. The Nike system was deployed between 1954 and the mid-1970's. Among the substances used or stored on Nike sites were liquid missile fuel (JP-4); starter fluids (UDKH, aniline, and furfuryl alcohol); oxidizer (IRFNA); hydrocarbons (motor oil, hydraulic fluid, diesel fuel, gasoline, heating oil); solvents (carbon tetrachloride, trichloroethylene, trichloroethane, stoddard solvent); and battery electrolyte. The quantities of material a disposed of and procedures for disposal are not documented in published reports. Virtually all information concerning the potential for contamination at Nike sites is confined to personnel who were assigned to Nike sites. During deactivation most hardware was shipped to depot-level supply points. There were reportedly instances where excess materials were disposed of on or near the site itself at closure. There was reportedly no routine site decontamination.
Government Publication Date: Dec 2, 1984

PHMSA Pipeline Safety Flagged Incidents: PIPELINE INCIDENT

This list of flagged pipeline incidents is made available by the U.S. Department of Transportation (US DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA regulations require incident and accident reports for five different pipeline system types. Accidents reported on hazardous liquid gravity lines (§195.13) and reporting-regulated-only hazardous liquid gathering lines (§195.15) and incidents reported on Type R gas gathering (§192.8(c)) are not included in the flagged incident file data.
Government Publication Date: Jul 10, 2025

Material Licensing Tracking System (MLTS): MLTS

A list of sites that store radioactive material subject to the Nuclear Regulatory Commission (NRC) licensing requirements. This list is maintained by the NRC. As of September 2016, the NRC no longer releases location information for sites. Site locations were last received in July 2016.
Government Publication Date: May 11, 2021

Historic Material Licensing Tracking System (MLTS) sites: HIST MLTS

A historic list of sites that have inactive licenses and/or removed from the Material Licensing Tracking System (MLTS). In some cases, a site is removed from the MLTS when the state becomes an "Agreement State". An Agreement State is a State that has signed an agreement with the Nuclear Regulatory Commission (NRC) authorizing the State to regulate certain uses of radioactive materials within the State.
Government Publication Date: Jan 31, 2010

Mines Master Index File: MINES

The Master Index File (MIF) is provided by the United States Department of Labor, Mine Safety and Health Administration (MSHA). This file, which was originally created in the 1970's, contained many Mine-IDs that were invalid. MSHA removes invalid IDs from the MIF upon discovery. MSHA applicable data includes the following: all Coal and Metal/Non-Metal mines under MSHA's jurisdiction since 1/1/1970; mine addresses for all mines in the database except for Abandoned mines prior to 1998 from MSHA's legacy system (addresses may or may not correspond with the physical location of the mine itself); violations that have been assessed penalties as a result of MSHA inspections beginning on 1/1/2000; and violations issued as a result of MSHA inspections conducted beginning on 1/1/2000.
Government Publication Date: Aug 8, 2025

Surface Mining Control and Reclamation Act Sites: SMCRA

This inventory of land and water impacted by past mining (primarily legacy coal mining operations) is maintained by the U.S. Department of the Interior's Office of Surface Mining Reclamation and Enforcement (OSMRE), as it provides information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). This inventory contains information on the type and extent of Abandoned Mine Land (AML) Problems, as well as information on the cost associated with the reclamation of those problems. The data is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed. Disclaimer: Per the OSMRE, States and tribes who enter their data into e-AMLIS (AML Inventory System) may truncate their latitude and longitude so the precise location of usually dangerous AMLs is not revealed in an effort to protect the public from searching for these AMLs, most of which are on private property. If more precise location information is needed, please contact the applicable state/tribe of interest.

Government Publication Date: Oct 30, 2025

Mineral Resource Data System: MRDS

The Mineral Resource Data System (MRDS) is a collection of reports describing metallic and nonmetallic mineral resources throughout the world. Included are deposit name, location, commodity, deposit description, geologic characteristics, production, reserves, resources, and references. This database contains the records previously provided in the Mineral Resource Data System (MRDS) of USGS and the Mineral Availability System/Mineral Industry Locator System (MAS/MILS) originated in the U.S. Bureau of Mines, which is now part of USGS. The USGS has ceased systematic updates of the MRDS database with their focus more recently on deposits of critical minerals while providing a well-documented baseline of historical mine locations from USGS topographic maps.

Government Publication Date: Mar 15, 2016

DOE Legacy Management Sites: LM SITES

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) currently manages radioactive and chemical waste, environmental contamination, and hazardous material at over 100 sites across the U.S. The LM manages sites with diverse regulatory drivers (statutes or programs that direct cleanup and management requirements at DOE sites) or as part of internal DOE or congressionally-recognized programs, such as but not limited to: Formerly Utilized Sites Remedial Action Program (FUSRAP), Uranium Mill Tailings Radiation Control Act (UMTRCA Title I, Tile II), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), Decontamination and Decommissioning (D&D), Nuclear Waste Policy Act (NWPA). The intent of the site location is to provide a general reference point to the site on a national scale. The coordinates of each site point can be the location of a site monument, the centroid of the site boundary, or a general location of the site. This site listing includes data exported from the DOE Office of LM's Geospatial Environmental Mapping System (GEMS). GEMS Data disclaimer: The DOE Office of LM makes no representation or warranty, expressed or implied, regarding the use, accuracy, availability, or completeness of the data presented herein.

Government Publication Date: Nov 6, 2025

Alternative Fueling Stations: ALT FUELS

This list of alternative fueling stations is sourced from the U.S. Department of Energy's (DOE) Alternative Fuels Data Center (AFDC) and National Renewable Energy Laboratory (NREL). The DOE's Office of Energy Efficiency & Renewable Energy launched the AFDC in 1991 as a repository for alternative fuel vehicle performance data, which provides a wealth of information and data on alternative and renewable fuels, advanced vehicles, fuel-saving strategies, and emerging transportation technologies. The data includes Biodiesel (B20 and above), Compressed Natural Gas (CNG), Electric, Ethanol (E85), Hydrogen, Liquefied Natural Gas (LNG), Propane (LPG), and Renewable Diesel (R20 and above) fuel type locations.

Government Publication Date: Mar 11, 2026

Superfunds Consent Decrees: CONSENT DECREES

This list of Superfund consent decrees is provided by the Department of Justice, Environment & Natural Resources Division (ENRD) through a Freedom of Information Act (FOIA) applicable file. This listing includes Cases filed since 2010 limited to the following: Consent Decrees for CERCLA or Superfund Sites filed and/or as proposed within the ENRD's Case Management System (CMS); and applicable ENRD's Environmental Defense Section (EDS) CERCLA Cases with "Consent" in History Note. CMS may not reflect the latest developments in a case, nor can the agency guarantee the accuracy of the data. ENRD Disclaimer: Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA; response is limited to those records that are subject to the requirements of the FOIA; however, this should not be taken as an indication that excluded records do, or do not, exist.

Government Publication Date: Dec 30, 2025

Air Facility System: AFS

This EPA retired Air Facility System (AFS) dataset contains emissions, compliance, and enforcement data on stationary sources of air pollution. Regulated sources cover a wide spectrum; from large industrial facilities to relatively small operations such as dry cleaners. AFS does not contain data on facilities that are solely asbestos demolition and/or renovation contractors, or landfills. ECHO Clean Air Act data from AFS are frozen and reflect data as of October 17, 2014; the EPA retired this system for Clean Air Act stationary sources and transitioned to ICIS-Air.

Government Publication Date: Oct 17, 2014

Registered Pesticide Establishments: SSTS

This national list of active EPA-registered foreign and domestic pesticide and/or device-producing establishments is based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that each producing establishment must place its EPA establishment number on the label or immediate container of each pesticide, active ingredient or device produced. An EPA establishment number on a pesticide product label identifies the EPA registered location where the product was produced. The list of establishments is made available by the U.S. Environmental Protection Agency (EPA).

Government Publication Date: Sep 26, 2025

Polychlorinated Biphenyl (PCB) Transformers: PCBT

Locations of Transformers Containing Polychlorinated Biphenyls (PCBs) registered with the United States Environmental Protection Agency. PCB transformer owners must register their transformer(s) with EPA. Although not required, PCB transformer owners who have removed and properly disposed of a registered PCB transformer may notify EPA to have their PCB transformer de-registered. Data made available by EPA.

Government Publication Date: Oct 15, 2019

Polychlorinated Biphenyl (PCB) Notifiers: PCB

Facilities included in the national list of facilities that have notified the United States Environmental Protection Agency (EPA) of Polychlorinated Biphenyl (PCB) activities. Any company or person storing, transporting or disposing of PCBs or conducting PCB research and development must notify the EPA and receive an identification number.

Government Publication Date: Aug 12, 2025

Power Plants: POWER PLANTS

This list of power plants is provided by the U.S. Energy Information Administration (EIA). The listing includes operable electric generating plants in the United States by energy source, originating from the EIA-860, Annual Electric Generator Report; EIA-860M, Monthly Update to the Annual Electric Generator Report; and EIA-923, Power Plant Operations Report. It includes all operable plants by energy source with a combined nameplate capacity of 1 megawatt or more that are operating, are on standby, or out of service for short- or long-term.

Government Publication Date: Jun 5, 2025

Historical Business Activity Risk: HIST RISK

Proprietary list of sites identified as potentially having engaged in business activity that poses a higher-than-normal risk of contamination. Records originate from historical city directories, and are included in this list based on broad business categories Potentially Hazardous Chemical Users and Fuel and Automotive, including but not limited to Dry Cleaners and Fuel Stations, Garages, etc. Inclusion in this listing does not indicate that there is or ever has been contamination; rather, sites are included in this list due to their potential for having engaged in a business activity presenting an elevated risk of contamination. The list was compiled from various city directories including Polks, Millers, Mullin Kille, Interstate Directory, and State Directory Co; spanning roughly 1920s through 1960 depending on information available by city.

Government Publication Date: Jan 1, 1960

NPDES Biosolids Program Permit Holders: NPDES BIOSOLIDS

This Water National Pollutant Discharge Elimination System (NPDES) Biosolids Permits list is sourced from the U.S. Environmental Protection Agency's (EPA) Enforcement and Compliance History Online data. EPA's Integrated Compliance Information System (ICIS) for NPDES includes facility and compliance information for NPDES permits in the ECHO Biosolids facility universe. Per the EPA, when sewage from households and businesses (and sometimes wastewater from industrial dischargers) is sent to a wastewater treatment plant, the liquids are separated from the solids, producing a semi-solid, nutrient-rich product known as "sewage sludge" or "biosolids". The EPA typically uses the term "biosolids" to mean sewage sludge that has been treated to meet the agency's regulatory requirements and is intended to be land applied as a soil conditioner or fertilizer.

Government Publication Date: Feb 7, 2026

State

Spills reported to the Pollution Control Agency: SPILLS

This listing of reported spills is maintained by the Minnesota Pollution Control Agency (MPCA). The Minn. Stat. §115.061, which has been in effect since 1969, describes the duty of people to notify the MPCA when spills occur.

Government Publication Date: Feb 23, 2026

Department of Agriculture Spills: AG SPILLS

The Minnesota Department of Agriculture Incident Response Unit is the regulatory authority of Agricultural Chemical (Ag-Chem) Incidents in Minnesota. This list contains pesticide and fertilizer incidents reported to the Response Unit. This data made available by The Minnesota Department of Agriculture, Incident Response Unit.

Government Publication Date: Nov 27, 2025

Historic spills reported to the Pollution Control Agency: HIST SPL

The Minn. Stat. §115.061, which has been in effect since 1969, describes the duty of people to notify the Minnesota Pollution Control Agency (MPCA) when spills occur. This is the list of spills reported to MPCA, and maintained by The Minnesota Pollution Control Agency (MPCA). This list was maintained till 1 Nov 2016.

Government Publication Date: Nov 1, 2016

Registered Dry Cleaning Facilities: DRYCLEANERS

The Minnesota Pollution Control Agency (MPCA) maintains this listing of registered dry cleaning facilities.

Government Publication Date: Sep 11, 2024

Delisted Drycleaners: DELISTED DRYCLEANERS

List of sites that once appeared on - and have since been removed from - the list of registered dry cleaning facilities made available by the Minnesota Pollution Control Agency (MPCA).

Government Publication Date: Sep 11, 2024

PFAS in Groundwater Samples: PFAS GW

A list of sites from the Minnesota Groundwater Contamination Atlas where Per- and Polyfluoroalkyl Substances (PFAS) were found in groundwater samples. This list is made available by the Minnesota Pollution Control Agency.

Government Publication Date: Nov 12, 2021

PFAS in Landfills: PFAS LANDFILL

A list of sites in the Closed Landfill Program where Per- or polyfluorinated alkyl substances (PFAS) have been detected. This list is made available by the Minnesota Pollution Control Agency (MPCA).

Government Publication Date: Jan 3, 2024

Clandestine Drug Labs: CDL

The Methamphetamine Laboratory Program at the Minnesota Department of Health (MDH) works to protect human health by providing technical advice on the remediation of clandestine methamphetamine production laboratories (meth labs) and decontamination of property exposed to meth lab activities.

Government Publication Date: Aug 23, 2021

Animal Feedlots: FEEDLOTS

The Minnesota Pollution Control Agency (MPCA) tracks locations of animal feedlot facilities. The locations of animal feedlots provide information and context to support decisions on animal health, land use, and maintaining environmental quality.

Government Publication Date: Aug 27, 2025

Tier 2 Report: TIER 2

A list of Tier 2 Facilities in Minnesota. This list is provided by Minnesota Department of Public Safety overseen by the Division of Homeland Security and Emergency Management.

Government Publication Date: Sep 14, 2022

Bulk Storage Permits: BULK STORAGE

The Minnesota Department of Agriculture's Licensing Information System (LIS) lists individuals or companies who hold licenses, certificates and/or permits required by state law and regulated by the Department. This database only contains those LIS licenses related to anhydrous ammonia storage facilities and bulk pesticide/ fertilizer storage facilities.

Government Publication Date: Nov 6, 2025

Tribal

No Tribal additional environmental record sources available for this State.

County

No County additional environmental record sources available for this State.

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

DATABASE REPORT

Project Property:	*Taxiway A Reconstruction Phase 7* *Southeast Parcel* *Duluth MN*
Project No:	*2097200*
Report Type:	*Database Report*
Order No:	*26040200815*
Requested by:	*Historical Information Gatherers*
Date Completed:	*April 6, 2026*

Environmental Risk Information Services
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Executive Summary

Property Information:

Project Property: *Taxiway A Reconstruction Phase 7 Southeast Parcel Duluth MN*

Project No: *2097200*

Coordinates:

Latitude:	*46.83693325*
Longitude:	*-92.17596271*
UTM Northing:	*5,187,372.97*
UTM Easting:	*562,838.12*
UTM Zone:	*15T*

Elevation: *1,371 FT*

Order Information:

Order No: *26040200815*
Date Requested: *April 2, 2026*
Requested by: *Historical Information Gatherers*
Report Type: *Database Report*

Historicals/Products:

Executive Summary: Report Summary

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
Standard Environmental Records								
Federal								
NPL	Y	1	0	0	0	0	0	0
PROPOSED NPL	Y	1	0	0	0	0	0	0
DELETED NPL	Y	0.5	0	0	0	0	-	0
SEMS	Y	0.5	0	0	0	0	-	0
ODI	Y	0.5	0	0	0	0	-	0
SEMS ARCHIVE	Y	0.5	0	0	0	0	-	0
CERCLIS	Y	0.5	0	0	0	0	-	0
IODI	Y	0.5	0	0	0	0	-	0
CERCLIS NFRAP	Y	0.5	0	0	0	0	-	0
CERCLIS LIENS	Y	PO	0	-	-	-	-	0
RCRA CORRACTS	Y	1	0	0	0	0	**1**	**1**
RCRA TSD	Y	0.5	0	0	0	0	-	0
RCRA LQG	Y	0.25	0	0	0	-	-	0
RCRA SQG	Y	0.25	0	0	**1**	-	-	**1**
RCRA VSQG	Y	0.25	0	**3**	**4**	-	-	**7**
RCRA NON GEN	Y	0.25	0	**3**	**5**	-	-	**8**
RCRA CONTROLS	Y	0.5	0	0	0	0	-	0
FED ENG	Y	0.5	0	0	0	0	-	0
FED INST	Y	0.5	0	0	0	0	-	0
LUCIS	Y	0.5	0	0	0	0	-	0
NPL IC	Y	0.5	0	0	0	0	-	0
ERNS 1982 TO 1986	Y	PO	0	-	-	-	-	0
ERNS 1987 TO 1989	Y	PO	0	-	-	-	-	0
ERNS	Y	PO	0	**4**	-	-	-	**4**
FED BROWNFIELDS	Y	0.5	0	0	0	0	-	0
FEMA UST	Y	0.25	0	0	0	-	-	0
FRP	Y	0.25	0	0	0	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
DELISTED FRP	Y	0.25	0	0	0	-	-	0
HIST GAS STATIONS	Y	0.25	0	0	0	-	-	0
REFN	Y	0.25	0	0	0	-	-	0
BULK TERMINAL	Y	0.25	0	0	0	-	-	0
SEMS LIEN	Y	PO	0	-	-	-	-	0
SUPERFUND ROD	Y	1	0	0	0	0	0	0
State								
PLP	Y	1	0	0	0	0	**20**	**20**
DEL PLP	Y	1	0	0	0	0	**4**	**4**
SHWS	Y	0.5	0	0	0	0	-	0
SITE ASSESSMENT	Y	0.25	0	**1**	0	-	-	**1**
SWF/LF	Y	0.5	0	**1**	0	0	-	**1**
LCP	Y	0.5	0	0	0	0	-	0
UNPERMITTED LF	Y	0.5	0	0	0	0	-	0
RECYCLING	Y	0.5	0	0	0	0	-	0
HIST LUST	Y	0.5	0	0	0	**1**	-	**1**
DEL LUST	Y	0.5	0	0	0	0	-	0
HIST LAST	Y	0.5	0	0	0	0	-	0
HIST LEAKSITES	Y	0.5	0	**4**	0	**3**	-	**7**
LST REM SITE	Y	0.5	0	**6**	0	**4**	-	**10**
LST INCIDENT	Y	0.5	0	0	0	0	-	0
DELISTED LST	Y	0.5	0	**1**	0	0	-	**1**
UST	Y	0.25	0	**2**	**2**	-	-	**4**
AST	Y	0.25	0	**1**	**1**	-	-	**2**
HIST TANK	Y	0.25	0	0	0	-	-	0
DELISTED TANK	Y	0.5	0	**1**	0	**2**	-	**3**
INST	Y	0.5	0	0	0	0	-	0
AG CONTINGENCY	Y	0.125	0	0	-	-	-	0
BROWNFIELDS	Y	0.5	0	**1**	0	**1**	-	**2**
VIC	Y	0.5	0	**1**	0	**1**	-	**2**
POTENTIAL VIC	Y	0.5	0	0	0	0	-	0
MPCA AI	Y	0.5	0	**24**	**17**	**20**	-	**61**
Tribal								
INDIAN LUST	Y	0.5	0	0	0	0	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
INDIAN UST	Y	0.25	0	0	0	-	-	0
DELISTED INDIAN LST	Y	0.5	0	0	0	0	-	0
DELISTED INDIAN UST	Y	0.25	0	0	0	-	-	0

County ***No County standard environmental record sources available for this State.***

Additional Environmental Records

Federal

PFAS GHG	Y	0.5	0	0	0	0	-	0
OSC RESPONSE	Y	0.125	0	0	-	-	-	0
FINDS/FRS	Y	PO	0	**19**	-	-	-	**19**
TRIS	Y	PO	0	**1**	-	-	-	**1**
PFAS NPL	Y	0.5	0	0	0	0	-	0
PFAS FED SITES	Y	0.5	0	0	0	0	-	0
PFAS SSEHRI	Y	0.5	0	0	**1**	0	-	**1**
PFAS ERNS	Y	0.5	0	0	0	0	-	0
PFAS NPDES	Y	0.5	0	0	0	0	-	0
PFAS TRI	Y	0.5	0	0	0	0	-	0
PFAS WATER	Y	0.5	0	0	0	**1**	-	**1**
PFAS TSCA	Y	0.5	0	0	0	0	-	0
PFAS E-MANIFEST	Y	0.5	0	0	0	0	-	0
PFAS IND	Y	0.5	0	0	0	0	-	0
HMIRS	Y	0.125	0	0	-	-	-	0
NCDL	Y	0.125	0	0	-	-	-	0
TSCA	Y	0.125	0	0	-	-	-	0
HIST TSCA	Y	0.125	0	0	-	-	-	0
FTTS ADMIN	Y	PO	0	-	-	-	-	0
FTTS INSP	Y	PO	0	-	-	-	-	0
PRP	Y	PO	0	-	-	-	-	0
SCRD DRYCLEANER	Y	0.5	0	0	0	0	-	0
ICIS	Y	PO	0	**1**	-	-	-	**1**
FED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED FED DRY	Y	0.25	0	0	0	-	-	0
FUDS	Y	1	**1**	0	0	0	0	**1**
FUDS MRS	Y	1	0	0	0	0	0	0
FORMER NIKE	Y	1	0	0	0	0	0	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
PIPELINE INCIDENT	Y	PO	0	-	-	-	-	0
MLTS	Y	PO	0	-	-	-	-	0
HIST MLTS	Y	PO	0	-	-	-	-	0
MINES	Y	0.25	0	0	0	-	-	0
SMCRA	Y	1	0	0	0	0	0	0
MRDS	Y	1	0	0	0	0	0	0
LM SITES	Y	1	0	0	0	0	0	0
ALT FUELS	Y	0.25	0	0	0	-	-	0
CONSENT DECREES	Y	0.25	0	0	0	-	-	0
AFS	Y	PO	0	**1**	-	-	-	**1**
SSTS	Y	0.25	0	0	0	-	-	0
PCBT	Y	0.5	0	0	0	0	-	0
PCB	Y	0.5	0	**1**	0	0	-	**1**
POWER PLANTS	Y	0.125	0	0	-	-	-	0
HIST RISK	Y	0.125	0	0	-	-	-	0
NPDES BIOSOLIDS	Y	PO	0	-	-	-	-	0
State								
SPILLS	Y	0.125	0	**9**	-	-	-	**9**
AG SPILLS	Y	0.125	0	0	-	-	-	0
HIST SPL	Y	0.125	0	**6**	-	-	-	**6**
DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
PFAS GW	Y	0.5	0	0	0	0	-	0
PFAS LANDFILL	Y	0.5	0	0	0	0	-	0
CDL	Y	PO	0	-	-	-	-	0
FEEDLOTS	Y	0.5	0	0	0	0	-	0
TIER 2	Y	0.125	0	0	-	-	-	0
BULK STORAGE	Y	0.25	0	0	0	-	-	0
Tribal	***No Tribal additional environmental record sources available for this State.***							
County	***No County additional environmental record sources available for this State.***							
Total:			***1***	***91***	***31***	***33***	***25***	***181***

**** PO – Property Only***
**** 'Property and adjoining properties' database search radii are set at 0.25 miles.***

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
1	FUDS	DULUTH INTERNATIONAL AIRPORT	DULUTH MN ***FUDS Property No:*** *E05MN0033*	SE	0.00 / 0.00	0	47

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
2	RCRA NON GEN	DELTA GLOBAL SERVICES	4701 AIRPORT DR DULUTH MN 55811 ***Handler ID | Recycler Activity?:*** MNS000217273 | NO	ESE	0.01 / 39.31	1	48
3	AFS	DULUTH INTERNATIONAL AIRPORT (DAA)	4701 GRINDEN DR DULUTH MN 55811	WNW	0.01 / 46.68	4	50
3	AST	Delta Airlines Inc Duluth Ramp	4701 Grinden Rd Duluth MN 55811 ***Tank ID | Tank Status:*** 130799-EQUI0000000001 | Active, 130799-EQUI0000000002 | Active	WNW	0.01 / 46.68	4	51
3	BROWNFIELDS	Duluth International Airport - Block 3	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	4	53
3	DELISTED LST	Former Fueling Station	4701 Grinden Dr Duluth MN	WNW	0.01 / 46.68	4	54
3	DELISTED TANK	Duluth International Airport	4701 Grinden Dr Duluth MN 55811-1578	WNW	0.01 / 46.68	4	54
3	ERNS		4701 GRINDEN DRIVE DULUTH MN 55811 ***NRC Report No:*** 468284	WNW	0.01 / 46.68	4	55
3	ERNS		4701 GRINDEN DRIVE GATE 3 DULUTH MN 55811 ***NRC Report No:*** 463985	WNW	0.01 / 46.68	4	57
3	ERNS		4701 GRINDEN DRIVE GATE NO.3 DULUTH MN 55811 ***NRC Report No:*** 471404	WNW	0.01 / 46.68	4	59
3	ERNS		4701 GRINDEN DRIVE DULUTH MN 55811 ***NRC Report No:*** 488617	WNW	0.01 / 46.68	4	61
3	FINDS/FRS	DULUTH INTERNATIONAL AIRPORT (DAA)	4701 GRINDEN DR DULUTH MN 55811 ***Registry ID:*** 110008799979	WNW	0.01 / 46.68	4	63
3	FINDS/FRS	DULUTH AIRPORT RUNWAY 21SAFET	4701 GRINDEN DR HERMANTOWN MN 55811	WNW	0.01 / 46.68	4	64

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
			Registry ID: 110068202233				
3	FINDS/FRS	DAA ANG FIRE STATION PHASE 3	4701 GRINDEN DR GNESEN TOWNSHIP MN 55803 ***Registry ID:*** 110068699493	WNW	0.01 / 46.68	4	64
3	FINDS/FRS	NEW PASSANGER TERMINAL BP 2C	4701 GRINDEN DRIVE DULUTH MN 55811 ***Registry ID:*** 110067735008	WNW	0.01 / 46.68	4	65
3	FINDS/FRS	DELTA AIR LINES GLOBAL SERVIC	4701 GRINDEN DR DULUTH MN 55811 ***Registry ID:*** 110069151358	WNW	0.01 / 46.68	4	65
3	FINDS/FRS	NORTH PERIMETER ROAD GRADING	4701 GRINDEN DR HERMANTOWN MN 55811 ***Registry ID:*** 110069111160	WNW	0.01 / 46.68	4	66
3	FINDS/FRS	DELTA AIRLINES INC DULUTH RAMP	4701 GRINDEN RD HERMANTOWN MN 55811 ***Registry ID:*** 110067981447	WNW	0.01 / 46.68	4	67
3	FINDS/FRS	KRENZEN CORPORATION	4701 GRINDEN DR DULUTH MN 55811 ***Registry ID:*** 110071476644	WNW	0.01 / 46.68	4	67
3	FINDS/FRS	SONJU ENTERPRISES INC	4701 GRINDEN DR BOX 161830 DULUTH MN 55816 ***Registry ID:*** 110071475201	WNW	0.01 / 46.68	4	68
3	FINDS/FRS	OVERLAND WEST INC	4701 GRINDEN DR DULUTH MN 55811 ***Registry ID:*** 110071496157	WNW	0.01 / 46.68	4	68
3	FINDS/FRS	2020 COMMERCIAL SERVICE APRON	4701 GRINDEN DR DULUTH MN 55811-1578 ***Registry ID:*** 110071496659	WNW	0.01 / 46.68	4	69
3	FINDS/FRS	2024 MIDFIELD RAMP REPAIR DUL	4701 GRINDEN DR DULUTH MN 55811-1578 ***Registry ID:*** 110071851503	WNW	0.01 / 46.68	4	70
3	FINDS/FRS	TAXIWAY A RECONSTRUCTION - PH	4701 GRINDEN DR DULUTH MN 55811-1578 ***Registry ID:*** 110071991027	WNW	0.01 / 46.68	4	70
3	HIST LEAKSITES	Duluth International Airport	4701 Grinden Dr Duluth MN 55811 ***Complete Site Closure Date | Leaksite Type Desc:*** 05/09/1995 00:00:00 | Leak Site	WNW	0.01 / 46.68	4	71
3	HIST SPL	DULUTH INTERNATIONAL AIRPORT	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	4	73

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
			Program Int ID: 188492				
3	HIST SPL	NWA	4701 Grinden Dr Duluth MN 55811 ***Program Int ID:*** 186795	WNW	0.01 / 46.68	4	74
3	HIST SPL	Northwest Airlines	4701 Grinden Dr. Duluth MN ***Program Int ID:*** 187716	WNW	0.01 / 46.68	4	75
3	HIST SPL	AIRPORT	4701 Grinden Dr Duluth MN 55811 ***Program Int ID:*** 186807	WNW	0.01 / 46.68	4	76
3	HIST SPL	Northwest Airlines - Duluth Intl Airport - ramp	4701 Grinden Dr Duluth MN 55811 ***Program Int ID:*** 259244	WNW	0.01 / 46.68	4	77
3	ICIS	DULUTH INTERNATIONAL AIRPORT (DAA)	4701 GRINDEN DR DULUTH MN 55811 ***Registry ID:*** 110008799979	WNW	0.01 / 46.68	4	77
3	LST REM SITE	Duluth International Airport	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	4	78
3	LST REM SITE	Duluth Airport - Former Fueling Station	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	4	79
3	LST REM SITE	Duluth International Airport Maintenance Garage	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	4	80
3	LST REM SITE	Former Fueling Station	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	4	81
3	MPCA AI	DAA ANG Fire Station Phase 3	4701 Grinden Dr Duluth MN 55803	WNW	0.01 / 46.68	4	82
3	MPCA AI	TSA at Duluth International Airport	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	4	84
3	MPCA AI	Duluth Airport Runway 21Safety Area Imp	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	4	86

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
3	MPCA AI	New Passanger Terminal BP 2C Civil	4701 Grinden Drive Duluth MN 55811	WNW	0.01 / 46.68	4	87
3	MPCA AI	North Perimeter Road Grading Drainage	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	4	89
3	MPCA AI	Delta Air Lines Global Services (DLH)	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	4	91
3	MPCA AI	Delta Airlines Inc Duluth Ramp	4701 Grinden Rd Duluth MN 55811	WNW	0.01 / 46.68	4	93
3	MPCA AI	Duluth International Airport	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	4	95
3	MPCA AI	Runway 9/27 Reconstruction, Phase 1	Duluth Airport 4701 Grinden Dr. Duluth MN 55811	WNW	0.01 / 46.68	4	97
3	MPCA AI	Duluth Airport Authority	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	4	98
3	MPCA AI	Duluth Airport Runway 9-27 Reconstruction	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	4	100
3	MPCA AI	Sonju Enterprises Inc	4701 Grinden Dr Box 161830 Duluth MN 55816	WNW	0.01 / 46.68	4	102
3	MPCA AI	Krenzen Corporation	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	4	103
3	MPCA AI	2020 Commercial Service Apron Expansion	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	4	105
3	MPCA AI	Overland West Inc	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	4	106
3	MPCA AI	2024 Midfield Ramp Repair Duluth Airport	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	4	108

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
3	MPCA AI	TAXIWAY A RECONSTRUCTION - PHASE 5 IFC AT THE DULUTH INTERNATIONAL AIRPORT (D	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	4	110
3	RCRA VSQG	TSA AT DULUTH INTERNATIONAL AIRPORT	4701 GRINDEN DR DULUTH MN 55811-1578 ***Handler ID*	*Recycler Activity?:*** MNS000105817 | NO	WNW	0.01 / 46.68	4	111
3	RCRA VSQG	DULUTH AIRPORT AUTHORITY	4701 GRINDEN DR DULUTH MN 55811-1578 ***Handler ID*	*Recycler Activity?:*** MNR000023143 | NO	WNW	0.01 / 46.68	4	114
3	SITE ASSESSMENT	Duluth Airport	4701 Grinden Drive Duluth MN	WNW	0.01 / 46.68	4	117
3	SPILLS	NORTHWEST ARILINES	4701 Grinden Dr MN 55811 Duluth MN 55811 ***Incident ID*	*Incident Status:*** 29734 | Closed or Completed	WNW	0.01 / 46.68	4	118
3	SPILLS	DULUTH AIRPORT AUTHORITY	4701 Grinden Dr MN 55811 Duluth MN 55811 ***Incident ID*	*Incident Status:*** 29432 | Closed or Completed	WNW	0.01 / 46.68	4	118
3	SPILLS	NORTHWEST AIRLINES	4701 Grinden Dr MN 55811 Duluth MN 55811 ***Incident ID*	*Incident Status:*** 29747 | Closed or Completed	WNW	0.01 / 46.68	4	119
3	SPILLS	Northwest Airlines	4701 Grinden Dr MN 55811 Duluth MN ***Incident ID*	*Incident Status:*** 58578 | Closed or Completed	WNW	0.01 / 46.68	4	119
3	SPILLS	AIR NATIONAL GUARD FD	4701 Grinden Dr. MN Duluth MN 55812 ***Incident ID*	*Incident Status:*** 30713 | Closed or Completed	WNW	0.01 / 46.68	4	119
3	SPILLS	Minnesota Power Inc-General Office	4701 Grinden Drive Duluth MN 558022191 ***Incident ID*	*Incident Status:*** 194261 | Closed or Completed	WNW	0.01 / 46.68	4	120
3	SPILLS	Duluth International Airport	4701 Grinden Drive Duluth MN 558111578 ***Incident ID*	*Incident Status:*** 204931 | Closed or Completed	WNW	0.01 / 46.68	4	120
3	SPILLS		4701 Grinden Dr Duluth MN ***Incident ID*	*Incident Status:*** 215386 | Closed or Completed	WNW	0.01 / 46.68	4	121

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
3	SWF/LF	DAA ANG Fire Station Phase 3	4701 Grinden Dr Duluth MN 55803	WNW	0.01 / 46.68	4	121
3	UST	Duluth International Airport	4701 Grinden Dr Duluth MN 55811-1578	WNW	0.01 / 46.68	4	121
			***Tank ID	Tank Status:*** 638-EQUI0000000003 | Removed, 638-EQUI0000000005 | Removed, 638-EQUI0000000009 | Removed, 638-EQUI0000000007 | Removed, 638-EQUI0000000014 | , 638-EQUI0000000002 | Removed, 638-EQUI0000000004 | Removed, 638-EQUI0000000016 | Removed, 638-EQUI0000000008 | Removed, 638-EQUI0000000006 | Removed, 638-EQUI0000000010 | Removed, 638-EQUI0000000011 | Removed, 638-EQUI0000000012 | Removed, 638-EQUI0000000015 | Removed, 638-EQUI0000000001 | Removed, 638-EQUI0000000013 |		
3	VIC	Duluth International Airport - Block 3	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	4	130
4	FINDS/FRS	CASE POWER & EQUIPMENT	6501 HAINES RD HERMANTOWN MN 55811	ESE	0.01 / 57.46	1	131
			Registry ID: 110067878513				
5	FINDS/FRS	NORTHWEST AIRLINES INC	4701 AIRPORT DRIVE DULUTH MN 55802	NW	0.01 / 58.86	1	132
			Registry ID: 110001444161				
5	FINDS/FRS	HK ENTERPRISES INC HERTZ SYST	4701 AIRPORT DR DULUTH MN 55811	NW	0.01 / 58.86	1	133
			Registry ID: 110067822547				
5	FINDS/FRS	DELTA GLOBAL SERVICES	4701 AIRPORT DR DULUTH MN 55811	NW	0.01 / 58.86	1	133
			Registry ID: 110069080522				
5	FINDS/FRS	AVIS RENT A CAR	4701 AIRPORT RD DULUTH MN 55811	NW	0.01 / 58.86	1	134
			Registry ID: 110067783857				
5	FINDS/FRS	NORTHWEST STORAGE AREA DULUTH	4701 AIRPORT RD DULUTH MN 55802	NW	0.01 / 58.86	1	134
			Registry ID: 110067914779				
5	HIST LEAKSITES	Avis Rent A Car	4701 Airport Rd Duluth MN 55811	NW	0.01 / 58.86	1	135
			***Complete Site Closure Date	Leaksite Type Desc:*** 06/29/1998 00:00:00 | Leak Site			
5	HIST LEAKSITES	Duluth International Airport Maintenance Garage	4701 Airport Dr Duluth MN 55811	NW	0.01 / 58.86	1	137
			***Complete Site Closure Date	Leaksite Type Desc:*** 09/27/1994 00:00:00 | Leak Site			
5	HIST LEAKSITES	Northwest Storage Area Duluth Iap	4701 Airport Rd Duluth MN 55802	NW	0.01 / 58.86	1	138
			***Complete Site Closure Date	Leaksite Type Desc:*** 08/27/1997 00:00:00 | Leak Site			
5	HIST SPL	NWA	4701 Airport Dr Duluth MN 55811	NW	0.01 / 58.86	1	140

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
			Program Int ID: 180249				
5	LST REM SITE	Avis Rent A Car	4701 Airport Rd Duluth MN 55811	NW	0.01 / 58.86	1	141
5	LST REM SITE	Northwest Storage Area Duluth Iap	4701 Airport Rd Duluth MN 55802	NW	0.01 / 58.86	1	142
5	RCRA NON GEN	DULUTH INTERNATIONAL AIRPORT USAF	DULUTH INTERNATIONAL AIRPORT DULLUTH MN 55811	NW	0.01 / 58.86	1	143
			Handler ID **|** ***Recycler Activity?:*** MN7570024284 | NO				
5	SPILLS	NORTHWEST AIRLINES	4701 Airport Dr MN 55811 Duluth MN	NW	0.01 / 58.86	1	145
			Incident ID **|** ***Incident Status:*** 22557 | Closed or Completed				
5	TRIS	NORTHWEST AIRLINES INC	4701 AIRPORT RD DULUTH MN 55811	NW	0.01 / 58.86	1	145
5	UST	Avis Rent a Car	4701 Airport Rd Duluth MN 55811	NW	0.01 / 58.86	1	146
			Tank ID **|** ***Tank Status:*** 137286-EQUI0000000001 | Removed				
6	MPCA AI	Hallmark Business Connections	4444 Haines Rd Duluth MN 55811	ESE	0.06 / 340.99	4	147
6	RCRA NON GEN	HALLMARK BUSINESS CONNECTIONS	4444 HAINES RD DULUTH MN 55811-1524	ESE	0.06 / 340.99	4	149
			Handler ID **|** ***Recycler Activity?:*** MNR000053025 | NO				
7	MPCA AI	Hallmark Parking Lot Reconstruction	MN	ESE	0.08 / 445.50	3	151
8	PCB	MINNESOTA AIR NAT GUARD148 FIG	BLDG 511 DULUTH INTERNATIONAL AIRPT DULUTH MN 55811-5000 ***Site ID:*** MND000773341	WNW	0.10 / 538.21	22	153
9	MPCA AI	Duluth Airport Terminal Expansion	Address Unknown Duluth MN 55811	W	0.11 / 590.48	14	154
10	MPCA AI	Lloyds Inc	4437 Venture Ave Duluth MN 55811	ESE	0.12 / 643.09	13	155
10	MPCA AI	Rockwell Automation	4439 Venture Ave Duluth MN 55811	ESE	0.12 / 643.09	13	157

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
10	MPCA AI	Rockwell Automation	4439 Venture Ave Duluth MN 55811	ESE	0.12 / 643.09	13	159
10	MPCA AI	Rockwell Automation Inc	4435 Venture Ave Duluth MN 55811	ESE	0.12 / 643.09	13	161
10	RCRA VSQG	ROCKWELL AUTOMATION	4439 VENTURE AVE DULUTH MN 55811	ESE	0.12 / 643.09	13	163
			Handler ID* | *Recycler Activity?: MNS000152421 | NO				
11	MPCA AI	Duluth International Airport Usaf	Duluth International Airport Duluth MN 55811	W	0.13 / 661.55	11	165
11	UST	Duluth International Airport Usaf	Duluth International Airport Duluth MN 55811	W	0.13 / 661.55	11	167
			Tank ID* | *Tank Status: 37342-EQUI0000000001 | Removed				
12	MPCA AI	Christie Printing Co	4433 Venture Ave Duluth MN 55811	ESE	0.15 / 800.10	13	167
12	RCRA VSQG	CHRISTIE PRINTING CO	4433 VENTURE AVE DULUTH MN 55811	ESE	0.15 / 800.10	13	169
			Handler ID* | *Recycler Activity?: MNR000014894 | NO				
13	MPCA AI	Case Power & Equipment	6501 Haines Rd Duluth MN 55811	NNE	0.15 / 801.97	14	172
13	MPCA AI	Airport Autos	5729 Haines Rd Duluth MN 55811	NNE	0.15 / 801.97	14	174
13	RCRA NON GEN	AIRPORT AUTOS	5729 HAINES RD DULUTH MN 55811	NNE	0.15 / 801.97	14	175
			Handler ID* | *Recycler Activity?: MND982619066 | NO				
13	UST	Case Power & Equipment	6501 Haines Rd Duluth MN 55811	NNE	0.15 / 801.97	14	178
			Tank ID* | *Tank Status: 103481-EQUI0000000002 | Removed, 103481-EQUI0000000001 | Removed				
14	PFAS SSEHRI	Duluth Air National Guard Base	Duluth MN	WNW	0.16 / 846.34	35	179
15	MPCA AI	Fastenal	4425 Venture Ave Duluth MN 55811	SE	0.18 / 970.41	2	179

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
15	RCRA VSQG	FASTENAL	4425 VENTURE AVE DULUTH MN 55811-5705	SE	0.18 / 970.41	2	181
			Handler ID* | *Recycler Activity?: MNS000354792 | NO				
16	MPCA AI	Don Leslie Supply Inc	4436 Haines Rd Duluth MN 55811	SE	0.18 / 976.34	-8	183
16	MPCA AI	Swanson & Youngdale Inc - Haines Rd	4426 Haines Rd Duluth MN 55811	SE	0.18 / 976.34	-8	185
16	MPCA AI	Diagnostic Medical Systems	4438 Haines Rd Duluth MN 55811	SE	0.18 / 976.34	-8	187
16	MPCA AI	Cutler-Hammer	4440 Haines Rd Duluth MN 55811	SE	0.18 / 976.34	-8	189
16	RCRA NON GEN	CUTLER-HAMMER	4440 HAINES RD DULUTH MN 55811	SE	0.18 / 976.34	-8	191
			Handler ID* | *Recycler Activity?: MNR000080143 | NO				
16	RCRA NON GEN	DON LESLIE SUPPLY INC	4436 HAINES RD DULUTH MN 55811-1524	SE	0.18 / 976.34	-8	193
			Handler ID* | *Recycler Activity?: MND985716299 | NO				
16	RCRA NON GEN	SWANSON & YOUNGDALE INC - HAINES RD	4426 HAINES RD DULUTH MN 55811	SE	0.18 / 976.34	-8	195
			Handler ID* | *Recycler Activity?: MNR000052886 | NO				
17	MPCA AI	GPM, Inc.	4432 Venture Ave Duluth MN 55811	ESE	0.19 / 1,016.85	23	198
17	RCRA VSQG	GPM INC	4432 VENTURE AVE DULUTH MN 55811-5706	ESE	0.19 / 1,016.85	23	200
			Handler ID* | *Recycler Activity?: MN0000562363 | NO				
18	MPCA AI	Carlson Duluth Company	4415 Venture Ave Duluth MN 55811	SE	0.22 / 1,187.13	-9	204
18	RCRA VSQG	CARLSON DULUTH COMPANY	4415 VENTURE AVE DULUTH MN 55811-5705	SE	0.22 / 1,187.13	-9	206
			Handler ID* | *Recycler Activity?: MND985757095 | NO				
19	MPCA AI	Johnson Controls	4627 Airpark Blvd Duluth MN 55811	SE	0.23 / 1,228.92	-10	208

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
19	MPCA AI	Universal Hospital Services	4625 Airpark Blvd Duluth MN 55811	SE	0.23 / 1,228.92	-10	210
19	RCRA NON GEN	JOHNSON CONTROLS	4627 AIRPARK BLVD DULUTH MN 55811-5750 ***Handler ID* | *Recycler Activity?:*** MNR000021774 | NO	SE	0.23 / 1,228.92	-10	212
20	MPCA AI	1 LLC	4413 Venture Ave Duluth MN 55811	SE	0.24 / 1,262.99	-11	214
21	MPCA AI	UPI Access Road & Airpark B3 L4 developm	4510 Airport Rd Duluth MN 55811	E	0.24 / 1,277.10	19	216
21	MPCA AI	United Piping Inc	4510 Airport Rd Hermantown MN 55811	E	0.24 / 1,277.10	19	218
21	RCRA SQG	UNITED PIPING INC	4510 AIRPORT RD HERMANTOWN MN 55811-1523 ***Handler ID* | *Recycler Activity?:*** MNR000080747 | NO	E	0.24 / 1,277.10	19	219
22	AST	Drywall Supply	4424 Venture Ave Duluth MN 55811 ***Tank ID* | *Tank Status:*** 134996-EQUI0000000001 | Active	ESE	0.24 / 1,279.52	21	223
22	MPCA AI	Drywall Supply	4424 Venture Ave Duluth MN 55811	ESE	0.24 / 1,279.52	21	224
23	MPCA AI	Mellin Promotional	4531 Airpark Blvd Duluth MN 55811	ESE	0.27 / 1,418.47	-2	226
24	MPCA AI	Const & Indust Services Inc	4418 Haines Rd Ste 1500 Duluth MN 55811	SSE	0.29 / 1,516.83	-11	228
24	MPCA AI	Vishay HiRel Systems LLC - Duluth	4418 Haines Rd Duluth MN 55811	SSE	0.29 / 1,516.83	-11	230
24	MPCA AI	Western States Fire Products	4418 Haines Rd Ste 600 Duluth MN 55811	SSE	0.29 / 1,516.83	-11	231
25	MPCA AI	2021 taxiway A reconstruction	Duluth Airport Duluth MN 55811	WNW	0.30 / 1,580.45	41	233

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
26	MPCA AI	North Country Business Prod	4602 Airpark Blvd Duluth MN 55811	SE	0.30 / 1,602.99	-3	235
27	BROWNFIELDS	Airpark Division	4503 Airpark Boulevard Duluth MN 55811	ESE	0.30 / 1,607.34	17	237
27	MPCA AI	Airpark Division	4503 Airpark Boulevard Duluth MN 55811	ESE	0.30 / 1,607.34	17	238
27	MPCA AI	Barr Engineering Co (WDFO)	4503 Airpark Blvd Duluth MN 55811	ESE	0.30 / 1,607.34	17	240
27	VIC	Airpark Division	4503 Airpark Boulevard Duluth MN 55811	ESE	0.30 / 1,607.34	17	241
28	PFAS WATER	Minnesota Pollution Control Agency - Ambient Surface Water	MN ***Monitoring Location Identifier:*** MNPCA-LD00584	WNW	0.32 / 1,670.49	42	243
29	MPCA AI	Spee Dee Delivery Service Inc - Duluth	4408 Haines Rd Duluth MN 55811	SSE	0.43 / 2,262.97	-6	410
30	MPCA AI	UHL Company	4444 Airpark Blvd Duluth MN 55811	ESE	0.43 / 2,277.75	9	412
31	MPCA AI	Lee K Older	4801 Swan Lake Rd Hermantown MN 55811	SW	0.43 / 2,296.12	26	414
31	MPCA AI	LKO Enterprises Inc	4801 Swan Lake Rd Hermantown MN 55811	SW	0.43 / 2,296.12	26	415
32	MPCA AI	Lots 4 & 5, Block 3 of th Airpark	Airpark Blvd. Duluth MN 55811	ESE	0.44 / 2,299.93	5	416
33	MPCA AI	Sears Roebuck & Co 7502	4402 Haines Rd Duluth MN 55811	SSE	0.46 / 2,447.93	-10	418
34	DELISTED TANK	Federal Aviation Administration - Duluth	4525 Airport Approach Rd Duluth MN 55811	W	0.47 / 2,458.94	39	420

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
34	DELISTED TANK	Faa/dlh Rcag	4525 Airport Approach Rd Duluth MN 55811	W	0.47 / 2,458.94	39	421
34	HIST LEAKSITES	Duluth International Airport	4525 Airport Approach Rd Duluth MN 55811	W	0.47 / 2,458.94	39	421
			Complete Site Closure Date* | *Leaksite Type Desc: 12/11/1998 00:00:00 | Leak Site				
34	HIST LEAKSITES	NOAA Station - Duluth Int'l Airport	4525 Airport Approach Rd Duluth MN 55811	W	0.47 / 2,458.94	39	423
			Complete Site Closure Date* | *Leaksite Type Desc: 07/21/1997 00:00:00 | Leak Site				
34	HIST LUST	Old Terminal	4525 Airport Approach Rd Duluth MN 55811	W	0.47 / 2,458.94	39	425
			Complete Site Closure Date* | *Leaksite Type Desc: 03/02/2007 00:00:00 | Leak Site				
34	LST REM SITE	NOAA Station - Duluth Int'l Airport	4525 Airport Approach Rd Duluth MN 55811	W	0.47 / 2,458.94	39	426
34	LST REM SITE	Old Municipal Hanger	4525 Airport Approach Rd Duluth MN 55811	W	0.47 / 2,458.94	39	427
34	LST REM SITE	Duluth International Airport	4525 Airport Approach Rd Duluth MN 55811	W	0.47 / 2,458.94	39	428
34	LST REM SITE	Old Terminal	4525 Airport Approach Rd Duluth MN 55811	W	0.47 / 2,458.94	39	429
34	MPCA AI	National Weather Service Station	4525 Airport Approach Rd Duluth MN 55811	W	0.47 / 2,458.94	39	430
34	MPCA AI	Federal Aviation Administration - Duluth	4525 Airport Approach Rd Duluth MN 55811	W	0.47 / 2,458.94	39	432
34	MPCA AI	Lake Superior Helicopters LLC	4525 Airport Approach Rd Duluth MN 55811	W	0.47 / 2,458.94	39	434
35	MPCA AI	UA Local 11 Duluth Facility - Building Addition	4402 Airpark Blvd Duluth MN 55811	ESE	0.49 / 2,569.56	10	436
36	HIST LEAKSITES	MN Air National Guard Tank #6/Bldg 230	4623 Phantom Dr Duluth MN 55811	NNE	0.49 / 2,573.02	40	438
			Complete Site Closure Date* | *Leaksite Type Desc: 07/30/1996 00:00:00 | Leak Site				

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
37	MPCA AI	United Piping Inc - Hermantown	4785 Swan Lake Rd Hermantown MN 55811	SW	0.49 / 2,575.99	34	439
37	MPCA AI	Swan Lake Road Property	4785 Swan Lake Road Hermantown MN 55811	SW	0.49 / 2,575.99	34	441
38	DEL PLP	DULUTH AIR FORCE BASE OU31-MANG Site 21 TCE Plume	Minnesota Air National Guard Facility Duluth International Airport Duluth MN 55811	NNE	0.62 / 3,283.32	24	443
38	DEL PLP	DULUTH AIR FORCE BASE OU31-MANG Site 21 TCE Plume	See location description Duluth MN	NNE	0.62 / 3,283.32	24	444
39	PLP	DULUTH AIR FORCE BASE OU31-MANG Site 21 TCE Plume	See location description Duluth MN 55811	NNE	0.62 / 3,284.31	24	444
40	DEL PLP	DULUTH AIR FORCE BASE Site 29 - (FUDS)Site 102 TCE	Lots 2 and 3 Block 4 and 5 of the Airport Division Duluth MN 55811	WNW	0.74 / 3,882.90	53	446
41	DEL PLP	DULUTH AIR FORCE BASE Site 2 - MANG fire training	4680 Viper St Duluth MN	NNE	0.78 / 4,118.46	50	447
41	PLP	Duluth Air Force Base OU5	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	50	447
41	PLP	Duluth Air Force Base OU27	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	50	448
41	PLP	Duluth Air Force Base OU12	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	50	449
41	PLP	Duluth Air Force Base OU6	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	50	450
41	PLP	DULUTH AIR FORCE BASE Site 7 - (FUDS) TCE Plume	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	50	451

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
41	PLP	Duluth Air Force Base OU8	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	50	453
41	PLP	Duluth Air Force Base OU9	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	50	454
41	PLP	DULUTH AIR FORCE BASE Site 30 - (FUDS) Former Solve	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	50	455
41	PLP	Duluth Air Force Base OU10	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	50	456
41	PLP	Duluth Air Force Base OU20	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	50	457
41	PLP	Duluth Air Force Base OU23	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	50	458
41	PLP	Duluth Air Force Base OU24	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	50	459
41	PLP	Duluth Air Force Base OU26	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	50	460
41	PLP	DULUTH AIR FORCE BASE OU28 - BUILDING 500, JET FUE	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	50	461
41	PLP	DULUTH AIR FORCE BASE Site 3 - DPDO Storage Area	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	50	462
41	PLP	DULUTH AIR FORCE BASE Site 4 - MANG Tank Farm	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	50	463
41	PLP	DULUTH AIR FORCE BASE OU1	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	50	464

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
41	PLP	DULUTH AIR FORCE BASE Site 29 - (FUDS)Site 102 TCE	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	50	466
41	PLP	DULUTH AIR FORCE BASE Site 2 - MANG fire training	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	50	467
41	RCRA CORRACTS	DULUTH AIR NATIONAL GUARD BASE	4680 VIPER ST DULUTH MN 55811-6005	NNE	0.78 / 4,118.46	50	468
			Handler ID* | *Recycler Activity?: MND000773341 | YES				

Executive Summary: Summary by Data Source

Standard

Federal

RCRA CORRACTS - RCRA CORRACTS-Corrective Action

A search of the RCRA CORRACTS database, dated Nov 30, 2025 has found that there are 1 RCRA CORRACTS site(s) within approximately 1.00miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
DULUTH AIR NATIONAL GUARD BASE	4680 VIPER ST DULUTH MN 55811-6005	NNE	0.78 / 4,118.46	41
	Handler ID* | *Recycler Activity?: *MND000773341* | *YES*			

RCRA SQG - RCRA Small Quantity Generators List

A search of the RCRA SQG database, dated Nov 30, 2025 has found that there are 1 RCRA SQG site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
UNITED PIPING INC	4510 AIRPORT RD HERMANTOWN MN 55811-1523	E	0.24 / 1,277.10	21
	Handler ID* | *Recycler Activity?: *MNR000080747* | *NO*			

RCRA VSQG - RCRA Very Small Quantity Generators List

A search of the RCRA VSQG database, dated Nov 30, 2025 has found that there are 7 RCRA VSQG site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
TSA AT DULUTH INTERNATIONAL AIRPORT	4701 GRINDEN DR DULUTH MN 55811-1578	WNW	0.01 / 46.68	3
	Handler ID* | *Recycler Activity?: *MNS000105817* | *NO*			
DULUTH AIRPORT AUTHORITY	4701 GRINDEN DR DULUTH MN 55811-1578	WNW	0.01 / 46.68	3
	Handler ID* | *Recycler Activity?: *MNR000023143* | *NO*			
ROCKWELL AUTOMATION	4439 VENTURE AVE DULUTH MN 55811	ESE	0.12 / 643.09	10
	Handler ID* | *Recycler Activity?: *MNS000152421* | *NO*			
CHRISTIE PRINTING CO	4433 VENTURE AVE DULUTH MN 55811	ESE	0.15 / 800.10	12
	Handler ID* | *Recycler Activity?: *MNR000014894* | *NO*			
FASTENAL	4425 VENTURE AVE DULUTH MN 55811-5705	SE	0.18 / 970.41	15

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
	Handler ID* | *Recycler Activity?: *MNS000354792* | *NO*			
GPM INC	4432 VENTURE AVE DULUTH MN 55811-5706	ESE	0.19 / 1,016.85	17
	Handler ID* | *Recycler Activity?: *MN0000562363* | *NO*			

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
CARLSON DULUTH COMPANY	4415 VENTURE AVE DULUTH MN 55811-5705	SE	0.22 / 1,187.13	18
	Handler ID* | *Recycler Activity?: *MND985757095* | *NO*			

RCRA NON GEN - RCRA Non-Generators

A search of the RCRA NON GEN database, dated Nov 30, 2025 has found that there are 8 RCRA NON GEN site(s) within approximately 0.25miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
DELTA GLOBAL SERVICES	4701 AIRPORT DR DULUTH MN 55811	ESE	0.01 / 39.31	2
	Handler ID* | *Recycler Activity?: *MNS000217273* | *NO*			
DULUTH INTERNATIONAL AIRPORT USAF	DULUTH INTERNATIONAL AIRPORT DULLUTH MN 55811	NW	0.01 / 58.86	5
	Handler ID* | *Recycler Activity?: *MN7570024284* | *NO*			
HALLMARK BUSINESS CONNECTIONS	4444 HAINES RD DULUTH MN 55811-1524	ESE	0.06 / 340.99	6
	Handler ID* | *Recycler Activity?: *MNR000053025* | *NO*			
AIRPORT AUTOS	5729 HAINES RD DULUTH MN 55811	NNE	0.15 / 801.97	13
	Handler ID* | *Recycler Activity?: *MND982619066* | *NO*			

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
SWANSON & YOUNGDALE INC - HAINES RD	4426 HAINES RD DULUTH MN 55811	SE	0.18 / 976.34	16
	Handler ID* | *Recycler Activity?: *MNR000052886* | *NO*			
DON LESLIE SUPPLY INC	4436 HAINES RD DULUTH MN 55811-1524	SE	0.18 / 976.34	16
	Handler ID* | *Recycler Activity?: *MND985716299* | *NO*			
CUTLER-HAMMER	4440 HAINES RD DULUTH MN 55811	SE	0.18 / 976.34	16
	Handler ID* | *Recycler Activity?: *MNR000080143* | *NO*			
JOHNSON CONTROLS	4627 AIRPARK BLVD DULUTH MN 55811-5750	SE	0.23 / 1,228.92	19
	Handler ID* | *Recycler Activity?: *MNR000021774* | *NO*			

ERNS - Emergency Response Notification System

A search of the ERNS database, dated Feb 8, 2026 has found that there are 4 ERNS site(s) within approximately 0.02miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
	4701 GRINDEN DRIVE DULUTH MN 55811 ***NRC Report No**: 468284*	WNW	0.01 / 46.68	3
	4701 GRINDEN DRIVE GATE 3 DULUTH MN 55811 ***NRC Report No**: 463985*	WNW	0.01 / 46.68	3
	4701 GRINDEN DRIVE GATE NO.3 DULUTH MN 55811 ***NRC Report No**: 471404*	WNW	0.01 / 46.68	3
	4701 GRINDEN DRIVE DULUTH MN 55811 ***NRC Report No**: 488617*	WNW	0.01 / 46.68	3

State

PLP - Minnesota Permanent List of Priorities

A search of the PLP database, dated Feb 26, 2026 has found that there are 20 PLP site(s) within approximately 1.00miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
DULUTH AIR FORCE BASE OU31-MANG Site 21 TCE Plume	See location description Duluth MN 55811	NNE	0.62 / 3,284.31	39
DULUTH AIR FORCE BASE Site 4 - MANG Tank Farm	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	41
Duluth Air Force Base OU26	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	41
DULUTH AIR FORCE BASE OU28 - BUILDING 500, JET FUE	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	41
DULUTH AIR FORCE BASE Site 2 - MANG fire training	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	41
DULUTH AIR FORCE BASE Site 29 - (FUDS)Site 102 TCE	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	41

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
DULUTH AIR FORCE BASE OU1	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	41
Duluth Air Force Base OU5	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	41
Duluth Air Force Base OU27	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	41
Duluth Air Force Base OU12	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	41
Duluth Air Force Base OU6	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	41
DULUTH AIR FORCE BASE Site 7 - (FUDS) TCE Plume	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	41
Duluth Air Force Base OU8	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	41
Duluth Air Force Base OU9	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	41
DULUTH AIR FORCE BASE Site 30 - (FUDS)Former Solve	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	41
Duluth Air Force Base OU10	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	41
Duluth Air Force Base OU20	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	41
Duluth Air Force Base OU23	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	41
Duluth Air Force Base OU24	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	41

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
DULUTH AIR FORCE BASE Site 3 - DPDO Storage Area	4680 Viper St Duluth MN 55811	NNE	0.78 / 4,118.46	41

DEL PLP - Delisted Permanent List of Priorities (PLP)

A search of the DEL PLP database, dated Feb 26, 2026 has found that there are 4 DEL PLP site(s) within approximately 1.00miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
DULUTH AIR FORCE BASE OU31-MANG Site 21 TCE Plume	See location description Duluth MN	NNE	0.62 / 3,283.32	38
DULUTH AIR FORCE BASE OU31-MANG Site 21 TCE Plume	Minnesota Air National Guard Facility Duluth International Airport Duluth MN 55811	NNE	0.62 / 3,283.32	38
DULUTH AIR FORCE BASE Site 29 - (FUDS)Site 102 TCE	Lots 2 and 3 Block 4 and 5 of the Airport Division Duluth MN 55811	WNW	0.74 / 3,882.90	40
DULUTH AIR FORCE BASE Site 2 - MANG fire training	4680 Viper St Duluth MN	NNE	0.78 / 4,118.46	41

SITE ASSESSMENT - MPCA Site Assessment and Emergency Response Sites

A search of the SITE ASSESSMENT database, dated Feb 26, 2026 has found that there are 1 SITE ASSESSMENT site(s) within approximately 0.25miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Duluth Airport	4701 Grinden Drive Duluth MN	WNW	0.01 / 46.68	3

SWF/LF - Permitted Solid Waste Facilities

A search of the SWF/LF database, dated Mar 3, 2026 has found that there are 1 SWF/LF site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
DAA ANG Fire Station Phase 3	4701 Grinden Dr Duluth MN 55803	WNW	0.01 / 46.68	3

HIST LUST - Historical Leaking Underground Storage Tanks

A search of the HIST LUST database, dated Nov 1, 2016 has found that there are 1 HIST LUST site(s) within approximately 0.50miles

of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Old Terminal	4525 Airport Approach Rd Duluth MN 55811	W	0.47 / 2,458.94	34
	***Complete Site Closure Date | Leaksite Type Desc**: 03/02/2007 00:00:00 | Leak Site*			

HIST LEAKSITES - Historical Leak Sites

A search of the HIST LEAKSITES database, dated Nov 1, 2016 has found that there are 7 HIST LEAKSITES site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Duluth International Airport	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	3
	***Complete Site Closure Date | Leaksite Type Desc**: 05/09/1995 00:00:00 | Leak Site*			
Avis Rent A Car	4701 Airport Rd Duluth MN 55811	NW	0.01 / 58.86	5
	***Complete Site Closure Date | Leaksite Type Desc**: 06/29/1998 00:00:00 | Leak Site*			
Duluth International Airport Maintenance Garage	4701 Airport Dr Duluth MN 55811	NW	0.01 / 58.86	5
	***Complete Site Closure Date | Leaksite Type Desc**: 09/27/1994 00:00:00 | Leak Site*			
Northwest Storage Area Duluth Iap	4701 Airport Rd Duluth MN 55802	NW	0.01 / 58.86	5
	***Complete Site Closure Date | Leaksite Type Desc**: 08/27/1997 00:00:00 | Leak Site*			
Duluth International Airport	4525 Airport Approach Rd Duluth MN 55811	W	0.47 / 2,458.94	34
	***Complete Site Closure Date | Leaksite Type Desc**: 12/11/1998 00:00:00 | Leak Site*			
NOAA Station - Duluth Int'l Airport	4525 Airport Approach Rd Duluth MN 55811	W	0.47 / 2,458.94	34
	***Complete Site Closure Date | Leaksite Type Desc**: 07/21/1997 00:00:00 | Leak Site*			
MN Air National Guard Tank #6/Bldg 230	4623 Phantom Dr Duluth MN 55811	NNE	0.49 / 2,573.02	36
	***Complete Site Closure Date | Leaksite Type Desc**: 07/30/1996 00:00:00 | Leak Site*			

LST REM SITE - MPCA Remediation Leak Sites

A search of the LST REM SITE database, dated Feb 26, 2026 has found that there are 10 LST REM SITE site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Duluth International Airport	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	3
Duluth Airport - Former Fueling Station	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	3

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Duluth International Airport Maintenance Garage	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	3
Former Fueling Station	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	3
Avis Rent A Car	4701 Airport Rd Duluth MN 55811	NW	0.01 / 58.86	5
Northwest Storage Area Duluth Iap	4701 Airport Rd Duluth MN 55802	NW	0.01 / 58.86	5
Old Terminal	4525 Airport Approach Rd Duluth MN 55811	W	0.47 / 2,458.94	34
Duluth International Airport	4525 Airport Approach Rd Duluth MN 55811	W	0.47 / 2,458.94	34
Old Municipal Hanger	4525 Airport Approach Rd Duluth MN 55811	W	0.47 / 2,458.94	34
NOAA Station - Duluth Int'l Airport	4525 Airport Approach Rd Duluth MN 55811	W	0.47 / 2,458.94	34

DELISTED LST - Delisted Leaking Storage Tanks

A search of the DELISTED LST database, dated Feb 26, 2026 has found that there are 1 DELISTED LST site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Former Fueling Station	4701 Grinden Dr Duluth MN	WNW	0.01 / 46.68	3

UST - Underground Storage Tanks

A search of the UST database, dated Feb 25, 2026 has found that there are 4 UST site(s) within approximately 0.25miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Duluth International Airport	4701 Grinden Dr Duluth MN 55811-1578	WNW	0.01 / 46.68	3

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
	Tank ID* | *Tank Status: *638-EQUI0000000003 | Removed, 638-EQUI0000000005 | Removed, 638-EQUI0000000009 | Removed, 638-EQUI0000000007 | Removed, 638-EQUI0000000014 | , 638-EQUI0000000002 | Removed, 638-EQUI0000000004 | Removed, 638-EQUI0000000016 | Removed, 638-EQUI0000000008 | Removed, 638-EQUI0000000006 | Removed, 638-EQUI0000000010 | Removed, 638-EQUI0000000011 | Removed, 638-EQUI0000000012 | Removed, 638-EQUI0000000015 | Removed, 638-EQUI0000000001 | Removed, 638-EQUI0000000013 |*			
Avis Rent a Car	4701 Airport Rd Duluth MN 55811	NW	0.01 / 58.86	5
	Tank ID* | *Tank Status: *137286-EQUI0000000001 | Removed*			
Duluth International Airport Usaf	Duluth International Airport Duluth MN 55811	W	0.13 / 661.55	11
	Tank ID* | *Tank Status: *37342-EQUI0000000001 | Removed*			
Case Power & Equipment	6501 Haines Rd Duluth MN 55811	NNE	0.15 / 801.97	13
	Tank ID* | *Tank Status: *103481-EQUI0000000002 | Removed, 103481-EQUI0000000001 | Removed*			

AST - Minnesota Above Ground Storage Tanks

A search of the AST database, dated Feb 23, 2026 has found that there are 2 AST site(s) within approximately 0.25miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Delta Airlines Inc Duluth Ramp	4701 Grinden Rd Duluth MN 55811	WNW	0.01 / 46.68	3
	Tank ID* | *Tank Status: *130799-EQUI0000000001 | Active, 130799-EQUI0000000002 | Active*			
Drywall Supply	4424 Venture Ave Duluth MN 55811	ESE	0.24 / 1,279.52	22
	Tank ID* | *Tank Status: *134996-EQUI0000000001 | Active*			

DELISTED TANK - Delisted Storage Tanks

A search of the DELISTED TANK database, dated Feb 26, 2026 has found that there are 3 DELISTED TANK site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Duluth International Airport	4701 Grinden Dr Duluth MN 55811-1578	WNW	0.01 / 46.68	3
Faa/dlh Rcag	4525 Airport Approach Rd Duluth MN 55811	W	0.47 / 2,458.94	34
Federal Aviation Administration - Duluth	4525 Airport Approach Rd Duluth MN 55811	W	0.47 / 2,458.94	34

BROWNFIELDS - Petroleum Brownfields Program Sites

A search of the BROWNFIELDS database, dated Feb 26, 2026 has found that there are 2 BROWNFIELDS site(s) within approximately

0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Duluth International Airport - Block 3	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	3
Airpark Division	4503 Airpark Boulevard Duluth MN 55811	ESE	0.30 / 1,607.34	27

VIC - Voluntary Investigation and Cleanup Program List

A search of the VIC database, dated Feb 26, 2026 has found that there are 2 VIC site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Duluth International Airport - Block 3	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	3
Airpark Division	4503 Airpark Boulevard Duluth MN 55811	ESE	0.30 / 1,607.34	27

MPCA AI - MPCA Agency Interests

A search of the MPCA AI database, dated Jan 27, 2026 has found that there are 61 MPCA AI site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Sonju Enterprises Inc	4701 Grinden Dr Box 161830 Duluth MN 55816	WNW	0.01 / 46.68	3
Krenzen Corporation	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	3
2020 Commercial Service Apron Expansion	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	3
Overland West Inc	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	3
2024 Midfield Ramp Repair Duluth Airport	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	3
TAXIWAY A RECONSTRUCTION - PHASE 5 IFC AT THE DULUTH	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	3

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
INTERNATIONAL AIRPORT (D				
DAA ANG Fire Station Phase 3	4701 Grinden Dr Duluth MN 55803	WNW	0.01 / 46.68	3
TSA at Duluth International Airport	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	3
Duluth Airport Runway 21Safety Area Imp	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	3
New Passanger Terminal BP 2C Civil	4701 Grinden Drive Duluth MN 55811	WNW	0.01 / 46.68	3
North Perimeter Road Grading Drainage	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	3
Delta Air Lines Global Services (DLH)	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	3
Delta Airlines Inc Duluth Ramp	4701 Grinden Rd Duluth MN 55811	WNW	0.01 / 46.68	3
Duluth International Airport	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	3
Runway 9/27 Reconstruction, Phase 1	Duluth Airport 4701 Grinden Dr. Duluth MN 55811	WNW	0.01 / 46.68	3
Duluth Airport Authority	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	3
Duluth Airport Runway 9-27 Reconstruction	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	3
Hallmark Business Connections	4444 Haines Rd Duluth MN 55811	ESE	0.06 / 340.99	6

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Hallmark Parking Lot Reconstruction	MN	ESE	0.08 / 445.50	7
Duluth Airport Terminal Expansion	Address Unknown Duluth MN 55811	W	0.11 / 590.48	9
Lloyds Inc	4437 Venture Ave Duluth MN 55811	ESE	0.12 / 643.09	10
Rockwell Automation	4439 Venture Ave Duluth MN 55811	ESE	0.12 / 643.09	10
Rockwell Automation	4439 Venture Ave Duluth MN 55811	ESE	0.12 / 643.09	10
Rockwell Automation Inc	4435 Venture Ave Duluth MN 55811	ESE	0.12 / 643.09	10
Duluth International Airport Usaf	Duluth International Airport Duluth MN 55811	W	0.13 / 661.55	11
Christie Printing Co	4433 Venture Ave Duluth MN 55811	ESE	0.15 / 800.10	12
Airport Autos	5729 Haines Rd Duluth MN 55811	NNE	0.15 / 801.97	13
Case Power & Equipment	6501 Haines Rd Duluth MN 55811	NNE	0.15 / 801.97	13
Fastenal	4425 Venture Ave Duluth MN 55811	SE	0.18 / 970.41	15
GPM, Inc.	4432 Venture Ave Duluth MN 55811	ESE	0.19 / 1,016.85	17
UPI Access Road & Airpark B3 L4 developm	4510 Airport Rd Duluth MN 55811	E	0.24 / 1,277.10	21

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
United Piping Inc	4510 Airport Rd Hermantown MN 55811	E	0.24 / 1,277.10	21
Drywall Supply	4424 Venture Ave Duluth MN 55811	ESE	0.24 / 1,279.52	22
2021 taxiway A reconstruction	Duluth Airport Duluth MN 55811	WNW	0.30 / 1,580.45	25
Airpark Division	4503 Airpark Boulevard Duluth MN 55811	ESE	0.30 / 1,607.34	27
Barr Engineering Co (WDFO)	4503 Airpark Blvd Duluth MN 55811	ESE	0.30 / 1,607.34	27
UHL Company	4444 Airpark Blvd Duluth MN 55811	ESE	0.43 / 2,277.75	30
Lee K Older	4801 Swan Lake Rd Hermantown MN 55811	SW	0.43 / 2,296.12	31
LKO Enterprises Inc	4801 Swan Lake Rd Hermantown MN 55811	SW	0.43 / 2,296.12	31
Lots 4 & 5, Block 3 of th Airpark	Airpark Blvd. Duluth MN 55811	ESE	0.44 / 2,299.93	32
National Weather Service Station	4525 Airport Approach Rd Duluth MN 55811	W	0.47 / 2,458.94	34
Federal Aviation Administration - Duluth	4525 Airport Approach Rd Duluth MN 55811	W	0.47 / 2,458.94	34
Lake Superior Helicopters LLC	4525 Airport Approach Rd Duluth MN 55811	W	0.47 / 2,458.94	34
UA Local 11 Duluth Facility - Building Addition	4402 Airpark Blvd Duluth MN 55811	ESE	0.49 / 2,569.56	35

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
United Piping Inc - Hermantown	4785 Swan Lake Rd Hermantown MN 55811	SW	0.49 / 2,575.99	37
Swan Lake Road Property	4785 Swan Lake Road Hermantown MN 55811	SW	0.49 / 2,575.99	37

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
Don Leslie Supply Inc	4436 Haines Rd Duluth MN 55811	SE	0.18 / 976.34	16
Swanson & Youngdale Inc - Haines Rd	4426 Haines Rd Duluth MN 55811	SE	0.18 / 976.34	16
Diagnostic Medical Systems	4438 Haines Rd Duluth MN 55811	SE	0.18 / 976.34	16
Cutler-Hammer	4440 Haines Rd Duluth MN 55811	SE	0.18 / 976.34	16
Carlson Duluth Company	4415 Venture Ave Duluth MN 55811	SE	0.22 / 1,187.13	18
Johnson Controls	4627 Airpark Blvd Duluth MN 55811	SE	0.23 / 1,228.92	19
Universal Hospital Services	4625 Airpark Blvd Duluth MN 55811	SE	0.23 / 1,228.92	19
1 LLC	4413 Venture Ave Duluth MN 55811	SE	0.24 / 1,262.99	20
Mellin Promotional	4531 Airpark Blvd Duluth MN 55811	ESE	0.27 / 1,418.47	23
Western States Fire Products	4418 Haines Rd Ste 600 Duluth MN 55811	SSE	0.29 / 1,516.83	24
Const & Indust Services Inc	4418 Haines Rd Ste 1500 Duluth MN 55811	SSE	0.29 / 1,516.83	24

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
Vishay HiRel Systems LLC - Duluth	4418 Haines Rd Duluth MN 55811	SSE	0.29 / 1,516.83	24
North Country Business Prod	4602 Airpark Blvd Duluth MN 55811	SE	0.30 / 1,602.99	26
Spee Dee Delivery Service Inc - Duluth	4408 Haines Rd Duluth MN 55811	SSE	0.43 / 2,262.97	29
Sears Roebuck & Co 7502	4402 Haines Rd Duluth MN 55811	SSE	0.46 / 2,447.93	33

Non Standard

Federal

FINDS/FRS - Facility Registry Service/Facility Index

A search of the FINDS/FRS database, dated Jan 1, 2026 has found that there are 19 FINDS/FRS site(s) within approximately 0.02miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
DELTA AIR LINES GLOBAL SERVIC	4701 GRINDEN DR DULUTH MN 55811 ***Registry ID**: 110069151358*	WNW	0.01 / 46.68	3
DULUTH AIRPORT RUNWAY 21SAFET	4701 GRINDEN DR HERMANTOWN MN 55811 ***Registry ID**: 110068202233*	WNW	0.01 / 46.68	3
TAXIWAY A RECONSTRUCTION - PH	4701 GRINDEN DR DULUTH MN 55811-1578 ***Registry ID**: 110071991027*	WNW	0.01 / 46.68	3
2024 MIDFIELD RAMP REPAIR DUL	4701 GRINDEN DR DULUTH MN 55811-1578 ***Registry ID**: 110071851503*	WNW	0.01 / 46.68	3
2020 COMMERCIAL SERVICE APRON	4701 GRINDEN DR DULUTH MN 55811-1578 ***Registry ID**: 110071496659*	WNW	0.01 / 46.68	3
OVERLAND WEST INC	4701 GRINDEN DR DULUTH MN 55811 ***Registry ID**: 110071496157*	WNW	0.01 / 46.68	3

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
SONJU ENTERPRISES INC	4701 GRINDEN DR BOX 161830 DULUTH MN 55816 ***Registry ID**: 110071475201*	WNW	0.01 / 46.68	3
KRENZEN CORPORATION	4701 GRINDEN DR DULUTH MN 55811 ***Registry ID**: 110071476644*	WNW	0.01 / 46.68	3
DELTA AIRLINES INC DULUTH RAMP	4701 GRINDEN RD HERMANTOWN MN 55811 ***Registry ID**: 110067981447*	WNW	0.01 / 46.68	3
NORTH PERIMETER ROAD GRADING	4701 GRINDEN DR HERMANTOWN MN 55811 ***Registry ID**: 110069111160*	WNW	0.01 / 46.68	3
DULUTH INTERNATIONAL AIRPORT (DAA)	4701 GRINDEN DR DULUTH MN 55811 ***Registry ID**: 110008799979*	WNW	0.01 / 46.68	3
NEW PASSANGER TERMINAL BP 2C	4701 GRINDEN DRIVE DULUTH MN 55811 ***Registry ID**: 110067735008*	WNW	0.01 / 46.68	3
DAA ANG FIRE STATION PHASE 3	4701 GRINDEN DR GNESEN TOWNSHIP MN 55803 ***Registry ID**: 110068699493*	WNW	0.01 / 46.68	3
CASE POWER & EQUIPMENT	6501 HAINES RD HERMANTOWN MN 55811 ***Registry ID**: 110067878513*	ESE	0.01 / 57.46	4
NORTHWEST STORAGE AREA DULUTH	4701 AIRPORT RD DULUTH MN 55802 ***Registry ID**: 110067914779*	NW	0.01 / 58.86	5
AVIS RENT A CAR	4701 AIRPORT RD DULUTH MN 55811 ***Registry ID**: 110067783857*	NW	0.01 / 58.86	5
NORTHWEST AIRLINES INC	4701 AIRPORT DRIVE DULUTH MN 55802 ***Registry ID**: 110001444161*	NW	0.01 / 58.86	5
HK ENTERPRISES INC HERTZ SYST	4701 AIRPORT DR DULUTH MN 55811 ***Registry ID**: 110067822547*	NW	0.01 / 58.86	5
DELTA GLOBAL SERVICES	4701 AIRPORT DR DULUTH MN 55811 ***Registry ID**: 110069080522*	NW	0.01 / 58.86	5

TRIS - Toxics Release Inventory (TRI) Program

A search of the TRIS database, dated Sep 20, 2023 has found that there are 1 TRIS site(s) within approximately 0.02miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
NORTHWEST AIRLINES INC	4701 AIRPORT RD DULUTH MN 55811	NW	0.01 / 58.86	5

PFAS SSEHRI - SSEHRI PFAS Contamination Sites

A search of the PFAS SSEHRI database, dated Aug 1, 2025 has found that there are 1 PFAS SSEHRI site(s) within approximately 0.50 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Duluth Air National Guard Base	Duluth MN	WNW	0.16 / 846.34	14

PFAS WATER - PFAS Water Quality Portal Sampling Data

A search of the PFAS WATER database, dated Feb 2, 2026 has found that there are 1 PFAS WATER site(s) within approximately 0.50 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Minnesota Pollution Control Agency - Ambient Surface Water	MN ***Monitoring Location Identifier**: MNPCA-LD00584*	WNW	0.32 / 1,670.49	28

ICIS - Integrated Compliance Information System (ICIS)

A search of the ICIS database, dated Oct 18, 2025 has found that there are 1 ICIS site(s) within approximately 0.02miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
DULUTH INTERNATIONAL AIRPORT (DAA)	4701 GRINDEN DR DULUTH MN 55811 ***Registry ID**: 110008799979*	WNW	0.01 / 46.68	3

FUDS - Formerly Used Defense Sites

A search of the FUDS database, dated May 15, 2023 has found that there are 1 FUDS site(s) within approximately 1.00miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
DULUTH INTERNATIONAL AIRPORT	DULUTH MN ***FUDS Property No**: E05MN0033*	SE	0.00 / 0.00	1

AFS - Air Facility System

A search of the AFS database, dated Oct 17, 2014 has found that there are 1 AFS site(s) within approximately 0.02miles of the project

property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
DULUTH INTERNATIONAL AIRPORT (DAA)	4701 GRINDEN DR DULUTH MN 55811	WNW	0.01 / 46.68	3

PCB - Polychlorinated Biphenyl (PCB) Notifiers

A search of the PCB database, dated Aug 12, 2025 has found that there are 1 PCB site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
MINNESOTA AIR NAT GUARD148 FIG	BLDG 511 DULUTH INTERNATIONAL AIRPT DULUTH MN 55811-5000 ***Site ID**: MND000773341*	WNW	0.10 / 538.21	8

State

SPILLS - Spills reported to the Pollution Control Agency

A search of the SPILLS database, dated Feb 23, 2026 has found that there are 9 SPILLS site(s) within approximately 0.12miles of the project property.

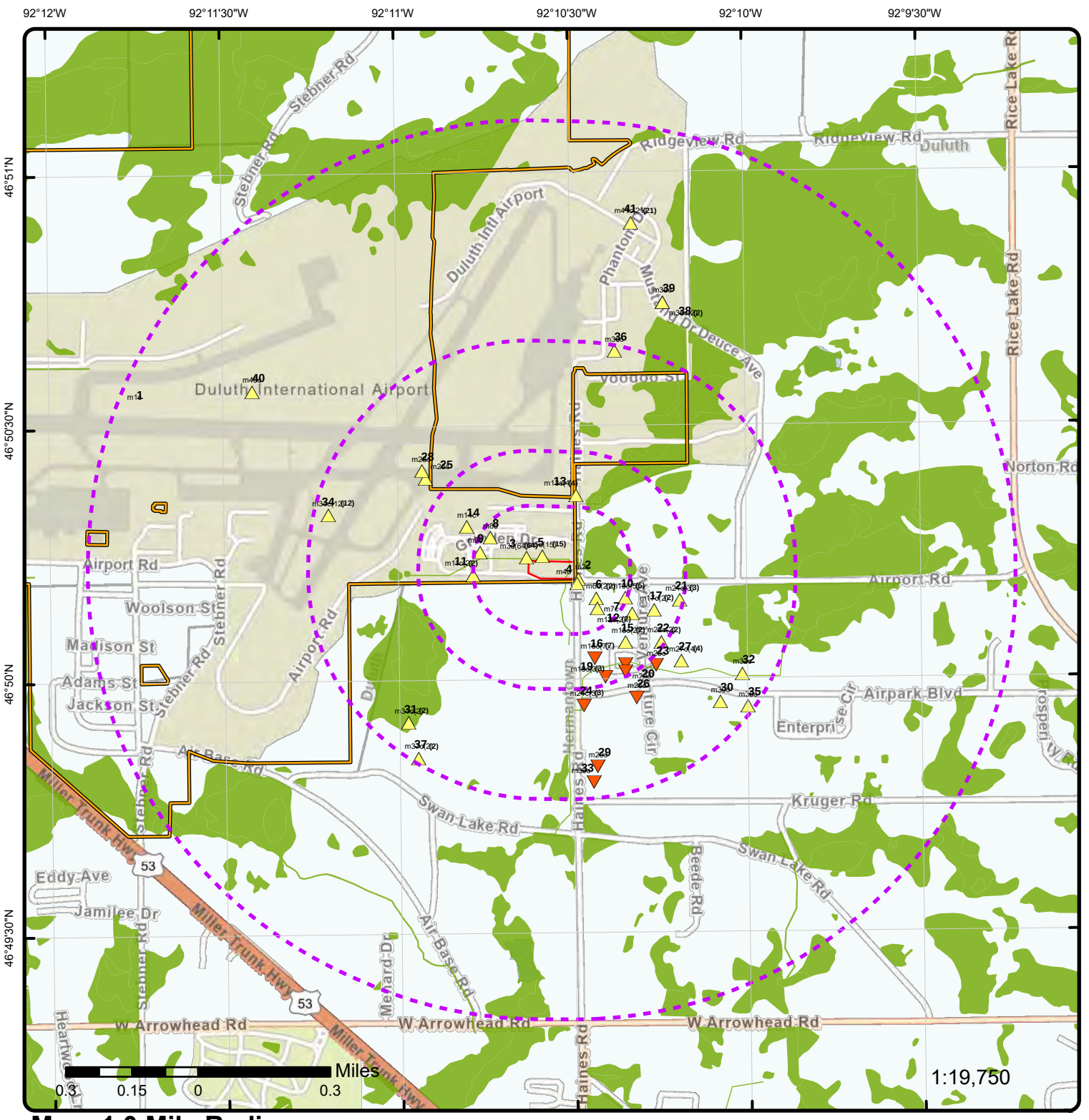
Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
AIR NATIONAL GUARD FD	4701 Grinden Dr. MN Duluth MN 55812	WNW	0.01 / 46.68	3
	***Incident ID* | *Incident Status**: 30713	Closed or Completed*		
Northwest Airlines	4701 Grinden Dr MN 55811 Duluth MN	WNW	0.01 / 46.68	3
	***Incident ID* | *Incident Status**: 58578	Closed or Completed*		
NORTHWEST AIRLINES	4701 Grinden Dr MN 55811 Duluth MN 55811	WNW	0.01 / 46.68	3
	***Incident ID* | *Incident Status**: 29747	Closed or Completed*		
DULUTH AIRPORT AUTHORITY	4701 Grinden Dr MN 55811 Duluth MN 55811	WNW	0.01 / 46.68	3
	***Incident ID* | *Incident Status**: 29432	Closed or Completed*		
NORTHWEST ARILINES	4701 Grinden Dr MN 55811 Duluth MN 55811	WNW	0.01 / 46.68	3
	***Incident ID* | *Incident Status**: 29734	Closed or Completed*		
Minnesota Power Inc- General Office	4701 Grinden Drive Duluth MN 558022191	WNW	0.01 / 46.68	3
	***Incident ID* | *Incident Status**: 194261	Closed or Completed*		
	4701 Grinden Dr Duluth MN	WNW	0.01 / 46.68	3
	***Incident ID* | *Incident Status**: 215386	Closed or Completed*		

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Duluth International Airport	4701 Grinden Drive Duluth MN 558111578	WNW	0.01 / 46.68	3
	Incident ID* | *Incident Status: *204931* | *Closed or Completed*			
NORTHWEST AIRLINES	4701 Airport Dr MN 55811 Duluth MN	NW	0.01 / 58.86	5
	Incident ID* | *Incident Status: *22557* | *Closed or Completed*			

HIST SPL - Historic spills reported to the Pollution Control Agency

A search of the HIST SPL database, dated Nov 1, 2016 has found that there are 6 HIST SPL site(s) within approximately 0.12miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
DULUTH INTERNATIONAL AIRPORT	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	3
	Program Int ID: *188492*			
NWA	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	3
	Program Int ID: *186795*			
Northwest Airlines	4701 Grinden Dr. Duluth MN	WNW	0.01 / 46.68	3
	Program Int ID: *187716*			
AIRPORT	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	3
	Program Int ID: *186807*			
Northwest Airlines - Duluth Intl Airport - ramp	4701 Grinden Dr Duluth MN 55811	WNW	0.01 / 46.68	3
	Program Int ID: *259244*			
NWA	4701 Airport Dr Duluth MN 55811	NW	0.01 / 58.86	5
	Program Int ID: *180249*			



Map: 1.0 Mile Radius

Order Number: 26040200815

Address: Southeast Parcel, Duluth, MN

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

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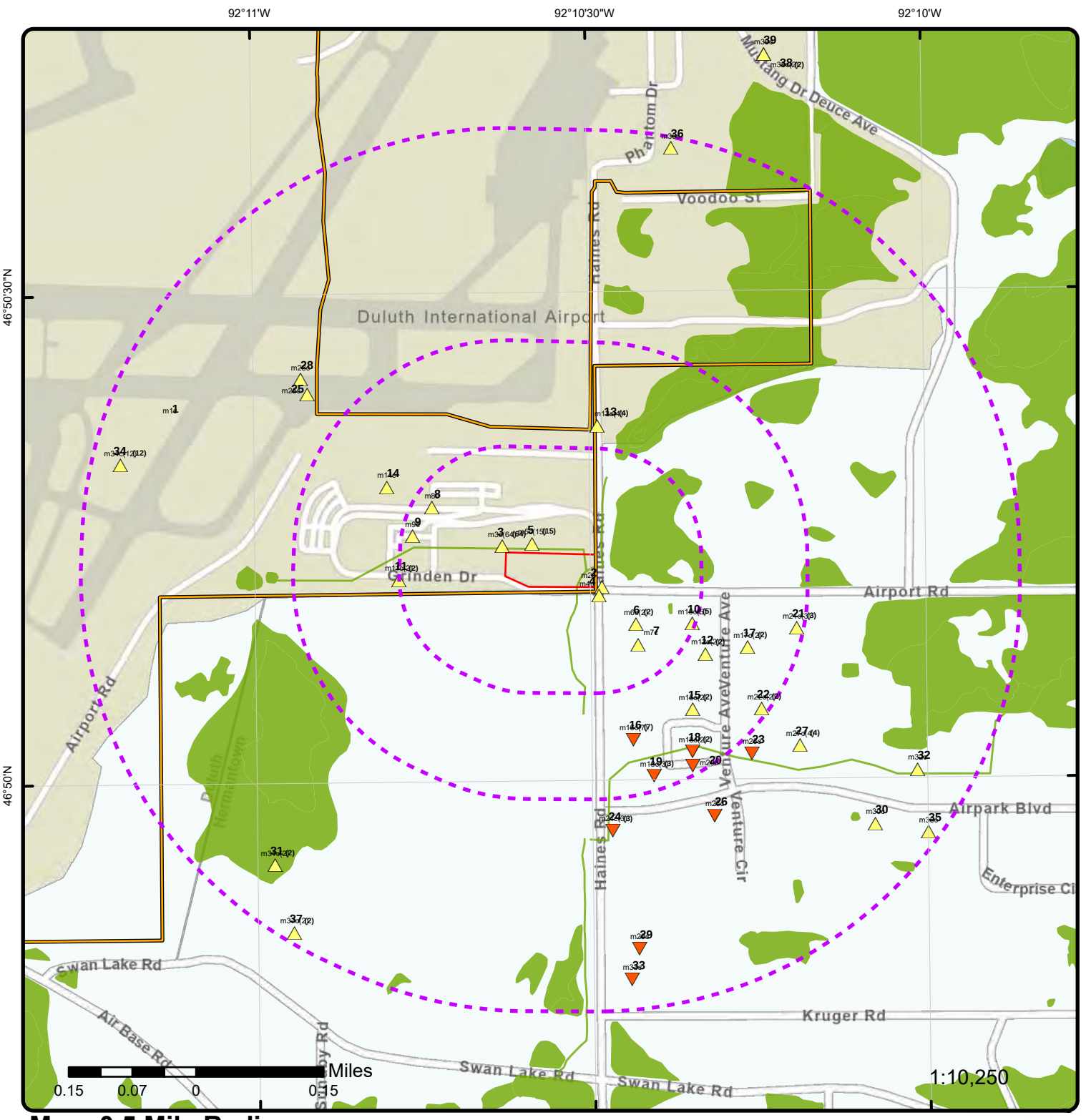

Map: 0.5 Mile Radius

Order Number: 26040200815

Address: Southeast Parcel, Duluth, MN

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

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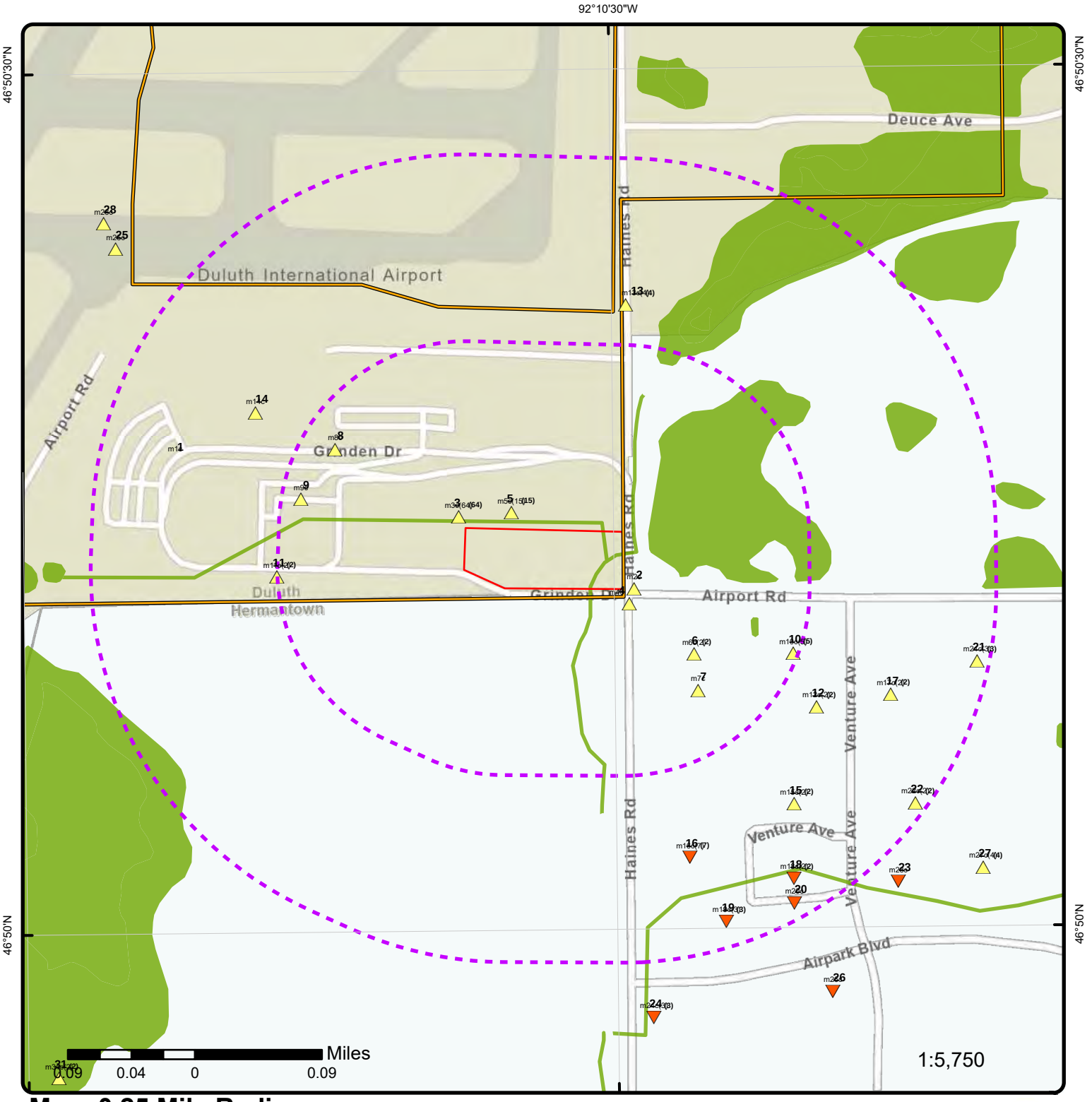

Map: 0.25 Mile Radius

Order Number: 26040200815

Address: Southeast Parcel, Duluth, MN

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

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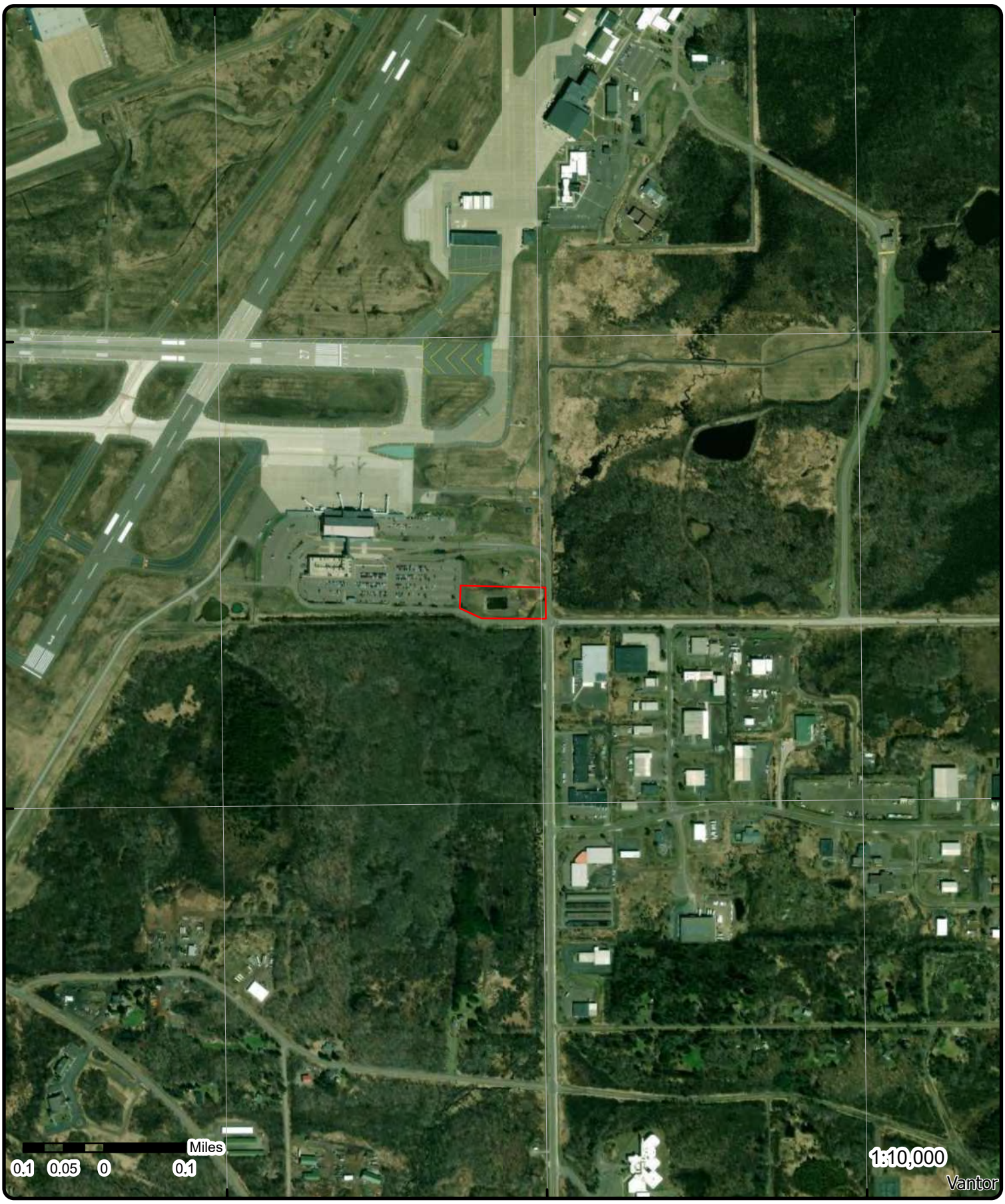

Aerial **Year: 2025**

Address: Southeast Parcel, Duluth, MN

Source: ESRI World Imagery

Order Number: 26040200815

ERIS

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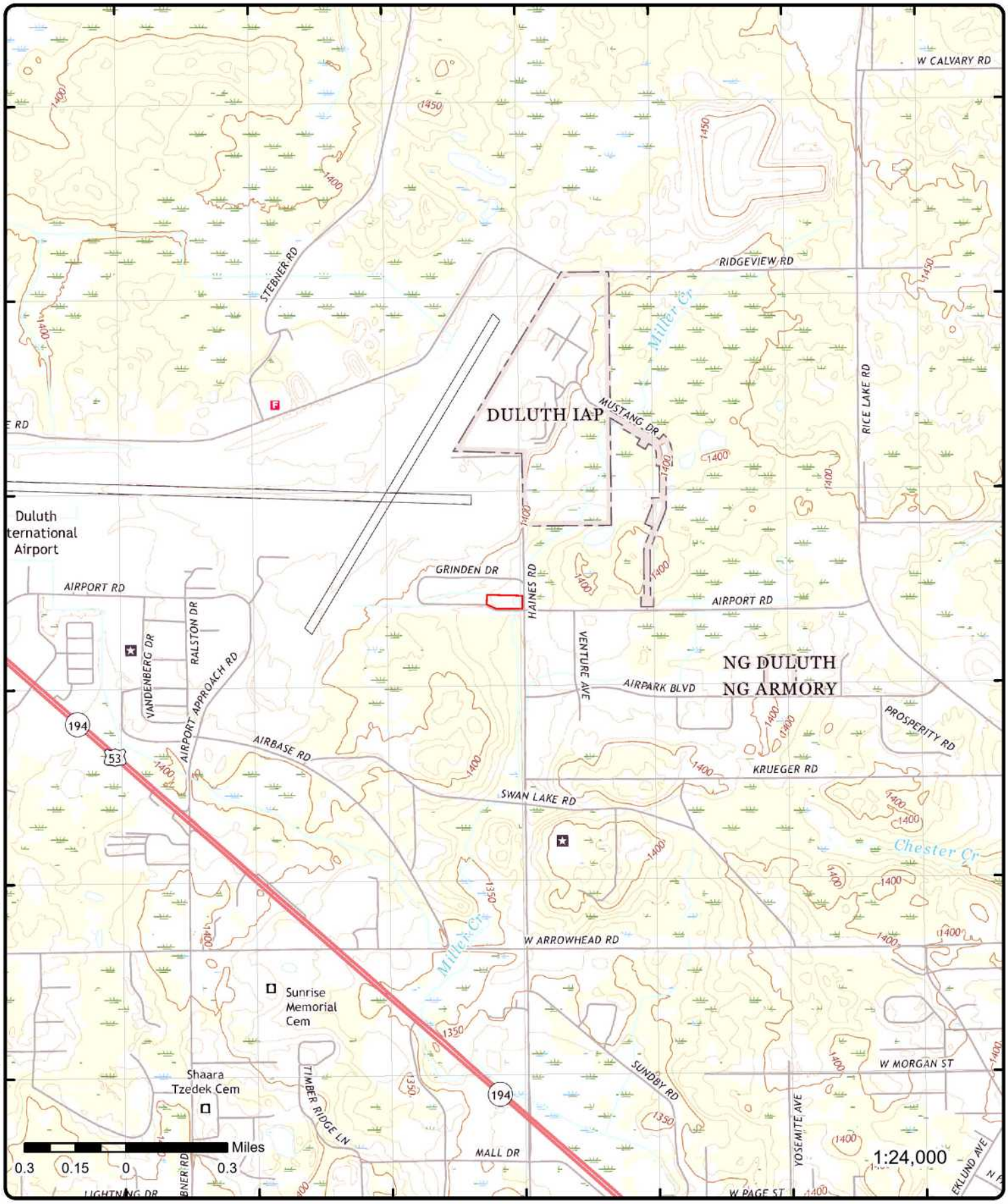

Topographic Map

Year: 2022

Order Number: 26040200815

Address: Southeast Parcel, MN

Quadrangle(s): Duluth Heights MN

Source: USGS Topographic Map

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Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	1 of 1	SE	0.00 / 0.00	1,371.37 / 0	DULUTH INTERNATIONAL AIRPORT DULUTH MN	FUDS

FUDS Property No: E05MN0033
EMS Map Link: https://fudsportal.usace.army.mil/ems/inventory/map?id=55056
FUDS INST ID: MN59799F237400
Status: Properties with projects
SDS ID:
NPL Status Code: Not Listed
Eligibility: Eligible
Site Eligib: Eligible
Current Owner: Local Government
Has Project: Yes
DOD FUDS Pro:
Project Required:
No Further Action:
Congressional District: 08
Congressional Dist 117: 08
Media ID:
Metadata ID:
Feature Desc:
EPA Region: 05
County: ST LOUIS
Latitude: 46.84194444
Longitude: -92.19361111
Fiscal year: 2020
USACE Division: nwd
USACE District: nwo
Centroid Lat:
Centroid Long:
Se Anno Cad Data:
Shape Length: 0.274871256485517
Shape Area: 0.00096364444575224
Shape Len: .27487126
X:
Y:
Data Source: U.S. Army Corps of Engineers Geospatial Open Data
Feature Description:

The former Duluth Air Force Base was established in the early 1950's during the Korean War era. The site closed in 1982. Some of the major functions of the base included the operation and maintenance of Bomarc anti-aircraft missiles, Goose Decoy missiles, fighter aircraft, interceptors, and SAFE radar/communications. The base served to support the Duluth Missile Site near the French River, Minnesota, and the Finland Air Force Radar Station in Finland, Minnesota. The property was conveyed to the City, the Airport Authority, and to the National Guard. It is being used as an airport, for commercial and industrial purposes, and for National Guard training. Tanks, petroleum and building demolition are the subjects of the FUDS Program involvement.

Property History:

The former Duluth Air Force Base was established in the early 1950's during the Korean War era. The site closed in 1982. Some of the major functions of the base included the operation and maintenance of Bomarc anti-aircraft missiles, Goose Decoy missiles, fighter aircraft, interceptors, and SAFE radar/communications. The base served to support the Duluth Missile Site near the French River, Minnesota, and the Finland Air Force Radar Station in Finland, Minnesota. The property was conveyed to the City, the Airport Authority, and to the National Guard. It is being used as an airport, for commercial and industrial purposes, and for National Guard training. Tanks, petroleum and building demolition are the subjects of the FUDS Program involvement.

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	1 of1	ESE	0.01 / 39.31	1,371.85 / 1	DELTA GLOBAL SERVICES 4701 AIRPORT DR DULUTH MN 55811	RCRA NON GEN

Handler ID: MNS000217273
Generator Status: N
Recycler Activity?: NO
Recycler Activity Note: This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note: NO RECORDS: As of Nov 2025, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer:	No	**Used Oil Transpor:**	No
Mixed Waste Gen:	No	**Used Oil Trans Fac:**	No
Transporter:	No	**Used Oil Processor:**	No
Transfer Facility:	No	**Used Oil Refiner:**	No
Recycler:	No	**Used Oil Burner:**	No
Onsite Burner Exem:	No	**Commercial TSD:**	No
Furnace Exemption:	No	**Recycl Nonstorage:**	No
Underground Injec:	No		

Used Oil Market Burner: No
Used Oil Spec Marketer: No

Additional Handler Summary Details

Source Type:	I	**NAIC 1:**	
Seq No:	100	**NAIC 2:**	
Non Notifier:		**NAIC 3:**	
Receive Date:	20251014	**NAIC 4:**	
Active Site:	-----	**State:**	MN
Land Type:		**Location Latitude:**	46.836632
In Handler Univ:	N	**Location Longitude:**	-92.174715
In A Universe:	N	**Loc GIS Primary:**	N
Gen Status:	N	**Loc GIS Origin:**	AG
Report Cycle:		**State District Owner:**	
Accessibility:		**State District:**	
Region:	05		

Fed Waste Gen Owner: HQ
State Waste Generator Owner: MN
State Waste Generator: 4
Short Term Generator: N
Uni Waste: N
Universal Waste Dest Facility: N
Federal Universal Waste: N
As Federally Regulated Tsdf: ------
As Converter Tsdf: ------
As State Regulated Tsdf: ------
As State Regulated Handler: ---
Federal Indicator: ---
Hsm: N
Subpart K: ----
GPRA Permit: N
GPRA Renewal: N
Permit Renewal Wrkld: ------
Permwrk ID: ------
Perm Prog: ------
Pcwrkld: ------
Closwrkld: ------
GPRA Ca: N
Cawrkld: N
Subjca Tsd Discretion: N

NCAPS:	N
EC Indicator:	N
Ca725 Indicator:	N
Ca750 Indicator:	N
Operating Tsdf:	------
Full Enforcement:	------
Snc:	N
Unaddressed Snc:	N
Addressed Snc:	N
Snc With Comp Sched:	N
Fa Required:	-----
Hhandler Last Change:	20251017
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	EN
Handler Name:	DELTA GLOBAL SERVICES
Location Street No:	
Location Street1:	4701 AIRPORT DR
Location Street2:	
Location City:	DULUTH
Location State:	MN
Location Zip:	55811
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	
Contact Name:	RYAN FROELICH
Contact Street No:	
Contact Street1:	4701 GRINDEN DRIVE
Contact Street2:	
Contact City:	DULUTH
Contact State:	MN
Contact Zip:	55811
Contact Country:	
Contact Phone & Ext:	218-726-4040
Contact Fax:	
Contact Email Address:	RYAN.FROELICH@DELTA.COM
Contact Title:	
Owner Name:	
Owner Type:	
Owner Seq:	
Operator Name:	
Operator Type:	
Operator Seq:	
Public Notes:	

Sequence Number 100 is associated with a batch data load by MPCA on 10/17/2025

Hazardous Waste Handler Details

Seq No:	53
Receive Date:	20231218
Handler Name:	DELTA GLOBAL SERVICES
Fed Waste Generator:	3
Generator Code Description:	Very Small Quantity Generator
Source Type:	Implementer
TSD Activity:	N

Hazardous Waste Handler Details

Seq No:	100
Receive Date:	20251014
Handler Name:	DELTA GLOBAL SERVICES

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Fed Waste Generator: N
Generator Code Description: Not a Generator, Verified
Source Type: Implementer
TSD Activity: N

Historical Handler Details

Receive Dt: 20231218
Generator Code Description: Very Small Quantity Generator
Handler Name: DELTA GLOBAL SERVICES

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	1 of64	WNW	0.01 / 46.68	1,375.08 / 4	DULUTH INTERNATIONAL AIRPORT (DAA) 4701 GRINDEN DR DULUTH MN 55811	AFS

Afs ID: 2713700074
Plant ID: 1031237
Epa Region: 05
Plant County: Saint Louis
State No: 27
Primary Sic Code: 4581
Secondary Sic Code:
Naics Code: 488111
Afs Gov Facility Des: PRIVATELY OWNED/OPERATED
Operating Status Def: Operating
Epa Classification Des: Potential uncontrolled emissions <100 tons/year
Epa Compliance Status: In Compliance - Inspection
State Compliance Status: In Compliance - Inspection

Fed Reportable: No
Current Hpv:
Loc Contrl Region:
Afs Gov Fac Code: 0
Operating Status: O
Epa Class Code: B
Epa Complian Stat: 3
State Comp Status: 3

Actions

Plant ID: 1031237
Anu1: 1
Date Achieved: 20041005
Penalty Amount: 0
Record Updated Dt: 20050207
Creation Date:
Key Action No:
Regional Data Element:
National Action Desc: STATE NOV ISSUED
All Air Program Def: 0-SIP Source
Result Def:
Pollutant Def:
All Violating Poll Def:
All Violation Type Def:

National Actn Type: 7C
All Air Prog Codes: 0
Result Code:
Pollutant Code:
Violating Poll Cds:
Violation Type Cds:

Historical Compliance - Air Program Level

Air Program Code: 0
Air Program Code Ref: SIP Source
Historical Compliance Date: 0604, 0701, 0702, 0703, 0704, 0801, 0802, 0803, 0804, 0901, 0902, 0903, 0904, 1001, 1002, 1003, 1004, 1101, 1102, 1103, 1104, 1201, 1202, 1203, 1204, 1301, 1302, 1303, 1304, 1401, 1402, 1403
Historical Compliance Status: 3
Historical Compliance Stat Ref: In Compliance - Inspection

Air Program

Plant ID: 1031237
Air Program Code: 0
Air Program Status: O
Pollutant Code: OT
Chemical Abstract Service

Poll Classificatn: B
Poll Compli Status: 3
Epa Class Code: B
Epa Compli Status: 3

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Nmbr:
Air Program Code Subparts:
Air Program Code Ref: SIP Source
Epa Classification Code Ref: Potential uncontrolled emissions <100 tons/year
Epa Compliance Status Ref: In Compliance - Inspection
Pollutant Code Ref:
Pollutant Classification Ref: Potential uncontrolled emissions <100 tons/year
Pollutant Complian Status Ref: In Compliance - Inspection

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	2 of64	WNW	0.01 / 46.68	1,375.08 / 4	Delta Airlines Inc Duluth Ramp 4701 Grinden Rd Duluth MN 55811	AST

Agency Interest ID: 130799
Tank Type: Aboveground Storage Tank
AI Name: Delta Airlines Inc Duluth Ramp
Address1: 4701 Grinden Rd
Address2:
Address3:
City: Duluth
County: St. Louis
State: MN
Zip: 55811
Location Description:
AI Name (Map): Delta Airlines Inc Duluth Ramp
Address1 (Map): 4701 Grinden Rd
Address2 (Map):
City (Map): Duluth
State (Map): MN
Zip (Map): 55811
Owner: Delta Air Lines Inc
Owner Address: Dept 885 PO Box 20706
Owner City: Atlanta
Owner State: GA
Owner Zip: 303206001
Data Source: Minnesota Pollution Control Agency Tank Sites; Minnesota Pollution Control Agency Regulated Tank Systems

Tank Information

Tank Site ID: TS0125282
Tank ID: 130799-EQUI0000000001
Tank Status: Active
Install Date:
Status Change Date:
Primary Naics:
Primary Sic:
Subject Item Description:
Tanks URL: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0125282
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N
Latitude: 46.83778688
Longitude: -92.17481925
Contractor of Tank:
Tribal Land:

Compartment Information

Compartment ID: 130799-EQUI0000000001-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Plastic (PVC, Flexible Plastic, etc.)
Subject Item Designation: 1011
Overfill Prevention System: AST None
Programs: AT
Capacity (gal): 6650
Cathodic Prot Sys:
Special Use Desc:

Pipe Information

Pipe Wall Type:
Pipe Leak Detection:
Pipe Material:
Pipe Corrosion Protection:
Stored Product: Gasoline Blends (E1-E49)
Tank Leak Detection:
Vapor Recovery Flag:

Tank Information

Tank Site ID: TS0125282
Tank ID: 130799-EQUI0000000002
Tank Status: Active
Install Date:
Status Change Date:
Latitude: 46.83778689
Longitude: -92.17481925
Contractor of Tank:
Tribal Land:

Primary Naics:
Primary Sic:
Subject Item Description:
Tanks URL: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0125282
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N

Compartment Information

Compartment ID: 130799-EQUI0000000002-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Carbon steel
Subject Item Designation: 1012
Overfill Prevention System: AST None
Programs: AT
Capacity (gal): 1000
Cathodic Prot Sys:
Special Use Desc:

Pipe Information

Pipe Wall Type:
Pipe Leak Detection:
Pipe Material:
Pipe Corrosion Protection:
Stored Product: Chemical Other Or Unspecified
Tank Leak Detection:
Vapor Recovery Flag:

MPCA Map Regulated Tank Systems

Item ID: 130799-EQUI0000000002
Int Doc ID: 0
Spatial ID:
SI Type: ABOV
SI Cat: EQUI
SI ID: 2
SI Cat Desc: Equipment
SI Type Desc: Aboveground Storage Tank
SI Designation: 1012
Status Desc: Active / Existing
Status Dt: 2010-02-19 12:15:13 UTC
Install Dt:
AI Prg Code: AT
AI Program: Aboveground Tanks
Compartments:
Substance: Chemical Other Or Unspecified
Capacity: 1000
County: St. Louis
Latitude: 46.83778689
Longitude: -92.17481925
Point X: -92.1748192503103
Point Y: 46.83778688994398
Description:
Overfill Prevent Desc: AST None
Loc Desc:
CTU Name: Duluth
Cong Dist: 8
House Dist: 8B
Senate Dist: 8
Huc 8: 04010201
Huc 8 Name: St. Louis River
Huc10: 0401020116
Huc12: 040102011604
Huc12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
TRDSQQ:
Pls Twsp:
Range :
Range Dir:
Section:
Quarters:
Method Desc: Address Matching House Number
Ref Desc: General Location

MPCA Map Regulated Tank Systems

Item ID: 130799-EQUI0000000001
Int Doc ID: 0
Spatial ID:
SI Type: ABOV
SI Cat: EQUI
SI ID: 1
SI Cat Desc: Equipment
SI Type Desc: Aboveground Storage Tank
SI Designation: 1011
Status Desc: Active / Existing
Status Dt: 2010-02-19 12:13:20 UTC
Install Dt:
AI Prg Code: AT
Overfill Prevent Desc: AST None
Loc Desc:
CTU Name: Duluth
Cong Dist: 8
House Dist: 8B
Senate Dist: 8
Huc 8: 04010201
Huc 8 Name: St. Louis River
Huc10: 0401020116
Huc12: 040102011604
Huc12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

AI Program:	Aboveground Tanks	**TRDSQQ:**	
Compartments:		**Pls Twsp:**	
Substance:	Gasoline Blends (E1-E49)	**Range :**	
Capacity:	6650	**Range Dir:**	
County:	St. Louis	**Section:**	
Latitude:	46.837786879999996	**Quarters:**	
Longitude:	-92.17481925	**Method Desc:**	Address Matching House Number
Point X:	-92.1748192503103	**Ref Desc:**	General Location
Point Y:	46.83778688011186		
Description:			

3	**3 of64**	**WNW**	**0.01 / 46.68**	**1,375.08 / 4**	**Duluth International Airport - Block 3** **4701 Grinden Dr** **Duluth MN 55811**	**BROWNFIELDS**

Item ID:	638-AREA0000000001	**Federal Reg:**	
Project ID:	VP15240	**Fed State Reg:**	
Project Type:	Brownfield Site	**Non Reg:**	
Project ID (RAP):	VP15240	**SEMS?:**	
Project Type (RAP):	Brownfield Site	**NPL:**	
Site Status:	Closed	**Unpermitted Dump?:**	
Perm List of Prior?:		**Latitude:**	46.83633804
Petrol Brownfield?:		**Longitude:**	-92.17481995
VIC Site?:	Yes	**County (RAP):**	St. Louis
Sf Voluntary:		**Latitude (RAP):**	46.83633804
Inst Controls?:		**Longitude (RAP):**	-92.17481995
State Reg:	Yes		

Project Name:	Duluth International Airport - Block 3
Site Address 1:	4701 Grinden Dr
Site Address 2:	
Site City:	Duluth
Site State:	MN
Site Zip:	55811
Site County:	St. Louis
Project Name(RAP):	Duluth International Airport - Block 3
Address1 (RAP):	4701 Grinden Dr
Address2(RAP):	
City (RAP):	Duluth
State (RAP):	MN
Zip (RAP):	55811
Project Managers:	Jane Mosel (no longer at MPCA)
Data Source:	MPCA Remediation Sites; MPCA Remediation Sites with RAP approvals

Remediation Sites Details

Activity ID:	638	**DWSMA Name:**	
AI Name:	Duluth International Airport	**Cong Dist:**	8
SI ID:	1	**House Dist:**	3B
SI Cat:	AREA	**Senate Dis:**	3
SI Type:	BROW	**HUC 8:**	04010201
Site Type:	CON	**HUC 10:**	0401020116
Acreage:	4.25	**HUC 12:**	040102011604
HRS Score:		**DWSMA Code:**	
Score Year:		**Method Des:**	DOQ - Digital Orthophoto Quad
MNTBA:			

Loc Desc:	Lots 4 and 5
HUC 8 Name:	St. Louis River
HUC 12 Name:	Saint Louis River
Hydrologist:	Mike Bares (no longer at MPCA)
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/638

Remediation Sites with RAP Approval

Activity ID:	638	**Rap Date:**	
No Assoc Date:		**Site Start:**	11/29/2001

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

No Assoc Letter:	No	**Rap Approved:**	
Has Rp:	Yes	**Rap Completed:**	2/7/2002
Coord Collect Methd:	DOQ - Digital Orthophoto Quad	**Site Closed:**	8/9/2002
Parcels:			
WIMN:	https://webapp.pca.state.mn.us/wimn/site/638		
AI Name:	Duluth International Airport		
Rp Names:	Duluth Airport Authority , Duluth International Airport (DAA), John Grinden		

Spatial Remediation Activity

AI ID:	638	**Site Start:**	2001-11-29 00:00:00
Site ID:	VP15240	**Remedy Imp:**	
SI ID:	1	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	2001-11-29 00:00:00
Site Close:	2002-08-09 00:00:00	**NPL List:**	
Leak Discovered:		**NPL Delete:**	
Leak Reported:		**PLP List:**	
Leak Reopened:		**PLP Delist:**	
Activity No:	1	**Staff Assi:**	2001-11-29 00:00:00
Activity ID:	SIW20010001	**FF Aproved:**	
Activity Type:	Brownfield Site	**FF Closed:**	
Activity Code:	SIW	**Inv Comple:**	
Activity Year:	2001	**App Comple:**	2001-11-29 00:00:00
Discovered:		**Er Site Ev:**	

3	***4 of64***	***WNW***	***0.01 / 46.68***	***1,375.08 / 4***	***Former Fueling Station 4701 Grinden Dr Duluth MN***	***DELISTED LST***

Delisted MPCA Remediation Leak Sites

Item ID:	638-AREA0000000004	**Perm List of Prio?:**	
Project ID:	LS0020226	**Petrol Brownfield?:**	
Project Type:	Leak Site	**VIC Site?:**	
Project Name:	Former Fueling Station	**Sf Volunta:**	
Site Address 1:	4701 Grinden Dr	**Inst Controls?:**	
Site Address 2:		**SEMS?:**	
Site City:	Duluth	**Unpermitted Dump?:**	
Site State:	MN	**State Reg:**	
Site ZIP:	55811	**Federal Re:**	Yes
Site Status:	Closed	**Fed State:**	
Project ID (RAP):		**Non Reg:**	
Project Type (RAP):		**NPL:**	
Project Name(RAP):		**Site County:**	St. Louis
Address1 (RAP):		**County (RAP):**	
Address2(RAP):		**Latitude (RAP):**	
City (RAP):		**Longitude (RAP):**	
State (RAP):		**Latitude:**	46.83778689
ZIP (RAP):		**Longitude:**	-92.17481925
Project Manager:	Lauralin Kania (former)		
Data Source:	MPCA Remediation Sites		
Original Source:	LSTR		
Record Date:	08-JUN-2022		

3	***5 of64***	***WNW***	***0.01 / 46.68***	***1,375.08 / 4***	***Duluth International Airport 4701 Grinden Dr Duluth MN 55811-1578***	***DELISTED TANK***

Delisted Underground Storage Tanks

Tank Site ID:	TS0021164	**Owner:**	Duluth Airport Authority

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

AI ID:	638	**Owner Address:**	4701 Grinden Dr
Tank Type:	Underground Storage Tank System	**Owner City:**	Duluth
Address2:		**Owner State:**	MN
Address3:		**Owner Zip:**	558111578
County:	St. Louis		
Zip(Map):			
State(Map):			
City(Map):			
Address2(Map):			
Address1(Map):			
Data Source:			
AI Name(Map):			
Longitude(Map):			
Latitude(Map):			
County(Map):			
County Code(Map):			
Location Description:			
Tanks URL:	https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0021164		
Original Source:	UST		
Record Date:	04-SEP-2020		

3	6 of64	WNW	0.01 / 46.68	1,375.08 / 4	**4701 GRINDEN DRIVE** **DULUTH MN 55811**	ERNS

NRC Report No:	468284	**Latitude Degrees:**	
Type of Incident:	AIRCRAFT	**Latitude Minutes:**	
Incident Cause:	EQUIPMENT FAILURE	**Latitude Seconds:**	
Incident Date:	19-Dec-1998 20:40:00	**Longitude Degrees:**	
Incident Location:		**Longitude Minutes:**	
Incident Dtg:	OCCURRED	**Longitude Seconds:**	
Distance from City:		**Lat Quad:**	
Distance Units:		**Long Quad:**	
Direction from City:		**Location Section:**	
Location County:	ST. LOUIS	**Location Township:**	
Potential Flag:		**Location Range:**	
Year:	Year 1998 Reports		
Description of Incident:	AIRCRAFT FUEL TANK/ DURING TRANSFER, DISCOVERED LEAK OUT OF WING TIP.		

Material Spill Information

Chris Code:	JPO	**Unit of Measure:**	GALLON(S)
CAS No:		**If Reached Water:**	YES
UN No:		**Amount in Water:**	0
Name of Material:	JET FUEL: JP-1 (KEROSENE)	**Unit Reach Water:**	NONE
Amount of Material:	10		

Calls Information

Date Time Received:	19-Dec-1998 22:44:51	**Responsible City:**	DULUTH
Date Time Complete:	19-Dec-1998 22:49:40	**Responsible State:**	MN
Call Type:	INC	**Responsible Zip:**	55811
Resp Company:	NORTHWEST AIRLINES	**Source:**	UNAVAILABLE
Resp Org Type:	PRIVATE ENTERPRISE		

Incident Information

Tank ID:		**Building ID:**	
Tank Regulated:	U	**Location Area ID:**	
Tank Regulated By:		**Location Block ID:**	
Capacity of Tank:		**OCSG No:**	
Capacity Tank Units:		**OCSP No:**	
Description of Tank:		**State Lease No:**	
Actual Amount:		**Pier Dock No:**	
Actual Amount Units:		**Berth Slip No:**	

Tank Above Ground:	ABOVE	**Brake Failure:**	N
NPDES:		**Airbag Deployed:**	
NPDES Compliance:	U	**Transport Contain:**	U
Init Contin Rel No:		**Location Subdiv:**	
Contin Rel Permit:		**Platform Rig Name:**	
Contin Release Type:		**Platform Letter:**	
Aircraft ID:		**Allision:**	N
Aircraft Runway No:		**Type of Structure:**	
Aircraft Spot No:		**Structure Name:**	
Aircraft Type:	UNKNOWN	**Structure Oper:**	Y
Aircraft Model:		**Transit Bus Flag:**	
Aircraft Fuel Cap:		**Date Time Norm Serv:**	
Aircraft Fuel Cap U:		**Serv Disrupt Time:**	
Aircraft Fuel on Brd:		**Serv Disrupt Units:**	
Aircraft Fuel OB U:		**CR Begin Date:**	
Aircraft Hanger:		**CR End Date:**	
Road Mile Marker:		**CR Change Date:**	
Power Gen Facility:	U	**FBI Contact:**	
Generating Capacity:		**FBI Contact Dt Tm:**	
Type of Fixed Obj:	UNKNOWN	**Passenger Handling:**	
Type of Fuel:		**Passenger Route:**	XXX
DOT Crossing No:		**Passenger Delay:**	XXX
DOT Regulated:	U	**Sub Part C Test Req:**	XXX
Pipeline Type:	UNKNOWN	**No of Conductor Tested:**	
Pipeline Abv Ground:	ABOVE	**No of Engineer Tested:**	
Pipeline Covered:	U	**No of Trainman Tested:**	
Exposed Underwater:	U	**No of Yard Foreman Tested:**	
Railroad Hotline:	No	**No of RCL Operator Tested:**	
Railroad Milepost:	UNKNOWN	**No of Brakeman Tested:**	
Grade Crossing:	N	**No of Train Dispat Tested:**	
Crossing Device Ty:		**No of Signalman Tested:**	
Ty Vehicle Involved:	UNKNOWN	**No of Other Emp Tested:**	
Device Operational:	Y	**No of Unknown Emp Tested:**	

Incident Details Information

Release Secured:	U	**State Agen Report No:**	
Release Rate:		**State Agen on Scene:**	
Release Rate Unit:		**State Agen Notified:**	
Release Rate Rate:		**Fed Agency Notified:**	
Est Duration of Rel:		**Oth Agency Notified:**	
Desc Remedial Act:	STOPPED FUEL TRANSFER. CLEAN UP CREW AND FIRE & RESCUE ARE ON SCENE.	**Body of Water:**	
Fire Involved:	N	**Tributary of:**	
Fire Extinguished:	U	**Near River Mile Make:**	
Any Evacuations:	N	**Near River Mile Mark:**	
No Evacuated:		**Offshore:**	N
Who Evacuated:		**Weather Conditions:**	
Radius of Evac:		**Air Temperature:**	
Any Injuries:	U	**Wind Direction:**	
No. Injured:		**Wind Speed:**	
No. Hospitalized:		**Wind Speed Unit:**	
No. Fatalities:		**Water Supp Contam:**	U
Any Fatalities:	U	**Water Temperature:**	
Any Damages:	N	**Wave Condition:**	
Damage Amount:		**Current Speed:**	
Air Corridor Closed:	N	**Current Direction:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Air Corridor Desc:		**Current Speed Unit:**	
Air Closure Time:		**EMPL Fatality:**	
Waterway Closed:	N	**Pass Fatality:**	
Waterway Desc:		**Community Impact:**	N
Waterway Close Time:		**Passengers Transfer:**	UNK
Road Closed:	N	**Passenger Injuries:**	
Road Desc:		**Employee Injuries:**	
Road Closure Time:		**Occupant Fatality:**	
Road Closure Units:		**Sheen Size:**	
Closure Direction:		**Sheen Size Units:**	
Major Artery:	No	**Sheen Size Length:**	
Track Closed:	N	**Sheen Size Length U:**	
Track Desc:		**Sheen Size Width:**	
Track Closure Time:		**Sheen Size Width U:**	
Track Closure Units:		**Sheen Color:**	
Track Close Dir:		**Dir of Sheen Travel:**	
Media Interest:		**Sheen Odor Desc:**	
Medium Desc:	LAND	**Duration Unit:**	
Addl Medium Info:	CONCRETE	**Additional Info:**	SIZE OF AREA AFFECTED:6FT SQ. O/S WX: CLEAR, CALM.

3	7 of64	WNW	0.01 / 46.68	1,375.08 / 4	4701 GRINDEN DRIVE GATE 3 DULUTH MN 55811	ERNS

NRC Report No:	463985	**Latitude Degrees:**	
Type of Incident:	UNKNOWN SHEEN	**Latitude Minutes:**	
Incident Cause:	OTHER	**Latitude Seconds:**	
Incident Date:	15-Nov-1998 05:15:00	**Longitude Degrees:**	
Incident Location:		**Longitude Minutes:**	
Incident Dtg:	OCCURRED	**Longitude Seconds:**	
Distance from City:		**Lat Quad:**	
Distance Units:		**Long Quad:**	
Direction from City:		**Location Section:**	
Location County:	ST. LOUIS	**Location Township:**	
Potential Flag:		**Location Range:**	
Year:	Year 1998 Reports		

Description of Incident: DURING A TRUCK TO AIRCRAFT FUEL TRANSFER A SPILL OCCURRED / VENDORSUPPLYING:NORTH COUNTRY AVIATION, 218-727-2911,CAUSE BEING INVESTIGATED

Material Spill Information

Chris Code:	OTH	**Unit of Measure:**	GALLON(S)
CAS No:		**If Reached Water:**	YES
UN No:		**Amount in Water:**	0
Name of Material:	JET A FUEL	**Unit Reach Water:**	NONE
Amount of Material:	40		

Calls Information

Date Time Received:	15-Nov-1998 08:29:53	**Responsible City:**	DULUTH
Date Time Complete:	15-Nov-1998 08:38:42	**Responsible State:**	MN
Call Type:	INC	**Responsible Zip:**	55811
Resp Company:	NORTHWEST AIRLINES	**Source:**	UNAVAILABLE
Resp Org Type:	PRIVATE ENTERPRISE		

Incident Information

Tank ID:		**Building ID:**	
Tank Regulated:	U	**Location Area ID:**	
Tank Regulated By:		**Location Block ID:**	
Capacity of Tank:		**OCSG No:**	
Capacity Tank Units:		**OCSP No:**	
Description of Tank:		**State Lease No:**	
Actual Amount:		**Pier Dock No:**	

Actual Amount Units:		**Berth Slip No:**	
Tank Above Ground:	ABOVE	**Brake Failure:**	N
NPDES:		**Airbag Deployed:**	
NPDES Compliance:	U	**Transport Contain:**	U
Init Contin Rel No:		**Location Subdiv:**	
Contin Rel Permit:		**Platform Rig Name:**	
Contin Release Type:		**Platform Letter:**	
Aircraft ID:		**Allision:**	N
Aircraft Runway No:		**Type of Structure:**	
Aircraft Spot No:		**Structure Name:**	
Aircraft Type:	UNKNOWN	**Structure Oper:**	Y
Aircraft Model:		**Transit Bus Flag:**	
Aircraft Fuel Cap:		**Date Time Norm Serv:**	
Aircraft Fuel Cap U:		**Serv Disrupt Time:**	
Aircraft Fuel on Brd:		**Serv Disrupt Units:**	
Aircraft Fuel OB U:		**CR Begin Date:**	
Aircraft Hanger:		**CR End Date:**	
Road Mile Marker:		**CR Change Date:**	
Power Gen Facility:	U	**FBI Contact:**	
Generating Capacity:		**FBI Contact Dt Tm:**	
Type of Fixed Obj:	UNKNOWN	**Passenger Handling:**	
Type of Fuel:		**Passenger Route:**	XXX
DOT Crossing No:		**Passenger Delay:**	XXX
DOT Regulated:	U	**Sub Part C Test Req:**	XXX
Pipeline Type:	UNKNOWN	**No of Conductor Tested:**	
Pipeline Abv Ground:	ABOVE	**No of Engineer Tested:**	
Pipeline Covered:	U	**No of Trainman Tested:**	
Exposed Underwater:	U	**No of Yard Foreman Tested:**	
Railroad Hotline:	No	**No of RCL Operator Tested:**	
Railroad Milepost:	UNKNOWN	**No of Brakeman Tested:**	
Grade Crossing:	N	**No of Train Dispat Tested:**	
Crossing Device Ty:		**No of Signalman Tested:**	
Ty Vehicle Involved:	UNKNOWN	**No of Other Emp Tested:**	
Device Operational:	Y	**No of Unknown Emp Tested:**	

Incident Details Information

Release Secured:	U	**State Agen Report No:**	
Release Rate:		**State Agen on Scene:**	
Release Rate Unit:		**State Agen Notified:**	
Release Rate Rate:		**Fed Agency Notified:**	
Est Duration of Rel:		**Oth Agency Notified:**	
Desc Remedial Act:	CONTAINED / WILL EVAPORATE / SOURCE HAS BEEN SECURED / FIRE DEPTRESPONDED	**Body of Water:**	
Fire Involved:	N	**Tributary of:**	
Fire Extinguished:	U	**Near River Mile Make:**	
Any Evacuations:	N	**Near River Mile Mark:**	
No Evacuated:		**Offshore:**	Y
Who Evacuated:		**Weather Conditions:**	
Radius of Evac:		**Air Temperature:**	
Any Injuries:	U	**Wind Direction:**	
No. Injured:		**Wind Speed:**	
No. Hospitalized:		**Wind Speed Unit:**	
No. Fatalities:		**Water Supp Contam:**	U
Any Fatalities:	U	**Water Temperature:**	
Any Damages:	N	**Wave Condition:**	
Damage Amount:		**Current Speed:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Air Corridor Closed:	N		**Current Direction:**		
Air Corridor Desc:			**Current Speed Unit:**		
Air Closure Time:			**EMPL Fatality:**		
Waterway Closed:	N		**Pass Fatality:**		
Waterway Desc:			**Community Impact:**	N	
Waterway Close Time:			**Passengers Transfer:**	UNK	
Road Closed:	N		**Passenger Injuries:**		
Road Desc:			**Employee Injuries:**		
Road Closure Time:			**Occupant Fatality:**		
Road Closure Units:			**Sheen Size:**		
Closure Direction:			**Sheen Size Units:**		
Major Artery:	No		**Sheen Size Length:**		
Track Closed:	N		**Sheen Size Length U:**		
Track Desc:			**Sheen Size Width:**		
Track Closure Time:			**Sheen Size Width U:**		
Track Closure Units:			**Sheen Color:**		
Track Close Dir:			**Dir of Sheen Travel:**		
Media Interest:			**Sheen Odor Desc:**		
Medium Desc:	LAND		**Duration Unit:**		
Addl Medium Info:	CONCRETE		**Additional Info:**	IT IS UNKNOWN EXACTLY FROM WHERE THE SPILL OCCURRED MEANING EITHER THETRUCK OR OVERFLOW FROM THE AIRCRAFT	

3	**8 of64**	**WNW**	**0.01 / 46.68**	**1,375.08 / 4**	**4701 GRINDEN DRIVE GATE NO.3 DULUTH MN 55811**	**ERNS**

NRC Report No:	471404	**Latitude Degrees:**	
Type of Incident:	AIRCRAFT	**Latitude Minutes:**	
Incident Cause:	UNKNOWN	**Latitude Seconds:**	
Incident Date:	22-Jan-1999 05:10:00	**Longitude Degrees:**	
Incident Location:		**Longitude Minutes:**	
Incident Dtg:	OCCURRED	**Longitude Seconds:**	
Distance from City:		**Lat Quad:**	
Distance Units:		**Long Quad:**	
Direction from City:		**Location Section:**	
Location County:	ST. LOUIS	**Location Township:**	
Potential Flag:		**Location Range:**	
Year:	Year 1999 Reports		
Description of Incident:	AIRCRAFT "A320" / CAUSE UNKNOWN / RELEASED JPE ON RAMP		

Material Spill Information

Chris Code:	JPE	**Unit of Measure:**	GALLON(S)
CAS No:		**If Reached Water:**	YES
UN No:		**Amount in Water:**	0
Name of Material:	JET FUEL: JP-8	**Unit Reach Water:**	NONE
Amount of Material:	40		

Calls Information

Date Time Received:	22-Jan-1999 08:31:45	**Responsible City:**	DULUTH
Date Time Complete:	22-Jan-1999 08:38:26	**Responsible State:**	MN
Call Type:	INC	**Responsible Zip:**	55811
Resp Company:	NORTHWEST AIRLINES	**Source:**	UNAVAILABLE
Resp Org Type:	PRIVATE ENTERPRISE		

Incident Information

Tank ID:		**Building ID:**	
Tank Regulated:	U	**Location Area ID:**	
Tank Regulated By:		**Location Block ID:**	
Capacity of Tank:		**OCSG No:**	
Capacity Tank Units:		**OCSP No:**	

Description of Tank:		**State Lease No:**	
Actual Amount:		**Pier Dock No:**	
Actual Amount Units:		**Berth Slip No:**	
Tank Above Ground:	ABOVE	**Brake Failure:**	N
NPDES:		**Airbag Deployed:**	
NPDES Compliance:	U	**Transport Contain:**	U
Init Contin Rel No:		**Location Subdiv:**	
Contin Rel Permit:		**Platform Rig Name:**	
Contin Release Type:		**Platform Letter:**	
Aircraft ID:		**Allision:**	N
Aircraft Runway No:		**Type of Structure:**	
Aircraft Spot No:		**Structure Name:**	
Aircraft Type:	UNKNOWN	**Structure Oper:**	Y
Aircraft Model:		**Transit Bus Flag:**	
Aircraft Fuel Cap:		**Date Time Norm Serv:**	
Aircraft Fuel Cap U:		**Serv Disrupt Time:**	
Aircraft Fuel on Brd:		**Serv Disrupt Units:**	
Aircraft Fuel OB U:		**CR Begin Date:**	
Aircraft Hanger:		**CR End Date:**	
Road Mile Marker:		**CR Change Date:**	
Power Gen Facility:	U	**FBI Contact:**	
Generating Capacity:		**FBI Contact Dt Tm:**	
Type of Fixed Obj:	UNKNOWN	**Passenger Handling:**	
Type of Fuel:		**Passenger Route:**	XXX
DOT Crossing No:		**Passenger Delay:**	XXX
DOT Regulated:	U	**Sub Part C Test Req:**	XXX
Pipeline Type:	UNKNOWN	**No of Conductor Tested:**	
Pipeline Abv Ground:	ABOVE	**No of Engineer Tested:**	
Pipeline Covered:	U	**No of Trainman Tested:**	
Exposed Underwater:	U	**No of Yard Foreman Tested:**	
Railroad Hotline:	No	**No of RCL Operator Tested:**	
Railroad Milepost:	UNKNOWN	**No of Brakeman Tested:**	
Grade Crossing:	N	**No of Train Dispat Tested:**	
Crossing Device Ty:		**No of Signalman Tested:**	
Ty Vehicle Involved:	UNKNOWN	**No of Other Emp Tested:**	
Device Operational:	Y	**No of Unknown Emp Tested:**	

Incident Details Information

Release Secured:	U	**State Agen Report No:**	
Release Rate:		**State Agen on Scene:**	
Release Rate Unit:		**State Agen Notified:**	
Release Rate Rate:		**Fed Agency Notified:**	
Est Duration of Rel:		**Oth Agency Notified:**	
Desc Remedial Act:	SPILL CONTAINED WITH BOOMS AND ABSORBENT / SPILL SECURED	**Body of Water:**	
Fire Involved:	N	**Tributary of:**	
Fire Extinguished:	U	**Near River Mile Make:**	
Any Evacuations:	N	**Near River Mile Mark:**	
No Evacuated:		**Offshore:**	N
Who Evacuated:		**Weather Conditions:**	
Radius of Evac:		**Air Temperature:**	
Any Injuries:	U	**Wind Direction:**	
No. Injured:		**Wind Speed:**	
No. Hospitalized:		**Wind Speed Unit:**	
No. Fatalities:		**Water Supp Contam:**	U
Any Fatalities:	U	**Water Temperature:**	
Any Damages:	N	**Wave Condition:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Damage Amount:		**Current Speed:**	
Air Corridor Closed:	N	**Current Direction:**	
Air Corridor Desc:		**Current Speed Unit:**	
Air Closure Time:		**EMPL Fatality:**	
Waterway Closed:	N	**Pass Fatality:**	
Waterway Desc:		**Community Impact:**	N
Waterway Close Time:		**Passengers Transfer:**	UNK
Road Closed:	N	**Passenger Injuries:**	
Road Desc:		**Employee Injuries:**	
Road Closure Time:		**Occupant Fatality:**	
Road Closure Units:		**Sheen Size:**	
Closure Direction:		**Sheen Size Units:**	
Major Artery:	No	**Sheen Size Length:**	
Track Closed:	N	**Sheen Size Length U:**	
Track Desc:		**Sheen Size Width:**	
Track Closure Time:		**Sheen Size Width U:**	
Track Closure Units:		**Sheen Color:**	
Track Close Dir:		**Dir of Sheen Travel:**	
Media Interest:		**Sheen Odor Desc:**	
Medium Desc:	LAND	**Duration Unit:**	
Addl Medium Info:	AIRPORT RAMP	**Additional Info:**	TEMP: 28F / CLOUD COVER: CLOUDY / WIND: NORTH

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	9 of64	WNW	0.01 / 46.68	1,375.08 / 4	4701 GRINDEN DRIVE DULUTH MN 55811	ERNS

NRC Report No:	488617	**Latitude Degrees:**	
Type of Incident:	AIRCRAFT	**Latitude Minutes:**	
Incident Cause:	EQUIPMENT FAILURE	**Latitude Seconds:**	
Incident Date:	23-Jun-1999 21:05:00	**Longitude Degrees:**	
Incident Location:		**Longitude Minutes:**	
Incident Dtg:	OCCURRED	**Longitude Seconds:**	
Distance from City:		**Lat Quad:**	
Distance Units:		**Long Quad:**	
Direction from City:		**Location Section:**	
Location County:	ST. LOUIS	**Location Township:**	
Potential Flag:		**Location Range:**	
Year:	Year 1999 Reports		
Description of Incident:	ARJ AIRCRAFT / MECHANICAL FAILURE		

Material Spill Information

Chris Code:	JPE	**Unit of Measure:**	GALLON(S)
CAS No:		**If Reached Water:**	YES
UN No:		**Amount in Water:**	0
Name of Material:	JET FUEL: JP-8 (JET-A)	**Unit Reach Water:**	NONE
Amount of Material:	50		

Calls Information

Date Time Received:	23-Jun-1999 23:18:59	**Responsible City:**	DULUTH
Date Time Complete:	23-Jun-1999 23:22:33	**Responsible State:**	MN
Call Type:	INC	**Responsible Zip:**	55811
Resp Company:	NORTHWEST AIRLINES	**Source:**	UNAVAILABLE
Resp Org Type:	PRIVATE ENTERPRISE		

Incident Information

Tank ID:		**Building ID:**	
Tank Regulated:	U	**Location Area ID:**	
Tank Regulated By:		**Location Block ID:**	
Capacity of Tank:		**OCSG No:**	
Capacity Tank Units:		**OCSP No:**	
Description of Tank:		**State Lease No:**	

Actual Amount:		**Pier Dock No:**	
Actual Amount Units:		**Berth Slip No:**	
Tank Above Ground:	ABOVE	**Brake Failure:**	N
NPDES:		**Airbag Deployed:**	
NPDES Compliance:	U	**Transport Contain:**	U
Init Contin Rel No:		**Location Subdiv:**	
Contin Rel Permit:		**Platform Rig Name:**	
Contin Release Type:		**Platform Letter:**	
Aircraft ID:		**Allision:**	N
Aircraft Runway No:		**Type of Structure:**	
Aircraft Spot No:		**Structure Name:**	
Aircraft Type:	UNKNOWN	**Structure Oper:**	Y
Aircraft Model:		**Transit Bus Flag:**	
Aircraft Fuel Cap:		**Date Time Norm Serv:**	
Aircraft Fuel Cap U:		**Serv Disrupt Time:**	
Aircraft Fuel on Brd:		**Serv Disrupt Units:**	
Aircraft Fuel OB U:		**CR Begin Date:**	
Aircraft Hanger:		**CR End Date:**	
Road Mile Marker:		**CR Change Date:**	
Power Gen Facility:	U	**FBI Contact:**	
Generating Capacity:		**FBI Contact Dt Tm:**	
Type of Fixed Obj:	UNKNOWN	**Passenger Handling:**	
Type of Fuel:		**Passenger Route:**	XXX
DOT Crossing No:		**Passenger Delay:**	XXX
DOT Regulated:	U	**Sub Part C Test Req:**	XXX
Pipeline Type:	UNKNOWN	**No of Conductor Tested:**	
Pipeline Abv Ground:	ABOVE	**No of Engineer Tested:**	
Pipeline Covered:	U	**No of Trainman Tested:**	
Exposed Underwater:	U	**No of Yard Foreman Tested:**	
Railroad Hotline:	No	**No of RCL Operator Tested:**	
Railroad Milepost:	UNKNOWN	**No of Brakeman Tested:**	
Grade Crossing:	N	**No of Train Dispat Tested:**	
Crossing Device Ty:		**No of Signalman Tested:**	
Ty Vehicle Involved:	UNKNOWN	**No of Other Emp Tested:**	
Device Operational:	Y	**No of Unknown Emp Tested:**	

Incident Details Information

Release Secured:	U	**State Agen Report No:**	
Release Rate:		**State Agen on Scene:**	
Release Rate Unit:		**State Agen Notified:**	
Release Rate Rate:		**Fed Agency Notified:**	
Est Duration of Rel:		**Oth Agency Notified:**	
Desc Remedial Act:	CONTAINED AND CLEANED UP	**Body of Water:**	
Fire Involved:	N	**Tributary of:**	
Fire Extinguished:	U	**Near River Mile Make:**	
Any Evacuations:	N	**Near River Mile Mark:**	
No Evacuated:		**Offshore:**	N
Who Evacuated:		**Weather Conditions:**	
Radius of Evac:		**Air Temperature:**	
Any Injuries:	U	**Wind Direction:**	
No. Injured:		**Wind Speed:**	
No. Hospitalized:		**Wind Speed Unit:**	
No. Fatalities:		**Water Supp Contam:**	U
Any Fatalities:	U	**Water Temperature:**	
Any Damages:	N	**Wave Condition:**	
Damage Amount:		**Current Speed:**	
Air Corridor Closed:	N	**Current Direction:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Air Corridor Desc:		**Current Speed Unit:**	
Air Closure Time:		**EMPL Fatality:**	
Waterway Closed:	N	**Pass Fatality:**	
Waterway Desc:		**Community Impact:**	N
Waterway Close Time:		**Passengers Transfer:**	UNK
Road Closed:	N	**Passenger Injuries:**	
Road Desc:		**Employee Injuries:**	
Road Closure Time:		**Occupant Fatality:**	
Road Closure Units:		**Sheen Size:**	
Closure Direction:		**Sheen Size Units:**	
Major Artery:	No	**Sheen Size Length:**	
Track Closed:	N	**Sheen Size Length U:**	
Track Desc:		**Sheen Size Width:**	
Track Closure Time:		**Sheen Size Width U:**	
Track Closure Units:		**Sheen Color:**	
Track Close Dir:		**Dir of Sheen Travel:**	
Media Interest:		**Sheen Odor Desc:**	
Medium Desc:	LAND	**Duration Unit:**	
Addl Medium Info:	TARMACK	**Additional Info:**	AREA AFFECTED: 45 SQ FTALSO NOTIFIED: AIR NATIONAL GUARD FIRE RESCUE

3	***10 of64***	***WNW***	***0.01 / 46.68***	***1,375.08 / 4***	***DULUTH INTERNATIONAL AIRPORT (DAA) 4701 GRINDEN DR DULUTH MN 55811***	***FINDS/FRS***

Registry ID:	110008799979
FIPS Code:	27137
HUC Code:	04010201
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	01-MAR-00
Update Date:	01-JUN-17
Interest Types:	AIR EMISSIONS CLASSIFICATION UNKNOWN, AIR MINOR, AIR MONITORING SITE, STATE MASTER, UNSPECIFIED UNIVERSE, VSQG
SIC Codes:	4512, 4581, 9621
SIC Code Descriptions:	AIR TRANSPORTATION, SCHEDULED, AIRPORTS, FLYING FIELDS, AND AIRPORT TERMINAL SERVICES, REGULATION AND ADMINISTRATION OF TRANSPORTATION PROGRAMS
NAICS Codes:	481111, 488111, 926120
NAICS Code Descriptions:	AIR TRAFFIC CONTROL., REGULATION AND ADMINISTRATION OF TRANSPORTATION PROGRAMS., SCHEDULED PASSENGER AIR TRANSPORTATION.
Conveyor:	FRS-GEOCODE
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	08
Census Block Code:	271370003001011
EPA Region Code:	05
County Name:	ST. LOUIS
US/Mexico Border Ind:	
Latitude:	46.83798
Longitude:	-92.17768
Reference Point:	ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method:	ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value:	50
Datum:	NAD83
Source:	
Frs Facility Detail Report URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110008799979
Program Acronyms:	

AIR:MN0000002713700074, AIRS/AFS:2713700074, AIRS/AQS:8306, EIS:6238111, MN-TEMPO:215002, MN-TEMPO:229212, MN-TEMPO:638, MN-TEMPO:83391, RCRAINFO:MN7570024284, RCRAINFO:MNR000023143, RCRAINFO:MNS000105817

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	11 of64	WNW	0.01 / 46.68	1,375.08 / 4	DULUTH AIRPORT RUNWAY 21SAFET 4701 GRINDEN DR HERMANTOWN MN 55811	FINDS/FRS

Registry ID:	110068202233
FIPS Code:	27137
HUC Code:	04010201
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	02-JUN-16
Update Date:	
Interest Types:	STATE MASTER
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	FRS-GEOCODE
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	08
Census Block Code:	271370003001011
EPA Region Code:	05
County Name:	ST. LOUIS
US/Mexico Border Ind:	
Latitude:	46.83798
Longitude:	-92.17768
Reference Point:	ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method:	ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value:	50
Datum:	NAD83
Source:	
Frs Facility Detail Report URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068202233
Program Acronyms:	

MN-TEMPO:89268

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	12 of64	WNW	0.01 / 46.68	1,375.08 / 4	DAA ANG FIRE STATION PHASE 3 4701 GRINDEN DR GNESEN TOWNSHIP MN 55803	FINDS/FRS

Registry ID:	110068699493
FIPS Code:	27137
HUC Code:	04010201
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	02-JUN-16
Update Date:	
Interest Types:	STATE MASTER
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	FRS-GEOCODE
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	08
Census Block Code:	271370003001011
EPA Region Code:	05
County Name:	ST. LOUIS

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

US/Mexico Border Ind:
Latitude: 46.83798
Longitude: -92.17768
Reference Point: ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value: 50
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068699493
Program Acronyms:

MN-TEMPO:108560

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	13 of64	WNW	0.01 / 46.68	1,375.08 / 4	NEW PASSANGER TERMINAL BP 2C 4701 GRINDEN DRIVE DULUTH MN 55811	FINDS/FRS

Registry ID: 110067735008
FIPS Code: 27137
HUC Code: 04010201
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 02-JUN-16
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor: FRS-GEOCODE
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 08
Census Block Code: 271370003001011
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude: 46.83798
Longitude: -92.17768
Reference Point: ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value: 50
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110067735008
Program Acronyms:

MN-TEMPO:143543

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	14 of64	WNW	0.01 / 46.68	1,375.08 / 4	DELTA AIR LINES GLOBAL SERVIC 4701 GRINDEN DR DULUTH MN 55811	FINDS/FRS

Registry ID: 110069151358
FIPS Code: 27137
HUC Code: 04010201
Site Type Name: STATIONARY
Location Description:
Supplemental Location:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Create Date:	03-JUN-16
Update Date:	
Interest Types:	STATE MASTER
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	FRS-GEOCODE
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	08
Census Block Code:	271370003001011
EPA Region Code:	05
County Name:	ST. LOUIS
US/Mexico Border Ind:	
Latitude:	46.83798
Longitude:	-92.17768
Reference Point:	ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method:	ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value:	50
Datum:	NAD83
Source:	
Frs Facility Detail Report URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110069151358
Program Acronyms:	

MN-TEMPO:130367

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	15 of64	WNW	0.01 / 46.68	1,375.08 / 4	NORTH PERIMETER ROAD GRADING 4701 GRINDEN DR HERMANTOWN MN 55811	FINDS/FRS

Registry ID:	110069111160
FIPS Code:	27137
HUC Code:	04010201
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	03-JUN-16
Update Date:	
Interest Types:	STATE MASTER
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	FRS-GEOCODE
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	08
Census Block Code:	271370003001011
EPA Region Code:	05
County Name:	ST. LOUIS
US/Mexico Border Ind:	
Latitude:	46.83798
Longitude:	-92.17768
Reference Point:	ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method:	ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value:	50
Datum:	NAD83
Source:	
Frs Facility Detail Report URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110069111160
Program Acronyms:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

MN-TEMPO:85161

3	16 of64	WNW	0.01 / 46.68	1,375.08 / 4	DELTA AIRLINES INC DULUTH RAMP 4701 GRINDEN RD HERMANTOWN MN 55811	FINDS/FRS

Registry ID:	110067981447
FIPS Code:	27137
HUC Code:	04010201
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	02-JUN-16
Update Date:	
Interest Types:	STATE MASTER
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	FRS-GEOCODE
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	08
Census Block Code:	271370003001011
EPA Region Code:	05
County Name:	ST. LOUIS
US/Mexico Border Ind:	
Latitude:	46.83798
Longitude:	-92.17768
Reference Point:	ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method:	ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value:	50
Datum:	NAD83
Source:	
Frs Facility Detail Report URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110067981447
Program Acronyms:	

MN-TEMPO:130799

3	17 of64	WNW	0.01 / 46.68	1,375.08 / 4	KRENZEN CORPORATION 4701 GRINDEN DR DULUTH MN 55811	FINDS/FRS

Registry ID:	110071476644
FIPS Code:	27137
HUC Code:	04010201
Site Type Name:	
Location Description:	
Supplemental Location:	
Create Date:	04-OCT-23
Update Date:	
Interest Types:	
SIC Codes:	5511
SIC Code Descriptions:	MOTOR VEHICLE DEALERS (NEW AND USED)
NAICS Codes:	441110
NAICS Code Descriptions:	NEW CAR DEALERS.
Conveyor:	FRS-GEOCODE
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Tribal Land Name:
Congressional Dist No: 08
Census Block Code: 271370003001011
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude: 46.83798
Longitude: -92.17768
Reference Point: ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value: 50
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110071476644
Program Acronyms:

MN-TEMPO:235672

3	*18 of64*	*WNW*	*0.01 / 46.68*	*1,375.08 / 4*	***SONJU ENTERPRISES INC*** ***4701 GRINDEN DR BOX 161830*** ***DULUTH MN 55816***	***FINDS/FRS***

Registry ID: 110071475201
FIPS Code: 27137
HUC Code: 04010201
Site Type Name:
Location Description:
Supplemental Location:
Create Date: 04-OCT-23
Update Date:
Interest Types:
SIC Codes: 5511
SIC Code Descriptions: MOTOR VEHICLE DEALERS (NEW AND USED)
NAICS Codes: 441110
NAICS Code Descriptions: NEW CAR DEALERS.
Conveyor: FRS-GEOCODE
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 08
Census Block Code: 271370003001011
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude: 46.83798
Longitude: -92.17768
Reference Point: ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value: 50
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110071475201
Program Acronyms:

MN-TEMPO:235247

3	*19 of64*	*WNW*	*0.01 / 46.68*	*1,375.08 / 4*	***OVERLAND WEST INC*** ***4701 GRINDEN DR*** ***DULUTH MN 55811***	***FINDS/FRS***

Registry ID: 110071496157
FIPS Code: 27137
HUC Code: 04010201

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Site Type Name:	
Location Description:	
Supplemental Location:	
Create Date:	04-OCT-23
Update Date:	
Interest Types:	
SIC Codes:	5511
SIC Code Descriptions:	MOTOR VEHICLE DEALERS (NEW AND USED)
NAICS Codes:	441110
NAICS Code Descriptions:	NEW CAR DEALERS.
Conveyor:	FRS-GEOCODE
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	08
Census Block Code:	271370003001011
EPA Region Code:	05
County Name:	ST. LOUIS
US/Mexico Border Ind:	
Latitude:	46.83798
Longitude:	-92.17768
Reference Point:	ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method:	ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value:	50
Datum:	NAD83
Source:	
Frs Facility Detail Report URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110071496157
Program Acronyms:	

MN-TEMPO:235464

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	20 of64	WNW	0.01 / 46.68	1,375.08 / 4	2020 COMMERCIAL SERVICE APRON 4701 GRINDEN DR DULUTH MN 55811-1578	FINDS/FRS

Registry ID:	110071496659
FIPS Code:	27137
HUC Code:	04010201
Site Type Name:	
Location Description:	
Supplemental Location:	
Create Date:	04-OCT-23
Update Date:	
Interest Types:	
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	FRS-GEOCODE
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	08
Census Block Code:	271370003001011
EPA Region Code:	05
County Name:	ST. LOUIS
US/Mexico Border Ind:	
Latitude:	46.83798
Longitude:	-92.17768
Reference Point:	ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method:	ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value:	50
Datum:	NAD83

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110071496659
Program Acronyms:

MN-TEMPO:235791

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	21 of64	WNW	0.01 / 46.68	1,375.08 / 4	2024 MIDFIELD RAMP REPAIR DUL 4701 GRINDEN DR DULUTH MN 55811-1578	FINDS/FRS

Registry ID: 110071851503
FIPS Code: 27137
HUC Code: 04010201
Site Type Name:
Location Description: DULUTH AIRPORT
Supplemental Location:
Create Date: 09-OCT-24
Update Date:
Interest Types:
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor: FRS-GEOCODE
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 08
Census Block Code: 271370003001011
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude: 46.83798
Longitude: -92.17768
Reference Point: ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value: 50
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110071851503
Program Acronyms:

MN-TEMPO:260965

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	22 of64	WNW	0.01 / 46.68	1,375.08 / 4	TAXIWAY A RECONSTRUCTION - PH 4701 GRINDEN DR DULUTH MN 55811-1578	FINDS/FRS

Registry ID: 110071991027
FIPS Code: 27137
HUC Code: 04010201
Site Type Name:
Location Description:
Supplemental Location:
Create Date: 01-AUG-25
Update Date:
Interest Types:
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Conveyor: FRS-GEOCODE
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 08
Census Block Code: 271370003001011
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude: 46.83798
Longitude: -92.17768
Reference Point: ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value: 50
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110071991027
Program Acronyms:

MN-TEMPO:262965

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	23 of64	WNW	0.01 / 46.68	1,375.08 / 4	Duluth International Airport 4701 Grinden Dr Duluth MN 55811	HIST LEAKSITES

Prog Int ID: 217187
Site ID: 780
State County Code: 69
Country: USA
Interest Type Cd: LS
ADDR ID: 1321
Tank Site: 4479
Interest Phone: NO CORE PI PH.
Interest Start Dt: 08/11/1997 00:00:00
Interest End Dt: 04/14/2011 14:53:48
Active?: No
Timestamp Added: 03/23/2006 13:20:59
Timestamp Updt: 11/10/2014 08:17:05
Staff ID Updt: RGAGLE
Source: CORE
Coord Src Type: 2
Coord Src Desc:
Foreign State:
FIPS County Cd1: 137
Addr Timestmp Add: 06/11/1996 20:16:00
Addr Timestamp Lst Updt: 08/01/2007 21:43:45
Addr Updater Staff ID: SYSTEM
Lat/Long Timestamp Added: 03/20/2003 11:44:14
Lat/Long Tmstmp Last Upd: 07/14/2004 22:03:07
Lat/Long Updater Staff ID: BOMAN
Lat/Long Desc:
Coord Coll Method Desc: DOQ - Digital Orthophoto Quad
Coord Coll Method Code: D3
Comments:

Address Source: CORE
Township Name:
County Name: St. Louis
Lat/Long ID: 73296
Interest Type Dsc: Leak Site
Lat Degrees: 46
Lat Minutes: 50
Lat Seconds: 10.81
Long Degrees: -92
Long Minutes: 10
Long Seconds: 29.35
Lat/Long Source: CORE
Lat/Long Site ID: 780
Lat/Long Spatial ID: 51063947
Collection Date: 03/14/2003 00:00:00
Map Scale Code: T
Org Name Source: MPCA
Foreign Zone:

Leak Site

Complete Site Closure Date: 05/09/1995 00:00:00
Cond Closure Date:
Release Discovered Date: 07/23/1991 00:00:00
Leaksite Type Code: 1
Leaksite Type Desc: Leak Site
Leak Report Date: 07/23/1991 00:00:00
Tank Reg Status Code: U

TMSP Added:	12/04/1999 14:03:46
TMSP Last Updt:	02/07/2012 16:02:31
CU Yds Excavated Qty:	75
ENF Action Begin Date:	09/13/1991 00:00:00
Residence Type Code:	
File Archive Box:	59
File Archive Lot:	97/296
Soil Digout Date:	07/22/1991 00:00:00
Staff ID Last Updt:	KMUSTON
Std Letter Response Date:	
VPIC Acres:	
VPIC Application Date:	
Contam Soils Remaining Flag:	Y
Indoor Air Collected Flag:	
LUST Trust Eligible Flag:	No
Offsite Contam Flag:	U
REIMB Awarded Flag:	No
Release From AST Flag:	No
Release From UST Flag:	No
Soil Gas Action Level Flag:	
Soil Gas Data Collected Flag:	
Sub Slab Sample Collected Flag:	
Surface Water Impact Flag:	U
Utility Project Flag:	No
Vapor Intrusion Action Flag:	
Vapor Intrusion Checked Flag:	
Leaksite Type Defn:	Leak site (tank and petroleum contamination).
Soil Gas Data Comments:	
Vapor Intrusion Comments:	

Leak Product Rls

Product Rls Seq ID:	403276
Leak Product Desc:	Fuel Oil 4 & 6
Leak Product Defn:	The product is fuel oil 4 & 6.

Leak GW Info

Well Type Code:	
Affected Non Res Props:	
Affected Residential Props:	
Staff ID Last Updt:	RSUCHAN
Staff ID Wellhead Area Assess:	
TMSP Added:	12/04/1999 14:07:30
TMSP Last Updt:	11/04/2003 12:57:07
Water Supply Exceeds Ral Flag:	
Cleanup Goal Achieved Flag:	
DW Supply Contam Flag:	
Free Product at Close Flag:	
Free Product Observed Flag:	
Free Product Thickness:	
Ground Water Contam Flag:	N
GW Cleanup Goal:	0
GW Exceeds Cleanup Goal Flag:	
Impacted Aquifer Code:	
MTBE High Level Date:	
MTBE High Ug Per Liter Char:	
MTBE High Ug Per Liter Numb:	
MTBE Present Historically Flag:	
MTBE Present Now Flag:	
Protected Area Flag:	
PWS Well Impacted Flag:	
Sensitive Area Flag:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	24 of64	WNW	0.01 / 46.68	1,375.08 / 4	DULUTH INTERNATIONAL AIRPORT 4701 Grinden Dr Duluth MN 55811	HIST SPL

Program Int ID: 188492
Site ID: 0
Interest Type: Spill Site
Preferred ID: 29432
Active?:
Interest Start: 11/16/1998 10:10:32
Interest End:
Tmsp Added: 11/16/1998 10:10:32
TMSP Update: 11/04/2003 15:23:07
Prgm Int Source: TALES
Address Source: TALES
Interest Phone:
Township:
County: St. Louis
Comments: ERROR IN FILLING AIRCRAFT. ALL CONTAINED AND CLEANED UP.

Spill Site

Spill Site Closure Date: 11/15/1998 00:00:00
Spill Date: 11/15/1998 00:00:00
Spill Reported Date: 11/15/1998 00:00:00
Priority Code: 3
MPCA Involvement:
Initial Cause: HUMAN ERROR
Initial Source: Truck/Vehicle Fuel
Public Safety Spill ID:
Duty Officer Report Number:
Spill Reported by: HANK STORMS, DULUTH INTERNATIONAL AIRPORT
Report Taken By Initials: 3297
Rpt Taken by Duty Officer Flag:
MPCA Project Manager: 3094
Tmsp Added: 11/16/1998 10:10:32
Tmsp Last Updt: 04/11/2007 08:23:03
Staff ID Last Updt: RSUCHAN
Rep Name:
Rep Phone:
Archive Lot:
Archive Box:
Response Desc:

Spill Released Product

Spill Product: Aviation Gas (High Octane)
Spill Released Quantity: 40
Spill Qty Units: Gallons
Spill Incident Accuracy: Estimated
Date Added: 11/16/1998 10:10:32
Last Update: 05/04/2002 07:36:36
Staff ID Last Update: TANKS

Spill Incident Affected

Spill Incident Affect: Street, Parking Lot
Date Added: 11/16/1998 10:10:32
Last Update: 05/04/2002 07:36:36
Staff ID Last Update: TANKS

Spill Action

Spill Action: None, No File
Spill Action Person:
Date Added: 11/16/1998 10:10:32
Last Update: 05/04/2002 07:36:36
Staff ID Last Update: TANKS

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	25 of64	WNW	0.01 / 46.68	1,375.08 / 4	NWA 4701 Grinden Dr Duluth MN 55811	HIST SPL

Program Int ID:	186795	**Tmsp Added:**	01/22/1999 13:12:07
Site ID:	0	**TMSP Update:**	10/09/2006 10:11:15
Interest Type:	Spill Site	**Prgm Int Source:**	TALES
Preferred ID:	29734	**Address Source:**	TALES
Active?:		**Interest Phone:**	
Interest Start:	01/22/1999 13:12:07	**Township:**	
Interest End:		**County:**	St. Louis

Comments: RELEASED JPE ON RAMP, CAUSE UNKNOWN. SPILL CONTAINED WITH BOOMS\n\nAND SORBENT.

Spill Site

Spill Site Closure Date:	01/22/1999 00:00:00
Spill Date:	01/22/1999 00:00:00
Spill Reported Date:	01/22/1999 00:00:00
Priority Code:	3
MPCA Involvement:	
Initial Cause:	EQUIPMENT FAILURE
Initial Source:	Unknown
Public Safety Spill ID:	
Duty Officer Report Number:	
Spill Reported by:	NORTHWEST AIRLINES, RIA MOLITOR
Report Taken By Initials:	3297
Rpt Taken by Duty Officer Flag:	
MPCA Project Manager:	3094
Tmsp Added:	01/22/1999 13:12:07
Tmsp Last Updt:	04/11/2007 08:23:02
Staff ID Last Updt:	RSUCHAN
Rep Name:	
Rep Phone:	
Archive Lot:	
Archive Box:	
Response Desc:	

Spill Released Product

Spill Product:	Aviation Gas (High Octane)
Spill Released Quantity:	40
Spill Qty Units:	Gallons
Spill Incident Accuracy:	Known
Date Added:	01/22/1999 13:12:07
Last Update:	05/04/2002 07:31:12
Staff ID Last Update:	TANKS

Spill Incident Affected

Spill Incident Affect:	Street, Parking Lot
Date Added:	01/22/1999 13:12:07
Last Update:	05/04/2002 07:31:12
Staff ID Last Update:	TANKS

Spill Action

Spill Action:	None, No File
Spill Action Person:	
Date Added:	01/22/1999 13:12:07
Last Update:	05/04/2002 07:31:12
Staff ID Last Update:	TANKS

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	26 of64	WNW	0.01 / 46.68	1,375.08 / 4	Northwest Airlines 4701 Grinden Dr. Duluth MN	HIST SPL

Program Int ID: 187716
Site ID: 0
Interest Type: Spill Site
Preferred ID: 30713
Active?:
Interest Start: 06/24/1999 09:23:04
Interest End:
Tmsp Added: 06/24/1999 09:23:04
TMSP Update: 02/05/2009 13:10:48
Prgm Int Source: TALES
Address Source: TALES
Interest Phone:
Township:
County: St. Louis
Comments: VALVE STUCK WHILE FUELING NW AIRCRAFT. FD CONTAINED & CLEANING UP\n\nAIRPORT WILL DISPOSE. CLEAN UP DONE.

Spill Site

Spill Site Closure Date: 06/23/1999 00:00:00
Spill Date: 06/23/1999 00:00:00
Spill Reported Date: 06/23/1999 00:00:00
Priority Code: 3
MPCA Involvement:
Initial Cause: EQUIPMENT FAILURE
Initial Source: Other
Public Safety Spill ID:
Duty Officer Report Number:
Spill Reported by: CARL ANDERSON, AIR NATIONAL GUARD FD
Report Taken By Initials: 3297
Rpt Taken by Duty Officer Flag:
MPCA Project Manager: 3094
Tmsp Added: 06/24/1999 09:23:04
Tmsp Last Updt: 04/11/2007 08:23:02
Staff ID Last Updt: RSUCHAN
Rep Name:
Rep Phone:
Archive Lot:
Archive Box:
Response Desc:

Spill Released Product

Spill Product: Aviation Gas (High Octane)
Spill Released Quantity: 100
Spill Qty Units: Gallons
Spill Incident Accuracy: Known
Date Added: 06/24/1999 09:23:04
Last Update: 05/04/2002 07:34:09
Staff ID Last Update: TANKS

Spill Incident Affected

Spill Incident Affect: Street, Parking Lot
Date Added: 06/24/1999 09:23:04
Last Update: 05/04/2002 07:34:09
Staff ID Last Update: TANKS

Spill Action

Spill Action: None, No File
Spill Action Person:
Date Added: 06/24/1999 09:23:04
Last Update: 05/04/2002 07:34:09
Staff ID Last Update: TANKS

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	27 of64	WNW	0.01 / 46.68	1,375.08 / 4	AIRPORT 4701 Grinden Dr Duluth MN 55811	HIST SPL

Program Int ID: 186807
Site ID: 0
Interest Type: Spill Site
Preferred ID: 29747
Active?:
Interest Start: 01/25/1999 11:51:20
Interest End:
Tmsp Added: 01/25/1999 11:51:20
TMSP Update: 11/04/2003 15:23:06
Prgm Int Source: TALES
Address Source: TALES
Interest Phone:
Township:
County: St. Louis
Comments: FUELING AIRCRAFT, PUMP MALFUNCTIONED OR WAS LEFT ON. FIRE DEPT.\n\nRESPONDED IMMEDIATELY. PADS AROUND DRAINS. NOTHING TO SEWER. JETA

Spill Site

Spill Site Closure Date: 01/22/1999 00:00:00
Spill Date: 01/22/1999 00:00:00
Spill Reported Date: 01/22/1999 00:00:00
Priority Code: 3
MPCA Involvement:
Initial Cause: EQUIPMENT FAILURE
Initial Source: Other
Public Safety Spill ID:
Duty Officer Report Number:
Spill Reported by: HANK STORMS, DULUTH INT'L AIRPORT
Report Taken By Initials: 3297
Rpt Taken by Duty Officer Flag:
MPCA Project Manager: 3094
Tmsp Added: 01/25/1999 11:51:20
Tmsp Last Updt: 04/11/2007 08:23:02
Staff ID Last Updt: RSUCHAN
Rep Name:
Rep Phone:
Archive Lot:
Archive Box:
Response Desc:

Spill Released Product

Spill Product: Aviation Gas (High Octane)
Spill Released Quantity: 35
Spill Qty Units: Gallons
Spill Incident Accuracy: Known
Date Added: 01/25/1999 11:51:20
Last Update: 05/04/2002 07:31:14
Staff ID Last Update: TANKS

Spill Incident Affected

Spill Incident Affect: Street, Parking Lot
Date Added: 01/25/1999 11:51:20
Last Update: 05/04/2002 07:31:14
Staff ID Last Update: TANKS

Spill Action

Spill Action: None, No File
Spill Action Person:
Date Added: 01/25/1999 11:51:20
Last Update: 05/04/2002 07:31:14
Staff ID Last Update: TANKS

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	28 of64	WNW	0.01 / 46.68	1,375.08 / 4	Northwest Airlines - Duluth Intl Airport - ramp 4701 Grinden Dr Duluth MN 55811	HIST SPL

Program Int ID: 259244
Site ID: 0
Interest Type: Spill Site
Preferred ID: 58578
Active?:
Interest Start: 03/05/2003 16:17:01
Interest End:
Tmsp Added: 03/05/2003 16:17:01
TMSP Update: 09/22/2005 10:24:09
Prgm Int Source: TALES
Address Source: TALES
Interest Phone:
Township:
County: St. Louis
Comments: **No File**\n\nSpill occurred during an internal transfer of fuel from one wing to the other in a Northwest DC-9. Duluth Air National Guard responded and contained with pads. Clean-up is almost complete, Air National Guard has 3 - 55 gallon drums of clean-up material. Caller stated that in the past the Air National Guard has handled disposal, caller will be checking with them shortly if that will be the case again. SUPPLEMENTAL Report indicated that airport will handle disposal.

Spill Site

Spill Site Closure Date: 02/21/2003 00:00:00
Spill Date: 02/21/2003 00:00:00
Spill Reported Date: 02/21/2003 03:00:00
Priority Code:
MPCA Involvement: None
Initial Cause:
Initial Source: Other
Public Safety Spill ID:
Duty Officer Report Number:
Spill Reported by: Shawn Germolus
Report Taken By Initials:
Rpt Taken by Duty Officer Flag: Yes
MPCA Project Manager: 3094
Tmsp Added: 03/05/2003 16:17:02
Tmsp Last Updt: 04/11/2007 08:23:06
Staff ID Last Updt: RSUCHAN
Rep Name: Shawn Germolus
Rep Phone: 2187272968
Archive Lot:
Archive Box:
Response Desc:

Spill Released Product

Spill Product: Jet Fuel (Kerosene Based)
Spill Released Quantity: 90
Spill Qty Units: Gallons
Spill Incident Accuracy: Estimated
Date Added: 03/05/2003 16:17:02
Last Update: 03/05/2003 16:17:02
Staff ID Last Update: SLEPPAL

Spill Incident Affected

Spill Incident Affect: Paved, Not Street
Date Added: 03/05/2003 16:17:02
Last Update: 03/05/2003 16:17:02
Staff ID Last Update: SLEPPAL

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	29 of64	WNW	0.01 / 46.68	1,375.08 / 4	DULUTH INTERNATIONAL AIRPORT (DAA) 4701 GRINDEN DR DULUTH MN 55811	ICIS

EPA Region: 05
Federal Fac ID:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Registry ID:	110008799979	**Tribal Land Code:**		
Pgm Sys ID:	MN0000002713700074	**County:**	St. Louis	
Pgm Sys Acrnm:	AIR	**Latitude 83:**	46.836338	
Permit Type:		**Longitude 83:**	-92.17482	

3	30 of64	WNW	0.01 / 46.68	1,375.08 / 4	Duluth International Airport 4701 Grinden Dr Duluth MN 55811	LST REM SITE

Item ID:	638-AREA0000000003	**Unpermitted Dump?:**	
Project ID:	LS0004479	**State Reg:**	
Project Type:	Leak Site	**Federal Reg:**	
Project ID (RAP):		**Fed State Reg:**	
Project Type (RAP):		**Non Reg:**	
Site Status:	Closed	**NPL:**	
Perm List of Prio?:		**Site County:**	St. Louis
Petrol Brownfield?:		**County (RAP):**	
VIC Site?:		**Latitude:**	46.83921119
Sf Voluntary:		**Longitude:**	-92.17977601
Inst Controls?:		**Latitude (RAP):**	
SEMS?:		**Longitude (RAP):**	
Project Name:	Duluth International Airport		
Project Managers:	Steve Leppala (no longer at MPCA)		
Site Address 1:	4701 Grinden Dr		
Site Address 2:			
Site City:	Duluth		
Site State:	MN		
Site ZIP:	55811		
Project Name(RAP):			
Address1 (RAP):			
Address2 (RAP):			
City (RAP):			
State (RAP):			
ZIP (RAP):			
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

Activity ID:	638	**Object ID:**	6557
SI ID:	3	**Cong Dist:**	8
Si Cat:	AREA	**House Dist:**	8B
SI Type:	LEAK	**Senate Dis:**	8
Site Type:	CON	**HUC 8:**	04010201
Acreage:		**HUC 10:**	0401020116
HRS Score:		**HUC 12:**	040102011604
Score Year:		**Gdb Geomattr Data:**	
DWSMA Code:		**MNTBA:**	
AI Name:	Duluth International Airport		
DWSMA Name:			
Hydrologists:			
Huc 8 Name:	St. Louis River		
Huc12 Name:	Saint Louis River		
Method Desc:	Digitized - MPCA internal map		
Loc Desc:			
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/638		

Spatial Remediation Activity

AI ID:	638	**Object ID:**	420
Site ID:	LS0004479	**Remedy Imp:**	
SI ID:	3	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	
Site Start:	1991-07-23 00:00:00	**NPL List:**	
Site Close:	1995-05-09 00:00:00	**NPL Delete:**	
Leak Discovered:	1991-07-23 00:00:00	**PLP List:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Leak Reported:	1991-07-23 00:00:00	**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	
Activity No:	1	**FF Aproved:**	
Activity ID:	SIW19910001	**FF Closed:**	
Activity Type:	Leak Site Investigation	**Inv Comple:**	
Activity Code:	SIW	**App Comple:**	
Activity Year:	1991	**Er Site Ev:**	
Discovered:			

3	31 of64	WNW	0.01 / 46.68	1,375.08 / 4	Duluth Airport - Former Fueling Station 4701 Grinden Dr Duluth MN 55811	LST REM SITE

Item ID:	638-AREA0000000005	**Unpermitted Dump?:**	
Project ID:	LS0020250	**State Reg:**	
Project Type:	Leak Site	**Federal Reg:**	Yes
Project ID (RAP):	LS0020250	**Fed State Reg:**	
Project Type (RAP):	Leak Site	**Non Reg:**	
Site Status:	Closed	**NPL:**	
Perm List of Prio?:		**Site County:**	St. Louis
Petrol Brownfield?:		**County (RAP):**	St. Louis
VIC Site?:		**Latitude:**	46.83740176
Sf Voluntary:		**Longitude:**	-92.19066252
Inst Controls?:		**Latitude (RAP):**	46.83740176
SEMS?:		**Longitude (RAP):**	-92.19066252

Project Name:	Duluth Airport - Former Fueling Station
Project Managers:	Lauralin Kania (former)
Site Address 1:	4701 Grinden Dr
Site Address 2:	
Site City:	Duluth
Site State:	MN
Site ZIP:	55811
Project Name(RAP):	Duluth Airport - Former Fueling Station
Address1 (RAP):	4701 Grinden Dr
Address2 (RAP):	
City (RAP):	Duluth
State (RAP):	MN
ZIP (RAP):	55811
Data Source:	MPCA Remediation Sites; MPCA Remediation Sites with RAP approvals

Remediation Sites Details

Activity ID:	638	**Object ID:**	29425
SI ID:	5	**Cong Dist:**	8
Si Cat:	AREA	**House Dist:**	8B
SI Type:	LEAK	**Senate Dis:**	8
Site Type:	CON	**HUC 8:**	04010201
Acreage:		**HUC 10:**	0401020116
HRS Score:		**HUC 12:**	040102011604
Score Year:		**Gdb Geomattr Data:**	
DWSMA Code:		**MNTBA:**	

AI Name:	Duluth International Airport
DWSMA Name:	
Hydrologists:	Sara Nelson (former)
Huc 8 Name:	St. Louis River
Huc12 Name:	Saint Louis River
Method Desc:	Digitized - MPCA internal map
Loc Desc:	
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/638

Remediation Sites with RAP Approval

Activity ID:	638	**Rap Date:**	
No Assoc Date:		**Rap Approved:**	
No Assoc Letter:	No	**Rap Completed:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Parcels:		**Site Closed:**	
Has RP:	Yes	**Site Start:**	
RP Names:	Duluth International Airport (DAA), Steven Wabrowetz		
AI Name:	Duluth International Airport		
Coord Collect Methd:	Digitized - MPCA internal map		
WIMN:	https://webapp.pca.state.mn.us/wimn/site/638		

Spatial Remediation Activity

AI ID:	638	**Object ID:**	424
Site ID:	LS0020250	**Remedy Imp:**	
SI ID:	5	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	
Site Start:	2016-10-24 00:00:00	**NPL List:**	
Site Close:	2018-02-23 00:00:00	**NPL Delete:**	
Leak Discovered:	2016-10-21 00:00:00	**PLP List:**	
Leak Reported:	2016-10-24 00:00:00	**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	
Activity No:	2	**FF Aproved:**	
Activity ID:	SIW20160002	**FF Closed:**	
Activity Type:	Leak Site Investigation	**Inv Comple:**	
Activity Code:	SIW	**App Comple:**	
Activity Year:	2016	**Er Site Ev:**	
Discovered:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	32 of64	WNW	0.01 / 46.68	1,375.08 / 4	Duluth International Airport Maintenance Garage 4701 Grinden Dr Duluth MN 55811	LST REM SITE

Item ID:	638-AREA0000000002	**Unpermitted Dump?:**	
Project ID:	LS0003496	**State Reg:**	
Project Type:	Leak Site	**Federal Reg:**	Yes
Project ID (RAP):		**Fed State Reg:**	
Project Type (RAP):		**Non Reg:**	
Site Status:	Closed	**NPL:**	
Perm List of Prio?:		**Site County:**	St. Louis
Petrol Brownfield?:		**County (RAP):**	
VIC Site?:		**Latitude:**	46.83697621
Sf Voluntary:		**Longitude:**	-92.19075034
Inst Controls?:		**Latitude (RAP):**	
SEMS?:		**Longitude (RAP):**	
Project Name:	Duluth International Airport Maintenance Garage		
Project Managers:	James Joslyn (no longer at MPCA)		
Site Address 1:	4701 Grinden Dr		
Site Address 2:			
Site City:	Duluth		
Site State:	MN		
Site ZIP:	55811		
Project Name(RAP):			
Address1 (RAP):			
Address2 (RAP):			
City (RAP):			
State (RAP):			
ZIP (RAP):			
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

Activity ID:	638	**Object ID:**	4357
SI ID:	2	**Cong Dist:**	8
Si Cat:	AREA	**House Dist:**	8B
SI Type:	LEAK	**Senate Dis:**	8
Site Type:	CON	**HUC 8:**	04010201
Acreage:		**HUC 10:**	0401020116

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HRS Score:		**HUC 12:**	040102011604
Score Year:		**Gdb Geomattr Data:**	
DWSMA Code:		**MNTBA:**	
AI Name:	Duluth International Airport		
DWSMA Name:			
Hydrologists:			
Huc 8 Name:	St. Louis River		
Huc12 Name:	Saint Louis River		
Method Desc:	Digitized - MPCA internal map		
Loc Desc:			
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/638		

Spatial Remediation Activity

AI ID:	638	**Object ID:**	419
Site ID:	LS0003496	**Remedy Imp:**	
SI ID:	2	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	
Site Start:	1990-10-29 00:00:00	**NPL List:**	
Site Close:	1994-09-27 00:00:00	**NPL Delete:**	
Leak Discovered:	1990-10-29 00:00:00	**PLP List:**	
Leak Reported:	1990-10-29 00:00:00	**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	
Activity No:	1	**FF Aproved:**	
Activity ID:	SIW19900001	**FF Closed:**	
Activity Type:	Leak Site Investigation	**Inv Comple:**	
Activity Code:	SIW	**App Comple:**	
Activity Year:	1990	**Er Site Ev:**	
Discovered:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	33 of64	WNW	0.01 / 46.68	1,375.08 / 4	Former Fueling Station 4701 Grinden Dr Duluth MN 55811	LST REM SITE

Item ID:	638-AREA0000000004	**Unpermitted Dump?:**	
Project ID:	LS0020226	**State Reg:**	
Project Type:	Leak Site	**Federal Reg:**	Yes
Project ID (RAP):		**Fed State Reg:**	
Project Type (RAP):		**Non Reg:**	
Site Status:	Closed	**NPL:**	
Perm List of Prio?:		**Site County:**	St. Louis
Petrol Brownfield?:		**County (RAP):**	
VIC Site?:		**Latitude:**	46.83778689
Sf Voluntary:		**Longitude:**	-92.17481925
Inst Controls?:		**Latitude (RAP):**	
SEMS?:		**Longitude (RAP):**	
Project Name:	Former Fueling Station		
Project Managers:	Lauralin Kania (former)		
Site Address 1:	4701 Grinden Dr		
Site Address 2:			
Site City:	Duluth		
Site State:	MN		
Site ZIP:	55811		
Project Name(RAP):			
Address1 (RAP):			
Address2 (RAP):			
City (RAP):			
State (RAP):			
ZIP (RAP):			
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

Activity ID:	638	**Object ID:**	29358
SI ID:	4	**Cong Dist:**	8

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Si Cat:	AREA	**House Dist:**	8B
SI Type:	LEAK	**Senate Dis:**	8
Site Type:	CON	**HUC 8:**	04010201
Acreage:		**HUC 10:**	0401020116
HRS Score:		**HUC 12:**	040102011604
Score Year:		**Gdb Geomattr Data:**	
DWSMA Code:		**MNTBA:**	
AI Name:	Duluth International Airport		
DWSMA Name:			
Hydrologists:	Sara Nelson (former)		
Huc 8 Name:	St. Louis River		
Huc12 Name:	Saint Louis River		
Method Desc:	Address Matching House Number		
Loc Desc:			
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/638		

Spatial Remediation Activity

AI ID:	638	**Object ID:**	422
Site ID:	LS0020226	**Remedy Imp:**	
SI ID:	4	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	
Site Start:	2016-09-27 00:00:00	**NPL List:**	
Site Close:	2017-05-18 00:00:00	**NPL Delete:**	
Leak Discovered:	2016-09-27 00:00:00	**PLP List:**	
Leak Reported:	2016-09-27 00:00:00	**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	
Activity No:	1	**FF Aproved:**	
Activity ID:	SIW20160001	**FF Closed:**	
Activity Type:	Leak Site Investigation	**Inv Comple:**	
Activity Code:	SIW	**App Comple:**	
Activity Year:	2016	**Er Site Ev:**	
Discovered:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	34 of64	WNW	0.01 / 46.68	1,375.08 / 4	DAA ANG Fire Station Phase 3 4701 Grinden Dr Duluth MN 55803	MPCA AI

Agency Interest ID:	108560
Name (Map):	DAA ANG Fire Station Phase 3
Address (Map):	4701 Grinden Dr
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55803
Latitude (Map):	47.03751595
Longitude (Map):	-92.10876654
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	DAA ANG Fire Station Phase 3
Address (Site):	4701 Grinden Dr
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55803
Latitude (Site):	47.03751595
Longitude (Site):	-92.10876654
County (Site):	St. Louis
Name (Req):	DAA ANG Fire Station Phase 3
Address (Req):	4701 Grinden Dr
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55803
Loc Desc (Req):	
Latitude (Req):	47.03751595
Longitude (Req):	-92.10876654
County (Req):	St. Louis

County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	108560-AISI0000108560	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	2008-08-08 06:53:00	***SI Cat:***	AISI
Program:	Multiple Programs	***SI ID:***	108560
CTU Code:	664284	***SI Cat Desc:***	Agency Interest
CTU Name:	Gnesen Township	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	6/30/2016	***TRDSQQ:***	
Tmsp Created:	10/2/2006	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	6/30/2016	***Verified:***	No
Spatial ID:	51480882	***User Updt:***	geo_nc

Name: DAA ANG Fire Station Phase 3
Program List: CS, SW
HUC 8: 04010202
HUC 8 Name: Cloquet River
HUC 10: 0401020204
HUC 12: 040102020404
HUC 12 Name: Island Lake Reservoir
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010202
MPCA ID:	C00020121	***Cong Distr:***	8
Program Co:	ST; SW	***Senate Dis:***	3
Program Name:	Multiple Programs	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55803	***Coord Coll:***	Q2
City:	Gnesen Township	***Latitude:***	47.03751595
County:	St. Louis	***Longitude:***	-92.10876654

Activity: Multiple Activities
Addr St: 4701 Grinden Dr
Addr City: Duluth
MPCA ID List: C00020121
Program 1: Stormwater; Solid Waste
Name: DAA ANG Fire Station Phase 3
Watershed : Cloquet River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Construction Stormwater; Solid Waste
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/108560

Agency Interests: File Request Details

Item ID:	108560-AISI0000108560	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	8/8/2008	***SI Cat:***	AISI
Program:	Multiple Programs	***SI ID:***	108560
CTU Code:	664284	***SI Cat Desc:***	Agency Interest
CTU Name:	Gnesen Township	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	10/2/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	51480882		
Name:	DAA ANG Fire Station Phase 3		
Program List:	CS, SW		
HUC 8:	4010202		
HUC 8 Name:	Cloquet River		
HUC 10:	401020204		
HUC 10 Name:	Island Lake Reservoir-Cloquet River		
HUC 12:	40102020404		
HUC 12 Name:	Island Lake Reservoir		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

3	35 of64	WNW	0.01 / 46.68	1,375.08 / 4	**TSA at Duluth International Airport** **4701 Grinden Dr** **Duluth MN 55811**	MPCA AI

Agency Interest ID:	83391
Name (Map):	TSA at Duluth International Airport
Address (Map):	4701 Grinden Dr
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8389587
Longitude (Map):	-92.1797798
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	TSA at Duluth International Airport
Address (Site):	4701 Grinden Dr
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811-1578
Latitude (Site):	46.8389587
Longitude (Site):	-92.1797798
County (Site):	St. Louis
Name (Req):	TSA at Duluth International Airport
Address (Req):	4701 Grinden Dr
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8389587
Longitude (Req):	-92.1797798
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	83391-AISI0000083391	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	83391
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	

Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:		**TRDSQQ:**	
Tmsp Created:	8/12/2004	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	3/30/2017	**Verified:**	No
Spatial ID:	96618	**User Updt:**	RSP
Name:	TSA at Duluth International Airport		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	MNS000105817	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	8
Program Name:	Hazardous Waste	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-1578	**Coord Coll:**	DM
City:	Duluth	**Latitude:**	46.8389587
County:	St. Louis	**Longitude:**	-92.1797798
Activity:	Hazardous Waste, Very small quantity generator		
Addr St:	4701 Grinden Dr		
Addr City:	Duluth		
MPCA ID List:	MNS000105817		
Program 1:	Hazardous Waste		
Name:	TSA at Duluth International Airport		
Watershed :	St. Louis River		
Coord Co 1:	Digitized - MPCA internal map		
Activity L:	Hazardous Waste, Very small quantity generator		
Industrial:	Regulation and Administration of Transportation Programs		
Site URL:	https://webapp.pca.state.mn.us/wimn/site/83391		

Agency Interests: File Request Details

Item ID:	83391-AISI0000083391	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	83391
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:		**Ref Code:**	GEN
Tmsp Created:	8/12/2004	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	3/30/2017	**User Updt:**	RSP
Spatial ID:	96618		
Name:	TSA at Duluth International Airport		
Program List:	HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: DM
Method Desc: Digitized - MPCA internal map

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	36 of64	WNW	0.01 / 46.68	1,375.08 / 4	Duluth Airport Runway 21Safety Area Imp 4701 Grinden Dr Duluth MN 55811	MPCA AI

Agency Interest ID: 89268
Name (Map): Duluth Airport Runway 21Safety Area Imp
Address (Map): 4701 Grinden Dr
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.8365273
Longitude (Map): -92.1751518
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Duluth Airport Runway 21Safety Area Imp
Address (Site): 4701 Grinden Dr
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.8365273
Longitude (Site): -92.1751518
County (Site): St. Louis
Name (Req): Duluth Airport Runway 21Safety Area Imp
Address (Req): 4701 Grinden Dr
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.8365273
Longitude (Req): -92.1751518
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	89268-AISI0000089268	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2005-09-13 10:44:58	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	89268
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	11/13/2002	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	87309	**User Updt:**	spatial_

Name: Duluth Airport Runway 21Safety Area Imp
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

My Neighborhood Site Details

Active FLA: No
MPCA ID: C00009266
Program Co: ST
Program Name: Stormwater
Address: MN
Addr ZIP: 55811
City: Hermantown
County: St. Louis
Activity: Construction Stormwater
Addr St: 4701 Grinden Dr
Addr City: Duluth
MPCA ID List: C00009266
Program 1: Stormwater
Name: Duluth Airport Runway 21Safety Area Imp
Watershed : St. Louis River
Coord Co 1: Address Matching House Number
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/89268

HUC 8: 04010201
Cong Distr: 8
Senate Dis: 3
House Dist: 3B
IC Flag: No
Coord Coll: A1
Latitude: 46.8365273
Longitude: -92.1751518

Agency Interests: File Request Details

Item ID: 89268-AISI0000089268
Status: Inactive
Status Date: 9/13/2005
Program: Const Stormwater
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 9/27/2015
Tmsp Created: 11/13/2002
User Created: DELTA_M_R1
Tmsp Updt: 4/26/2016
Spatial ID: 87309
Name: Duluth Airport Runway 21Safety Area Imp
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 89268
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: spatial_

3	37 of64	WNW	0.01 / 46.68	1,375.08 / 4	New Passanger Terminal BP 2C Civil 4701 Grinden Drive Duluth MN 55811	MPCA AI

Agency Interest ID:	143543
Name (Map):	New Passanger Terminal BP 2C Civil
Address (Map):	4701 Grinden Drive
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83778689
Longitude (Map):	-92.17481925
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	New Passanger Terminal BP 2C Civil
Address (Site):	4701 Grinden Drive
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83778689
Longitude (Site):	-92.17481925
County (Site):	St. Louis
Name (Req):	New Passanger Terminal BP 2C Civil
Address (Req):	4701 Grinden Drive
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83778689
Longitude (Req):	-92.17481925
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	143543-AISI0000143543	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	143543
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***SI Type Desc:***	Conventional Site
PLS Twsp:	050	***Description:***	
Range :	15	***SI Designation:***	
Range Dir:	W	***Cong Dist:***	8
Section:	01	***House Dist:***	8B
Quarters:	dd	***Senate Dist:***	8
Collection Date:	3/3/2017	***TRDSQQ:***	05015201dd
Tmsp Created:	7/16/2012	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	3/3/2017	***Verified:***	No
Spatial ID:		***User Updt:***	geo_nc

Name:	New Passanger Terminal BP 2C Civil
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	A1
Method Desc:	Address Matching House Number

My Neighborhood Site Details

Active FLA:	Yes	***HUC 8:***	04010201
MPCA ID:	C00034247	***Cong Distr:***	8

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program Co:	ST	**Senate Dis:**	8
Program Name:	Stormwater	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Duluth	**Latitude:**	46.83778689
County:	St. Louis	**Longitude:**	-92.17481925
Activity:	Construction Stormwater		
Addr St:	4701 Grinden Drive		
Addr City:	Duluth		
MPCA ID List:	C00034247		
Program 1:	Stormwater		
Name:	New Passanger Terminal BP 2C Civil		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/143543		

Agency Interests: File Request Details

Item ID:	143543-AISI0000143543	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	143543
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:	50	**SI Designation:**	
Range :	15	**Cong Dist:**	8
Range Dir:	W	**House Dist:**	8B
Section:	1	**Senate Dist:**	8
Quarters:	dd	**TRDSQQ:**	05015201dd
Collection Date:	3/3/2017	**Ref Code:**	GEN
Tmsp Created:	7/16/2012	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	3/3/2017	**User Updt:**	geo_nc
Spatial ID:			
Name:	New Passanger Terminal BP 2C Civil		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

3	***38 of64***	***WNW***	***0.01 / 46.68***	***1,375.08 / 4***	***North Perimeter Road Grading Drainage 4701 Grinden Dr Duluth MN 55811***	***MPCA AI***

Agency Interest ID:	85161
Name (Map):	North Perimeter Road Grading Drainage
Address (Map):	4701 Grinden Dr
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8365273
Longitude (Map):	-92.1751518
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	North Perimeter Road Grading Drainage

Address (Site):	4701 Grinden Dr
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8365273
Longitude (Site):	-92.1751518
County (Site):	St. Louis
Name (Req):	North Perimeter Road Grading Drainage
Address (Req):	4701 Grinden Dr
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8365273
Longitude (Req):	-92.1751518
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	85161-AISI0000085161	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2007-09-12 14:32:37	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	85161
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	12/8/2004	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	98608	**User Updt:**	spatial_
Name:	North Perimeter Road Grading Drainage		
Program List:	CS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00014195	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	3
Program Name:	Stormwater	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Hermantown	**Latitude:**	46.8365273
County:	St. Louis	**Longitude:**	-92.1751518
Activity:	Construction Stormwater		
Addr St:	4701 Grinden Dr		
Addr City:	Duluth		
MPCA ID List:	C00014195		
Program 1:	Stormwater		
Name:	North Perimeter Road Grading Drainage		
Watershed :	St. Louis River		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Coord Co 1: Address Matching House Number
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/85161

Agency Interests: File Request Details

Item ID:	85161-AISI0000085161	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	9/12/2007	***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	85161
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B
Section:		***Senate Dist:***	3
Quarters:		***TRDSQQ:***	
Collection Date:	9/27/2015	***Ref Code:***	GEN
Tmsp Created:	12/8/2004	***Ref Desc:***	General Location
User Created:	DELTA_M_R1	***Verified:***	No
Tmsp Updt:	4/26/2016	***User Updt:***	spatial_
Spatial ID:	98608		

Name: North Perimeter Road Grading Drainage
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	39 of64	WNW	0.01 / 46.68	1,375.08 / 4	Delta Air Lines Global Services (DLH) 4701 Grinden Dr Duluth MN 55811	MPCA AI

Agency Interest ID: 130367
Name (Map): Delta Air Lines Global Services (DLH)
Address (Map): 4701 Grinden Dr
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.8419444
Longitude (Map): -92.1938888
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Delta Air Lines Global Services (DLH)
Address (Site): 4701 Grinden Dr
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.8419444
Longitude (Site): -92.1938888
County (Site): St. Louis
Name (Req): Delta Air Lines Global Services (DLH)
Address (Req): 4701 Grinden Dr
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):

Latitude (Req):	46.8419444
Longitude (Req):	-92.1938888
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	130367-AISI0000130367	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Ind Stormwater	**SI ID:**	130367
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	3/3/2011	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	59498410	**User Updt:**	spatial_
Name:	Delta Air Lines Global Services (DLH)		
Program List:	IS		
HUC 8:	04010202		
HUC 8 Name:	Cloquet River		
HUC 10:	0401020205		
HUC 12:	040102020501		
HUC 12 Name:	Wild Rice Lake Reservoir		
DWSMA Code:			
DWSMA Name:			
Method Code:	G8		
Method Desc:	GPS - Other		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010202
MPCA ID:	MNR0536NR	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	8
Program Name:	Stormwater	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	G8
City:	Duluth	**Latitude:**	46.8419444
County:	St. Louis	**Longitude:**	-92.1938888
Activity:	Industrial Stormwater		
Addr St:	4701 Grinden Dr		
Addr City:	Duluth		
MPCA ID List:	MNR0536NR		
Program 1:	Stormwater		
Name:	Delta Air Lines Global Services (DLH)		
Watershed :	Cloquet River		
Coord Co 1:	GPS - Other		
Activity L:	Industrial Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/130367		

Agency Interests: File Request Details

Item ID:	130367-AISI0000130367	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Ind Stormwater	**SI ID:**	130367
CTU Code:	239456	**SI Cat Desc:**	Agency Interest

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	3/3/2011	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	59498410		
Name:	Delta Air Lines Global Services (DLH)		
Program List:	IS		
HUC 8:	4010202		
HUC 8 Name:	Cloquet River		
HUC 10:	401020205		
HUC 10 Name:	Fish Lake Reservoir-Beaver River		
HUC 12:	40102020501		
HUC 12 Name:	Wild Rice Lake Reservoir		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	G8		
Method Desc:	GPS - Other		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	40 of64	WNW	0.01 / 46.68	1,375.08 / 4	Delta Airlines Inc Duluth Ramp 4701 Grinden Rd Duluth MN 55811	MPCA AI

Agency Interest ID:	130799
Name (Map):	Delta Airlines Inc Duluth Ramp
Address (Map):	4701 Grinden Rd
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8365385
Longitude (Map):	-92.1765437
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Delta Airlines Inc Duluth Ramp
Address (Site):	4701 Grinden Rd
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8365385
Longitude (Site):	-92.1765437
County (Site):	St. Louis
Name (Req):	Delta Airlines Inc Duluth Ramp
Address (Req):	4701 Grinden Rd
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8365385
Longitude (Req):	-92.1765437
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	130799-AISI0000130799	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Aboveground Tanks	**SI ID:**	130799

CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	2/19/2010	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	57590663	**User Updt:**	spatial_
Name:	Delta Airlines Inc Duluth Ramp		
Program List:	AT		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	TS0125282	**Cong Distr:**	8
Program Co:	TL	**Senate Dis:**	3
Program Name:	Tanks	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Hermantown	**Latitude:**	46.8365385
County:	St. Louis	**Longitude:**	-92.1765437
Activity:	Aboveground Tanks		
Addr St:	4701 Grinden Rd		
Addr City:	Duluth		
MPCA ID List:	TS0125282		
Program 1:	Tanks		
Name:	Delta Airlines Inc Duluth Ramp		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Aboveground Tanks		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/130799		

Agency Interests: File Request Details

Item ID:	130799-AISI0000130799	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Aboveground Tanks	**SI ID:**	130799
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	2/19/2010	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	57590663		
Name:	Delta Airlines Inc Duluth Ramp		
Program List:	AT		
HUC 8:	4010201		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	A1
Method Desc:	Address Matching House Number

3	**41 of64**	**WNW**	**0.01 / 46.68**	**1,375.08 / 4**	**Duluth International Airport 4701 Grinden Dr Duluth MN 55811**	**MPCA AI**

Agency Interest ID:	638
Name (Map):	Duluth International Airport
Address (Map):	4701 Grinden Dr
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.841405
Longitude (Map):	-92.183171
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Duluth International Airport
Address (Site):	4701 Grinden Dr
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811-1578
Latitude (Site):	46.841405
Longitude (Site):	-92.183171
County (Site):	St. Louis
Name (Req):	Duluth International Airport
Address (Req):	4701 Grinden Dr
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.841405
Longitude (Req):	-92.183171
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	638-AISI0000000638	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	638
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:	050	**Description:**	
Range :	15	**SI Designation:**	
Range Dir:	W	**Cong Dist:**	8
Section:	01	**House Dist:**	8B
Quarters:	dd	**Senate Dist:**	8
Collection Date:	11/15/2023	**TRDSQQ:**	05015201dd
Tmsp Created:	6/11/1996	**Ref Code:**	CEN
User Created:	DELTA_M_R1	**Ref Desc:**	Center of Feature Represented
Tmsp Updt:	4/16/2025	**Verified:**	No
Spatial ID:		**User Updt:**	smotton
Name:	Duluth International Airport		
Program List:	AQ, BV, EV, HW, IS, PR, SA, UT		

HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	DP
Method Desc:	Digitized - MPCA online map

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	Multiple IDs	**Cong Distr:**	8
Program Co:	AQ; HW; SR; ST; TL	**Senate Dis:**	8
Program Name:	Multiple Programs	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-1578	**Coord Coll:**	DP
City:	Duluth	**Latitude:**	46.841405
County:	St. Louis	**Longitude:**	-92.183171

Activity:	Multiple Activities
Addr St:	4701 Grinden Dr
Addr City:	Duluth
MPCA ID List:	13700074; LS0003496; LS0004479; LS0020226; LS0020250; MNR000023143; MNR053644; MNR053C9T; SA0000367; TS0021164; VP15240
Program 1:	Air Quality; Hazardous Waste; Investigation and Cleanup; Stormwater; Tanks
Name:	Duluth International Airport
Watershed :	St. Louis River
Coord Co 1:	Digitized - MPCA online map
Activity L:	Air Quality; Brownfields, Voluntary Investigation and Cleanup; Hazardous Waste, Very small quantity generator; Industrial Stormwater; Petroleum Remediation, Leak Site; Site Assessment; Underground Tanks
Industrial:	Scheduled Passenger Air Transportation ; Air Traffic Control
Site URL:	https://webapp.pca.state.mn.us/wimn/site/638

Agency Interests: File Request Details

Item ID:	638-AISI0000000638	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	638
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:	50	**SI Designation:**	
Range :	15	**Cong Dist:**	8
Range Dir:	W	**House Dist:**	8B
Section:	1	**Senate Dist:**	8
Quarters:	dd	**TRDSQQ:**	05015201dd
Collection Date:	11/15/2023	**Ref Code:**	CEN
Tmsp Created:	6/11/1996	**Ref Desc:**	Center of Feature Represented
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/16/2025	**User Updt:**	smotton

Spatial ID:	
Name:	Duluth International Airport
Program List:	AQ, BV, EV, HW, IS, PR, SA, UT
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	DP
Method Desc:	Digitized - MPCA online map

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	42 of64	WNW	0.01 / 46.68	1,375.08 / 4	Runway 9/27 Reconstruction, Phase 1 Duluth Airport 4701 Grinden Dr. Duluth MN 55811	MPCA AI

Agency Interest ID:	212423
Name (Map):	Runway 9/27 Reconstruction, Phase 1
Address (Map):	Duluth Airport 4701 Grinden Dr.
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.842277
Longitude (Map):	-92.222676
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	Runway 9/27 Reconstruction *** Note:many records provided by the department have a truncated LOC_DESC field.
Name (Site):	Runway 9/27 Reconstruction, Phase 1
Address (Site):	Duluth Airport 4701 Grinden Dr.
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.842277
Longitude (Site):	-92.222676
County (Site):	St. Louis
Name (Req):	Runway 9/27 Reconstruction, Phase 1
Address (Req):	Duluth Airport
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	Runway 9/27 Reconstruction
Latitude (Req):	46.842277
Longitude (Req):	-92.222676
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	212423-AISI0000212423	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	212423
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	5/6/2016	**Ref Code:**	GEN
User Created:	RSP	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:		**User Updt:**	geo_nc

Name:	Runway 9/27 Reconstruction, Phase 1
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	DP
Method Desc:	Digitized - MPCA online map

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

My Neighborhood Site Details

Active FLA:	Yes	***HUC 8:***	04010201
MPCA ID:	C00043160	***Cong Distr:***	8
Program Co:	ST	***Senate Dis:***	3
Program Name:	Stormwater	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	DP
City:	Hermantown	***Latitude:***	46.842277
County:	St. Louis	***Longitude:***	-92.222676

Activity:	Construction Stormwater
Addr St:	Duluth Airport 4701 Grinden Dr.
Addr City:	Duluth
MPCA ID List:	C00043160
Program 1:	Stormwater
Name:	Runway 9/27 Reconstruction, Phase 1
Watershed :	St. Louis River
Coord Co 1:	Digitized - MPCA online map
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/212423

Agency Interests: File Request Details

Item ID:	212423-AISI0000212423	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	212423
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B
Section:		***Senate Dist:***	3
Quarters:		***TRDSQQ:***	
Collection Date:	6/30/2016	***Ref Code:***	GEN
Tmsp Created:	5/6/2016	***Ref Desc:***	General Location
User Created:	RSP	***Verified:***	No
Tmsp Updt:	6/30/2016	***User Updt:***	geo_nc
Spatial ID:			

Name:	Runway 9/27 Reconstruction, Phase 1
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	DP
Method Desc:	Digitized - MPCA online map

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	43 of64	WNW	0.01 / 46.68	1,375.08 / 4	Duluth Airport Authority 4701 Grinden Dr Duluth MN 55811	MPCA AI

Agency Interest ID:	215002
Name (Map):	Duluth Airport Authority
Address (Map):	4701 Grinden Dr
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83778689
Longitude (Map):	-92.17481925

County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	
Address (Site):	
City (Site):	
State (Site):	
ZIP (Site):	
Latitude (Site):	
Longitude (Site):	
County (Site):	
Name (Req):	Duluth Airport Authority
Address (Req):	4701 Grinden Dr
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83778689
Longitude (Req):	-92.17481925
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026)

Agency Interests: Map Details

Item ID:	215002-AISI0000215002	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:		***SI ID:***	215002
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	8B
Quarters:		***Senate Dist:***	8
Collection Date:	12/9/2016	***TRDSQQ:***	
Tmsp Created:	12/9/2016	***Ref Code:***	GEN
User Created:	jhenry	***Ref Desc:***	General Location
Tmsp Updt:	12/9/2016	***Verified:***	No
Spatial ID:		***User Updt:***	geo_nc
Name:	Duluth Airport Authority		
Program List:			
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

Agency Interests: File Request Details

Item ID:	215002-AISI0000215002	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:		***SI ID:***	215002
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	8B
Section:		***Senate Dist:***	8
Quarters:		***TRDSQQ:***	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Collection Date:	12/9/2016	**Ref Code:**	GEN
Tmsp Created:	12/9/2016	**Ref Desc:**	General Location
User Created:	jhenry	**Verified:**	No
Tmsp Updt:	12/9/2016	**User Updt:**	geo_nc
Spatial ID:			
Name:	Duluth Airport Authority		
Program List:			
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

3	44 of64	WNW	0.01 / 46.68	1,375.08 / 4	**Duluth Airport Runway 9-27 Reconstruction** **4701 Grinden Dr** **Duluth MN 55811**	MPCA AI

Agency Interest ID:	229212
Name (Map):	Duluth Airport Runway 9-27 Reconstruction
Address (Map):	4701 Grinden Dr
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.840128
Longitude (Map):	-92.180167
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Duluth Airport Runway 9-27 Reconstruction
Address (Site):	4701 Grinden Dr
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811-1578
Latitude (Site):	46.840128
Longitude (Site):	-92.180167
County (Site):	St. Louis
Name (Req):	Duluth Airport Runway 9-27 Reconstruction
Address (Req):	4701 Grinden Dr
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.840128
Longitude (Req):	-92.180167
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	229212-AISI0000229212	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	229212
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8

Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	4/22/2019	**TRDSQQ:**	
Tmsp Created:	4/22/2019	**Ref Code:**	CEN
User Created:	RSP	**Ref Desc:**	Center of Feature Represented
Tmsp Updt:	4/22/2019	**Verified:**	No
Spatial ID:		**User Updt:**	geo_nc

Name: Duluth Airport Runway 9-27 Reconstruction
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: DP
Method Desc: Digitized - MPCA online map

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00053474	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	8
Program Name:	Stormwater	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-1578	**Coord Coll:**	DP
City:	Duluth	**Latitude:**	46.840128
County:	St. Louis	**Longitude:**	-92.180167

Activity: Construction Stormwater
Addr St: 4701 Grinden Dr
Addr City: Duluth
MPCA ID List: C00053474
Program 1: Stormwater
Name: Duluth Airport Runway 9-27 Reconstruction
Watershed : St. Louis River
Coord Co 1: Digitized - MPCA online map
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/229212

Agency Interests: File Request Details

Item ID:	229212-AISI0000229212	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	229212
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	4/22/2019	**Ref Code:**	CEN
Tmsp Created:	4/22/2019	**Ref Desc:**	Center of Feature Represented
User Created:	RSP	**Verified:**	No
Tmsp Updt:	4/22/2019	**User Updt:**	geo_nc
Spatial ID:			

Name: Duluth Airport Runway 9-27 Reconstruction
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
SI Type Desc:		Conventional Site				
DWSMA Code:						
DWSMA Name:						
Method Code:		DP				
Method Desc:		Digitized - MPCA online map				

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	45 of64	WNW	0.01 / 46.68	1,375.08 / 4	Sonju Enterprises Inc 4701 Grinden Dr Box 161830 Duluth MN 55816	MPCA AI

Agency Interest ID:	235247
Name (Map):	Sonju Enterprises Inc
Address (Map):	4701 Grinden Dr Box 161830
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55816
Latitude (Map):	46.83891459
Longitude (Map):	-92.17994449
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	
Address (Site):	
City (Site):	
State (Site):	
ZIP (Site):	
Latitude (Site):	
Longitude (Site):	
County (Site):	
Name (Req):	Sonju Enterprises Inc
Address (Req):	4701 Grinden Dr Box 161830
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55816
Loc Desc (Req):	
Latitude (Req):	46.83891459
Longitude (Req):	-92.17994449
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026)

Agency Interests: Map Details

Item ID:	235247-AISI0000235247	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:		**SI ID:**	235247
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	7/7/2020	**TRDSQQ:**	
Tmsp Created:	7/6/2020	**Ref Code:**	GEN
User Created:	SYSTEM	**Ref Desc:**	General Location
Tmsp Updt:	7/7/2020	**Verified:**	No
Spatial ID:		**User Updt:**	geo_nc
Name:	Sonju Enterprises Inc		
Program List:			
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

DWSMA Code:	
DWSMA Name:	
Method Code:	A1
Method Desc:	Address Matching House Number

Agency Interests: File Request Details

Item ID:	235247-AISI0000235247	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:		**SI ID:**	235247
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	7/7/2020	**Ref Code:**	GEN
Tmsp Created:	7/6/2020	**Ref Desc:**	General Location
User Created:	SYSTEM	**Verified:**	No
Tmsp Updt:	7/7/2020	**User Updt:**	geo_nc

Spatial ID:	
Name:	Sonju Enterprises Inc
Program List:	
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	A1
Method Desc:	Address Matching House Number

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	46 of64	WNW	0.01 / 46.68	1,375.08 / 4	Krenzen Corporation 4701 Grinden Dr Duluth MN 55811	MPCA AI

Agency Interest ID:	235672
Name (Map):	Krenzen Corporation
Address (Map):	4701 Grinden Dr
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83891459
Longitude (Map):	-92.17994449
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	
Address (Site):	
City (Site):	
State (Site):	
ZIP (Site):	
Latitude (Site):	
Longitude (Site):	
County (Site):	
Name (Req):	Krenzen Corporation
Address (Req):	4701 Grinden Dr
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83891459

Longitude (Req): -92.17994449
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026)

Agency Interests: Map Details

Item ID: 235672-AISI0000235672
Status: Active
Status Date:
Program:
CTU Code: 239456
CTU Name: Duluth
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 7/6/2020
Tmsp Created: 7/6/2020
User Created: SYSTEM
Tmsp Updt: 7/6/2020
Spatial ID:
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 235672
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 8B
Senate Dist: 8
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc
Name: Krenzen Corporation
Program List:
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

Agency Interests: File Request Details

Item ID: 235672-AISI0000235672
Status: Active
Status Date:
Program:
CTU Code: 239456
CTU Name: Duluth
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 7/6/2020
Tmsp Created: 7/6/2020
User Created: SYSTEM
Tmsp Updt: 7/6/2020
Spatial ID:
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 235672
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 8B
Senate Dist: 8
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc
Name: Krenzen Corporation
Program List:
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	47 of64	WNW	0.01 / 46.68	1,375.08 / 4	2020 Commercial Service Apron Expansion 4701 Grinden Dr Duluth MN 55811	MPCA AI

Agency Interest ID:	235791
Name (Map):	2020 Commercial Service Apron Expansion
Address (Map):	4701 Grinden Dr
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.840877
Longitude (Map):	-92.194117
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	2020 Commercial Service Apron Expansion
Address (Site):	4701 Grinden Dr
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811-1578
Latitude (Site):	46.840877
Longitude (Site):	-92.194117
County (Site):	St. Louis
Name (Req):	2020 Commercial Service Apron Expansion
Address (Req):	4701 Grinden Dr
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.840877
Longitude (Req):	-92.194117
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	235791-AISI0000235791	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	235791
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	7/13/2020	**TRDSQQ:**	
Tmsp Created:	7/13/2020	**Ref Code:**	CEN
User Created:	RSP	**Ref Desc:**	Center of Feature Represented
Tmsp Updt:	7/13/2020	**Verified:**	No
Spatial ID:		**User Updt:**	geo_nc

Name:	2020 Commercial Service Apron Expansion
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	DP
Method Desc:	Digitized - MPCA online map

My Neighborhood Site Details

Active FLA:	Yes	***HUC 8:***	04010201
MPCA ID:	C00057371	***Cong Distr:***	8
Program Co:	ST	***Senate Dis:***	8
Program Name:	Stormwater	***House Dist:***	8B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811-1578	***Coord Coll:***	DP
City:	Duluth	***Latitude:***	46.840877
County:	St. Louis	***Longitude:***	-92.194117

Activity:	Construction Stormwater
Addr St:	4701 Grinden Dr
Addr City:	Duluth
MPCA ID List:	C00057371
Program 1:	Stormwater
Name:	2020 Commercial Service Apron Expansion
Watershed :	St. Louis River
Coord Co 1:	Digitized - MPCA online map
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/235791

Agency Interests: File Request Details

Item ID:	235791-AISI0000235791	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	235791
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	8B
Section:		***Senate Dist:***	8
Quarters:		***TRDSQQ:***	
Collection Date:	7/13/2020	***Ref Code:***	CEN
Tmsp Created:	7/13/2020	***Ref Desc:***	Center of Feature Represented
User Created:	RSP	***Verified:***	No
Tmsp Updt:	7/13/2020	***User Updt:***	geo_nc

Spatial ID:	
Name:	2020 Commercial Service Apron Expansion
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	DP
Method Desc:	Digitized - MPCA online map

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	48 of64	WNW	0.01 / 46.68	1,375.08 / 4	Overland West Inc 4701 Grinden Dr Duluth MN 55811	MPCA AI

Agency Interest ID:	235464
Name (Map):	Overland West Inc
Address (Map):	4701 Grinden Dr
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83891459

Longitude (Map):	-92.17994449
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	
Address (Site):	
City (Site):	
State (Site):	
ZIP (Site):	
Latitude (Site):	
Longitude (Site):	
County (Site):	
Name (Req):	Overland West Inc
Address (Req):	4701 Grinden Dr
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83891459
Longitude (Req):	-92.17994449
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026)

Agency Interests: Map Details

Item ID:	235464-AISI0000235464	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:		***SI ID:***	235464
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	8B
Quarters:		***Senate Dist:***	8
Collection Date:	7/6/2020	***TRDSQQ:***	
Tmsp Created:	7/6/2020	***Ref Code:***	GEN
User Created:	SYSTEM	***Ref Desc:***	General Location
Tmsp Updt:	7/6/2020	***Verified:***	No
Spatial ID:		***User Updt:***	geo_nc
Name:	Overland West Inc		
Program List:			
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

Agency Interests: File Request Details

Item ID:	235464-AISI0000235464	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:		***SI ID:***	235464
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	8B
Section:		***Senate Dist:***	8

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Quarters:		**TRDSQQ:**	
Collection Date:	7/6/2020	**Ref Code:**	GEN
Tmsp Created:	7/6/2020	**Ref Desc:**	General Location
User Created:	SYSTEM	**Verified:**	No
Tmsp Updt:	7/6/2020	**User Updt:**	geo_nc
Spatial ID:			
Name:	Overland West Inc		
Program List:			
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

3	***49 of64***	***WNW***	***0.01 / 46.68***	***1,375.08 / 4***	***2024 Midfield Ramp Repair Duluth Airport 4701 Grinden Dr Duluth MN 55811***	***MPCA AI***

Agency Interest ID:	260965
Name (Map):	2024 Midfield Ramp Repair Duluth Airport
Address (Map):	4701 Grinden Dr
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.841287
Longitude (Map):	-92.197605
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	Duluth Airport *** Note:many records provided by the department have a truncated LOC_DESC field.
Name (Site):	2024 Midfield Ramp Repair Duluth Airport
Address (Site):	4701 Grinden Dr
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811-1578
Latitude (Site):	46.841287
Longitude (Site):	-92.197605
County (Site):	St. Louis
Name (Req):	2024 Midfield Ramp Repair Duluth Airport
Address (Req):	4701 Grinden Dr
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	Duluth Airport
Latitude (Req):	46.841287
Longitude (Req):	-92.197605
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	260965-AISI0000260965	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	260965
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	

Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	9/10/2024	**TRDSQQ:**	
Tmsp Created:	9/10/2024	**Ref Code:**	CEN
User Created:	RSP	**Ref Desc:**	Center of Feature Represented
Tmsp Updt:	9/10/2024	**Verified:**	No
Spatial ID:		**User Updt:**	geo_nc

Name: 2024 Midfield Ramp Repair Duluth Airport
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: DP
Method Desc: Digitized - MPCA online map

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00070553	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	8
Program Name:	Stormwater	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-1578	**Coord Coll:**	DP
City:	Duluth	**Latitude:**	46.841287
County:	St. Louis	**Longitude:**	-92.197605

Activity: Construction Stormwater
Addr St: 4701 Grinden Dr
Addr City: Duluth
MPCA ID List: C00070553
Program 1: Stormwater
Name: 2024 Midfield Ramp Repair Duluth Airport
Watershed : St. Louis River
Coord Co 1: Digitized - MPCA online map
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/260965

Agency Interests: File Request Details

Item ID:	260965-AISI0000260965	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	260965
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	9/10/2024	**Ref Code:**	CEN
Tmsp Created:	9/10/2024	**Ref Desc:**	Center of Feature Represented
User Created:	RSP	**Verified:**	No
Tmsp Updt:	9/10/2024	**User Updt:**	geo_nc
Spatial ID:			

Name: 2024 Midfield Ramp Repair Duluth Airport
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: DP
Method Desc: Digitized - MPCA online map

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	50 of64	WNW	0.01 / 46.68	1,375.08 / 4	TAXIWAY A RECONSTRUCTION - PHASE 5 IFC AT THE DULUTH INTERNATIONAL AIRPORT (D 4701 Grinden Dr Duluth MN 55811	MPCA AI

Agency Interest ID: 262965
Name (Map): TAXIWAY A RECONSTRUCTION - PHASE 5 IFC AT THE DULUTH INTERNATIONAL AIRPORT (D
Address (Map): 4701 Grinden Dr
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.839144
Longitude (Map): -92.202492
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): TAXIWAY A RECONSTRUCTION - PHASE 5 IFC AT THE DULUTH INTERNATIONAL AIRPORT (D
Address (Site): 4701 Grinden Dr
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811-1578
Latitude (Site): 46.839144
Longitude (Site): -92.202492
County (Site): St. Louis
Name (Req): TAXIWAY A RECONSTRUCTION - PHASE 5 IFC AT THE DULUTH INTERNATIONAL AIRPORT (D
Address (Req): 4701 Grinden Dr
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.839144
Longitude (Req): -92.202492
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 262965-AISI0000262965
Status: Active
Status Date:
Program: Const Stormwater
CTU Code: 239456
CTU Name: Duluth
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 4/15/2025
Tmsp Created: 4/15/2025
User Created: RSP
Tmsp Updt: 4/15/2025
Spatial ID:
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 262965
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 8B
Senate Dist: 8
TRDSQQ:
Ref Code: CEN
Ref Desc: Center of Feature Represented
Verified: No
User Updt: geo_nc
Name: TAXIWAY A RECONSTRUCTION - PHASE 5 IFC AT THE DULUTH INTERNATIONAL AIRPORT (D
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: DP
Method Desc: Digitized - MPCA online map

My Neighborhood Site Details

Active FLA: Yes
MPCA ID: C00071863
Program Co: ST
Program Name: Stormwater
Address: MN
Addr ZIP: 55811-1578
City: Duluth
County: St. Louis
HUC 8: 04010201
Cong Distr: 8
Senate Dis: 8
House Dist: 8B
IC Flag: No
Coord Coll: DP
Latitude: 46.839144
Longitude: -92.202492
Activity: Construction Stormwater
Addr St: 4701 Grinden Dr
Addr City: Duluth
MPCA ID List: C00071863
Program 1: Stormwater
Name: TAXIWAY A RECONSTRUCTION - PHASE 5 IFC AT THE DULUTH INTERNATIONAL AIRPORT (D
Watershed : St. Louis River
Coord Co 1: Digitized - MPCA online map
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/262965

Agency Interests: File Request Details

Item ID: 262965-AISI0000262965
Status: Active
Status Date:
Program: Const Stormwater
CTU Code: 239456
CTU Name: Duluth
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 4/15/2025
Tmsp Created: 4/15/2025
User Created: RSP
Tmsp Updt: 4/15/2025
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 262965
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 8B
Senate Dist: 8
TRDSQQ:
Ref Code: CEN
Ref Desc: Center of Feature Represented
Verified: No
User Updt: geo_nc
Spatial ID:
Name: TAXIWAY A RECONSTRUCTION - PHASE 5 IFC AT THE DULUTH INTERNATIONAL AIRPORT (D
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: DP
Method Desc: Digitized - MPCA online map

3	51 of64	WNW	0.01 / 46.68	1,375.08 / 4	TSA AT DULUTH INTERNATIONAL AIRPORT 4701 GRINDEN DR DULUTH MN 55811-1578	RCRA VSQG

Handler ID: MNS000105817
Generator Status: VSG
Recycler Activity?: NO
Recycler Activity Note: This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note: NO RECORDS: As of Nov 2025, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer:	No	**Used Oil Transpor:**	No
Mixed Waste Gen:	No	**Used Oil Trans Fac:**	No
Transporter:	No	**Used Oil Processor:**	No
Transfer Facility:	No	**Used Oil Refiner:**	No
Recycler:	No	**Used Oil Burner:**	No
Onsite Burner Exem:	No	**Commercial TSD:**	No
Furnace Exemption:	No	**Recycl Nonstorage:**	No
Underground Injec:	No		

Used Oil Market Burner: No
Used Oil Spec Marketer: No

Additional Handler Summary Details

Source Type:	I	**NAIC 1:**	
Seq No:	53	**NAIC 2:**	
Non Notifier:		**NAIC 3:**	
Receive Date:	20231218	**NAIC 4:**	
Active Site:	H----	**State:**	MN
Land Type:		**Location Latitude:**	46.838028
In Handler Univ:	Y	**Location Longitude:**	-92.17975
In A Universe:	Y	**Loc GIS Primary:**	N
Gen Status:	VSG	**Loc GIS Origin:**	AG
Report Cycle:		**State District Owner:**	
Accessibility:		**State District:**	
Region:	05		

Fed Waste Gen Owner: HQ
State Waste Generator Owner: MN
State Waste Generator: 5
Short Term Generator: N
Uni Waste: N
Universal Waste Dest Facility: N
Federal Universal Waste: N
As Federally Regulated Tsdf: ------
As Converter Tsdf: ------
As State Regulated Tsdf: ------
As State Regulated Handler: ---
Federal Indicator: ---
Hsm: N
Subpart K: ----
GPRA Permit: N
GPRA Renewal: N
Permit Renewal Wrkld: ------
Permwrk ID: ------
Perm Prog: ------
Pcwrkld: ------
Closwrkld: ------
GPRA Ca: N
Cawrkld: N
Subjca Tsd Discretion: N
NCAPS: N
EC Indicator: N
Ca725 Indicator: N

Ca750 Indicator:	N
Operating Tsdf:	------
Full Enforcement:	------
Snc:	N
Unaddressed Snc:	N
Addressed Snc:	N
Snc With Comp Sched:	N
Fa Required:	-----
Hhandler Last Change:	20231220
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	EN
Handler Name:	TSA AT DULUTH INTERNATIONAL AIRPORT
Location Street No:	
Location Street1:	4701 GRINDEN DR
Location Street2:	
Location City:	DULUTH
Location State:	MN
Location Zip:	55811-1578
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	
Contact Name:	DONALD LANG
Contact Street No:	
Contact Street1:	2001 KILLEBREW DR STE 400
Contact Street2:	
Contact City:	BLOOMINGTON
Contact State:	MN
Contact Zip:	55425
Contact Country:	
Contact Phone & Ext:	612-486-6172
Contact Fax:	
Contact Email Address:	DONALD.LANG@TSA.DHS.GOV
Contact Title:	ENVIRONMENTAL SPECIALIST
Owner Name:	
Owner Type:	
Owner Seq:	
Operator Name:	
Operator Type:	
Operator Seq:	
Public Notes:	

Hazardous Waste Handler Details

Seq No:	1
Receive Date:	20040809
Handler Name:	TSA AT DULUTH INTERNATIONAL AIRPORT
Fed Waste Generator:	3
Generator Code Description:	Very Small Quantity Generator
Source Type:	Notification
TSD Activity:	N

Hazardous Waste Handler Details

Seq No:	53
Receive Date:	20231218
Handler Name:	TSA AT DULUTH INTERNATIONAL AIRPORT
Fed Waste Generator:	3
Generator Code Description:	Very Small Quantity Generator
Source Type:	Implementer
TSD Activity:	N

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Owner/Operator Details

Owner/Operator Ind:	Current Owner	***Street No:***	
Type:	Federal	***Street1:***	4300 GLUMACK DR STE C-1137
Name:	TSA AIRPORT	***Street2:***	
Dt Became Current:	20040812	***City:***	ST. PAUL
Dt Ended Current:		***State:***	MN
Phone:	612-486-6175	***Country:***	US
Source Type:	Notification	***Zip:***	55111

Historical Handler Details

Receive Dt:	20040809
Generator Code Description:	Very Small Quantity Generator
Handler Name:	TSA AT DULUTH INTERNATIONAL AIRPORT

3	*52 of64*	*WNW*	*0.01 / 46.68*	*1,375.08 / 4*	***DULUTH AIRPORT AUTHORITY*** ***4701 GRINDEN DR*** ***DULUTH MN 55811-1578***	***RCRA VSQG***

Handler ID:	MNR000023143
Generator Status:	VSG
Recycler Activity?:	NO
Recycler Activity Note:	This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note:	VIOLATION or UNDETERMINED: There are VIOLATION or UNDETERMINED details or records associated with this facility (EPA ID) in the Compliance Monitoring and Enforcement table dated Nov 2025.

Violation Details

Viol Type:	262.A	***Actual Rtc Date:***	20020510
Citation:		***Found Violation:***	Yes
Determined Date:	20020508	***Rtc Qualifier:***	Observed
Scheduled Compliance Date:	20020509		
Eval Activity Location:	MN		
Viol Determined By Agency:	State		
Viol Short Desc:	Generators - General		

Enforcement Details

Enf Type:	121
Enf Type Desc:	Letter of Warning (LOW)
Enf Action Date:	20020509
Disposition Status Desc:	
Disposition Status Date:	
Enf Agency:	State
Proposed Amount:	
Final Amount:	
Paid Amount:	

Evaluation Details

Eval Start Date:	20020508
Eval Type Desc:	COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:	Generators - General
Actual Rtc Date:	20020510
Eval Agency:	State

Handler Summary

Importer:	No	***Used Oil Transpor:***	No
Mixed Waste Gen:	No	***Used Oil Trans Fac:***	No
Transporter:	No	***Used Oil Processor:***	No
Transfer Facility:	No	***Used Oil Refiner:***	No
Recycler:	No	***Used Oil Burner:***	No
Onsite Burner Exem:	No	***Commercial TSD:***	No
Furnace Exemption:	No	***Recycl Nonstorage:***	No
Underground Injec:	No		
Used Oil Market Burner:	No		
Used Oil Spec Marketer:	No		

Additional Handler Summary Details

Source Type:	I	***NAIC 1:***	
Seq No:	53	***NAIC 2:***	
Non Notifier:		***NAIC 3:***	
Receive Date:	20231218	***NAIC 4:***	
Active Site:	H----	***State:***	MN
Land Type:		***Location Latitude:***	46.836479
In Handler Univ:	Y	***Location Longitude:***	-92.175188
In A Universe:	Y	***Loc GIS Primary:***	N
Gen Status:	VSG	***Loc GIS Origin:***	UC
Report Cycle:		***State District Owner:***	
Accessibility:		***State District:***	
Region:	05		
Fed Waste Gen Owner:	HQ		
State Waste Generator Owner:	MN		
State Waste Generator:	5		
Short Term Generator:	N		
Uni Waste:	N		
Universal Waste Dest Facility:	N		
Federal Universal Waste:	N		
As Federally Regulated Tsdf:	------		
As Converter Tsdf:	------		
As State Regulated Tsdf:	------		
As State Regulated Handler:	---		
Federal Indicator:	---		
Hsm:	N		
Subpart K:	----		
GPRA Permit:	N		
GPRA Renewal:	N		
Permit Renewal Wrkld:	------		
Permwrk ID:	------		
Perm Prog:	------		
Pcwrkld:	------		
Closwrkld:	------		
GPRA Ca:	N		
Cawrkld:	N		
Subjca Tsd Discretion:	N		
NCAPS:	N		
EC Indicator:	N		
Ca725 Indicator:	N		
Ca750 Indicator:	N		
Operating Tsdf:	------		
Full Enforcement:	------		
Snc:	N		
Unaddressed Snc:	N		
Addressed Snc:	N		
Snc With Comp Sched:	N		
Fa Required:	-----		
Hhandler Last Change:	20231220		
Recognized Trader Importer:	N		
Recognized Trader Exporter:	N		
Slab Importer:	N		
Slab Exporter:	N		

Manifest Broker:	N
Subpart P:	N
Contact Language:	EN
Handler Name:	DULUTH AIRPORT AUTHORITY
Location Street No:	
Location Street1:	4701 GRINDEN DR
Location Street2:	
Location City:	DULUTH
Location State:	MN
Location Zip:	55811-1578
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	
Contact Name:	RYAN WELCH
Contact Street No:	
Contact Street1:	4701 GRINDEN DR
Contact Street2:	
Contact City:	DULUTH
Contact State:	MN
Contact Zip:	55811-1578
Contact Country:	
Contact Phone & Ext:	218-625-5051
Contact Fax:	
Contact Email Address:	RWELCH@DULUTHAIRPORT.COM
Contact Title:	MANAGER
Owner Name:	
Owner Type:	
Owner Seq:	
Operator Name:	
Operator Type:	
Operator Seq:	
Public Notes:	

Hazardous Waste Handler Details

Seq No:	1
Receive Date:	20000810
Handler Name:	DULUTH AIRPORT AUTHORITY
Fed Waste Generator:	3
Generator Code Description:	Very Small Quantity Generator
Source Type:	Notification
TSD Activity:	N

Waste Code Details

Waste Code:	D001
Waste Code Desc:	IGNITABLE WASTE

Hazardous Waste Handler Details

Seq No:	53
Receive Date:	20231218
Handler Name:	DULUTH AIRPORT AUTHORITY
Fed Waste Generator:	3
Generator Code Description:	Very Small Quantity Generator
Source Type:	Implementer
TSD Activity:	N

Owner/Operator Details

Owner/Operator Ind:	Current Operator	***Street No:***	
Type:	Other	***Street1:***	4701 GRINDEN DR
Name:	DULUTH INTERNATIONAL AIRPORT (DAA)	***Street2:***	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Dt Became Current:	19990729	**City:**	DULUTH
Dt Ended Current:		**State:**	MN
Phone:	218-727-2968	**Country:**	US
Source Type:	Notification	**Zip:**	55811

Historical Handler Details

Receive Dt:	20000810
Generator Code Description:	Very Small Quantity Generator
Handler Name:	DULUTH AIRPORT AUTHORITY

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	53 of64	WNW	0.01 / 46.68	1,375.08 / 4	Duluth Airport 4701 Grinden Drive Duluth MN	SITE ASSESSMENT

Item ID:	638-AREA0000000006	**Federal Reg:**	
Project ID:	SA0000367	**Fed State Reg:**	
Project Type:	Site Assessment Site	**Non Reg:**	
Project ID (RAP):		**SEMS?:**	
Project Type (RAP):		**NPL:**	
Site Status:	Active / Existing	**Unpermitted Dump?:**	
Perm List of Prior?:		**Latitude:**	46.83778689
Petrol Brownfield?:		**Longitude:**	-92.17481925
VIC Site?:		**County (RAP):**	
Sf Voluntary:		**Latitude (RAP):**	
Inst Controls?:		**Longitude (RAP):**	
State Reg:			
Project Name:	Duluth Airport		
Site Address 1:	4701 Grinden Drive		
Site Address 2:			
Site City:	Duluth		
Site State:	MN		
Site Zip:			
Site County:	St. Louis		
Project Name(RAP):			
Address1 (RAP):			
Address2(RAP):			
City (RAP):			
State (RAP):			
Zip (RAP):			
Project Managers:	Site Assessment Coordinator (current)		
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

AI Name:	Duluth International Airport	**DWSMA Name:**	
Activity ID:	638	**Cong Dist:**	8
SI ID:	6	**House Dist:**	8B
SI Cat:	AREA	**Senate Dis:**	8
SI Type:	SITE	**HUC 8:**	04010201
Site Type:	CON	**HUC 10:**	0401020116
Acreage:	1.00	**HUC 12:**	040102011604
HRS Score:		**Method Des:**	Address Matching House Number
Score Year:		**Hydrologis:**	
DWSMA Code:		**MNTBA:**	
Loc Desc:			
HUC 8 Name:	St. Louis River		
HUC 12 Name:	Saint Louis River		
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/638		

Spatial Remediation Activity

AI ID:	638	**Site Start:**	2017-05-19 00:00:00
Site ID:	SA0000367	**Remedy Imp:**	
SI ID:	6	**Remedy Sel:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	2017-05-19 00:00:00
Site Close:		**NPL List:**	
Leak Discovered:		**NPL Delete:**	
Leak Reported:		**PLP List:**	
Leak Reopened:		**PLP Delist:**	
Activity No:	1	**Staff Assi:**	
Activity ID:	SIW20170001	**FF Aproved:**	
Activity Type:	Site Assessment Investigation	**FF Closed:**	
Activity Code:	SIW	**Inv Comple:**	
Activity Year:	2017	**App Comple:**	
Discovered:		**Er Site Ev:**	

3	54 of64	WNW	0.01 / 46.68	1,375.08 / 4	**NORTHWEST ARILINES** **4701 Grinden Dr MN 55811** **Duluth MN 55811**	SPILLS

Incident ID:	29734	**AI ID Source:**	
Incident Status:	Closed or Completed	**Source Address:**	4701 Grinden Dr
Incident Type:	Spill or Release	**Source City:**	Duluth
Incident Date:	1/22/1999	**Source State:**	MN
Program:	Emergency Response	**Source Zip:**	55811
Closure Type:	Response/Action Completed	**Latitude:**	
County:	St. Louis	**Longitude:**	
Coord Method:			
Location:	4701 Grinden Dr MN 55811		

Lead Investigator and Duty Officer

Substances:	40 gallons Aviation Gas
Duty Officer No:	
Lead Investigator:	Steve Leppala
Linked Incidents:	
Source List:	NORTHWEST ARILINES (Duluth, MN)
Address:	
Ai ID Location:	
State:	
Zip:	

3	55 of64	WNW	0.01 / 46.68	1,375.08 / 4	**DULUTH AIRPORT AUTHORITY** **4701 Grinden Dr MN 55811** **Duluth MN 55811**	SPILLS

Incident ID:	29432	**AI ID Source:**	
Incident Status:	Closed or Completed	**Source Address:**	4701 Grinden Dr
Incident Type:	Transportation Accident - Saddle Tank	**Source City:**	Duluth
Incident Date:	11/15/1998	**Source State:**	MN
Program:	Emergency Response	**Source Zip:**	55811
Closure Type:	Response/Action Completed	**Latitude:**	
County:	St. Louis	**Longitude:**	
Coord Method:			
Location:	4701 Grinden Dr MN 55811		

Lead Investigator and Duty Officer

Substances:	40 gallons Aviation Gas
Duty Officer No:	
Lead Investigator:	Steve Leppala
Linked Incidents:	
Source List:	DULUTH AIRPORT AUTHORITY (Duluth, MN)
Address:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
Ai ID Location:						
State:						
Zip:						

3	56 of64	WNW	0.01 / 46.68	1,375.08 / 4	NORTHWEST AIRLINES 4701 Grinden Dr MN 55811 Duluth MN 55811	SPILLS

Incident ID:	29747	AI ID Source:	
Incident Status:	Closed or Completed	Source Address:	4701 Grinden Dr
Incident Type:	Spill or Release	Source City:	Duluth
Incident Date:	1/22/1999	Source State:	MN
Program:	Emergency Response	Source Zip:	55811
Closure Type:	Response/Action Completed	Latitude:	
County:	St. Louis	Longitude:	
Coord Method:			
Location:	4701 Grinden Dr MN 55811		

Lead Investigator and Duty Officer

Substances:	35 gallons Aviation Gas
Duty Officer No:	
Lead Investigator:	Steve Leppala
Linked Incidents:	
Source List:	NORTHWEST AIRLINES (Duluth, MN)
Address:	
Ai ID Location:	
State:	
Zip:	

3	57 of64	WNW	0.01 / 46.68	1,375.08 / 4	Northwest Airlines 4701 Grinden Dr MN 55811 Duluth MN	SPILLS

Incident ID:	58578	AI ID Source:	
Incident Status:	Closed or Completed	Source Address:	Address Unknown
Incident Type:	Spill or Release	Source City:	Duluth
Incident Date:	2/21/2003	Source State:	MN
Program:	Emergency Response	Source Zip:	
Closure Type:	Response/Action Completed	Latitude:	
County:	St. Louis	Longitude:	
Coord Method:			
Location:	4701 Grinden Dr MN 55811		

Lead Investigator and Duty Officer

Substances:	90 gallons Jet Fuel A
Duty Officer No:	
Lead Investigator:	Steve Leppala
Linked Incidents:	
Source List:	Northwest Airlines (Duluth, MN)
Address:	
Ai ID Location:	
State:	
Zip:	

3	58 of64	WNW	0.01 / 46.68	1,375.08 / 4	AIR NATIONAL GUARD FD 4701 Grinden Dr. MN Duluth MN 55812	SPILLS

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Incident ID: 30713
Incident Status: Closed or Completed
Incident Type: Spill or Release
Incident Date: 6/23/1999
Program: Emergency Response
Closure Type: Response/Action Completed
County: St. Louis
Coord Method:
Location: 4701 Grinden Dr.
MN

AI ID Source:
Source Address: Duluth
Source City: Duluth
Source State: MN
Source Zip: 55812
Latitude:
Longitude:

Lead Investigator and Duty Officer

Substances: 100 gallons Aviation Gas
Duty Officer No:
Lead Investigator: Steve Leppala
Linked Incidents:
Source List: AIR NATIONAL GUARD FD (Duluth, MN)
Address:
Ai ID Location:
State:
Zip:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	59 of64	WNW	0.01 / 46.68	1,375.08 / 4	Minnesota Power Inc- General Office 4701 Grinden Drive Duluth MN 558022191	SPILLS

Incident ID: 194261
Incident Status: Closed or Completed
Incident Type: Spill or Release, Transformer
Incident Date: 4/12/2020
Program: Emergency Response
Closure Type: Response/Action Completed
County: St. Louis
Coord Method: Address Matching House Number
Location: 4701 Grinden Drive

AI ID Source: 2419
Source Address: 30 Superior St
Source City: Duluth
Source State: MN
Source Zip: 558022191
Latitude: 46.78663455
Longitude: -92.09856193

Lead Investigator and Duty Officer

Substances: 15 gallons Transformer Oil, Non-PCB
Duty Officer No: 190378
Lead Investigator: Craig Schafer
Linked Incidents:
Source List: Minnesota Power Inc- General Office (Duluth, MN)
Address:
Ai ID Location:
State:
Zip:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	60 of64	WNW	0.01 / 46.68	1,375.08 / 4	Duluth International Airport 4701 Grinden Drive Duluth MN 558111578	SPILLS

Incident ID: 204931
Incident Status: Closed or Completed
Incident Type: Stormwater - Industrial
Incident Date: 8/4/2022
Program: Ind Stormwater
Closure Type:
County: St. Louis
Coord Method: Digitized - MPCA online map
Location: 4701 Grinden Drive

AI ID Source: 638
Source Address: 4701 Grinden Dr
Source City: Duluth
Source State: MN
Source Zip: 558111578
Latitude: 46.841405
Longitude: -92.183171

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Lead Investigator and Duty Officer

Substances:
Duty Officer No: 207461
Lead Investigator: Craig Weingart
Linked Incidents:
Source List: Duluth Airport Authority (Duluth, MN); Duluth International Airport (Duluth, MN)
Address: 4701 Grinden Drive
Ai ID Location:
State:
Zip:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	61 of64	WNW	0.01 / 46.68	1,375.08 / 4	4701 Grinden Dr Duluth MN	SPILLS

Incident ID: 215386
Incident Status: Closed or Completed
Incident Type: Spill or Release, Supplemental DO Report
Incident Date: 10/11/2024
Program: Emergency Response
Closure Type: Response/Action Completed
County: St. Louis
Coord Method:
Location: 4701 Grinden Dr

AI ID Source:
Source Address:
Source City:
Source State:
Source Zip:
Latitude:
Longitude:

Lead Investigator and Duty Officer

Substances:
Duty Officer No: 223440, 26816
Lead Investigator: Kayla Hovde
Linked Incidents: 215384
Source List: National Airline
Address: 4701 Grinden Dr
Ai ID Location:
State:
Zip:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	62 of64	WNW	0.01 / 46.68	1,375.08 / 4	DAA ANG Fire Station Phase 3 4701 Grinden Dr Duluth MN 55803	SWF/LF

Site ID: 108560
Owner Name:
Program Name: Solid Waste
Activity Type Name: Solid Waste
Activity Name: DAA ANG Fire Station Phase 3
Address Line 1: 4701 Grinden Dr
Address Line 2:
State Code: MN
County Name: St. Louis

Legislative District: 8
HUC 8: 04010202
Watershed Name: Cloquet River
Latitude: 47.03751595
Longitude: -92.10876654
Coordinate Method: Public Land Survey-Two Quarter
Institutional Control: No
Indust. Classification:

Activities

Activity ID: C00020121
Active: No
Activity Sub Type Name:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	63 of64	WNW	0.01 / 46.68	1,375.08 / 4	Duluth International Airport 4701 Grinden Dr Duluth MN 55811-1578	UST

AI ID: 638
Tank Type: Underground Storage Tank System

AI Name (Map): Duluth International Airport
Address1 (Map):

AI Name: Duluth International Airport
Address1: 4701 Grinden Dr
Address2:
Address3:
City: Duluth
County: St. Louis
State: MN
Zip: 55811-1578
Location Description:
Address2 (Map):
City (Map):
State (Map):
Zip (Map):
Owner: Duluth Airport Authority
Owner Address: 4701 Grinden Dr
Owner City: Duluth
Owner State: MN
Owner Zip: 558111578
Data Source: Minnesota Pollution Control Agency Tank Sites; Minnesota Pollution Control Agency Regulated Tank Systems (Map)

Tank Information

Tank Site ID: TS0021164
Tank ID: 638-EQUI0000000003
Tank Status: Removed
Install Date: 1/1/1900
Status Change Date: 6/4/1991
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 1,000 gal/Diesel/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0021164
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N
Latitude: 46.83824934
Longitude: -92.17997448
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Compartment Information

Compartment ID: 638-EQUI0000000003-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: 3
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 1000
Cathodic Prot Sys: Not needed
Special Use Desc: None

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: NONE
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None
Stored Product: Diesel
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Tank Information

Tank Site ID: TS0021164
Tank ID: 638-EQUI0000000005
Tank Status: Removed
Install Date: 1/1/1900
Status Change Date: 7/21/1991
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 1,000 gal/Fuel Oil/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0021164
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N
Latitude: 46.83824934
Longitude: -92.17997448
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Compartment Information

Compartment ID: 638-EQUI0000000005-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: 5
Programs: UT
Capacity (gal): 1000
Cathodic Prot Sys: Not needed
Special Use Desc: Heating

Overfill Prevention System: UST Not needed

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: NONE
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None
Stored Product: Fuel Oil
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Tank Information

Tank Site ID: TS0021164
Tank ID: 638-EQUI0000000009
Tank Status: Removed
Install Date: 6/1/1965
Status Change Date: 10/30/1990
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 8,000 gal/Diesel/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0021164
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N
Latitude: 46.83824934
Longitude: -92.17997448
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Compartment Information

Compartment ID: 638-EQUI0000000009-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: 1
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 8000
Cathodic Prot Sys: Not needed
Special Use Desc: None

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: NONE
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None
Stored Product: Diesel
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Tank Information

Tank Site ID: TS0021164
Tank ID: 638-EQUI0000000007
Tank Status: Removed
Install Date: 11/1/1980
Status Change Date: 6/9/1997
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 1,000 gal/Gasoline/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0021164
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N
Latitude: 46.83824934
Longitude: -92.17997448
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Compartment Information

Compartment ID: 638-EQUI0000000007-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: 9
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 1000
Cathodic Prot Sys: Not needed
Special Use Desc: None

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: NONE
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None
Stored Product: Gasoline
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Tank Information

Tank Site ID:
Tank ID: 638-EQUI0000000014
Tank Status:
Install Date:
Status Change Date:
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 10,000 ga. diesel tank to be removed pending removal 9/26/2016
Tanks Url:
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N
Latitude: 46.83778689
Longitude: -92.17481925
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Compartment Information

Compartment ID: 638-EQUI0000000014-1
Compartment No: 1
Tank Wall Type:
Tank Material:
Subject Item Designation: 14
Overfill Prevention System:
Programs: UT
Capacity (gal):
Cathodic Prot Sys:
Special Use Desc:

Tank Information

Tank Site ID: TS0021164
Tank ID: 638-EQUI0000000002
Tank Status: Removed
Install Date: 1/1/1900
Status Change Date: 8/9/1993
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 50,000 gal/Aviation gasoline/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0021164
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N
Latitude: 46.83824934
Longitude: -92.17997448
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Compartment Information

Compartment ID: 638-EQUI0000000002-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: 11
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 50000
Cathodic Prot Sys: Not needed
Special Use Desc: None

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: SSP
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None
Stored Product: Aviation gasoline
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Tank Information

Tank Site ID: TS0021164
Tank ID: 638-EQUI0000000004
Tank Status: Removed
Install Date: 7/1/1949
Status Change Date: 8/13/1991
Latitude: 46.83824934
Longitude: -92.17997448
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 8,000 gal/Gasoline/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0021164
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N

Compartment Information

Compartment ID: 638-EQUI0000000004-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: 6
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 8000
Cathodic Prot Sys: Not needed
Special Use Desc: None

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: NONE
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None
Stored Product: Gasoline
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Tank Information

Tank Site ID:
Tank ID: 638-EQUI0000000016
Tank Status: Removed
Install Date: 1/1/1900
Status Change Date: 9/26/2016
Latitude: 46.83740195
Longitude: -92.19065796
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 10,000 ga. diesel tank removed 9/26/2016, registered 10/21/2016
Tanks Url:
Coord Collect Meth Desc: Digitized - MPCA internal map
On Tribal Land: N

Compartment Information

Compartment ID: 638-EQUI0000000016-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Steel
Subject Item Designation: 14
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 10000
Cathodic Prot Sys: Anode
Special Use Desc: None

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: NONE
Pipe Material: Steel
Pipe Corrosion Protection: Not needed
Stored Product: Diesel
Tank Leak Detection: UST Not needed
Vapor Recovery Flag:

Tank Information

Tank Site ID: TS0021164
Latitude: 46.83824934

Tank ID: 638-EQUI0000000008
Tank Status: Removed
Install Date: 1/1/1900
Status Change Date: 7/21/1991
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 500 gal/Fuel Oil/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0021164
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N
Longitude: -92.17997448
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Compartment Information

Compartment ID: 638-EQUI0000000008-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: 8
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 500
Cathodic Prot Sys: Not needed
Special Use Desc: Heating

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: NONE
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None
Stored Product: Fuel Oil
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Tank Information

Tank Site ID: TS0021164
Tank ID: 638-EQUI0000000006
Tank Status: Removed
Install Date: 1/1/1900
Status Change Date: 6/4/1991
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 1,000 gal/Gasoline/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0021164
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N
Latitude: 46.83824934
Longitude: -92.17997448
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Compartment Information

Compartment ID: 638-EQUI0000000006-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: 4
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 1000
Cathodic Prot Sys: Not needed
Special Use Desc: None

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: NONE
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None
Stored Product: Gasoline
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Tank Information

Tank Site ID: TS0021164
Tank ID: 638-EQUI0000000010
Tank Status: Removed
Latitude: 46.83824934
Longitude: -92.17997448
Contractor of Tank: Duluth International Airport (DAA)

Install Date: 1/1/1900
Tribal Land:
Status Change Date: 6/4/1991
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 2,000 gal/Diesel/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0021164
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N

Compartment Information

Compartment ID: 638-EQUI0000000010-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: 2
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 2000
Cathodic Prot Sys: Not needed
Special Use Desc: None

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: NONE
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None
Stored Product: Diesel
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Tank Information

Tank Site ID: TS0021164
Tank ID: 638-EQUI0000000011
Tank Status: Removed
Install Date: 1/1/1900
Status Change Date: 8/9/1993
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 10,000 gal/Aviation gasoline/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0021164
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N
Latitude: 46.83824934
Longitude: -92.17997448
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Compartment Information

Compartment ID: 638-EQUI0000000011-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Fiberglass
Subject Item Designation: 10
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 10000
Cathodic Prot Sys: Not needed
Special Use Desc: None

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: SSP
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None
Stored Product: Aviation gasoline
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Tank Information

Tank Site ID: TS0021164
Tank ID: 638-EQUI0000000012
Tank Status: Removed
Install Date: 8/1/1974
Status Change Date: 8/13/1991
Latitude: 46.83824934
Longitude: -92.17997448
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 10,000 gal/Fuel Oil/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0021164
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N

Compartment Information

Compartment ID: 638-EQUI0000000012-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: 7
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 10000
Cathodic Prot Sys: Not needed
Special Use Desc: Heating

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: NONE
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None
Stored Product: Fuel Oil
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Tank Information

Tank Site ID:
Tank ID: 638-EQUI0000000015
Tank Status: Removed
Install Date: 1/1/1900
Status Change Date: 9/26/2016
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 1500 ga. E-10 removed 9/26/2016, registered 10/21/2016
Tanks Url:
Coord Collect Meth Desc: Digitized - MPCA internal map
On Tribal Land: N
Latitude: 46.83740195
Longitude: -92.19065796
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Compartment Information

Compartment ID: 638-EQUI0000000015-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Steel
Subject Item Designation: 13
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 1500
Cathodic Prot Sys: Anode
Special Use Desc: None

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: NONE
Pipe Material: Steel
Pipe Corrosion Protection: Not needed
Stored Product: E-10 - 10% ethanol & 90% gas
Tank Leak Detection: UST Not needed
Vapor Recovery Flag:

Tank Information

Tank Site ID: TS0021164
Tank ID: 638-EQUI0000000001
Tank Status: Removed
Install Date: 1/1/1900
Status Change Date: 8/9/1993
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Latitude: 46.83824934
Longitude: -92.17997448
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Subject Item Description: 50,000 gal/Aviation gasoline/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0021164
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N

Compartment Information

Compartment ID: 638-EQUI0000000001-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: 12
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 50000
Cathodic Prot Sys: Not needed
Special Use Desc: None

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: SSP
Pipe Material: Steel/Iron
Pipe Corrosion Protection: None
Stored Product: Aviation gasoline
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

Tank Information

Tank Site ID:
Tank ID: 638-EQUI0000000013
Tank Status:
Install Date:
Status Change Date:
Primary NAICS: 488111 - Air Traffic Control
Primary SIC: 4581 - Airports, Flying Fields, and Airport Terminal Services
Subject Item Description: 2500 ga. gas tank to be removed pending removal 9/26/2016
Tanks Url:
Coord Collect Meth Desc: Address Matching House Number
On Tribal Land: N
Latitude: 46.83778689
Longitude: -92.17481925
Contractor of Tank: Duluth International Airport (DAA)
Tribal Land:

Compartment Information

Compartment ID: 638-EQUI0000000013-1
Compartment No: 1
Tank Wall Type:
Tank Material:
Subject Item Designation: 13
Overfill Prevention System:
Programs: UT
Capacity (gal):
Cathodic Prot Sys:
Special Use Desc:

MPCA Map Regulated Tank Systems

Item ID: 638-EQUI0000000013
Int Doc ID: 0
Spatial ID:
SI Type: USTS
SI Cat: EQUI
SI ID: 13
SI Cat Desc: Equipment
SI Designation: 013
Status Desc:
Status Dt:
Install Dt:
AI Prg Code: UT
AI Program: Underground Tanks
Compartments:
Substance:
Capacity:
Overfill Prevent:
Longitude: -92.17481925
Ctu Name: Duluth
Cong Dist: 8
House Dist: 8B
Senate Dist: 8
Huc8: 04010201
Huc10: 0401020116
Huc12: 040102011604
Dwsma Code:
Dwsma Name:
Trdsqq:
Pls Twsp:
Range :
Range Dir:
Section:
Quarters:
Method Desc: Address Matching House Number

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Loc Desc:		**Ref Desc:**	Copied from Agency Interest
County:	St. Louis	**Point X:**	-92.1748192503103
Latitude:	46.83778689	**Point Y:**	46.83778688994398
Si Type Desc:	Underground Storage Tank System		
Huc8 Name:	St. Louis River		
Huc12 Name:	Saint Louis River		
Description:	2500 ga. gas tank to be removed pending removal 9/26/2016		

MPCA Map Regulated Tank Systems

Item ID:	638-EQUI0000000014	**Longitude:**	-92.17481925
Int Doc ID:	0	**Ctu Name:**	Duluth
Spatial ID:		**Cong Dist:**	8
SI Type:	USTS	**House Dist:**	8B
SI Cat:	EQUI	**Senate Dist:**	8
SI ID:	14	**Huc8:**	04010201
SI Cat Desc:	Equipment	**Huc10:**	0401020116
SI Designation:	014	**Huc12:**	040102011604
Status Desc:		**Dwsma Code:**	
Status Dt:		**Dwsma Name:**	
Install Dt:		**Trdsqq:**	
AI Prg Code:	UT	**Pls Twsp:**	
AI Program:	Underground Tanks	**Range :**	
Compartments:		**Range Dir:**	
Substance:		**Section:**	
Capacity:		**Quarters:**	
Overfill Prevent:		**Method Desc:**	Address Matching House Number
Loc Desc:		**Ref Desc:**	Copied from Agency Interest
County:	St. Louis	**Point X:**	-92.1748192503103
Latitude:	46.83778689	**Point Y:**	46.83778688994398
Si Type Desc:	Underground Storage Tank System		
Huc8 Name:	St. Louis River		
Huc12 Name:	Saint Louis River		
Description:	10,000 ga. diesel tank to be removed pending removal 9/26/2016		

3	64 of64	WNW	0.01 / 46.68	1,375.08 / 4	**Duluth International Airport - Block 3** **4701 Grinden Dr** **Duluth MN 55811**	VIC

Item ID:	638-AREA0000000001	**Unpermitted Dump?:**	
Project ID:	VP15240	**State Reg:**	Yes
Project Type:	Brownfield Site	**Federal Reg:**	
Project ID (RAP):	VP15240	**Fed State Reg:**	
Project Type (RAP):	Brownfield Site	**Non Reg:**	
Site Status:	Closed	**NPL:**	
Perm List of Prio?:		**Site County:**	St. Louis
Petrol Brownfield?:		**County (RAP):**	St. Louis
VIC Site?:	Yes	**Latitude:**	46.83633804
Sf Voluntary:		**Longitude:**	-92.17481995
Inst Controls?:		**Latitude (RAP):**	46.83633804
SEMS?:		**Longitude (RAP):**	-92.17481995
Project Name:	Duluth International Airport - Block 3		
Project Managers:	Jane Mosel (no longer at MPCA)		
Site Address 1:	4701 Grinden Dr		
Site Address 2:			
Site City:	Duluth		
Site State:	MN		
Site Zip:	55811		
Project Name(RAP):	Duluth International Airport - Block 3		
Address1 (RAP):	4701 Grinden Dr		
Address2(RAP):			
City (RAP):	Duluth		
State (RAP):	MN		
Zip (RAP):	55811		
Data Source:	MPCA Remediation Sites; MPCA Remediation Sites with RAP approvals		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Remediation Sites Details

Activity ID:	638	***Object ID:***	5776
SI ID:	1	***Cong Dist:***	8
SI Cat:	AREA	***House Dist:***	3B
SI Type:	BROW	***Senate Dis:***	3
Site Type:	CON	***HUC 8:***	04010201
Acreage:	4.25	***HUC 10:***	0401020116
HRS Score:		***HUC 12:***	040102011604
Score Year:		***Gdb Geomattr Data:***	
DWSMA Code:		***MNTBA:***	
AI Name:	Duluth International Airport		
Hydrologists:	Mike Bares (no longer at MPCA)		
DWSMA Name:			
HUC 8 Name:	St. Louis River		
HUC 12 Name:	Saint Louis River		
Method Desc:	DOQ - Digital Orthophoto Quad		
Loc Desc:	Lots 4 and 5		
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/638		

Remediation Sites with RAP Approval

Activity ID:	638	***Rap Approved:***	
No Association Dt:		***Rap Completed:***	
No Associatn Lettr:	No	***Site Start:***	
Rap Date:		***Site Closed:***	
Has RP:	Yes		
RP Names:	Duluth Airport Authority , Duluth International Airport (DAA), John Grinden		
AI Name:	Duluth International Airport		
Parcels:			
Coord Collection Method:	DOQ - Digital Orthophoto Quad		
WIMN:	https://webapp.pca.state.mn.us/wimn/site/638		

Spatial Remediation Activity

AI ID:	638	***Object ID:***	421
Site ID:	VP15240	***Remedy Imp:***	
SI ID:	1	***Remedy Sel:***	
SI Cat:	AREA	***ASMT Compl:***	
NFA Decisi:		***Received:***	2001-11-29 00:00:00
Site Start:	2001-11-29 00:00:00	***NPL List:***	
Site Close:	2002-08-09 00:00:00	***NPL Delete:***	
Leak Discovered:		***PLP List:***	
Leak Reported:		***PLP Delist:***	
Leak Reopened:		***Staff Assi:***	2001-11-29 00:00:00
Activity No:	1	***FF Aproved:***	
Activity ID:	SIW20010001	***FF Closed:***	
Activity Type:	Brownfield Site	***Inv Comple:***	
Activity Code:	SIW	***App Comple:***	2001-11-29 00:00:00
Activity Year:	2001	***Er Site Ev:***	
Discovered:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	1 of1	ESE	0.01 / 57.46	1,371.65 / 1	CASE POWER & EQUIPMENT 6501 HAINES RD HERMANTOWN MN 55811	FINDS/FRS

Registry ID:	110067878513
FIPS Code:	27137
HUC Code:	04010201
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	02-JUN-16
Update Date:	
Interest Types:	STATE MASTER

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor: FRS-GEOCODE
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 08
Census Block Code: 271370003001056
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude: 46.83281
Longitude: -92.17481
Reference Point: ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value: 30
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110067878513
Program Acronyms:

MN-TEMPO:103481

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
5	1 of15	NW	0.01 / 58.86	1,371.98 / 1	NORTHWEST AIRLINES INC 4701 AIRPORT DRIVE DULUTH MN 55802	FINDS/FRS

Registry ID: 110001444161
FIPS Code: 27137
HUC Code: 04010102
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 01-MAR-00
Update Date: 31-DEC-15
Interest Types: TRI REPORTER
SIC Codes: 3721
SIC Code Descriptions: AIRCRAFT
NAICS Codes: 336411
NAICS Code Descriptions: AIRCRAFT MANUFACTURING.
Conveyor: FRS-TRIS
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 08
Census Block Code: 271370004002004
EPA Region Code: 05
County Name: SAINT LOUIS
US/Mexico Border Ind:
Latitude: 46.836611
Longitude: -92.153061
Reference Point: UNKNOWN
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110001444161
Program Acronyms:

TRIS:55811NRTHW4701A

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
5	2 of15	NW	0.01 / 58.86	1,371.98 / 1	HK ENTERPRISES INC HERTZ SYST 4701 AIRPORT DR DULUTH MN 55811	FINDS/FRS

Registry ID:	110067822547
FIPS Code:	27137
HUC Code:	
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	02-JUN-16
Update Date:	
Interest Types:	STATE MASTER
SIC Codes:	7514
SIC Code Descriptions:	PASSENGER CAR RENTAL
NAICS Codes:	532111
NAICS Code Descriptions:	PASSENGER CAR RENTAL.
Conveyor:	
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	
Census Block Code:	
EPA Region Code:	05
County Name:	ST. LOUIS
US/Mexico Border Ind:	
Latitude:	
Longitude:	
Reference Point:	
Coord Collection Method:	
Accuracy Value:	
Datum:	NAD83
Source:	
Frs Facility Detail Report URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110067822547
Program Acronyms:	

MN-TEMPO:39025

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
5	3 of15	NW	0.01 / 58.86	1,371.98 / 1	DELTA GLOBAL SERVICES 4701 AIRPORT DR DULUTH MN 55811	FINDS/FRS

Registry ID:	110069080522
FIPS Code:	27137
HUC Code:	04010201
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	03-JUN-16
Update Date:	
Interest Types:	STATE MASTER, UNSPECIFIED UNIVERSE
SIC Codes:	4512
SIC Code Descriptions:	AIR TRANSPORTATION, SCHEDULED
NAICS Codes:	481112
NAICS Code Descriptions:	SCHEDULED FREIGHT AIR TRANSPORTATION.
Conveyor:	RCRAINFO
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	08
Census Block Code:	271370003001022
EPA Region Code:	05

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude: 46.836632
Longitude: -92.174715
Reference Point: ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method: GDT-ADDRESS MATCHING (GEOCODING)
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110069080522
Program Acronyms:

MN-TEMPO:37752, RCRAINFO:MNS000217273

5	4 of15	NW	0.01 / 58.86	1,371.98 / 1	**AVIS RENT A CAR** **4701 AIRPORT RD** **DULUTH MN 55811**	FINDS/FRS

Registry ID: 110067783857
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 02-JUN-16
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110067783857
Program Acronyms:

MN-TEMPO:137286

5	5 of15	NW	0.01 / 58.86	1,371.98 / 1	**NORTHWEST STORAGE AREA** **DULUTH** **4701 AIRPORT RD** **DULUTH MN 55802**	FINDS/FRS

Registry ID: 110067914779
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Create Date:	02-JUN-16
Update Date:	
Interest Types:	STATE MASTER
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	
Census Block Code:	
EPA Region Code:	05
County Name:	ST. LOUIS
US/Mexico Border Ind:	
Latitude:	
Longitude:	
Reference Point:	
Coord Collection Method:	
Accuracy Value:	
Datum:	NAD83
Source:	
Frs Facility Detail Report URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110067914779
Program Acronyms:	

MN-TEMPO:189430

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
5	6 of15	NW	0.01 / 58.86	1,371.98 / 1	**Avis Rent A Car** **4701 Airport Rd** **Duluth MN 55811**	HIST LEAKSITES

Prog Int ID:	218590	**Address Source:**	CORE
Site ID:	59811302	**Township Name:**	
State County Code:	69	**County Name:**	St. Louis
Country:	USA	**Lat/Long ID:**	194249
Interest Type Cd:	LS	**Interest Type Dsc:**	Leak Site
ADDR ID:	59811292	**Lat Degrees:**	46
Tank Site:	5937	**Lat Minutes:**	50
Interest Phone:	NO CORE PI PH.	**Lat Seconds:**	14.13
Interest Start Dt:	01/28/1999 08:54:47	**Long Degrees:**	-92
Interest End Dt:	04/14/2011 13:19:26	**Long Minutes:**	10
Active?:	No	**Long Seconds:**	45.87
Timestamp Added:	03/24/2006 13:05:39	**Lat/Long Source:**	CORE
Timestamp Updt:	11/10/2014 08:17:05	**Lat/Long Site ID:**	59811302
Staff ID Updt:	RGAGLE	**Lat/Long Spatial ID:**	51070157
Source:	CORE	**Collection Date:**	04/14/2011 13:24:20
Coord Src Type:		**Map Scale Code:**	
Coord Src Desc:		**Org Name Source:**	
Foreign State:		**Foreign Zone:**	
FIPS County Cd1:	137		

Addr Timestmp Add:	04/14/2011 13:12:58
Addr Timestamp Lst Updt:	04/14/2011 13:12:58
Addr Updater Staff ID:	SFRYE
Lat/Long Timestamp Added:	04/14/2011 13:23:33
Lat/Long Tmstmp Last Upd:	04/14/2011 13:24:18
Lat/Long Updater Staff ID:	MAPTOOL
Lat/Long Desc:	
Coord Coll Method Desc:	Digitized - Map Tool
Coord Coll Method Code:	DM
Comments:	

Leak Site

Complete Site Closure Date:	06/29/1998 00:00:00
Cond Closure Date:	
Release Discovered Date:	08/11/1992 00:00:00
Leaksite Type Code:	1
Leaksite Type Desc:	Leak Site
Leak Report Date:	08/11/1992 00:00:00
Tank Reg Status Code:	F
TMSP Added:	12/04/1999 14:03:47
TMSP Last Updt:	07/01/2014 10:27:08
CU Yds Excavated Qty:	200
ENF Action Begin Date:	11/25/1992 00:00:00
Residence Type Code:	
File Archive Box:	
File Archive Lot:	
Soil Digout Date:	08/11/1992 00:00:00
Staff ID Last Updt:	DBOETTC
Std Letter Response Date:	
VPIC Acres:	
VPIC Application Date:	
Contam Soils Remaining Flag:	Y
Indoor Air Collected Flag:	
LUST Trust Eligible Flag:	Yes
Offsite Contam Flag:	N
REIMB Awarded Flag:	No
Release From AST Flag:	No
Release From UST Flag:	No
Soil Gas Action Level Flag:	
Soil Gas Data Collected Flag:	
Sub Slab Sample Collected Flag:	
Surface Water Impact Flag:	U
Utility Project Flag:	No
Vapor Intrusion Action Flag:	
Vapor Intrusion Checked Flag:	
Leaksite Type Defn:	Leak site (tank and petroleum contamination).
Soil Gas Data Comments:	
Vapor Intrusion Comments:	

Leak Product Rls

Product Rls Seq ID:	403817
Leak Product Desc:	Gasoline, Type Unknown
Leak Product Defn:	The product is an unknown type of gasoline.

Leak GW Info

Well Type Code:	
Affected Non Res Props:	
Affected Residential Props:	
Staff ID Last Updt:	RSUCHAN
Staff ID Wellhead Area Assess:	
TMSP Added:	12/04/1999 14:07:31
TMSP Last Updt:	11/04/2003 12:57:07
Water Supply Exceeds Ral Flag:	
Cleanup Goal Achieved Flag:	
DW Supply Contam Flag:	N
Free Product at Close Flag:	
Free Product Observed Flag:	N
Free Product Thickness:	
Ground Water Contam Flag:	N
GW Cleanup Goal:	0
GW Exceeds Cleanup Goal Flag:	
Impacted Aquifer Code:	
MTBE High Level Date:	
MTBE High Ug Per Liter Char:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
5	7 of15	NW	0.01 / 58.86	1,371.98 / 1	Duluth International Airport Maintenance Garage 4701 Airport Dr Duluth MN 55811	HIST LEAKSITES

MTBE High Ug Per Liter Numb:
MTBE Present Historically Flag:
MTBE Present Now Flag:
Protected Area Flag:
PWS Well Impacted Flag:
Sensitive Area Flag:

Prog Int ID:	216260	**Address Source:**	CORE
Site ID:	780	**Township Name:**	
State County Code:	69	**County Name:**	St. Louis
Country:	USA	**Lat/Long ID:**	73296
Interest Type Cd:	LS	**Interest Type Dsc:**	Leak Site
ADDR ID:	19096	**Lat Degrees:**	46
Tank Site:	3496	**Lat Minutes:**	50
Interest Phone:	NO CORE PI PH.	**Lat Seconds:**	10.81
Interest Start Dt:	08/26/1996 00:00:00	**Long Degrees:**	-92
Interest End Dt:	03/26/2012 10:44:09	**Long Minutes:**	10
Active?:	No	**Long Seconds:**	29.35
Timestamp Added:	03/23/2006 13:20:53	**Lat/Long Source:**	CORE
Timestamp Updt:	11/10/2014 08:17:05	**Lat/Long Site ID:**	780
Staff ID Updt:	RGAGLE	**Lat/Long Spatial ID:**	51063766
Source:	CORE	**Collection Date:**	03/14/2003 00:00:00
Coord Src Type:	2	**Map Scale Code:**	T
Coord Src Desc:		**Org Name Source:**	MPCA
Foreign State:		**Foreign Zone:**	
FIPS County Cd1:	137		

Addr Timestmp Add:	07/15/1998 12:36:52
Addr Timestamp Lst Updt:	08/11/2010 13:27:06
Addr Updater Staff ID:	NETSVCU
Lat/Long Timestamp Added:	03/20/2003 11:44:14
Lat/Long Tmstmp Last Upd:	07/14/2004 22:03:07
Lat/Long Updater Staff ID:	BOMAN
Lat/Long Desc:	
Coord Coll Method Desc:	DOQ - Digital Orthophoto Quad
Coord Coll Method Code:	D3
Comments:	

Leak Site

Complete Site Closure Date:	09/27/1994 00:00:00
Cond Closure Date:	
Release Discovered Date:	10/29/1990 00:00:00
Leaksite Type Code:	1
Leaksite Type Desc:	Leak Site
Leak Report Date:	10/29/1990 00:00:00
Tank Reg Status Code:	F
TMSP Added:	12/04/1999 14:03:45
TMSP Last Updt:	03/08/2016 09:25:58
CU Yds Excavated Qty:	140
ENF Action Begin Date:	11/19/1990 00:00:00
Residence Type Code:	
File Archive Box:	21
File Archive Lot:	97/11
Soil Digout Date:	10/29/1990 00:00:00
Staff ID Last Updt:	SFRYE
Std Letter Response Date:	
VPIC Acres:	
VPIC Application Date:	
Contam Soils Remaining Flag:	N
Indoor Air Collected Flag:	
LUST Trust Eligible Flag:	Yes
Offsite Contam Flag:	N

REIMB Awarded Flag:	No
Release From AST Flag:	No
Release From UST Flag:	No
Soil Gas Action Level Flag:	
Soil Gas Data Collected Flag:	
Sub Slab Sample Collected Flag:	
Surface Water Impact Flag:	U
Utility Project Flag:	No
Vapor Intrusion Action Flag:	
Vapor Intrusion Checked Flag:	
Leaksite Type Defn:	Leak site (tank and petroleum contamination).
Soil Gas Data Comments:	
Vapor Intrusion Comments:	

Leak Product Rls

Product Rls Seq ID:	402764
Leak Product Desc:	Fuel Oil 1 & 2
Leak Product Defn:	The product is fuel oil 1 & 2.

Leak GW Info

Well Type Code:	
Affected Non Res Props:	
Affected Residential Props:	
Staff ID Last Updt:	RSUCHAN
Staff ID Wellhead Area Assess:	
TMSP Added:	12/04/1999 14:07:29
TMSP Last Updt:	11/04/2003 12:57:06
Water Supply Exceeds Ral Flag:	
Cleanup Goal Achieved Flag:	
DW Supply Contam Flag:	
Free Product at Close Flag:	
Free Product Observed Flag:	
Free Product Thickness:	
Ground Water Contam Flag:	
GW Cleanup Goal:	0
GW Exceeds Cleanup Goal Flag:	
Impacted Aquifer Code:	
MTBE High Level Date:	
MTBE High Ug Per Liter Char:	
MTBE High Ug Per Liter Numb:	
MTBE Present Historically Flag:	
MTBE Present Now Flag:	
Protected Area Flag:	
PWS Well Impacted Flag:	
Sensitive Area Flag:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
5	***8 of15***	***NW***	***0.01 / 58.86***	***1,371.98 / 1***	***Northwest Storage Area Duluth Iap 4701 Airport Rd Duluth MN 55802***	***HIST LEAKSITES***

Prog Int ID:	222779	***Address Source:***	CORE
Site ID:	245840	***Township Name:***	Whiteface Reservoir
State County Code:	69	***County Name:***	St. Louis
Country:	USA	***Lat/Long ID:***	132647
Interest Type Cd:	LS	***Interest Type Dsc:***	Leak Site
ADDR ID:	269783	***Lat Degrees:***	46
Tank Site:	10276	***Lat Minutes:***	50
Interest Phone:	NO CORE PI PH.	***Lat Seconds:***	21.08
Interest Start Dt:	07/01/1999 11:05:12	***Long Degrees:***	-92
Interest End Dt:	11/29/2006 08:17:50	***Long Minutes:***	10
Active?:	No	***Long Seconds:***	42.92

Timestamp Added:	11/29/2006 08:17:50	***Lat/Long Source:***	CORE
Timestamp Updt:	11/10/2014 08:17:06	***Lat/Long Site ID:***	245840
Staff ID Updt:	RGAGLE	***Lat/Long Spatial ID:***	51830738
Source:	CORE	***Collection Date:***	03/09/2011 08:25:38
Coord Src Type:		***Map Scale Code:***	
Coord Src Desc:		***Org Name Source:***	
Foreign State:		***Foreign Zone:***	
FIPS County Cd1:	137		

Addr Timestmp Add:	11/29/2006 08:17:24
Addr Timestamp Lst Updt:	11/04/2008 21:13:55
Addr Updater Staff ID:	SYSTEM
Lat/Long Timestamp Added:	11/29/2006 08:18:01
Lat/Long Tmstmp Last Upd:	03/09/2011 08:25:39
Lat/Long Updater Staff ID:	MAPTOOL
Lat/Long Desc:	
Coord Coll Method Desc:	Digitized - Map Tool
Coord Coll Method Code:	DM
Comments:	

Leak Site

Complete Site Closure Date:	08/27/1997 00:00:00
Cond Closure Date:	
Release Discovered Date:	06/24/1997 00:00:00
Leaksite Type Code:	1
Leaksite Type Desc:	Leak Site
Leak Report Date:	06/25/1997 00:00:00
Tank Reg Status Code:	F
TMSP Added:	12/04/1999 14:03:51
TMSP Last Updt:	08/13/2014 13:40:07
CU Yds Excavated Qty:	
ENF Action Begin Date:	06/30/1997 00:00:00
Residence Type Code:	
File Archive Box:	
File Archive Lot:	
Soil Digout Date:	
Staff ID Last Updt:	DBOETTC
Std Letter Response Date:	07/09/1997 00:00:00
VPIC Acres:	
VPIC Application Date:	
Contam Soils Remaining Flag:	U
Indoor Air Collected Flag:	
LUST Trust Eligible Flag:	Yes
Offsite Contam Flag:	U
REIMB Awarded Flag:	No
Release From AST Flag:	No
Release From UST Flag:	No
Soil Gas Action Level Flag:	
Soil Gas Data Collected Flag:	
Sub Slab Sample Collected Flag:	
Surface Water Impact Flag:	U
Utility Project Flag:	No
Vapor Intrusion Action Flag:	
Vapor Intrusion Checked Flag:	
Leaksite Type Defn:	Leak site (tank and petroleum contamination).
Soil Gas Data Comments:	
Vapor Intrusion Comments:	

Leak Product Rls

Product Rls Seq ID:	35800
Leak Product Desc:	Gasoline, Type Unknown
Leak Product Defn:	The product is an unknown type of gasoline.

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Leak GW Info

Well Type Code:
Affected Non Res Props:
Affected Residential Props:
Staff ID Last Updt: RSUCHAN
Staff ID Wellhead Area Assess:
TMSP Added: 12/04/1999 14:07:34
TMSP Last Updt: 11/04/2003 12:57:08
Water Supply Exceeds Ral Flag:
Cleanup Goal Achieved Flag:
DW Supply Contam Flag:
Free Product at Close Flag:
Free Product Observed Flag:
Free Product Thickness:
Ground Water Contam Flag: N
GW Cleanup Goal: 0
GW Exceeds Cleanup Goal Flag:
Impacted Aquifer Code:
MTBE High Level Date:
MTBE High Ug Per Liter Char:
MTBE High Ug Per Liter Numb:
MTBE Present Historically Flag:
MTBE Present Now Flag:
Protected Area Flag:
PWS Well Impacted Flag:
Sensitive Area Flag:

5	9 of15	NW	0.01 / 58.86	1,371.98 / 1	NWA 4701 Airport Dr Duluth MN 55811	HIST SPL

Program Int ID: 180249
Site ID: 0
Interest Type: Spill Site
Preferred ID: 22557
Active?:
Interest Start: 03/21/1996 00:00:00
Interest End:
Comments: *FILE WITH KF*\n\nfile exists

Tmsp Added: 03/21/1996 00:00:00
TMSP Update: 10/09/2006 10:10:44
Prgm Int Source: TALES
Address Source: TALES
Interest Phone:
Township:
County: St. Louis

Spill Site

Spill Site Closure Date: 10/25/1995 00:00:00
Spill Date: 10/25/1995 00:00:00
Spill Reported Date: 10/25/1995 00:00:00
Priority Code: 4
MPCA Involvement:
Initial Cause: HUMAN ERROR
Initial Source:
Public Safety Spill ID:
Duty Officer Report Number:
Spill Reported by: HANK STORMS
Report Taken By Initials: 3234
Rpt Taken by Duty Officer Flag:
MPCA Project Manager: 3234
Tmsp Added: 03/21/1996 00:00:00
Tmsp Last Updt: 04/11/2007 08:22:56
Staff ID Last Updt: RSUCHAN
Rep Name:
Rep Phone:
Archive Lot:
Archive Box:
Response Desc:

Spill Released Product

Spill Product:	Aviation Gas (High Octane)
Spill Released Quantity:	300
Spill Qty Units:	Gallons
Spill Incident Accuracy:	Known
Date Added:	03/21/1996 00:00:00
Last Update:	05/04/2002 07:10:26
Staff ID Last Update:	TANKS

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
5	10 of15	NW	0.01 / 58.86	1,371.98 / 1	Avis Rent A Car 4701 Airport Rd Duluth MN 55811	LST REM SITE

Item ID:	137286-AREA0000000001	***Unpermitted Dump?:***	
Project ID:	LS0005937	***State Reg:***	
Project Type:	Leak Site	***Federal Reg:***	Yes
Project ID (RAP):		***Fed State Reg:***	
Project Type (RAP):		***Non Reg:***	
Site Status:	Closed	***NPL:***	
Perm List of Prio?:		***Site County:***	St. Louis
Petrol Brownfield?:		***County (RAP):***	
VIC Site?:		***Latitude:***	46.83726227
Sf Voluntary:		***Longitude:***	-92.17941242
Inst Controls?:		***Latitude (RAP):***	
SEMS?:		***Longitude (RAP):***	

Project Name:	Avis Rent A Car
Project Managers:	Steve Leppala (no longer at MPCA)
Site Address 1:	4701 Airport Rd
Site Address 2:	
Site City:	Duluth
Site State:	MN
Site ZIP:	55811
Project Name(RAP):	
Address1 (RAP):	
Address2 (RAP):	
City (RAP):	
State (RAP):	
ZIP (RAP):	
Data Source:	MPCA Remediation Sites

Remediation Sites Details

Activity ID:	137286	***Object ID:***	2882
SI ID:	1	***Cong Dist:***	8
Si Cat:	AREA	***House Dist:***	8B
SI Type:	LEAK	***Senate Dis:***	8
Site Type:	CON	***HUC 8:***	04010201
Acreage:		***HUC 10:***	0401020116
HRS Score:		***HUC 12:***	040102011604
Score Year:		***Gdb Geomattr Data:***	
DWSMA Code:		***MNTBA:***	

AI Name:	Avis Rent a Car
DWSMA Name:	
Hydrologists:	Jonathan Smith (no longer at MPCA)
Huc 8 Name:	St. Louis River
Huc12 Name:	Saint Louis River
Method Desc:	Digitized - MPCA internal map
Loc Desc:	
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/137286

Spatial Remediation Activity

AI ID:	137286	***Object ID:***	20742
Site ID:	LS0005937	***Remedy Imp:***	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

SI ID:	1	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	
Site Start:	1992-08-11 00:00:00	**NPL List:**	
Site Close:	1998-06-29 00:00:00	**NPL Delete:**	
Leak Discovered:	1992-08-11 00:00:00	**PLP List:**	
Leak Reported:	1992-08-11 00:00:00	**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	
Activity No:	1	**FF Aproved:**	
Activity ID:	SIW19920001	**FF Closed:**	
Activity Type:	Leak Site Investigation	**Inv Comple:**	
Activity Code:	SIW	**App Comple:**	
Activity Year:	1992	**Er Site Ev:**	
Discovered:			

5	**11 of15**	**NW**	**0.01 / 58.86**	**1,371.98 / 1**	**Northwest Storage Area Duluth Iap 4701 Airport Rd Duluth MN 55802**	**LST REM SITE**

Item ID:	189430-AREA0000000001	**Unpermitted Dump?:**	
Project ID:	LS0010276	**State Reg:**	
Project Type:	Leak Site	**Federal Reg:**	Yes
Project ID (RAP):		**Fed State Reg:**	
Project Type (RAP):		**Non Reg:**	
Site Status:	Closed	**NPL:**	
Perm List of Prio?:		**Site County:**	St. Louis
Petrol Brownfield?:		**County (RAP):**	
VIC Site?:		**Latitude:**	46.83918402
Sf Voluntary:		**Longitude:**	-92.17859002
Inst Controls?:		**Latitude (RAP):**	
SEMS?:		**Longitude (RAP):**	
Project Name:	Northwest Storage Area Duluth Iap		
Project Managers:	Steve Leppala (no longer at MPCA)		
Site Address 1:	4701 Airport Rd		
Site Address 2:			
Site City:	Duluth		
Site State:	MN		
Site ZIP:	55802		
Project Name(RAP):			
Address1 (RAP):			
Address2 (RAP):			
City (RAP):			
State (RAP):			
ZIP (RAP):			
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

Activity ID:	189430	**Object ID:**	4446
SI ID:	1	**Cong Dist:**	8
Si Cat:	AREA	**House Dist:**	8B
SI Type:	LEAK	**Senate Dis:**	8
Site Type:	CON	**HUC 8:**	04010201
Acreage:		**HUC 10:**	0401020116
HRS Score:		**HUC 12:**	040102011604
Score Year:		**Gdb Geomattr Data:**	
DWSMA Code:		**MNTBA:**	
AI Name:	Northwest Storage Area Duluth Iap		
DWSMA Name:			
Hydrologists:			
Huc 8 Name:	St. Louis River		
Huc12 Name:	Saint Louis River		
Method Desc:	Digitized - MPCA internal map		
Loc Desc:			
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/189430		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Spatial Remediation Activity

AI ID:	189430	***Object ID:***	26231
Site ID:	LS0010276	***Remedy Imp:***	
SI ID:	1	***Remedy Sel:***	
SI Cat:	AREA	***ASMT Compl:***	
NFA Decisi:		***Received:***	
Site Start:	1997-06-25 00:00:00	***NPL List:***	
Site Close:	1997-08-27 00:00:00	***NPL Delete:***	
Leak Discovered:	1997-06-24 00:00:00	***PLP List:***	
Leak Reported:	1997-06-25 00:00:00	***PLP Delist:***	
Leak Reopened:		***Staff Assi:***	
Activity No:	1	***FF Aproved:***	
Activity ID:	SIW19970001	***FF Closed:***	
Activity Type:	Leak Site Investigation	***Inv Comple:***	
Activity Code:	SIW	***App Comple:***	
Activity Year:	1997	***Er Site Ev:***	
Discovered:			

5	***12 of15***	***NW***	***0.01 / 58.86***	***1,371.98 / 1***	***DULUTH INTERNATIONAL AIRPORT USAF DULUTH INTERNATIONAL AIRPORT DULLUTH MN 55811***	***RCRA NON GEN***

Handler ID:	MN7570024284
Generator Status:	N
Recycler Activity?:	NO
Recycler Activity Note:	This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note:	NO RECORDS: As of Nov 2025, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer:	No	***Used Oil Transpor:***	No
Mixed Waste Gen:	No	***Used Oil Trans Fac:***	No
Transporter:	No	***Used Oil Processor:***	No
Transfer Facility:	No	***Used Oil Refiner:***	No
Recycler:	No	***Used Oil Burner:***	No
Onsite Burner Exem:	No	***Commercial TSD:***	No
Furnace Exemption:	No	***Recycl Nonstorage:***	No
Underground Injec:	No		
Used Oil Market Burner:	No		
Used Oil Spec Marketer:	No		

Additional Handler Summary Details

Source Type:	I	***NAIC 1:***	
Seq No:	1	***NAIC 2:***	
Non Notifier:		***NAIC 3:***	
Receive Date:	19850101	***NAIC 4:***	
Active Site:	-----	***State:***	MN
Land Type:		***Location Latitude:***	46.837995
In Handler Univ:	N	***Location Longitude:***	-92.180005
In A Universe:	N	***Loc GIS Primary:***	N
Gen Status:	N	***Loc GIS Origin:***	AG
Report Cycle:		***State District Owner:***	
Accessibility:		***State District:***	
Region:	05		
Fed Waste Gen Owner:	HQ		

State Waste Generator Owner:	MN
State Waste Generator:	N
Short Term Generator:	N
Uni Waste:	N
Universal Waste Dest Facility:	N
Federal Universal Waste:	N
As Federally Regulated Tsdf:	------
As Converter Tsdf:	------
As State Regulated Tsdf:	------
As State Regulated Handler:	---
Federal Indicator:	---
Hsm:	N
Subpart K:	----
GPRA Permit:	N
GPRA Renewal:	N
Permit Renewal Wrkld:	------
Permwrk ID:	------
Perm Prog:	------
Pcwrkld:	------
Closwrkld:	------
GPRA Ca:	N
Cawrkld:	N
Subjca Tsd Discretion:	N
NCAPS:	N
EC Indicator:	N
Ca725 Indicator:	N
Ca750 Indicator:	N
Operating Tsdf:	------
Full Enforcement:	------
Snc:	N
Unaddressed Snc:	N
Addressed Snc:	N
Snc With Comp Sched:	N
Fa Required:	-----
Hhandler Last Change:	20070405
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	EN
Handler Name:	DULUTH INTERNATIONAL AIRPORT USAF
Location Street No:	
Location Street1:	DULUTH INTERNATIONAL AIRPORT
Location Street2:	
Location City:	DULLUTH
Location State:	MN
Location Zip:	55811
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	US
Contact Name:	
Contact Street No:	
Contact Street1:	
Contact Street2:	
Contact City:	
Contact State:	
Contact Zip:	
Contact Country:	US
Contact Phone & Ext:	
Contact Fax:	
Contact Email Address:	
Contact Title:	
Owner Name:	
Owner Type:	
Owner Seq:	
Operator Name:	
Operator Type:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Operator Seq:
Public Notes:

Hazardous Waste Handler Details

Seq No: 1
Receive Date: 19850101
Handler Name: DULUTH INTERNATIONAL AIRPORT USAF
Fed Waste Generator: N
Generator Code Description: Not a Generator, Verified
Source Type: Implementer
TSD Activity: N

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
5	13 of15	NW	0.01 / 58.86	1,371.98 / 1	NORTHWEST AIRLINES 4701 Airport Dr MN 55811 Duluth MN	SPILLS

Incident ID: 22557
Incident Status: Closed or Completed
Incident Type: Spill or Release
Incident Date: 10/25/1995
Program: Emergency Response
Closure Type:
County: St. Louis
Coord Method:
Location: 4701 Airport Dr
MN
55811

AI ID Source:
Source Address:
Source City:
Source State:
Source Zip:
Latitude:
Longitude:

Lead Investigator and Duty Officer

Substances: 300 gallons Aviation Gas
Duty Officer No:
Lead Investigator: Kevin Faus
Linked Incidents:
Source List: NORTHWEST AIRLINES
Address:
Ai ID Location:
State:
Zip:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
5	14 of15	NW	0.01 / 58.86	1,371.98 / 1	NORTHWEST AIRLINES INC 4701 AIRPORT RD DULUTH MN 55811	TRIS

TRI FD: 55811NRTHW4701A
FRS ID: 110001444161
BIA:
Tribe:
Facility Name: NORTHWEST AIRLINES INC
Street Address: 4701 AIRPORT RD
City: DULUTH
County: ST LOUIS
State: MN
Zip: 55811
Latitude: 46.836611
Longitude: -92.153061

1992 Details

TRI FD: 55811NRTHW4701A
Federal Facility: NO
Cas No Compound ID: 0000107211

Underground: 0.000000
Underground CL I: 0.000000
Underground C II-V: 0.000000

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Classification:	TRI	**Landfills:**	0.000000
Primary SIC:	3721	**RCRA C Landfill:**	0.000000
Primary NAICS:	336411	**Other Landfills:**	0.000000
Metal:	NO	**Land Treatment:**	0.000000
Carcinogen:	NO	**Surface Impndmnt:**	4.000000
Fugitive Air:	0.000000	**RCRA Surface IM:**	0.000000
Stack Air:	0.000000	**Other Surface I:**	0.000000
Water:	4.000000	**Other Disposal:**	0.000000

Chemical: Ethylene glycol
Industry Sector Code: 336
Industry Sector: Transportation Equipment
Parent Co Name:
On Site Release Total: 8.000000
Off Site Release Total: 0.000000
Off Site Recycled Total: 0.000000
Total Releases: 8.000000
One Time Release:

0.000000

Horizontal Datum:

NAD83

CAS No:

107-21-1

PFAS:

NO

PBT:

NO

5	15 of15	NW	0.01 / 58.86	1,371.98 / 1	Avis Rent a Car 4701 Airport Rd Duluth MN 55811	UST

AI ID:	137286	**AI Name (Map):**	
Tank Type:	Underground Storage Tank System	**Address1 (Map):**	
AI Name:	Avis Rent a Car	**Address2 (Map):**	
Address1:	4701 Airport Rd	**City (Map):**	
Address2:		**State (Map):**	
Address3:		**Zip (Map):**	
City:	Duluth	**Owner:**	Twin Ports Transport
County:	St. Louis	**Owner Address:**	
State:	MN	**Owner City:**	
Zip:	55811	**Owner State:**	
Location Description:		**Owner Zip:**	

Data Source: Minnesota Pollution Control Agency Tank Sites

Tank Information

Tank Site ID:	TS0012553	**Latitude:**	46.84924589
Tank ID:	137286-EQUI0000000001	**Longitude:**	-92.23551093
Tank Status:	Removed	**Contractor of Tank:**	
Install Date:	1/1/1972	**Tribal Land:**	
Status Change Date:	12/18/1992		
Primary NAICS:			
Primary SIC:			

Subject Item Description: 4,000 gal/Gasoline/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0012553
Coord Collect Meth Desc: Public Land Survey-Two Quarter
On Tribal Land: N

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Compartment Information

Compartment ID:	137286-EQUI0000000001-1	***Programs:***	UT
Compartment No:	1	***Capacity (gal):***	4000
Tank Wall Type:	Single	***Cathodic Prot Sys:***	Not needed
Tank Material:	Bare/Paint/Asph Coat Steel	***Special Use Desc:***	None
Subject Item Designation:	1		
Overfill Prevention System:	UST Not needed		

Pipe Information

Pipe Wall Type:	Single	***Stored Product:***	Gasoline
Pipe Leak Detection:	NONE	***Tank Leak Detection:***	UST Not needed
Pipe Material:	Steel/Iron	***Vapor Recovery Flag:***	No
Pipe Corrosion Protection:	None		

6	*1 of2*	*ESE*	*0.06 / 340.99*	*1,375.22 / 4*	***Hallmark Business Connections 4444 Haines Rd Duluth MN 55811***	*MPCA AI*

Agency Interest ID:	28981
Name (Map):	Hallmark Business Connections
Address (Map):	4444 Haines Rd
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.835961
Longitude (Map):	-92.174252
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Hallmark Business Connections
Address (Site):	4444 Haines Rd
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811-1524
Latitude (Site):	46.835961
Longitude (Site):	-92.174252
County (Site):	St. Louis
Name (Req):	Hallmark Business Connections
Address (Req):	4444 Haines Rd
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.835961
Longitude (Req):	-92.174252
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	28981-AISI0000028981	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Multiple Programs	***SI ID:***	28981
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	8B
Quarters:		***Senate Dist:***	8

Collection Date:	5/4/2021	**TRDSQQ:**	
Tmsp Created:	7/26/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	5/4/2021	**Verified:**	No
Spatial ID:	19997	**User Updt:**	geo_nc

Name: Hallmark Business Connections
Program List: HW, IS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: DP
Method Desc: Digitized - MPCA online map

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	Multiple IDs	**Cong Distr:**	8
Program Co:	HW; ST	**Senate Dis:**	8
Program Name:	Multiple Programs	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-1524	**Coord Coll:**	DP
City:	Duluth	**Latitude:**	46.835961
County:	St. Louis	**Longitude:**	-92.174252

Activity: Multiple Activities
Addr St: 4444 Haines Rd
Addr City: Duluth
MPCA ID List: MNR000053025; MNRNE378R; MNRNE385R
Program 1: Hazardous Waste; Stormwater
Name: Hallmark Business Connections
Watershed : St. Louis River
Coord Co 1: Digitized - MPCA online map
Activity L: Hazardous Waste; Industrial Stormwater
Industrial: Commercial Printing (except Screen and Books)
Site URL: https://webapp.pca.state.mn.us/wimn/site/28981

Agency Interests: File Request Details

Item ID:	28981-AISI0000028981	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	28981
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	5/4/2021	**Ref Code:**	GEN
Tmsp Created:	7/26/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	5/4/2021	**User Updt:**	geo_nc
Spatial ID:	19997		

Name: Hallmark Business Connections
Program List: HW, IS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
DWSMA Name:						
Method Code:		DP				
Method Desc:		Digitized - MPCA online map				
6	2 of2	ESE	0.06 / 340.99	1,375.22 / 4	HALLMARK BUSINESS CONNECTIONS 4444 HAINES RD DULUTH MN 55811-1524	RCRA NON GEN

Handler ID: MNR000053025
Generator Status: N
Recycler Activity?: NO
Recycler Activity Note: This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note: NO VIOLATIONS: All of the compliance records associated with this facility (EPA ID) indicate NO VIOLATIONS; Compliance Monitoring and Enforcement table dated Nov 2025.

Evaluation Details

Eval Start Date: 19990702
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:
Actual Rtc Date:
Eval Agency: State

Handler Summary

Importer:	No	**Used Oil Transpor:**	No
Mixed Waste Gen:	No	**Used Oil Trans Fac:**	No
Transporter:	No	**Used Oil Processor:**	No
Transfer Facility:	No	**Used Oil Refiner:**	No
Recycler:	No	**Used Oil Burner:**	No
Onsite Burner Exem:	No	**Commercial TSD:**	No
Furnace Exemption:	No	**Recycl Nonstorage:**	No
Underground Injec:	No		

Used Oil Market Burner: No
Used Oil Spec Marketer: No

Additional Handler Summary Details

Source Type:	I	**NAIC 1:**	
Seq No:	101	**NAIC 2:**	
Non Notifier:		**NAIC 3:**	
Receive Date:	20251021	**NAIC 4:**	
Active Site:	-----	**State:**	MN
Land Type:		**Location Latitude:**	46.833838
In Handler Univ:	N	**Location Longitude:**	-92.174458
In A Universe:	N	**Loc GIS Primary:**	N
Gen Status:	N	**Loc GIS Origin:**	UC
Report Cycle:		**State District Owner:**	
Accessibility:		**State District:**	
Region:	05		

Fed Waste Gen Owner: HQ
State Waste Generator Owner: MN
State Waste Generator: 4
Short Term Generator: N
Uni Waste: N
Universal Waste Dest Facility: N
Federal Universal Waste: N
As Federally Regulated Tsdf: ------
As Converter Tsdf: ------

As State Regulated Tsdf:	------
As State Regulated Handler:	---
Federal Indicator:	---
Hsm:	N
Subpart K:	----
GPRA Permit:	N
GPRA Renewal:	N
Permit Renewal Wrkld:	------
Permwrk ID:	------
Perm Prog:	------
Pcwrkld:	------
Closwrkld:	------
GPRA Ca:	N
Cawrkld:	N
Subjca Tsd Discretion:	N
NCAPS:	N
EC Indicator:	N
Ca725 Indicator:	N
Ca750 Indicator:	N
Operating Tsdf:	------
Full Enforcement:	------
Snc:	N
Unaddressed Snc:	N
Addressed Snc:	N
Snc With Comp Sched:	N
Fa Required:	-----
Hhandler Last Change:	20251024
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	EN
Handler Name:	HALLMARK BUSINESS CONNECTIONS
Location Street No:	
Location Street1:	4444 HAINES RD
Location Street2:	
Location City:	DULUTH
Location State:	MN
Location Zip:	55811-1524
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	
Contact Name:	CURT CONRAD
Contact Street No:	
Contact Street1:	4444 HAINES RD
Contact Street2:	
Contact City:	DULUTH
Contact State:	MN
Contact Zip:	55811-1524
Contact Country:	
Contact Phone & Ext:	218-336-4241
Contact Fax:	
Contact Email Address:	CURT.CONRAD@HALLMARKBUSINESSCONNECTIONS.COM
Contact Title:	ENVIRONMENTAL HEALTH AND SAFETY ADMINISTRATOR
Owner Name:	
Owner Type:	
Owner Seq:	
Operator Name:	
Operator Type:	
Operator Seq:	
Public Notes:	

Sequence Number 101 is associated with a batch data load by MPCA on 10/24/2025

Hazardous Waste Handler Details

Seq No: 2
Receive Date: 20041215
Handler Name: IRRESISTIBLE INK INC - DULUTH
Fed Waste Generator: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Notification
TSD Activity: N

Hazardous Waste Handler Details

Seq No: 53
Receive Date: 20231218
Handler Name: HALLMARK BUSINESS CONNECTIONS
Fed Waste Generator: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Implementer
TSD Activity: N

Hazardous Waste Handler Details

Seq No: 101
Receive Date: 20251021
Handler Name: HALLMARK BUSINESS CONNECTIONS
Fed Waste Generator: N
Generator Code Description: Not a Generator, Verified
Source Type: Implementer
TSD Activity: N

Owner/Operator Details

Owner/Operator Ind: Current Owner
Type: Private
Name: LARSMONT DEVELOPMENT
Dt Became Current: 19990726
Dt Ended Current:
Phone: 218-336-4234
Source Type: Notification
Street No:
Street1: 1131 SUPERIOR ST E
Street2:
City: DULUTH
State: MN
Country: US
Zip: 55802

Owner/Operator Ind: Current Operator
Type: Private
Name: LARSMONT DEVELOPMENT
Dt Became Current: 19990726
Dt Ended Current:
Phone: 218-336-4234
Source Type: Notification
Street No:
Street1: 1131 SUPERIOR ST E
Street2:
City: DULUTH
State: MN
Country: US
Zip: 55802

Historical Handler Details

Receive Dt: 20231218
Generator Code Description: Very Small Quantity Generator
Handler Name: HALLMARK BUSINESS CONNECTIONS

Receive Dt: 20041215
Generator Code Description: Very Small Quantity Generator
Handler Name: IRRESISTIBLE INK INC - DULUTH

7	1 of1	ESE	0.08 / 445.50	1,373.76 / 3	Hallmark Parking Lot Reconstruction MN	MPCA AI

Agency Interest ID: 258943

Name (Map):	Hallmark Parking Lot Reconstruction
Address (Map):	
City (Map):	
State (Map):	
ZIP (Map):	
Latitude (Map):	46.835644
Longitude (Map):	-92.173834
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Hallmark Parking Lot Reconstruction
Address (Site):	
City (Site):	
State (Site):	
ZIP (Site):	
Latitude (Site):	46.835644
Longitude (Site):	-92.173834
County (Site):	St. Louis
Name (Req):	Hallmark Parking Lot Reconstruction
Address (Req):	
City (Req):	
State (Req):	
ZIP (Req):	
Loc Desc (Req):	
Latitude (Req):	46.835644
Longitude (Req):	-92.173834
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	258943-AISI0000258943	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	258943
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	4/4/2024	**TRDSQQ:**	
Tmsp Created:	4/4/2024	**Ref Code:**	CEN
User Created:	RSP	**Ref Desc:**	Center of Feature Represented
Tmsp Updt:	4/4/2024	**Verified:**	No
Spatial ID:		**User Updt:**	geo_nc

Name:	Hallmark Parking Lot Reconstruction
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	DP
Method Desc:	Digitized - MPCA online map

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00069232	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	8
Program Name:	Stormwater	**House Dist:**	8B

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Address:		**IC Flag:**	No
Addr ZIP:		**Coord Coll:**	DP
City:	Duluth	**Latitude:**	46.835644
County:	St. Louis	**Longitude:**	-92.173834
Activity:	Construction Stormwater		
Addr St:			
Addr City:			
MPCA ID List:	C00069232		
Program 1:	Stormwater		
Name:	Hallmark Parking Lot Reconstruction		
Watershed :	St. Louis River		
Coord Co 1:	Digitized - MPCA online map		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/258943		

Agency Interests: File Request Details

Item ID:	258943-AISI0000258943	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	258943
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	4/4/2024	**Ref Code:**	CEN
Tmsp Created:	4/4/2024	**Ref Desc:**	Center of Feature Represented
User Created:	RSP	**Verified:**	No
Tmsp Updt:	4/4/2024	**User Updt:**	geo_nc
Spatial ID:			
Name:	Hallmark Parking Lot Reconstruction		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	DP		
Method Desc:	Digitized - MPCA online map		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
8	1 of1	WNW	0.10 / 538.21	1,392.62 / 22	MINNESOTA AIR NAT GUARD148 FIG BLDG 511 DULUTH INTERNATIONAL AIRPT DULUTH MN 55811-5000	PCB

Site ID:	MND000773341	**Cert Title:**	
Receive Date:		**Cert Date:**	9/13/1991 12:00:00 AM
Generator:	Yes	**Cert Name:**	
Storer:	No	**State Name:**	MINNESOTA
Transporter:	No	**Region:**	05
Disposer:	No	**GIS Data Origin:**	Auto-Geocoded
Research:	No	**Latitude:**	46.83801
Smelter:	No	**Longitude:**	-92.17892
Owner Name:	MINNESOTA GUARD CTY OF DULUTH		
Mail Address 1:	DULUTH INTERNATIONAL AIRPORT		
Mail Address 2:			
Mail Street No:			
Mail City:	DULUTH		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Mail State: MN
Mail Zip: 55811-5000
Mail Country: US
Contact Name: GARY NIEMI
Contact Title:
Contact Phone: 218-723-7339
Contact Phone Ext:
Contact Email:

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9 | **1 of1** | **W** | **0.11 / 590.48** | **1,384.94 / 14** | **Duluth Airport Terminal Expansion**
Address Unknown
Duluth MN 55811 | **MPCA AI**

Agency Interest ID: 137956
Name (Map): Duluth Airport Terminal Expansion
Address (Map): Address Unknown
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.8375321
Longitude (Map): -92.1794128
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Duluth Airport Terminal Expansion
Address (Site): Address Unknown
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.8375321
Longitude (Site): -92.1794128
County (Site): St. Louis
Name (Req): Duluth Airport Terminal Expansion
Address (Req): Address Unknown
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.8375321
Longitude (Req): -92.1794128
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 137956-AISI0000137956
Status: Inactive
Status Date: 2011-02-23 07:34:28
Program: Const Stormwater
CTU Code: 239456
CTU Name: Duluth
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 9/27/2015
Tmsp Created: 7/2/2009
User Created: DELTA_M_R1
Tmsp Updt: 4/26/2016
Spatial ID: 56303790
Name: Duluth Airport Terminal Expansion
Program List: CS
HUC 8: 04010201

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 137956
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 8B
Senate Dist: 8
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: spatial_

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	DW
Method Desc:	Digitized - Web Map Google / Yahoo / Microsoft

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00028066	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	8
Program Name:	Stormwater	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	DW
City:	Duluth	**Latitude:**	46.8375321
County:	St. Louis	**Longitude:**	-92.1794128

Activity:	Construction Stormwater
Addr St:	Address Unknown
Addr City:	Duluth
MPCA ID List:	C00028066
Program 1:	Stormwater
Name:	Duluth Airport Terminal Expansion
Watershed :	St. Louis River
Coord Co 1:	Digitized - Web Map Google / Yahoo / Microsoft
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/137956

Agency Interests: File Request Details

Item ID:	137956-AISI0000137956	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2/23/2011	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	137956
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	7/2/2009	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	56303790		

Name:	Duluth Airport Terminal Expansion
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	DW
Method Desc:	Digitized - Web Map Google / Yahoo / Microsoft

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
10	1 of5	ESE	0.12 / 643.09	1,383.50 / 13	Lloyds Inc 4437 Venture Ave Duluth MN 55811	MPCA AI

Agency Interest ID:	119909
Name (Map):	Lloyds Inc
Address (Map):	4437 Venture Ave
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.834433
Longitude (Map):	-92.171647
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Lloyds Inc
Address (Site):	4437 Venture Ave
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.834433
Longitude (Site):	-92.171647
County (Site):	St. Louis
Name (Req):	Lloyds Inc
Address (Req):	4437 Venture Ave
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.834433
Longitude (Req):	-92.171647
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	119909-AISI0000119909	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	2008-04-30 12:14:16	***SI Cat:***	AISI
Program:	Ind Stormwater	***SI ID:***	119909
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	8B
Quarters:		***Senate Dist:***	8
Collection Date:	9/27/2015	***TRDSQQ:***	
Tmsp Created:	4/30/2008	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	4/26/2016	***Verified:***	No
Spatial ID:	54389613	***User Updt:***	spatial_

Name:	Lloyds Inc
Program List:	IS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	G8
Method Desc:	GPS - Other

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	A00020871	***Cong Distr:***	8

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program Co:	ST	**Senate Dis:**	8
Program Name:	Stormwater	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	G8
City:	Duluth	**Latitude:**	46.834433
County:	St. Louis	**Longitude:**	-92.171647
Activity:	Industrial Stormwater		
Addr St:	4437 Venture Ave		
Addr City:	Duluth		
MPCA ID List:	A00020871		
Program 1:	Stormwater		
Name:	Lloyds Inc		
Watershed :	St. Louis River		
Coord Co 1:	GPS - Other		
Activity L:	Industrial Stormwater		
Industrial:	Soap and Other Detergent Manufacturing		
Site URL:	https://webapp.pca.state.mn.us/wimn/site/119909		

Agency Interests: File Request Details

Item ID:	119909-AISI0000119909	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	4/30/2008	**SI Cat:**	AISI
Program:	Ind Stormwater	**SI ID:**	119909
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	4/30/2008	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	54389613		
Name:	Lloyds Inc		
Program List:	IS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	G8		
Method Desc:	GPS - Other		

10	***2 of5***	***ESE***	***0.12 / 643.09***	***1,383.50 / 13***	***Rockwell Automation 4439 Venture Ave Duluth MN 55811***	***MPCA AI***

Agency Interest ID:	132225
Name (Map):	Rockwell Automation
Address (Map):	4439 Venture Ave
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8345184
Longitude (Map):	-92.1717239
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Rockwell Automation
Address (Site):	4439 Venture Ave

City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8345184
Longitude (Site):	-92.1717239
County (Site):	St. Louis
Name (Req):	Rockwell Automation
Address (Req):	4439 Venture Ave
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8345184
Longitude (Req):	-92.1717239
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	132225-AISI0000132225	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2014-05-31 00:00:00	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	132225
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	2/8/2010	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	57570655	**User Updt:**	spatial_
Name:	Rockwell Automation		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	MNS000152421	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	8
Program Name:	Hazardous Waste	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Duluth	**Latitude:**	46.8345184
County:	St. Louis	**Longitude:**	-92.1717239
Activity:	Hazardous Waste		
Addr St:	4439 Venture Ave		
Addr City:	Duluth		
MPCA ID List:	MNS000152421		
Program 1:	Hazardous Waste		
Name:	Rockwell Automation		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		

Activity L: Hazardous Waste
Industrial: Relay and Industrial Control Manufacturing
Site URL: https://webapp.pca.state.mn.us/wimn/site/132225

Agency Interests: File Request Details

Item ID:	132225-AISI0000132225	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	5/31/2014	***SI Cat:***	AISI
Program:	Hazardous Waste	***SI ID:***	132225
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	8B
Section:		***Senate Dist:***	8
Quarters:		***TRDSQQ:***	
Collection Date:	9/27/2015	***Ref Code:***	GEN
Tmsp Created:	2/8/2010	***Ref Desc:***	General Location
User Created:	DELTA_M_R1	***Verified:***	No
Tmsp Updt:	4/26/2016	***User Updt:***	spatial_
Spatial ID:	57570655		

Name: Rockwell Automation
Program List: HW
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

10	*3 of5*	*ESE*	*0.12 / 643.09*	*1,383.50 / 13*	***Rockwell Automation 4439 Venture Ave Duluth MN 55811***	*MPCA AI*

Agency Interest ID: 141901
Name (Map): Rockwell Automation
Address (Map): 4439 Venture Ave
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.834919
Longitude (Map): -92.17177
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Rockwell Automation
Address (Site): 4439 Venture Ave
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.834919
Longitude (Site): -92.17177
County (Site): St. Louis
Name (Req): Rockwell Automation
Address (Req): 4439 Venture Ave
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.834919
Longitude (Req): -92.17177

County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 141901-AISI0000141901
Status: Inactive
Status Date: 2021-02-12 00:00:00
Program: Ind Stormwater
CTU Code: 239456
CTU Name: Duluth
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 2/12/2021
Tmsp Created: 8/21/2013
User Created: DELTA_M_R1
Tmsp Updt: 3/1/2021
Spatial ID: 66808604
Name: Rockwell Automation
Program List: IS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: G8
Method Desc: GPS - Other

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 141901
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 8B
Senate Dist: 8
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: ceidem

My Neighborhood Site Details

Active FLA: No
MPCA ID: Multiple IDs
Program Co: ST
Program Name: Stormwater
Address: MN
Addr ZIP: 55811
City: Duluth
County: St. Louis
Activity: Industrial Stormwater
Addr St: 4439 Venture Ave
Addr City: Duluth
MPCA ID List: MNRNE37S4; MNRNE38C4
Program 1: Stormwater
Name: Rockwell Automation
Watershed : St. Louis River
Coord Co 1: GPS - Other
Activity L: Industrial Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/141901

HUC 8: 04010201
Cong Distr: 8
Senate Dis: 8
House Dist: 8B
IC Flag: No
Coord Coll: G8
Latitude: 46.834919
Longitude: -92.17177

Agency Interests: File Request Details

Item ID: 141901-AISI0000141901
Status: Inactive
Status Date: 2/12/2021
Program: Ind Stormwater
CTU Code: 239456
CTU Name: Duluth
PLS Twsp:

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 141901
SI Cat Desc: Agency Interest
Description:
SI Designation:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	2/12/2021	**Ref Code:**	GEN
Tmsp Created:	8/21/2013	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	3/1/2021	**User Updt:**	ceidem
Spatial ID:	66808604		
Name:	Rockwell Automation		
Program List:	IS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	G8		
Method Desc:	GPS - Other		

10	4 of5	ESE	0.12 / 643.09	1,383.50 / 13	**Rockwell Automation Inc** **4435 Venture Ave** **Duluth MN 55811**	MPCA AI

Agency Interest ID:	125233
Name (Map):	Rockwell Automation Inc
Address (Map):	4435 Venture Ave
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8343871
Longitude (Map):	-92.1717288
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Rockwell Automation Inc
Address (Site):	4435 Venture Ave
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8343871
Longitude (Site):	-92.1717288
County (Site):	St. Louis
Name (Req):	Rockwell Automation Inc
Address (Req):	4435 Venture Ave
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8343871
Longitude (Req):	-92.1717288
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	125233-AISI0000125233	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Ind Stormwater	**SI ID:**	125233
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site

PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	4/7/2016	**TRDSQQ:**	
Tmsp Created:	9/20/2010	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	58595323	**User Updt:**	spatial_
Name:	Rockwell Automation Inc		
Program List:	IS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	MNRNE362D	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	8
Program Name:	Stormwater	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Duluth	**Latitude:**	46.8343871
County:	St. Louis	**Longitude:**	-92.1717288
Activity:	Industrial Stormwater		
Addr St:	4435 Venture Ave		
Addr City:	Duluth		
MPCA ID List:	MNRNE362D		
Program 1:	Stormwater		
Name:	Rockwell Automation Inc		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Industrial Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/125233		

Agency Interests: File Request Details

Item ID:	125233-AISI0000125233	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Ind Stormwater	**SI ID:**	125233
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	4/7/2016	**Ref Code:**	GEN
Tmsp Created:	9/20/2010	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	58595323		
Name:	Rockwell Automation Inc		
Program List:	IS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
10	5 of5	ESE	0.12 / 643.09	1,383.50 / 13	ROCKWELL AUTOMATION 4439 VENTURE AVE DULUTH MN 55811	RCRA VSQG

Handler ID: MNS000152421
Generator Status: VSG
Recycler Activity?: NO
Recycler Activity Note: This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note: NO RECORDS: As of Nov 2025, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer:	No	**Used Oil Transpor:**	No
Mixed Waste Gen:	No	**Used Oil Trans Fac:**	No
Transporter:	No	**Used Oil Processor:**	No
Transfer Facility:	No	**Used Oil Refiner:**	No
Recycler:	No	**Used Oil Burner:**	No
Onsite Burner Exem:	No	**Commercial TSD:**	No
Furnace Exemption:	No	**Recycl Nonstorage:**	No
Underground Injec:	No		

Used Oil Market Burner: No
Used Oil Spec Marketer: No

Additional Handler Summary Details

Source Type:	N	**NAIC 1:**	335314
Seq No:	1	**NAIC 2:**	
Non Notifier:		**NAIC 3:**	
Receive Date:	20100208	**NAIC 4:**	
Active Site:	H----	**State:**	MN
Land Type:	P	**Location Latitude:**	46.834444
In Handler Univ:	Y	**Location Longitude:**	-92.171754
In A Universe:	Y	**Loc GIS Primary:**	N
Gen Status:	VSG	**Loc GIS Origin:**	AG
Report Cycle:		**State District Owner:**	
Accessibility:		**State District:**	
Region:	05		

Fed Waste Gen Owner: HQ
State Waste Generator Owner: MN
State Waste Generator: 3
Short Term Generator: N
Uni Waste: N
Universal Waste Dest Facility: N
Federal Universal Waste: N
As Federally Regulated Tsdf: ------
As Converter Tsdf: ------
As State Regulated Tsdf: ------
As State Regulated Handler: ---
Federal Indicator: ---
Hsm: N
Subpart K: ----

GPRA Permit:	N
GPRA Renewal:	N
Permit Renewal Wrkld:	------
Permwrk ID:	------
Perm Prog:	------
Pcwrkld:	------
Closwrkld:	------
GPRA Ca:	N
Cawrkld:	N
Subjca Tsd Discretion:	N
NCAPS:	N
EC Indicator:	N
Ca725 Indicator:	N
Ca750 Indicator:	N
Operating Tsdf:	------
Full Enforcement:	------
Snc:	N
Unaddressed Snc:	N
Addressed Snc:	N
Snc With Comp Sched:	N
Fa Required:	-----
Hhandler Last Change:	20100308
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	EN
Handler Name:	ROCKWELL AUTOMATION
Location Street No:	
Location Street1:	4439 VENTURE AVE
Location Street2:	
Location City:	DULUTH
Location State:	MN
Location Zip:	55811
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	US
Contact Name:	NATE HOLDEN
Contact Street No:	
Contact Street1:	4439 VENTURE AVE
Contact Street2:	
Contact City:	DULUTH
Contact State:	MN
Contact Zip:	55811
Contact Country:	US
Contact Phone & Ext:	218-726-3011
Contact Fax:	
Contact Email Address:	
Contact Title:	
Owner Name:	ROCKWELL AUTOMATION
Owner Type:	P
Owner Seq:	1
Operator Name:	
Operator Type:	
Operator Seq:	
Public Notes:	

Hazardous Waste Handler Details

Seq No:	1
Receive Date:	20100208
Handler Name:	ROCKWELL AUTOMATION
Fed Waste Generator:	3
Generator Code Description:	Very Small Quantity Generator
Source Type:	Notification

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

TSD Activity: N

Owner/Operator Details

Owner/Operator Ind:	Current Owner	**Street No:**	
Type:	Private	**Street1:**	4439 VENTURE AVE
Name:	ROCKWELL AUTOMATION	**Street2:**	
Dt Became Current:	20100208	**City:**	DULUTH
Dt Ended Current:		**State:**	MN
Phone:	218-726-3011	**Country:**	US
Source Type:	Notification	**Zip:**	55811

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
11	1 of2	W	0.13 / 661.55	1,381.76 / 11	Duluth International Airport Usaf Duluth International Airport Duluth MN 55811	MPCA AI

Agency Interest ID:	37342
Name (Map):	Duluth International Airport Usaf
Address (Map):	Duluth International Airport
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83678176
Longitude (Map):	-92.17975633
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Duluth International Airport Usaf
Address (Site):	Duluth International Airport
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83678176
Longitude (Site):	-92.17975633
County (Site):	St. Louis
Name (Req):	Duluth International Airport Usaf
Address (Req):	Duluth International Airport
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83678176
Longitude (Req):	-92.17975633
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	37342-AISI0000037342	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	37342
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	3/30/2018	**TRDSQQ:**	
Tmsp Created:	8/9/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	3/30/2018	**Verified:**	No
Spatial ID:	46468	**User Updt:**	geo_nc

Name:	Duluth International Airport Usaf
Program List:	HW, PR, UT
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	G9
Method Desc:	GPS - Unknown

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	Multiple IDs	**Cong Distr:**	8
Program Co:	HW; SR; TL	**Senate Dis:**	8
Program Name:	Multiple Programs	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	G9
City:	Duluth	**Latitude:**	46.83678176
County:	St. Louis	**Longitude:**	-92.17975633

Activity:	Multiple Activities
Addr St:	Duluth International Airport
Addr City:	Duluth
MPCA ID List:	LS0004092; LS0006647; MN7570024284; TS0004990
Program 1:	Hazardous Waste; Investigation and Cleanup; Tanks
Name:	Duluth International Airport Usaf
Watershed :	St. Louis River
Coord Co 1:	GPS - Unknown
Activity L:	Hazardous Waste; Petroleum Remediation, Leak Site; Underground Tanks
Industrial:	Administration of Economic Programs
Site URL:	https://webapp.pca.state.mn.us/wimn/site/37342

Agency Interests: File Request Details

Item ID:	37342-AISI0000037342	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	37342
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	3/30/2018	**Ref Code:**	GEN
Tmsp Created:	8/9/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	3/30/2018	**User Updt:**	geo_nc
Spatial ID:	46468		

Name:	Duluth International Airport Usaf
Program List:	HW, PR, UT
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	G9
Method Desc:	GPS - Unknown

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
11	2 of2	W	0.13 / 661.55	1,381.76 / 11	Duluth International Airport Usaf Duluth International Airport Duluth MN 55811	UST

AI ID: 37342
Tank Type: Underground Storage Tank System
AI Name: Duluth International Airport Usaf
Address1: Duluth International Airport
Address2:
Address3:
City: Duluth
County: St. Louis
State: MN
Zip: 55811
Location Description:
Data Source: Minnesota Pollution Control Agency Tank Sites

AI Name (Map):
Address1 (Map):
Address2 (Map):
City (Map):
State (Map):
Zip (Map):
Owner: Hertz-Hk Enterprises Inc
Owner Address: 4701 Grinden Dr-Duluth Airport
Owner City: Duluth
Owner State: MN
Owner Zip: 55811

Tank Information

Tank Site ID: TS0004990
Tank ID: 37342-EQUI0000000001
Tank Status: Removed
Install Date: 10/31/1974
Status Change Date: 6/1/2011
Primary NAICS:
Primary SIC: 96 - Administration of Economic Programs
Subject Item Description: 8,000 gal/Gasoline/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0004990
Coord Collect Meth Desc: GPS - Unknown
On Tribal Land: N

Latitude: 46.83678176
Longitude: -92.17975633
Contractor of Tank:
Tribal Land:

Compartment Information

Compartment ID: 37342-EQUI0000000001-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Fiberglass
Subject Item Designation: 1
Overfill Prevention System: UST Automatic shutoff

Programs: UT
Capacity (gal): 8000
Cathodic Prot Sys: Not needed
Special Use Desc: None

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: SIR, SSP
Pipe Material: Fiberglass
Pipe Corrosion Protection: Not needed

Stored Product: Gasoline
Tank Leak Detection: UST Statistical inventory reconciliation
Vapor Recovery Flag: No

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
12	1 of2	ESE	0.15 / 800.10	1,384.03 / 13	Christie Printing Co 4433 Venture Ave Duluth MN 55811	MPCA AI

Agency Interest ID: 29282
Name (Map): Christie Printing Co
Address (Map): 4433 Venture Ave
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.8342726
Longitude (Map): -92.1717287
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Christie Printing Co
Address (Site): 4433 Venture Ave
City (Site): Duluth

State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8342726
Longitude (Site):	-92.1717287
County (Site):	St. Louis
Name (Req):	Christie Printing Co
Address (Req):	4433 Venture Ave
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8342726
Longitude (Req):	-92.1717287
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	29282-AISI0000029282	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2014-05-31 00:00:00	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	29282
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	4/7/2016	**TRDSQQ:**	
Tmsp Created:	7/26/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	20158	**User Updt:**	spatial_
Name:	Christie Printing Co		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	MNR000014894	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	8
Program Name:	Hazardous Waste	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Duluth	**Latitude:**	46.8342726
County:	St. Louis	**Longitude:**	-92.1717287
Activity:	Hazardous Waste		
Addr St:	4433 Venture Ave		
Addr City:	Duluth		
MPCA ID List:	MNR000014894		
Program 1:	Hazardous Waste		
Name:	Christie Printing Co		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Hazardous Waste		

Industrial: Commercial Printing (except Screen and Books)
Site URL: https://webapp.pca.state.mn.us/wimn/site/29282

Agency Interests: File Request Details

Item ID:	29282-AISI0000029282	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	5/31/2014	***SI Cat:***	AISI
Program:	Hazardous Waste	***SI ID:***	29282
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	8B
Section:		***Senate Dist:***	8
Quarters:		***TRDSQQ:***	
Collection Date:	4/7/2016	***Ref Code:***	GEN
Tmsp Created:	7/26/1999	***Ref Desc:***	General Location
User Created:	DELTA_M_R1	***Verified:***	No
Tmsp Updt:	4/26/2016	***User Updt:***	spatial_
Spatial ID:	20158		

Name: Christie Printing Co
Program List: HW
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

12	***2 of2***	***ESE***	***0.15 / 800.10***	***1,384.03 / 13***	***CHRISTIE PRINTING CO 4433 VENTURE AVE DULUTH MN 55811***	***RCRA VSQG***

Handler ID: MNR000014894
Generator Status: VSG
Recycler Activity?: NO
Recycler Activity Note: This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note: VIOLATION or UNDETERMINED: There are VIOLATION or UNDETERMINED details or records associated with this facility (EPA ID) in the Compliance Monitoring and Enforcement table dated Nov 2025.

Violation Details

Viol Type:	262.A	***Actual Rtc Date:***	20090602
Citation:		***Found Violation:***	Yes
Determined Date:	20070309	***Rtc Qualifier:***	Documented
Scheduled Compliance Date:			

Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - General

Enforcement Details

Enf Type: 122
Enf Type Desc: Notice of Violation (NOV)

Enf Action Date: 20090316
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Evaluation Details

Eval Start Date: 20070309
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc: Generators - General
Actual Rtc Date: 20090602
Eval Agency: State

Handler Summary

Importer:	No	***Used Oil Transpor:***	No
Mixed Waste Gen:	No	***Used Oil Trans Fac:***	No
Transporter:	No	***Used Oil Processor:***	No
Transfer Facility:	No	***Used Oil Refiner:***	No
Recycler:	No	***Used Oil Burner:***	No
Onsite Burner Exem:	No	***Commercial TSD:***	No
Furnace Exemption:	No	***Recycl Nonstorage:***	No
Underground Injec:	No		

Used Oil Market Burner: No
Used Oil Spec Marketer: No

Additional Handler Summary Details

Source Type:	N	***NAIC 1:***	323114
Seq No:	1	***NAIC 2:***	323114
Non Notifier:		***NAIC 3:***	323114
Receive Date:	20080115	***NAIC 4:***	323114
Active Site:	H----	***State:***	MN
Land Type:	P	***Location Latitude:***	46.834273
In Handler Univ:	Y	***Location Longitude:***	-92.171729
In A Universe:	Y	***Loc GIS Primary:***	N
Gen Status:	VSG	***Loc GIS Origin:***	UC
Report Cycle:		***State District Owner:***	
Accessibility:		***State District:***	
Region:	05		

Fed Waste Gen Owner: HQ
State Waste Generator Owner: MN
State Waste Generator: 3
Short Term Generator: N
Uni Waste: N
Universal Waste Dest Facility: N
Federal Universal Waste: N
As Federally Regulated Tsdf: ------
As Converter Tsdf: ------
As State Regulated Tsdf: ------
As State Regulated Handler: ---
Federal Indicator: ---
Hsm: N
Subpart K: ----
GPRA Permit: N
GPRA Renewal: N
Permit Renewal Wrkld: ------
Permwrk ID: ------
Perm Prog: ------
Pcwrkld: ------
Closwrkld: ------
GPRA Ca: N

CawrkId:	N
Subjca Tsd Discretion:	N
NCAPS:	N
EC Indicator:	N
Ca725 Indicator:	N
Ca750 Indicator:	N
Operating Tsdf:	------
Full Enforcement:	------
Snc:	N
Unaddressed Snc:	N
Addressed Snc:	N
Snc With Comp Sched:	N
Fa Required:	-----
Hhandler Last Change:	20100217
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	EN
Handler Name:	CHRISTIE PRINTING CO
Location Street No:	
Location Street1:	4433 VENTURE AVE
Location Street2:	
Location City:	DULUTH
Location State:	MN
Location Zip:	55811
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	US
Contact Name:	PAIGE MELLINGER
Contact Street No:	
Contact Street1:	4433 VENTURE AVE
Contact Street2:	
Contact City:	DULUTH
Contact State:	MN
Contact Zip:	55811
Contact Country:	US
Contact Phone & Ext:	218-722-2220
Contact Fax:	
Contact Email Address:	
Contact Title:	
Owner Name:	
Owner Type:	
Owner Seq:	
Operator Name:	CHRISTIE PRINTING CO
Operator Type:	P
Operator Seq:	1
Public Notes:	

Hazardous Waste Handler Details

Seq No:	1
Receive Date:	20080115
Handler Name:	CHRISTIE PRINTING CO
Fed Waste Generator:	3
Generator Code Description:	Very Small Quantity Generator
Source Type:	Notification
TSD Activity:	N

Waste Code Details

Waste Code:	D001
Waste Code Desc:	IGNITABLE WASTE

Waste Code: D018
Waste Code Desc: BENZENE

Waste Code: D039
Waste Code Desc: TETRACHLOROETHYLENE

Owner/Operator Details

Owner/Operator Ind: Current Operator
Type: Private
Name: CHRISTIE PRINTING CO
Dt Became Current: 19990726
Dt Ended Current:
Phone: 218-722-2220
Source Type: Notification
Street No:
Street1: 4433 VENTURE AVE
Street2:
City: DULUTH
State: MN
Country: US
Zip: 55811

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13 | ***1 of4*** | ***NNE*** | ***0.15 / 801.97*** | ***1,385.09 / 14*** | ***Case Power & Equipment 6501 Haines Rd Duluth MN 55811*** | ***MPCA AI***

Agency Interest ID: 103481
Name (Map): Case Power & Equipment
Address (Map): 6501 Haines Rd
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83837374
Longitude (Map): -92.21965346
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Case Power & Equipment
Address (Site): 6501 Haines Rd
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.83837374
Longitude (Site): -92.21965346
County (Site): St. Louis
Name (Req): Case Power & Equipment
Address (Req): 6501 Haines Rd
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.83837374
Longitude (Req): -92.21965346
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 103481-AISI0000103481
Status: Inactive
Status Date: 2006-03-24 12:20:51
Program: Underground Tanks
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 6/30/2016
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 103481
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:

Tmsp Created:	3/24/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	51067106	**User Updt:**	geo_nc
Name:	Case Power & Equipment		
Program List:	UT		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	TS0005131	**Cong Distr:**	8
Program Co:	TL	**Senate Dis:**	3
Program Name:	Tanks	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	Q2
City:	Hermantown	**Latitude:**	46.83837374
County:	St. Louis	**Longitude:**	-92.21965346
Activity:	Underground Tanks		
Addr St:	6501 Haines Rd		
Addr City:	Duluth		
MPCA ID List:	TS0005131		
Program 1:	Tanks		
Name:	Case Power & Equipment		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Underground Tanks		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/103481		

Agency Interests: File Request Details

Item ID:	103481-AISI0000103481	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	3/24/2006	**SI Cat:**	AISI
Program:	Underground Tanks	**SI ID:**	103481
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	6/30/2016	**Ref Code:**	GEN
Tmsp Created:	3/24/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	6/30/2016	**User Updt:**	geo_nc
Spatial ID:	51067106		
Name:	Case Power & Equipment		
Program List:	UT		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
Method Code:		Q2				
Method Desc:		Public Land Survey-Two Quarter				
13	2 of4	NNE	0.15 / 801.97	1,385.09 / 14	Airport Autos 5729 Haines Rd Duluth MN 55811	MPCA AI

Agency Interest ID:	26581
Name (Map):	Airport Autos
Address (Map):	5729 Haines Rd
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.84924589
Longitude (Map):	-92.23551093
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Airport Autos
Address (Site):	5729 Haines Rd
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.84924589
Longitude (Site):	-92.23551093
County (Site):	St. Louis
Name (Req):	Airport Autos
Address (Req):	5729 Haines Rd
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.84924589
Longitude (Req):	-92.23551093
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	26581-AISI0000026581	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	1999-07-27 18:24:16	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	26581
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	6/30/2016	**TRDSQQ:**	
Tmsp Created:	7/26/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	6/30/2016	**Verified:**	No
Spatial ID:	20493	**User Updt:**	geo_nc

Name:	Airport Autos
Program List:	HW
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020114
HUC 12:	040102011401
HUC 12 Name:	Upper Midway River
DWSMA Code:	
DWSMA Name:	
Method Code:	Q2

Method Desc: Public Land Survey-Two Quarter

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	MND982619066	***Cong Distr:***	8
Program Co:	HW	***Senate Dis:***	3
Program Name:	Hazardous Waste	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	Q2
City:	Hermantown	***Latitude:***	46.84924589
County:	St. Louis	***Longitude:***	-92.23551093

Activity: Hazardous Waste
Addr St: 5729 Haines Rd
Addr City: Duluth
MPCA ID List: MND982619066
Program 1: Hazardous Waste
Name: Airport Autos
Watershed : St. Louis River
Coord Co 1: Public Land Survey-Two Quarter
Activity L: Hazardous Waste
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/26581

Agency Interests: File Request Details

Item ID:	26581-AISI0000026581	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	7/27/1999	***SI Cat:***	AISI
Program:	Hazardous Waste	***SI ID:***	26581
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B
Section:		***Senate Dist:***	3
Quarters:		***TRDSQQ:***	
Collection Date:	6/30/2016	***Ref Code:***	GEN
Tmsp Created:	7/26/1999	***Ref Desc:***	General Location
User Created:	DELTA_M_R1	***Verified:***	No
Tmsp Updt:	6/30/2016	***User Updt:***	geo_nc
Spatial ID:	20493		

Name: Airport Autos
Program List: HW
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020114
HUC 10 Name: Midway River
HUC 12: 40102011401
HUC 12 Name: Upper Midway River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: Q2
Method Desc: Public Land Survey-Two Quarter

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
13	*3 of4*	*NNE*	*0.15 / 801.97*	*1,385.09 / 14*	*AIRPORT AUTOS 5729 HAINES RD DULUTH MN 55811*	*RCRA NON GEN*

Handler ID: MND982619066
Generator Status: N
Recycler Activity?: NO
Recycler Activity Note: This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note: NO RECORDS: As of Nov 2025, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer:	No	***Used Oil Transpor:***	No
Mixed Waste Gen:	No	***Used Oil Trans Fac:***	No
Transporter:	No	***Used Oil Processor:***	No
Transfer Facility:	No	***Used Oil Refiner:***	No
Recycler:	No	***Used Oil Burner:***	No
Onsite Burner Exem:	No	***Commercial TSD:***	No
Furnace Exemption:	No	***Recycl Nonstorage:***	No
Underground Injec:	No		
Used Oil Market Burner:	No		
Used Oil Spec Marketer:	No		

Additional Handler Summary Details

Source Type:	N	***NAIC 1:***	
Seq No:	1	***NAIC 2:***	
Non Notifier:		***NAIC 3:***	
Receive Date:	19890124	***NAIC 4:***	
Active Site:	-----	***State:***	MN
Land Type:	P	***Location Latitude:***	46.817191
In Handler Univ:	N	***Location Longitude:***	-92.201954
In A Universe:	N	***Loc GIS Primary:***	N
Gen Status:	N	***Loc GIS Origin:***	UC
Report Cycle:		***State District Owner:***	
Accessibility:		***State District:***	
Region:	05		
Fed Waste Gen Owner:	HQ		
State Waste Generator Owner:	MN		
State Waste Generator:	N		
Short Term Generator:	N		
Uni Waste:	N		
Universal Waste Dest Facility:	N		
Federal Universal Waste:	N		
As Federally Regulated Tsdf:	------		
As Converter Tsdf:	------		
As State Regulated Tsdf:	------		
As State Regulated Handler:	---		
Federal Indicator:	---		
Hsm:	N		
Subpart K:	----		
GPRA Permit:	N		
GPRA Renewal:	N		
Permit Renewal Wrkld:	------		
Permwrk ID:	------		
Perm Prog:	------		
Pcwrkld:	------		
Closwrkld:	------		
GPRA Ca:	N		
Cawrkld:	N		
Subjca Tsd Discretion:	N		
NCAPS:	N		
EC Indicator:	N		
Ca725 Indicator:	N		
Ca750 Indicator:	N		
Operating Tsdf:	------		
Full Enforcement:	------		
Snc:	N		
Unaddressed Snc:	N		
Addressed Snc:	N		
Snc With Comp Sched:	N		

Fa Required:	-----
Hhandler Last Change:	20070620
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	EN
Handler Name:	AIRPORT AUTOS
Location Street No:	
Location Street1:	5729 HAINES RD
Location Street2:	
Location City:	DULUTH
Location State:	MN
Location Zip:	55811
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	US
Contact Name:	DON CHESNEY
Contact Street No:	
Contact Street1:	5729 HAINES RD
Contact Street2:	
Contact City:	DULUTH
Contact State:	MN
Contact Zip:	55811
Contact Country:	US
Contact Phone & Ext:	218-727-2277
Contact Fax:	
Contact Email Address:	
Contact Title:	
Owner Name:	AIRPORT AUTOS
Owner Type:	P
Owner Seq:	1
Operator Name:	NAME NOT REPORTED
Operator Type:	P
Operator Seq:	2
Public Notes:	

Hazardous Waste Handler Details

Seq No:	1
Receive Date:	19890124
Handler Name:	AIRPORT AUTOS
Fed Waste Generator:	N
Generator Code Description:	Not a Generator, Verified
Source Type:	Notification
TSD Activity:	N

Waste Code Details

Waste Code:	D000
Waste Code Desc:	DESCRIPTION
Waste Code:	D001
Waste Code Desc:	IGNITABLE WASTE

Owner/Operator Details

Owner/Operator Ind:	Current Owner	***Street No:***	
Type:	Private	***Street1:***	5729 HAINES RD
Name:	AIRPORT AUTOS	***Street2:***	
Dt Became Current:	19990726	***City:***	DULUTH
Dt Ended Current:	19990514	***State:***	MN
Phone:	218-727-2277	***Country:***	US

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Source Type:	Notification	**Zip:**	55811
Owner/Operator Ind:	Current Operator	**Street No:**	
Type:	Private	**Street1:**	ADDRESS NOT REPORTED
Name:	NAME NOT REPORTED	**Street2:**	
Dt Became Current:		**City:**	CITY NOT REPORTED
Dt Ended Current:		**State:**	AK
Phone:	312-555-1212	**Country:**	
Source Type:	Notification	**Zip:**	99998

13	4 of4	NNE	0.15 / 801.97	1,385.09 / 14	**Case Power & Equipment** **6501 Haines Rd** **Duluth MN 55811**	UST

AI ID:	103481	**AI Name (Map):**	
Tank Type:	Underground Storage Tank System	**Address1 (Map):**	
AI Name:	Case Power & Equipment	**Address2 (Map):**	
Address1:	6501 Haines Rd	**City (Map):**	
Address2:		**State (Map):**	
Address3:		**Zip (Map):**	
City:	Duluth	**Owner:**	J I Case Co
County:	St. Louis	**Owner Address:**	700 State St
State:	MN	**Owner City:**	Racine
Zip:	55811	**Owner State:**	WI
Location Description:		**Owner Zip:**	53404
Data Source:	Minnesota Pollution Control Agency Tank Sites		

Tank Information

Tank Site ID:	TS0005131	**Latitude:**	46.84924589
Tank ID:	103481-EQUI0000000002	**Longitude:**	-92.23551093
Tank Status:	Removed	**Contractor of Tank:**	
Install Date:	1/1/1900	**Tribal Land:**	
Status Change Date:	1/1/1900		
Primary NAICS:			
Primary SIC:			
Subject Item Description:	2,000 gal/Fuel Oil/Removed		
Tanks Url:	https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0005131		
Coord Collect Meth Desc:	Public Land Survey-Two Quarter		
On Tribal Land:	N		

Compartment Information

Compartment ID:	103481-EQUI0000000002-1	**Programs:**	UT
Compartment No:	1	**Capacity (gal):**	2000
Tank Wall Type:	Single	**Cathodic Prot Sys:**	Not needed
Tank Material:	Bare/Paint/Asph Coat Steel	**Special Use Desc:**	Heating
Subject Item Designation:	1		
Overfill Prevention System:	UST Not needed		

Pipe Information

Pipe Wall Type:	Single	**Stored Product:**	Fuel Oil
Pipe Leak Detection:	SSP	**Tank Leak Detection:**	UST Not needed
Pipe Material:	Galvanized steel	**Vapor Recovery Flag:**	No
Pipe Corrosion Protection:	None		

Tank Information

Tank Site ID:	TS0005131	**Latitude:**	46.84924589
Tank ID:	103481-EQUI0000000001	**Longitude:**	-92.23551093
Tank Status:	Removed	**Contractor of Tank:**	
Install Date:	8/1/1984	**Tribal Land:**	

Status Change Date: 8/1/1984
Primary NAICS:
Primary SIC:
Subject Item Description: 1,000 gal/Used or waste oil/Removed
Tanks Url: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0005131
Coord Collect Meth Desc: Public Land Survey-Two Quarter
On Tribal Land: N

Compartment Information

Compartment ID: 103481-EQUI0000000001-1
Compartment No: 1
Tank Wall Type: Single
Tank Material: Bare/Paint/Asph Coat Steel
Subject Item Designation: 2
Overfill Prevention System: UST Not needed
Programs: UT
Capacity (gal): 1000
Cathodic Prot Sys: Not needed
Special Use Desc: None

Pipe Information

Pipe Wall Type: Single
Pipe Leak Detection: SSP
Pipe Material: Galvanized steel
Pipe Corrosion Protection: None
Stored Product: Used or waste oil
Tank Leak Detection: UST Not needed
Vapor Recovery Flag: No

14	1 of1	WNW	0.16 / 846.34	1,405.65 / 35	Duluth Air National Guard Base Duluth MN	PFAS SSEHRI

Site Name: Duluth Air National Guard Base
Location: Duluth, Saint Louis County, Minnesota
State: Minnesota
Latitude: 46.8383667
Longitude: -92.1800442
Date Sampled: 2018
Sample Matrix: Groundwater
Industry: Military
Max PFOA (ppt): 600
Max PFOS (ppt): 8700
Max PFOA/PFOS from One Spl: 9300
Max Total PFAS from One Spl: 15652
Regulation And Gvtl Re: https://www.health.state.mn.us/communities/environment/hazardous/topics/sites.html#AFFFuse
PFAS Level Ppt Highest Value: 15652
Other Site Name(s): Duluth International Airport, Lake Superior College
PFAS Testing Results Link: https://webapp.pca.state.mn.us/cleanup/search/superfund?siteId=1163-AREA0000000005
Suspected Source Link: https://ar.afcec-cloud.af.mil/Search.aspx
Federal State Local Online Res: https://www.health.state.mn.us/communities/environment/hazardous/topics/pfcs.html
Link to General Ref Form: https://drive.google.com/drive/u/1/folders/1JHapkdyZrRziZCfTAWAX-nxDpQ_WEWlp?ths=true
Link to Site Specific Ref: https://drive.google.com/drive/u/1/folders/1KD1eFNbh-sQqWpEONSBrxpNjW152gLLy
Notes and Additional Info: Firefighting foam used at Duluth International Airport/Air National Gaurd Base

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15	1 of2	SE	0.18 / 970.41	1,372.85 / 2	Fastenal 4425 Venture Ave Duluth MN 55811	MPCA AI

Agency Interest ID: 258291
Name (Map): Fastenal
Address (Map): 4425 Venture Ave
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.834643
Longitude (Map): -92.172588
County (Map): St. Louis
County Code (Map): 137

Loc Desc (Map):	
Name (Site):	Fastenal
Address (Site):	4425 Venture Ave
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811-5705
Latitude (Site):	46.834643
Longitude (Site):	-92.172588
County (Site):	St. Louis
Name (Req):	Fastenal
Address (Req):	4425 Venture Ave
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.834643
Longitude (Req):	-92.172588
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	258291-AISI0000258291	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	258291
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	2/7/2024	**TRDSQQ:**	
Tmsp Created:	2/7/2024	**Ref Code:**	GEN
User Created:	smotton	**Ref Desc:**	General Location
Tmsp Updt:	2/9/2024	**Verified:**	No
Spatial ID:		**User Updt:**	smotton

Name:	Fastenal
Program List:	HW
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	DP
Method Desc:	Digitized - MPCA online map

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	MNS000354792	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	8
Program Name:	Hazardous Waste	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-5705	**Coord Coll:**	DP
City:	Duluth	**Latitude:**	46.834643
County:	St. Louis	**Longitude:**	-92.172588

Activity:	Hazardous Waste, Very small quantity generator
Addr St:	4425 Venture Ave
Addr City:	Duluth
MPCA ID List:	MNS000354792
Program 1:	Hazardous Waste

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Name: Fastenal
Watershed : St. Louis River
Coord Co 1: Digitized - MPCA online map
Activity L: Hazardous Waste, Very small quantity generator
Industrial: Aircraft Manufacturing ; Aircraft Engine and Engine Parts Manufacturing ; Other Aircraft Parts and Auxiliary Equipment Manufacturing
Site URL: https://webapp.pca.state.mn.us/wimn/site/258291

Agency Interests: File Request Details

Item ID:	258291-AISI0000258291	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	258291
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	2/7/2024	**Ref Code:**	GEN
Tmsp Created:	2/7/2024	**Ref Desc:**	General Location
User Created:	smotton	**Verified:**	No
Tmsp Updt:	2/9/2024	**User Updt:**	smotton

Spatial ID:
Name: Fastenal
Program List: HW
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: DP
Method Desc: Digitized - MPCA online map

15	2 of2	SE	0.18 / 970.41	1,372.85 / 2	**FASTENAL** **4425 VENTURE AVE** **DULUTH MN 55811-5705**	RCRA VSQG

Handler ID: MNS000354792
Generator Status: VSG
Recycler Activity?: NO
Recycler Activity Note: This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note: NO RECORDS: As of Nov 2025, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer:	No	**Used Oil Transpor:**	No
Mixed Waste Gen:	No	**Used Oil Trans Fac:**	No
Transporter:	No	**Used Oil Processor:**	No
Transfer Facility:	No	**Used Oil Refiner:**	No
Recycler:	No	**Used Oil Burner:**	No
Onsite Burner Exem:	No	**Commercial TSD:**	No
Furnace Exemption:	No	**Recycl Nonstorage:**	No
Underground Injec:	No		

Used Oil Market Burner: No
Used Oil Spec Marketer: No

Additional Handler Summary Details

Source Type: I
Seq No: 59
Non Notifier:
Receive Date: 20250113
Active Site: H----
Land Type:
In Handler Univ: Y
In A Universe: Y
Gen Status: VSG
Report Cycle:
Accessibility:
Region: 05
Fed Waste Gen Owner: HQ
State Waste Generator Owner: MN
State Waste Generator: 5
Short Term Generator: N
Uni Waste: N
Universal Waste Dest Facility: N
Federal Universal Waste: N
As Federally Regulated Tsdf: ------
As Converter Tsdf: ------
As State Regulated Tsdf: ------
As State Regulated Handler: ---
Federal Indicator: ---
Hsm: N
Subpart K: ----
GPRA Permit: N
GPRA Renewal: N
Permit Renewal Wrkld: ------
Permwrk ID: ------
Perm Prog: ------
Pcwrkld: ------
Closwrkld: ------
GPRA Ca: N
Cawrkld: N
Subjca Tsd Discretion: N
NCAPS: N
EC Indicator: N
Ca725 Indicator: N
Ca750 Indicator: N
Operating Tsdf: ------
Full Enforcement: ------
Snc: N
Unaddressed Snc: N
Addressed Snc: N
Snc With Comp Sched: N
Fa Required: -----
Hhandler Last Change: 20250117
Recognized Trader Importer: N
Recognized Trader Exporter: N
Slab Importer: N
Slab Exporter: N
Manifest Broker: N
Subpart P: N
Contact Language: EN
Handler Name: FASTENAL
Location Street No:
Location Street1: 4425 VENTURE AVE
Location Street2:
Location City: DULUTH
Location State: MN
Location Zip: 55811-5705
Location County Code: MN137

NAIC 1:
NAIC 2:
NAIC 3:
NAIC 4:
State: MN
Location Latitude: 46.834336
Location Longitude: -92.172397
Loc GIS Primary: N
Loc GIS Origin: AG
State District Owner:
State District:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Location County Name: ST LOUIS
Location Country:
Contact Name: SARAH SOLOMON
Contact Street No:
Contact Street1: 4425 VENTURE AVE
Contact Street2:
Contact City: DULUTH
Contact State: MN
Contact Zip: 55811
Contact Country:
Contact Phone & Ext: 218-464-0756
Contact Fax:
Contact Email Address: SASOLOMO@FASTENAL.COM
Contact Title: MANAGER
Owner Name:
Owner Type:
Owner Seq:
Operator Name:
Operator Type:
Operator Seq:
Public Notes:

Sequence Number 59 is associated with a batch data load by MPCA on 1/17/2051

Hazardous Waste Handler Details

Seq No: 54
Receive Date: 20240207
Handler Name: FASTENAL
Fed Waste Generator: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Implementer
TSD Activity: N

Hazardous Waste Handler Details

Seq No: 59
Receive Date: 20250113
Handler Name: FASTENAL
Fed Waste Generator: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Implementer
TSD Activity: N

Historical Handler Details

Receive Dt: 20240207
Generator Code Description: Very Small Quantity Generator
Handler Name: FASTENAL

16	1 of7	SE	0.18 / 976.34	1,363.05 / -8	Don Leslie Supply Inc 4436 Haines Rd Duluth MN 55811	MPCA AI

Agency Interest ID: 25043
Name (Map): Don Leslie Supply Inc
Address (Map): 4436 Haines Rd
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83351899
Longitude (Map): -92.17475124
County (Map): St. Louis
County Code (Map): 137

Loc Desc (Map):	
Name (Site):	Don Leslie Supply Inc
Address (Site):	4436 Haines Rd
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811-1524
Latitude (Site):	46.83351899
Longitude (Site):	-92.17475124
County (Site):	St. Louis
Name (Req):	Don Leslie Supply Inc
Address (Req):	4436 Haines Rd
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83351899
Longitude (Req):	-92.17475124
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	25043-AISI0000025043	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	1999-07-27 18:24:16	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	25043
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	9/28/2015	**TRDSQQ:**	
Tmsp Created:	7/26/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	19887	**User Updt:**	spatial_
Name:	Don Leslie Supply Inc		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	MND985716299	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	8
Program Name:	Hazardous Waste	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-1524	**Coord Coll:**	A1
City:	Duluth	**Latitude:**	46.83351899
County:	St. Louis	**Longitude:**	-92.17475124
Activity:	Hazardous Waste		
Addr St:	4436 Haines Rd		
Addr City:	Duluth		
MPCA ID List:	MND985716299		
Program 1:	Hazardous Waste		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Name: Don Leslie Supply Inc
Watershed : St. Louis River
Coord Co 1: Address Matching House Number
Activity L: Hazardous Waste
Industrial: Miscellaneous Repair Services
Site URL: https://webapp.pca.state.mn.us/wimn/site/25043

Agency Interests: File Request Details

Item ID:	25043-AISI0000025043	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	7/27/1999	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	25043
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	9/28/2015	**Ref Code:**	GEN
Tmsp Created:	7/26/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	19887		

Name: Don Leslie Supply Inc
Program List: HW
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

16	2 of7	SE	0.18 / 976.34	1,363.05 / -8	**Swanson & Youngdale Inc - Haines Rd** **4426 Haines Rd** **Duluth MN 55811**	MPCA AI

Agency Interest ID: 27286
Name (Map): Swanson & Youngdale Inc - Haines Rd
Address (Map): 4426 Haines Rd
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.8332345
Longitude (Map): -92.1744508
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Swanson & Youngdale Inc - Haines Rd
Address (Site): 4426 Haines Rd
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.8332345
Longitude (Site): -92.1744508
County (Site): St. Louis
Name (Req): Swanson & Youngdale Inc - Haines Rd
Address (Req): 4426 Haines Rd
City (Req): Duluth
State (Req): MN

ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8332345
Longitude (Req):	-92.1744508
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	27286-AISI0000027286	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2006-05-02 00:00:00	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	27286
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	9/28/2015	**TRDSQQ:**	
Tmsp Created:	7/26/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	18237	**User Updt:**	spatial_
Name:	Swanson & Youngdale Inc - Haines Rd		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	MNR000052886	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	8
Program Name:	Hazardous Waste	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Duluth	**Latitude:**	46.8332345
County:	St. Louis	**Longitude:**	-92.1744508
Activity:	Hazardous Waste		
Addr St:	4426 Haines Rd		
Addr City:	Duluth		
MPCA ID List:	MNR000052886		
Program 1:	Hazardous Waste		
Name:	Swanson & Youngdale Inc - Haines Rd		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Hazardous Waste		
Industrial:	Painting and Wall Covering Contractors		
Site URL:	https://webapp.pca.state.mn.us/wimn/site/27286		

Agency Interests: File Request Details

Item ID:	27286-AISI0000027286	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	5/2/2006	**SI Cat:**	AISI

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program:	Hazardous Waste	**SI ID:**	27286
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	9/28/2015	**Ref Code:**	GEN
Tmsp Created:	7/26/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	18237		
Name:	Swanson & Youngdale Inc - Haines Rd		
Program List:	HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

16	***3 of7***	***SE***	***0.18 / 976.34***	***1,363.05 / -8***	***Diagnostic Medical Systems 4438 Haines Rd Duluth MN 55811***	***MPCA AI***

Agency Interest ID:	30172
Name (Map):	Diagnostic Medical Systems
Address (Map):	4438 Haines Rd
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8336365
Longitude (Map):	-92.1744553
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Diagnostic Medical Systems
Address (Site):	4438 Haines Rd
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8336365
Longitude (Site):	-92.1744553
County (Site):	St. Louis
Name (Req):	Diagnostic Medical Systems
Address (Req):	4438 Haines Rd
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8336365
Longitude (Req):	-92.1744553
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	30172-AISI0000030172	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON

Status Date:	1999-07-27 18:24:16	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	30172
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	4/7/2016	**TRDSQQ:**	
Tmsp Created:	7/26/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	19869	**User Updt:**	spatial_

Name: Diagnostic Medical Systems
Program List: HW
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	702628280	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	8
Program Name:	Hazardous Waste	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Duluth	**Latitude:**	46.8336365
County:	St. Louis	**Longitude:**	-92.1744553

Activity: Hazardous Waste
Addr St: 4438 Haines Rd
Addr City: Duluth
MPCA ID List: 702628280
Program 1: Hazardous Waste
Name: Diagnostic Medical Systems
Watershed : St. Louis River
Coord Co 1: Address Matching House Number
Activity L: Hazardous Waste
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/30172

Agency Interests: File Request Details

Item ID:	30172-AISI0000030172	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	7/27/1999	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	30172
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	4/7/2016	**Ref Code:**	GEN
Tmsp Created:	7/26/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	19869		

Name: Diagnostic Medical Systems

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program List:	HW
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	A1
Method Desc:	Address Matching House Number

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
16	4 of7	SE	0.18 / 976.34	1,363.05 / -8	Cutler-Hammer 4440 Haines Rd Duluth MN 55811	MPCA AI

Agency Interest ID:	56851
Name (Map):	Cutler-Hammer
Address (Map):	4440 Haines Rd
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8336582
Longitude (Map):	-92.174843
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	CSLL: Site along road used for address match *** Note:many records provided by the department have a truncated LOC_DESC field.
Name (Site):	Cutler-Hammer
Address (Site):	4440 Haines Rd
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8336582
Longitude (Site):	-92.174843
County (Site):	St. Louis
Name (Req):	Cutler-Hammer
Address (Req):	4440 Haines Rd
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	CSLL: Site along road used for address match
Latitude (Req):	46.8336582
Longitude (Req):	-92.174843
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	56851-AISI0000056851	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2011-09-30 00:00:00	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	56851
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	7/17/2000	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No

Spatial ID:	53520	**User Updt:**	spatial_
Name:	Cutler-Hammer		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	MNR000080143	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	3
Program Name:	Hazardous Waste	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Hermantown	**Latitude:**	46.8336582
County:	St. Louis	**Longitude:**	-92.174843
Activity:	Hazardous Waste		
Addr St:	4440 Haines Rd		
Addr City:	Duluth		
MPCA ID List:	MNR000080143		
Program 1:	Hazardous Waste		
Name:	Cutler-Hammer		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Hazardous Waste		
Industrial:	Engineering Services		
Site URL:	https://webapp.pca.state.mn.us/wimn/site/56851		

Agency Interests: File Request Details

Item ID:	56851-AISI0000056851	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	9/30/2011	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	56851
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	7/17/2000	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	53520		
Name:	Cutler-Hammer		
Program List:	HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
16	5 of7	SE	0.18 / 976.34	1,363.05 / -8	CUTLER-HAMMER 4440 HAINES RD DULUTH MN 55811	RCRA NON GEN

Handler ID: MNR000080143
Generator Status: N
Recycler Activity?: NO
Recycler Activity Note: This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note: NO RECORDS: As of Nov 2025, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer:	No	**Used Oil Transpor:**	No
Mixed Waste Gen:	No	**Used Oil Trans Fac:**	No
Transporter:	No	**Used Oil Processor:**	No
Transfer Facility:	No	**Used Oil Refiner:**	No
Recycler:	No	**Used Oil Burner:**	No
Onsite Burner Exem:	No	**Commercial TSD:**	No
Furnace Exemption:	No	**Recycl Nonstorage:**	No
Underground Injec:	No		

Used Oil Market Burner: No
Used Oil Spec Marketer: No

Additional Handler Summary Details

Source Type:	N	**NAIC 1:**	54133
Seq No:	1	**NAIC 2:**	54133
Non Notifier:		**NAIC 3:**	
Receive Date:	20020510	**NAIC 4:**	
Active Site:	-----	**State:**	MN
Land Type:	P	**Location Latitude:**	46.833658
In Handler Univ:	N	**Location Longitude:**	-92.174843
In A Universe:	N	**Loc GIS Primary:**	N
Gen Status:	N	**Loc GIS Origin:**	UC
Report Cycle:		**State District Owner:**	
Accessibility:		**State District:**	
Region:	05		

Fed Waste Gen Owner: HQ
State Waste Generator Owner: MN
State Waste Generator: N
Short Term Generator: N
Uni Waste: N
Universal Waste Dest Facility: N
Federal Universal Waste: N
As Federally Regulated Tsdf: ------
As Converter Tsdf: ------
As State Regulated Tsdf: ------
As State Regulated Handler: ---
Federal Indicator: ---
Hsm: N
Subpart K: ----
GPRA Permit: N
GPRA Renewal: N
Permit Renewal Wrkld: ------
Permwrk ID: ------
Perm Prog: ------
Pcwrkld: ------
Closwrkld: ------
GPRA Ca: N
Cawrkld: N

Subjca Tsd Discretion:	N
NCAPS:	N
EC Indicator:	N
Ca725 Indicator:	N
Ca750 Indicator:	N
Operating Tsdf:	------
Full Enforcement:	------
Snc:	N
Unaddressed Snc:	N
Addressed Snc:	N
Snc With Comp Sched:	N
Fa Required:	-----
Hhandler Last Change:	20091019
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	EN
Handler Name:	CUTLER-HAMMER
Location Street No:	
Location Street1:	4440 HAINES RD
Location Street2:	
Location City:	DULUTH
Location State:	MN
Location Zip:	55811
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	US
Contact Name:	THOMAS TISCHER
Contact Street No:	
Contact Street1:	5421 FELTL RD STE 190
Contact Street2:	
Contact City:	MINNETONKA
Contact State:	MN
Contact Zip:	55343
Contact Country:	US
Contact Phone & Ext:	952-912-1342
Contact Fax:	
Contact Email Address:	
Contact Title:	
Owner Name:	
Owner Type:	
Owner Seq:	
Operator Name:	CUTLER-HAMMER
Operator Type:	P
Operator Seq:	1
Public Notes:	

Hazardous Waste Handler Details

Seq No:	1
Receive Date:	20020510
Handler Name:	CUTLER-HAMMER
Fed Waste Generator:	N
Generator Code Description:	Not a Generator, Verified
Source Type:	Notification
TSD Activity:	N

Hazardous Waste Handler Details

Seq No:	2
Receive Date:	20020510
Handler Name:	CUTLER-HAMMER
Fed Waste Generator:	N

Generator Code Description: Not a Generator, Verified
Source Type: Notification
TSD Activity: N

Waste Code Details

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: D018
Waste Code Desc: BENZENE

Waste Code: D039
Waste Code Desc: TETRACHLOROETHYLENE

Owner/Operator Details

Owner/Operator Ind: Current Operator
Type: Private
Name: CUTLER-HAMMER
Dt Became Current: 20000717
Dt Ended Current:
Phone: 952-912-1342
Source Type: Notification
Street No:
Street1: 1000 CHERRYINGTON PKWY
Street2:
City: MOON TOWNSHIP
State: PA
Country: US
Zip: 15108

Owner/Operator Ind: Current Owner
Type: Private
Name: CUTLER-HAMMER
Dt Became Current: 20000717
Dt Ended Current:
Phone: 952-912-1342
Source Type: Notification
Street No:
Street1: 1000 CHERRYINGTON PKWY
Street2:
City: MOON TOWNSHIP
State: PA
Country: US
Zip: 15108

Historical Handler Details

Receive Dt: 20020510
Generator Code Description: Not a Generator, Verified
Handler Name: CUTLER-HAMMER

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16 | **6 of7** | **SE** | **0.18 / 976.34** | **1,363.05 / -8** | **DON LESLIE SUPPLY INC**
4436 HAINES RD
DULUTH MN 55811-1524 | **RCRA NON GEN**

Handler ID: MND985716299
Generator Status: N
Recycler Activity?: NO
Recycler Activity Note: This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note: NO RECORDS: As of Nov 2025, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer: No
Mixed Waste Gen: No
Transporter: No
Transfer Facility: No
Recycler: No
Onsite Burner Exem: No
Used Oil Transpor: No
Used Oil Trans Fac: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Commercial TSD: No

Furnace Exemption:	No	**Recycl Nonstorage:**	No
Underground Injec:	No		
Used Oil Market Burner:	No		
Used Oil Spec Marketer:	No		

Additional Handler Summary Details

Source Type:	N	**NAIC 1:**	
Seq No:	1	**NAIC 2:**	
Non Notifier:		**NAIC 3:**	
Receive Date:	19911003	**NAIC 4:**	
Active Site:	-----	**State:**	MN
Land Type:	P	**Location Latitude:**	46.83146
In Handler Univ:	N	**Location Longitude:**	-92.163664
In A Universe:	N	**Loc GIS Primary:**	N
Gen Status:	N	**Loc GIS Origin:**	UC
Report Cycle:		**State District Owner:**	
Accessibility:		**State District:**	
Region:	05		

Fed Waste Gen Owner:	HQ
State Waste Generator Owner:	MN
State Waste Generator:	N
Short Term Generator:	N
Uni Waste:	N
Universal Waste Dest Facility:	N
Federal Universal Waste:	N
As Federally Regulated Tsdf:	------
As Converter Tsdf:	------
As State Regulated Tsdf:	------
As State Regulated Handler:	---
Federal Indicator:	---
Hsm:	N
Subpart K:	----
GPRA Permit:	N
GPRA Renewal:	N
Permit Renewal Wrkld:	------
Permwrk ID:	------
Perm Prog:	------
Pcwrkld:	------
Closwrkld:	------
GPRA Ca:	N
Cawrkld:	N
Subjca Tsd Discretion:	N
NCAPS:	N
EC Indicator:	N
Ca725 Indicator:	N
Ca750 Indicator:	N
Operating Tsdf:	------
Full Enforcement:	------
Snc:	N
Unaddressed Snc:	N
Addressed Snc:	N
Snc With Comp Sched:	N
Fa Required:	-----
Hhandler Last Change:	20070620
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	
Handler Name:	DON LESLIE SUPPLY INC
Location Street No:	
Location Street1:	4436 HAINES RD
Location Street2:	
Location City:	DULUTH
Location State:	MN

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Location Zip: 55811-1524
Location County Code: MN137
Location County Name: ST LOUIS
Location Country: US
Contact Name:
Contact Street No:
Contact Street1:
Contact Street2:
Contact City:
Contact State:
Contact Zip:
Contact Country: US
Contact Phone & Ext:
Contact Fax:
Contact Email Address:
Contact Title:
Owner Name: DON LESLIE SUPPLY INC
Owner Type: P
Owner Seq: 1
Operator Name:
Operator Type:
Operator Seq:
Public Notes:

Hazardous Waste Handler Details

Seq No: 1
Receive Date: 19911003
Handler Name: DON LESLIE SUPPLY INC
Fed Waste Generator: N
Generator Code Description: Not a Generator, Verified
Source Type: Notification
TSD Activity: N

Waste Code Details

Waste Code: D000
Waste Code Desc: DESCRIPTION

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: D018
Waste Code Desc: BENZENE

Waste Code: D039
Waste Code Desc: TETRACHLOROETHYLENE

Owner/Operator Details

Owner/Operator Ind: Current Owner
Type: Private
Name: DON LESLIE SUPPLY INC
Dt Became Current: 19990726
Dt Ended Current: 19990514
Phone:
Source Type: Notification
Street No:
Street1: 4309 ENTERPRISE CIR
Street2:
City: DULUTH
State: MN
Country: US
Zip: 55811

16	7 of7	SE	0.18 / 976.34	1,363.05 / -8	SWANSON & YOUNGDALE INC - HAINES RD 4426 HAINES RD DULUTH MN 55811	RCRA NON GEN

Handler ID: MNR000052886

Generator Status: N
Recycler Activity?: NO
Recycler Activity Note: This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note: NO RECORDS: As of Nov 2025, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer:	No	**Used Oil Transpor:**	No
Mixed Waste Gen:	No	**Used Oil Trans Fac:**	No
Transporter:	No	**Used Oil Processor:**	No
Transfer Facility:	No	**Used Oil Refiner:**	No
Recycler:	No	**Used Oil Burner:**	No
Onsite Burner Exem:	No	**Commercial TSD:**	No
Furnace Exemption:	No	**Recycl Nonstorage:**	No
Underground Injec:	No		
Used Oil Market Burner:	No		
Used Oil Spec Marketer:	No		

Additional Handler Summary Details

Source Type:	N	**NAIC 1:**	23832
Seq No:	1	**NAIC 2:**	23832
Non Notifier:		**NAIC 3:**	23832
Receive Date:	19970721	**NAIC 4:**	23832
Active Site:	-----	**State:**	MN
Land Type:	P	**Location Latitude:**	46.833235
In Handler Univ:	N	**Location Longitude:**	-92.174451
In A Universe:	N	**Loc GIS Primary:**	N
Gen Status:	N	**Loc GIS Origin:**	UC
Report Cycle:		**State District Owner:**	
Accessibility:		**State District:**	
Region:	05		

Fed Waste Gen Owner: HQ
State Waste Generator Owner: MN
State Waste Generator: N
Short Term Generator: N
Uni Waste: N
Universal Waste Dest Facility: N
Federal Universal Waste: N
As Federally Regulated Tsdf: ------
As Converter Tsdf: ------
As State Regulated Tsdf: ------
As State Regulated Handler: ---
Federal Indicator: ---
Hsm: N
Subpart K: ----
GPRA Permit: N
GPRA Renewal: N
Permit Renewal Wrkld: ------
Permwrk ID: ------
Perm Prog: ------
Pcwrkld: ------
Closwrkld: ------
GPRA Ca: N
Cawrkld: N
Subjca Tsd Discretion: N
NCAPS: N
EC Indicator: N
Ca725 Indicator: N
Ca750 Indicator: N
Operating Tsdf: ------

Full Enforcement:	------
Snc:	N
Unaddressed Snc:	N
Addressed Snc:	N
Snc With Comp Sched:	N
Fa Required:	-----
Hhandler Last Change:	20091019
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	EN
Handler Name:	SWANSON & YOUNGDALE INC - HAINES RD
Location Street No:	
Location Street1:	4426 HAINES RD
Location Street2:	
Location City:	DULUTH
Location State:	MN
Location Zip:	55811
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	US
Contact Name:	NEAL J FINKE
Contact Street No:	
Contact Street1:	PO BOX 26070
Contact Street2:	
Contact City:	ST. LOUIS PARK
Contact State:	MN
Contact Zip:	55426-0070
Contact Country:	US
Contact Phone & Ext:	952-545-2541
Contact Fax:	
Contact Email Address:	
Contact Title:	
Owner Name:	
Owner Type:	
Owner Seq:	
Operator Name:	SWANSON & YOUNGDALE INC
Operator Type:	P
Operator Seq:	1
Public Notes:	

Hazardous Waste Handler Details

Seq No:	1
Receive Date:	19970721
Handler Name:	SWANSON & YOUNGDALE INC - HAINES RD
Fed Waste Generator:	N
Generator Code Description:	Not a Generator, Verified
Source Type:	Notification
TSD Activity:	N

Waste Code Details

Waste Code:	D001
Waste Code Desc:	IGNITABLE WASTE
Waste Code:	F003
Waste Code Desc:	THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004,

AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F005
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Hazardous Waste Handler Details

Seq No: 2
Receive Date: 20060427
Handler Name: SWANSON & YOUNGDALE INC - HAINES RD
Fed Waste Generator: N
Generator Code Description: Not a Generator, Verified
Source Type: Notification
TSD Activity: N

Owner/Operator Details

Owner/Operator Ind: Current Operator
Type: Private
Name: SWANSON & YOUNGDALE INC
Dt Became Current: 19990726
Dt Ended Current: 20060502
Phone: 952-545-2541
Source Type: Notification
Street No:
Street1: PO BOX 26070
Street2:
City: ST. LOUIS PARK
State: MN
Country: US
Zip: 55426-0070

Owner/Operator Ind: Current Owner
Type: Private
Name: SWANSON & YOUNGDALE INC
Dt Became Current: 19990726
Dt Ended Current: 20060502
Phone: 952-545-2541
Source Type: Notification
Street No:
Street1: PO BOX 26070
Street2:
City: ST. LOUIS PARK
State: MN
Country: US
Zip: 55426-0070

Historical Handler Details

Receive Dt: 20060427
Generator Code Description: Not a Generator, Verified
Handler Name: SWANSON & YOUNGDALE INC - HAINES RD

17	1 of2	ESE	0.19 / 1,016.85	1,393.52 / 23	GPM, Inc. 4432 Venture Ave Duluth MN 55811	MPCA AI

Agency Interest ID: 27189
Name (Map): GPM, Inc.
Address (Map): 4432 Venture Ave
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.835186
Longitude (Map): -92.171178
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): GPM, Inc.
Address (Site): 4432 Venture Ave
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811-5706

Latitude (Site):	46.835186
Longitude (Site):	-92.171178
County (Site):	St. Louis
Name (Req):	GPM, Inc.
Address (Req):	4432 Venture Ave
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.835186
Longitude (Req):	-92.171178
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	27189-AISI0000027189	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	27189
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	3/23/2020	**TRDSQQ:**	
Tmsp Created:	7/26/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	12/13/2023	**Verified:**	No
Spatial ID:	19639	**User Updt:**	smuelle
Name:	GPM, Inc.		
Program List:	HW, IS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	DP		
Method Desc:	Digitized - MPCA online map		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	Multiple IDs	**Cong Distr:**	8
Program Co:	HW; ST	**Senate Dis:**	8
Program Name:	Multiple Programs	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-5706	**Coord Coll:**	DP
City:	Duluth	**Latitude:**	46.835186
County:	St. Louis	**Longitude:**	-92.171178
Activity:	Multiple Activities		
Addr St:	4432 Venture Ave		
Addr City:	Duluth		
MPCA ID List:	MN0000562363; MNR053DYT		
Program 1:	Hazardous Waste; Stormwater		
Name:	GPM, Inc.		
Watershed :	St. Louis River		
Coord Co 1:	Digitized - MPCA online map		
Activity L:	Hazardous Waste, Very small quantity generator; Industrial Stormwater		
Industrial:	Industrial Machinery and Equipment Merchant Wholesalers		
Site URL:	https://webapp.pca.state.mn.us/wimn/site/27189		

Agency Interests: File Request Details

Item ID:	27189-AISI0000027189	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Multiple Programs	***SI ID:***	27189
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	8B
Section:		***Senate Dist:***	8
Quarters:		***TRDSQQ:***	
Collection Date:	3/23/2020	***Ref Code:***	GEN
Tmsp Created:	7/26/1999	***Ref Desc:***	General Location
User Created:	DELTA_M_R1	***Verified:***	No
Tmsp Updt:	12/13/2023	***User Updt:***	smuelle
Spatial ID:	19639		
Name:	GPM, Inc.		
Program List:	HW, IS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	DP		
Method Desc:	Digitized - MPCA online map		

17	*2 of2*	*ESE*	*0.19 / 1,016.85*	*1,393.52 / 23*	***GPM INC*** ***4432 VENTURE AVE*** ***DULUTH MN 55811-5706***	***RCRA VSQG***

Handler ID:	MN0000562363
Generator Status:	VSG
Recycler Activity?:	NO
Recycler Activity Note:	This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note:	VIOLATION or UNDETERMINED: There are VIOLATION or UNDETERMINED details or records associated with this facility (EPA ID) in the Compliance Monitoring and Enforcement table dated Nov 2025.

Violation Details

Viol Type:	262.A	***Actual Rtc Date:***	20070821
Citation:		***Found Violation:***	Yes
Determined Date:	20070502	***Rtc Qualifier:***	Documented
Scheduled Compliance Date:			
Eval Activity Location:	MN		
Viol Determined By Agency:	State		
Viol Short Desc:	Generators - General		

Enforcement Details

Enf Type:	123
Enf Type Desc:	TEN DAY LETTER
Enf Action Date:	20070511
Disposition Status Desc:	

Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Enf Type: 213
Enf Type Desc: FORGIVEABLE & NON-FORGIVEABLE APO
Enf Action Date: 20070718
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Violation Details

Viol Type: 262.C
Citation:
Determined Date: 20070502
Scheduled Compliance Date:
Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - Pre-transport
Actual Rtc Date: 20070821
Found Violation: Yes
Rtc Qualifier: Documented

Enforcement Details

Enf Type: 123
Enf Type Desc: TEN DAY LETTER
Enf Action Date: 20070511
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Enf Type: 213
Enf Type Desc: FORGIVEABLE & NON-FORGIVEABLE APO
Enf Action Date: 20070718
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Evaluation Details

Eval Start Date: 20070502
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc: Generators - General
Actual Rtc Date: 20070821
Eval Agency: State

Eval Start Date: 20070502
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc: Generators - Pre-transport
Actual Rtc Date: 20070821
Eval Agency: State

Handler Summary

Importer:	No	**Used Oil Transpor:**	No
Mixed Waste Gen:	No	**Used Oil Trans Fac:**	No
Transporter:	No	**Used Oil Processor:**	No
Transfer Facility:	No	**Used Oil Refiner:**	No
Recycler:	No	**Used Oil Burner:**	No
Onsite Burner Exem:	No	**Commercial TSD:**	No
Furnace Exemption:	No	**Recycl Nonstorage:**	No
Underground Injec:	No		
Used Oil Market Burner:	No		
Used Oil Spec Marketer:	No		

Additional Handler Summary Details

Source Type:	I	**NAIC 1:**	
Seq No:	53	**NAIC 2:**	
Non Notifier:		**NAIC 3:**	
Receive Date:	20231218	**NAIC 4:**	
Active Site:	H----	**State:**	MN
Land Type:		**Location Latitude:**	46.835359
In Handler Univ:	Y	**Location Longitude:**	-92.171658
In A Universe:	Y	**Loc GIS Primary:**	N
Gen Status:	VSG	**Loc GIS Origin:**	AG
Report Cycle:		**State District Owner:**	
Accessibility:		**State District:**	
Region:	05		

Fed Waste Gen Owner:	HQ
State Waste Generator Owner:	MN
State Waste Generator:	5
Short Term Generator:	N
Uni Waste:	N
Universal Waste Dest Facility:	N
Federal Universal Waste:	N
As Federally Regulated Tsdf:	------
As Converter Tsdf:	------
As State Regulated Tsdf:	------
As State Regulated Handler:	---
Federal Indicator:	---
Hsm:	N
Subpart K:	----
GPRA Permit:	N
GPRA Renewal:	N
Permit Renewal Wrkld:	------
Permwrk ID:	------
Perm Prog:	------
Pcwrkld:	------
Closwrkld:	------
GPRA Ca:	N
Cawrkld:	N
Subjca Tsd Discretion:	N
NCAPS:	N
EC Indicator:	N
Ca725 Indicator:	N
Ca750 Indicator:	N
Operating Tsdf:	------
Full Enforcement:	------
Snc:	N
Unaddressed Snc:	N
Addressed Snc:	N
Snc With Comp Sched:	N
Fa Required:	-----
Hhandler Last Change:	20231220
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	EN

Handler Name:	GPM INC
Location Street No:	
Location Street1:	4432 VENTURE AVE
Location Street2:	
Location City:	DULUTH
Location State:	MN
Location Zip:	55811-5706
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	
Contact Name:	JIM BITTENGER
Contact Street No:	
Contact Street1:	4432 VENTURE AVE
Contact Street2:	
Contact City:	DULUTH
Contact State:	MN
Contact Zip:	55811-5706
Contact Country:	
Contact Phone & Ext:	218-740-3583
Contact Fax:	
Contact Email Address:	JBITTINGER@GPMCO.COM
Contact Title:	DIRECTOR
Owner Name:	
Owner Type:	
Owner Seq:	
Operator Name:	
Operator Type:	
Operator Seq:	
Public Notes:	

Hazardous Waste Handler Details

Seq No:	1
Receive Date:	19940805
Handler Name:	GPM INC
Fed Waste Generator:	3
Generator Code Description:	Very Small Quantity Generator
Source Type:	Notification
TSD Activity:	N

Waste Code Details

Waste Code:	D000
Waste Code Desc:	DESCRIPTION
Waste Code:	D001
Waste Code Desc:	IGNITABLE WASTE
Waste Code:	D008
Waste Code Desc:	LEAD
Waste Code:	D018
Waste Code Desc:	BENZENE
Waste Code:	D039
Waste Code Desc:	TETRACHLOROETHYLENE

Hazardous Waste Handler Details

Seq No:	53
Receive Date:	20231218
Handler Name:	GPM INC
Fed Waste Generator:	3
Generator Code Description:	Very Small Quantity Generator
Source Type:	Implementer

TSD Activity: N

Owner/Operator Details

Owner/Operator Ind:	Current Operator	***Street No:***	
Type:	Private	***Street1:***	4432 VENTURE AVE
Name:	GPM INC	***Street2:***	
Dt Became Current:	19990726	***City:***	DULUTH
Dt Ended Current:		***State:***	MN
Phone:	218-722-9904	***Country:***	US
Source Type:	Notification	***Zip:***	55811

Historical Handler Details

Receive Dt:	19940805
Generator Code Description:	Very Small Quantity Generator
Handler Name:	GPM INC

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
18	1 of2	SE	0.22 / 1,187.13	1,362.12 / -9	Carlson Duluth Company 4415 Venture Ave Duluth MN 55811	MPCA AI

Agency Interest ID:	24517
Name (Map):	Carlson Duluth Company
Address (Map):	4415 Venture Ave
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83368232
Longitude (Map):	-92.17176659
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Carlson Duluth Company
Address (Site):	4415 Venture Ave
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811-5705
Latitude (Site):	46.83368232
Longitude (Site):	-92.17176659
County (Site):	St. Louis
Name (Req):	Carlson Duluth Company
Address (Req):	4415 Venture Ave
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83368232
Longitude (Req):	-92.17176659
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	24517-AISI0000024517	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	2014-05-31 00:00:00	***SI Cat:***	AISI
Program:	Hazardous Waste	***SI ID:***	24517
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8

Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	10/2/2023	**TRDSQQ:**	
Tmsp Created:	7/26/1999	**Ref Code:**	CEN
User Created:	DELTA_M_R1	**Ref Desc:**	Center of Feature Represented
Tmsp Updt:	10/2/2023	**Verified:**	No
Spatial ID:	20378	**User Updt:**	geo_nc
Name:	Carlson Duluth Company		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	DP		
Method Desc:	Digitized - MPCA online map		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	MND985757095	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	8
Program Name:	Hazardous Waste	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-5705	**Coord Coll:**	DP
City:	Duluth	**Latitude:**	46.83368232
County:	St. Louis	**Longitude:**	-92.17176659
Activity:	Hazardous Waste, Very small quantity generator		
Addr St:	4415 Venture Ave		
Addr City:	Duluth		
MPCA ID List:	MND985757095		
Program 1:	Hazardous Waste		
Name:	Carlson Duluth Company		
Watershed :	St. Louis River		
Coord Co 1:	Digitized - MPCA online map		
Activity L:	Hazardous Waste, Very small quantity generator		
Industrial:	Plumbing, Heating, and Air-Conditioning Contractors		
Site URL:	https://webapp.pca.state.mn.us/wimn/site/24517		

Agency Interests: File Request Details

Item ID:	24517-AISI0000024517	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	5/31/2014	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	24517
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	10/2/2023	**Ref Code:**	CEN
Tmsp Created:	7/26/1999	**Ref Desc:**	Center of Feature Represented
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	10/2/2023	**User Updt:**	geo_nc
Spatial ID:	20378		
Name:	Carlson Duluth Company		
Program List:	HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: DP
Method Desc: Digitized - MPCA online map

18	2 of2	SE	0.22 / 1,187.13	1,362.12 / -9	CARLSON DULUTH COMPANY 4415 VENTURE AVE DULUTH MN 55811-5705	RCRA VSQG

Handler ID: MND985757095
Generator Status: VSG
Recycler Activity?: NO
Recycler Activity Note: This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note: NO RECORDS: As of Nov 2025, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer:	No	**Used Oil Transpor:**	No
Mixed Waste Gen:	No	**Used Oil Trans Fac:**	No
Transporter:	No	**Used Oil Processor:**	No
Transfer Facility:	No	**Used Oil Refiner:**	No
Recycler:	No	**Used Oil Burner:**	No
Onsite Burner Exem:	No	**Commercial TSD:**	No
Furnace Exemption:	No	**Recycl Nonstorage:**	No
Underground Injec:	No		

Used Oil Market Burner: No
Used Oil Spec Marketer: No

Additional Handler Summary Details

Source Type:	I	**NAIC 1:**	
Seq No:	53	**NAIC 2:**	
Non Notifier:		**NAIC 3:**	
Receive Date:	20231218	**NAIC 4:**	
Active Site:	H----	**State:**	MN
Land Type:		**Location Latitude:**	46.833677
In Handler Univ:	Y	**Location Longitude:**	-92.171764
In A Universe:	Y	**Loc GIS Primary:**	N
Gen Status:	VSG	**Loc GIS Origin:**	UC
Report Cycle:		**State District Owner:**	
Accessibility:		**State District:**	
Region:	05		

Fed Waste Gen Owner: HQ
State Waste Generator Owner: MN
State Waste Generator: 5
Short Term Generator: N
Uni Waste: N
Universal Waste Dest Facility: N
Federal Universal Waste: N
As Federally Regulated Tsdf: ------
As Converter Tsdf: ------
As State Regulated Tsdf: ------
As State Regulated Handler: ---
Federal Indicator: ---
Hsm: N
Subpart K: ----
GPRA Permit: N
GPRA Renewal: N
Permit Renewal WrkId: ------

Permwrk ID:	------
Perm Prog:	------
Pcwrkld:	------
Closwrkld:	------
GPRA Ca:	N
Cawrkld:	N
Subjca Tsd Discretion:	N
NCAPS:	N
EC Indicator:	N
Ca725 Indicator:	N
Ca750 Indicator:	N
Operating Tsdf:	------
Full Enforcement:	------
Snc:	N
Unaddressed Snc:	N
Addressed Snc:	N
Snc With Comp Sched:	N
Fa Required:	-----
Hhandler Last Change:	20231220
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	EN
Handler Name:	CARLSON DULUTH COMPANY
Location Street No:	
Location Street1:	4415 VENTURE AVE
Location Street2:	
Location City:	DULUTH
Location State:	MN
Location Zip:	55811-5705
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	
Contact Name:	CASEY GILLMAN
Contact Street No:	
Contact Street1:	4415 VENTURE AVE
Contact Street2:	
Contact City:	DULUTH
Contact State:	MN
Contact Zip:	55811
Contact Country:	
Contact Phone & Ext:	
Contact Fax:	
Contact Email Address:	CASEY@CARLSONDULUTH.COM
Contact Title:	DIRECTOR
Owner Name:	
Owner Type:	
Owner Seq:	
Operator Name:	
Operator Type:	
Operator Seq:	
Public Notes:	

Hazardous Waste Handler Details

Seq No:	1
Receive Date:	19930203
Handler Name:	ARCHER RACING ACCESS
Fed Waste Generator:	3
Generator Code Description:	Very Small Quantity Generator
Source Type:	Notification
TSD Activity:	N

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Waste Code Details

Waste Code: D000
Waste Code Desc: DESCRIPTION

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: D018
Waste Code Desc: BENZENE

Waste Code: D039
Waste Code Desc: TETRACHLOROETHYLENE

Hazardous Waste Handler Details

Seq No: 53
Receive Date: 20231218
Handler Name: CARLSON DULUTH COMPANY
Fed Waste Generator: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Implementer
TSD Activity: N

Owner/Operator Details

Owner/Operator Ind: Current Operator
Type: Private
Name: ARCHER RACING ACCESS
Dt Became Current: 19990726
Dt Ended Current:
Phone: 218-727-4806
Source Type: Notification

Street No:
Street1: 4415 VENTURE AVE
Street2:
City: DULUTH
State: MN
Country: US
Zip: 55811

Historical Handler Details

Receive Dt: 19930203
Generator Code Description: Very Small Quantity Generator
Handler Name: ARCHER RACING ACCESS

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
19	1 of3	SE	0.23 / 1,228.92	1,360.80 / -10	Johnson Controls 4627 Airpark Blvd Duluth MN 55811	MPCA AI

Agency Interest ID: 27099
Name (Map): Johnson Controls
Address (Map): 4627 Airpark Blvd
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.8330856
Longitude (Map): -92.1724577
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Johnson Controls
Address (Site): 4627 Airpark Blvd
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811-5750
Latitude (Site): 46.8330856
Longitude (Site): -92.1724577
County (Site): St. Louis
Name (Req): Johnson Controls

Address (Req):	4627 Airpark Blvd
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8330856
Longitude (Req):	-92.1724577
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	27099-AISI0000027099	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	1999-07-27 18:24:16	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	27099
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	9/28/2015	**TRDSQQ:**	
Tmsp Created:	7/26/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	19261	**User Updt:**	spatial_
Name:	Johnson Controls		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	MNR000021774	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	8
Program Name:	Hazardous Waste	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-5750	**Coord Coll:**	A1
City:	Duluth	**Latitude:**	46.8330856
County:	St. Louis	**Longitude:**	-92.1724577
Activity:	Hazardous Waste		
Addr St:	4627 Airpark Blvd		
Addr City:	Duluth		
MPCA ID List:	MNR000021774		
Program 1:	Hazardous Waste		
Name:	Johnson Controls		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Hazardous Waste		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/27099		

Agency Interests: File Request Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Item ID:	27099-AISI0000027099	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	7/27/1999	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	27099
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	9/28/2015	**Ref Code:**	GEN
Tmsp Created:	7/26/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	19261		
Name:	Johnson Controls		
Program List:	HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

19	***2 of3***	***SE***	***0.23 / 1,228.92***	***1,360.80 / -10***	***Universal Hospital Services 4625 Airpark Blvd Duluth MN 55811***	***MPCA AI***

Agency Interest ID:	26820
Name (Map):	Universal Hospital Services
Address (Map):	4625 Airpark Blvd
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8330937
Longitude (Map):	-92.1724029
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Universal Hospital Services
Address (Site):	4625 Airpark Blvd
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811-5750
Latitude (Site):	46.8330937
Longitude (Site):	-92.1724029
County (Site):	St. Louis
Name (Req):	Universal Hospital Services
Address (Req):	4625 Airpark Blvd
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8330937
Longitude (Req):	-92.1724029
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	26820-AISI0000026820	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2014-05-31 00:00:00	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	26820
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	9/28/2015	**TRDSQQ:**	
Tmsp Created:	7/26/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	18043	**User Updt:**	spatial_
Name:	Universal Hospital Services		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	708819800	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	8
Program Name:	Hazardous Waste	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-5750	**Coord Coll:**	A1
City:	Duluth	**Latitude:**	46.8330937
County:	St. Louis	**Longitude:**	-92.1724029
Activity:	Hazardous Waste		
Addr St:	4625 Airpark Blvd		
Addr City:	Duluth		
MPCA ID List:	708819800		
Program 1:	Hazardous Waste		
Name:	Universal Hospital Services		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Hazardous Waste		
Industrial:	Health Services		
Site URL:	https://webapp.pca.state.mn.us/wimn/site/26820		

Agency Interests: File Request Details

Item ID:	26820-AISI0000026820	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	5/31/2014	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	26820
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	9/28/2015	**Ref Code:**	GEN
Tmsp Created:	7/26/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	18043		
Name:	Universal Hospital Services		
Program List:	HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

19	3 of3	SE	0.23 / 1,228.92	1,360.80 / -10	JOHNSON CONTROLS 4627 AIRPARK BLVD DULUTH MN 55811-5750	RCRA NON GEN

Handler ID:	MNR000021774
Generator Status:	N
Recycler Activity?:	NO
Recycler Activity Note:	This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note:	NO RECORDS: As of Nov 2025, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer:	No	**Used Oil Transpor:**	No
Mixed Waste Gen:	No	**Used Oil Trans Fac:**	No
Transporter:	No	**Used Oil Processor:**	No
Transfer Facility:	No	**Used Oil Refiner:**	No
Recycler:	No	**Used Oil Burner:**	No
Onsite Burner Exem:	No	**Commercial TSD:**	No
Furnace Exemption:	No	**Recycl Nonstorage:**	No
Underground Injec:	No		
Used Oil Market Burner:	No		
Used Oil Spec Marketer:	No		

Additional Handler Summary Details

Source Type:	N	**NAIC 1:**	
Seq No:	1	**NAIC 2:**	
Non Notifier:		**NAIC 3:**	
Receive Date:	19960508	**NAIC 4:**	
Active Site:	-----	**State:**	MN
Land Type:	P	**Location Latitude:**	46.833086
In Handler Univ:	N	**Location Longitude:**	-92.172458
In A Universe:	N	**Loc GIS Primary:**	N
Gen Status:	N	**Loc GIS Origin:**	UC
Report Cycle:		**State District Owner:**	
Accessibility:		**State District:**	
Region:	05		
Fed Waste Gen Owner:	HQ		
State Waste Generator Owner:	MN		
State Waste Generator:	N		
Short Term Generator:	N		
Uni Waste:	N		
Universal Waste Dest Facility:	N		
Federal Universal Waste:	N		

As Federally Regulated Tsdf:	------
As Converter Tsdf:	------
As State Regulated Tsdf:	------
As State Regulated Handler:	---
Federal Indicator:	---
Hsm:	N
Subpart K:	----
GPRA Permit:	N
GPRA Renewal:	N
Permit Renewal Wrkld:	------
Permwrk ID:	------
Perm Prog:	------
Pcwrkld:	------
Closwrkld:	------
GPRA Ca:	N
Cawrkld:	N
Subjca Tsd Discretion:	N
NCAPS:	N
EC Indicator:	N
Ca725 Indicator:	N
Ca750 Indicator:	N
Operating Tsdf:	------
Full Enforcement:	------
Snc:	N
Unaddressed Snc:	N
Addressed Snc:	N
Snc With Comp Sched:	N
Fa Required:	-----
Hhandler Last Change:	20070620
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	EN
Handler Name:	JOHNSON CONTROLS
Location Street No:	
Location Street1:	4627 AIRPARK BLVD
Location Street2:	
Location City:	DULUTH
Location State:	MN
Location Zip:	55811-5750
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	US
Contact Name:	DAVID BOIS
Contact Street No:	
Contact Street1:	4627 AIRPARK BLVD
Contact Street2:	
Contact City:	DULUTH
Contact State:	MN
Contact Zip:	55811-5750
Contact Country:	US
Contact Phone & Ext:	218-727-8996
Contact Fax:	
Contact Email Address:	
Contact Title:	
Owner Name:	JOHNSON CONTROLS
Owner Type:	P
Owner Seq:	1
Operator Name:	
Operator Type:	
Operator Seq:	
Public Notes:	

Hazardous Waste Handler Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Seq No: 1
Receive Date: 19960508
Handler Name: JOHNSON CONTROLS
Fed Waste Generator: N
Generator Code Description: Not a Generator, Verified
Source Type: Notification
TSD Activity: N

Waste Code Details

Waste Code: D002
Waste Code Desc: CORROSIVE WASTE

Owner/Operator Details

Owner/Operator Ind: Current Owner
Type: Private
Name: JOHNSON CONTROLS
Dt Became Current: 19990726
Dt Ended Current: 19990514
Phone: 218-727-8996
Source Type: Notification
Street No:
Street1: 4627 AIRPARK BLVD
Street2:
City: DULUTH
State: MN
Country: US
Zip: 55811-5750

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
20	1 of1	SE	0.24 / 1,262.99	1,360.43 / -11	1 LLC 4413 Venture Ave Duluth MN 55811	MPCA AI

Agency Interest ID: 246442
Name (Map): 1 LLC
Address (Map): 4413 Venture Ave
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83357196
Longitude (Map): -92.17224869
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): 1 LLC
Address (Site): 4413 Venture Ave
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811-5705
Latitude (Site): 46.83357196
Longitude (Site): -92.17224869
County (Site): St. Louis
Name (Req): 1 LLC
Address (Req): 4413 Venture Ave
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.83357196
Longitude (Req): -92.17224869
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 246442-AISI0000246442
Status: Active
Status Date:
Int Doc ID: 0
SI Type: CON
SI Cat: AISI

Program:	Hazardous Waste	**SI ID:**	246442
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	2/23/2021	**TRDSQQ:**	
Tmsp Created:	2/23/2021	**Ref Code:**	GEN
User Created:	smotton	**Ref Desc:**	General Location
Tmsp Updt:	2/23/2021	**Verified:**	No
Spatial ID:		**User Updt:**	geo_nc

Name: 1 LLC
Program List: HW
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	HW-gen	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	8
Program Name:	Hazardous Waste	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-5705	**Coord Coll:**	A1
City:	Duluth	**Latitude:**	46.83357196
County:	St. Louis	**Longitude:**	-92.17224869

Activity: Hazardous Waste
Addr St: 4413 Venture Ave
Addr City: Duluth
MPCA ID List: HW-gen
Program 1: Hazardous Waste
Name: 1 LLC
Watershed : St. Louis River
Coord Co 1: Address Matching House Number
Activity L: Hazardous Waste
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/246442

Agency Interests: File Request Details

Item ID:	246442-AISI0000246442	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	246442
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	2/23/2021	**Ref Code:**	GEN
Tmsp Created:	2/23/2021	**Ref Desc:**	General Location
User Created:	smotton	**Verified:**	No
Tmsp Updt:	2/23/2021	**User Updt:**	geo_nc
Spatial ID:			

Name: 1 LLC
Program List: HW

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	A1
Method Desc:	Address Matching House Number

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
21	1 of3	E	0.24 / 1,277.10	1,389.87 / 19	UPI Access Road & Airpark B3 L4 developm 4510 Airport Rd Duluth MN 55811	MPCA AI

Agency Interest ID:	144203
Name (Map):	UPI Access Road & Airpark B3 L4 developm
Address (Map):	4510 Airport Rd
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.835
Longitude (Map):	-92.168056
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	UPI Access Road & Airpark B3 L4 developm
Address (Site):	4510 Airport Rd
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.835
Longitude (Site):	-92.168056
County (Site):	St. Louis
Name (Req):	UPI Access Road & Airpark B3 L4 developm
Address (Req):	4510 Airport Rd
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.835
Longitude (Req):	-92.168056
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	144203-AISI0000144203	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2014-08-15 00:00:00	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	144203
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	5/6/2014	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	68580521	**User Updt:**	spatial_

Name:	UPI Access Road & Airpark B3 L4 developm
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	G8
Method Desc:	GPS - Other

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00037981	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	8
Program Name:	Stormwater	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	G8
City:	Duluth	**Latitude:**	46.835
County:	St. Louis	**Longitude:**	-92.168056

Activity:	Construction Stormwater
Addr St:	4510 Airport Rd
Addr City:	Duluth
MPCA ID List:	C00037981
Program 1:	Stormwater
Name:	UPI Access Road & Airpark B3 L4 developm
Watershed :	St. Louis River
Coord Co 1:	GPS - Other
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/144203

Agency Interests: File Request Details

Item ID:	144203-AISI0000144203	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	8/15/2014	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	144203
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	5/6/2014	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	68580521		

Name:	UPI Access Road & Airpark B3 L4 developm
Program List:	CS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	G8
Method Desc:	GPS - Other

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
21	2 of3	E	0.24 / 1,277.10	1,389.87 / 19	United Piping Inc 4510 Airport Rd Hermantown MN 55811	MPCA AI

Agency Interest ID:	48712
Name (Map):	United Piping Inc
Address (Map):	4510 Airport Rd
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8337954
Longitude (Map):	-92.1918617
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	United Piping Inc
Address (Site):	4510 Airport Rd
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811-1523
Latitude (Site):	46.8337954
Longitude (Site):	-92.1918617
County (Site):	St. Louis
Name (Req):	United Piping Inc
Address (Req):	4510 Airport Rd
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8337954
Longitude (Req):	-92.1918617
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	48712-AISI0000048712	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	48712
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:		**TRDSQQ:**	
Tmsp Created:	8/31/2000	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	7/21/2017	**Verified:**	No
Spatial ID:	54748	**User Updt:**	RSP

Name:	United Piping Inc
Program List:	HW
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	A1
Method Desc:	Address Matching House Number

My Neighborhood Site Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	MNR000080747	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	8
Program Name:	Hazardous Waste	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-1523	**Coord Coll:**	A1
City:	Duluth	**Latitude:**	46.8337954
County:	St. Louis	**Longitude:**	-92.1918617

Activity: Hazardous Waste, Small quantity generator
Addr St: 4510 Airport Rd
Addr City: Hermantown
MPCA ID List: MNR000080747
Program 1: Hazardous Waste
Name: United Piping Inc
Watershed : St. Louis River
Coord Co 1: Address Matching House Number
Activity L: Hazardous Waste, Small quantity generator
Industrial: Oil and Gas Pipeline and Related Structures Construction
Site URL: https://webapp.pca.state.mn.us/wimn/site/48712

Agency Interests: File Request Details

Item ID:	48712-AISI0000048712	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	48712
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:		**Ref Code:**	GEN
Tmsp Created:	8/31/2000	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	7/21/2017	**User Updt:**	RSP
Spatial ID:	54748		

Name: United Piping Inc
Program List: HW
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

21	3 of3	E	0.24 / 1,277.10	1,389.87 / 19	**UNITED PIPING INC** **4510 AIRPORT RD** **HERMANTOWN MN 55811-1523**	**RCRA SQG**

Handler ID: MNR000080747
Generator Status: SQG
Recycler Activity?: NO
Recycler Activity Note: This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note: NO VIOLATIONS: All of the compliance records associated with this facility (EPA ID) indicate NO VIOLATIONS;

Compliance Monitoring and Enforcement table dated Nov 2025.

Evaluation Details

Eval Start Date:	20220602
Eval Type Desc:	NON-FINANCIAL RECORD REVIEW
Viol Short Desc:	
Actual Rtc Date:	
Eval Agency:	State

Handler Summary

Importer:	No	***Used Oil Transpor:***	No
Mixed Waste Gen:	No	***Used Oil Trans Fac:***	No
Transporter:	No	***Used Oil Processor:***	No
Transfer Facility:	No	***Used Oil Refiner:***	No
Recycler:	No	***Used Oil Burner:***	No
Onsite Burner Exem:	No	***Commercial TSD:***	No
Furnace Exemption:	No	***Recycl Nonstorage:***	No
Underground Injec:	No		
Used Oil Market Burner:	No		
Used Oil Spec Marketer:	No		

Additional Handler Summary Details

Source Type:	I	***NAIC 1:***	
Seq No:	56	***NAIC 2:***	
Non Notifier:		***NAIC 3:***	
Receive Date:	20240826	***NAIC 4:***	
Active Site:	H----	***State:***	MN
Land Type:		***Location Latitude:***	46.833795
In Handler Univ:	Y	***Location Longitude:***	-92.191862
In A Universe:	Y	***Loc GIS Primary:***	N
Gen Status:	SQG	***Loc GIS Origin:***	UC
Report Cycle:		***State District Owner:***	
Accessibility:		***State District:***	
Region:	05		

Fed Waste Gen Owner:	HQ
State Waste Generator Owner:	MN
State Waste Generator:	2
Short Term Generator:	N
Uni Waste:	N
Universal Waste Dest Facility:	N
Federal Universal Waste:	N
As Federally Regulated Tsdf:	------
As Converter Tsdf:	------
As State Regulated Tsdf:	------
As State Regulated Handler:	---
Federal Indicator:	---
Hsm:	N
Subpart K:	----
GPRA Permit:	N
GPRA Renewal:	N
Permit Renewal Wrkld:	------
Permwrk ID:	------
Perm Prog:	------
Pcwrkld:	------
Closwrkld:	------
GPRA Ca:	N
Cawrkld:	N
Subjca Tsd Discretion:	N
NCAPS:	N
EC Indicator:	N
Ca725 Indicator:	N
Ca750 Indicator:	N

Operating Tsdf:	------
Full Enforcement:	------
Snc:	N
Unaddressed Snc:	N
Addressed Snc:	N
Snc With Comp Sched:	N
Fa Required:	-----
Hhandler Last Change:	20241106
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	EN
Handler Name:	UNITED PIPING INC
Location Street No:	
Location Street1:	4510 AIRPORT RD
Location Street2:	
Location City:	HERMANTOWN
Location State:	MN
Location Zip:	55811-1523
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	
Contact Name:	MIKE VILLA
Contact Street No:	
Contact Street1:	4510 AIRPORT RD
Contact Street2:	
Contact City:	DULUTH
Contact State:	MN
Contact Zip:	55811-1523
Contact Country:	
Contact Phone & Ext:	218-727-7676
Contact Fax:	
Contact Email Address:	MIKE.VILLA@UNITEDPIPING.US
Contact Title:	
Owner Name:	
Owner Type:	
Owner Seq:	
Operator Name:	
Operator Type:	
Operator Seq:	
Public Notes:	

Hazardous Waste Handler Details

Seq No:	1
Receive Date:	20000721
Handler Name:	UNITED PIPING INC
Fed Waste Generator:	2
Generator Code Description:	Small Quantity Generator
Source Type:	Notification
TSD Activity:	N

Waste Code Details

Waste Code:	D001
Waste Code Desc:	IGNITABLE WASTE
Waste Code:	D008
Waste Code Desc:	LEAD
Waste Code:	D018
Waste Code Desc:	BENZENE

Waste Code: D039
Waste Code Desc: TETRACHLOROETHYLENE

Hazardous Waste Handler Details

Seq No: 2
Receive Date: 20110323
Handler Name: UNITED PIPING INC
Fed Waste Generator: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Notification
TSD Activity: N

Waste Code Details

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: D008
Waste Code Desc: LEAD

Waste Code: D018
Waste Code Desc: BENZENE

Waste Code: D039
Waste Code Desc: TETRACHLOROETHYLENE

Hazardous Waste Handler Details

Seq No: 8
Receive Date: 20170721
Handler Name: UNITED PIPING INC
Fed Waste Generator: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Implementer
TSD Activity: N

Waste Code Details

Waste Code: U
Waste Code Desc: Unknown Waste

Hazardous Waste Handler Details

Seq No: 53
Receive Date: 20231218
Handler Name: UNITED PIPING INC
Fed Waste Generator: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Implementer
TSD Activity: N

Hazardous Waste Handler Details

Seq No: 56
Receive Date: 20240826
Handler Name: UNITED PIPING INC
Fed Waste Generator: 2
Generator Code Description: Small Quantity Generator
Source Type: Implementer
TSD Activity: N

Owner/Operator Details

Owner/Operator Ind:	Current Operator	***Street No:***	
Type:	Private	***Street1:***	4510 AIRPORT RD
Name:	UNITED PIPING INC	***Street2:***	
Dt Became Current:	20000831	***City:***	HERMANTOWN
Dt Ended Current:		***State:***	MN
Phone:	218-727-7676	***Country:***	US
Source Type:	Notification	***Zip:***	55811

Owner/Operator Ind:	Current Owner	***Street No:***	
Type:	Private	***Street1:***	4510 AIRPORT RD
Name:	UNITED PIPING INC	***Street2:***	
Dt Became Current:	20000831	***City:***	HERMANTOWN
Dt Ended Current:		***State:***	MN
Phone:	218-727-7676	***Country:***	US
Source Type:	Notification	***Zip:***	55811

Historical Handler Details

Receive Dt:	20231218
Generator Code Description:	Very Small Quantity Generator
Handler Name:	UNITED PIPING INC

Receive Dt:	20170721
Generator Code Description:	Very Small Quantity Generator
Handler Name:	UNITED PIPING INC

Receive Dt:	20110323
Generator Code Description:	Very Small Quantity Generator
Handler Name:	UNITED PIPING INC

Receive Dt:	20000721
Generator Code Description:	Small Quantity Generator
Handler Name:	UNITED PIPING INC

22	*1 of2*	*ESE*	*0.24 / 1,279.52*	*1,392.27 / 21*	***Drywall Supply 4424 Venture Ave Duluth MN 55811***	***AST***

Agency Interest ID:	134996	***AI Name (Map):***	Drywall Supply
Tank Type:	Aboveground Storage Tank	***Address1 (Map):***	4424 Venture Ave
AI Name:	Drywall Supply	***Address2 (Map):***	
Address1:	4424 Venture Ave	***City (Map):***	Duluth
Address2:		***State (Map):***	MN
Address3:		***Zip (Map):***	55811
City:	Duluth	***Owner:***	Curtis Oil
County:	St. Louis	***Owner Address:***	4985 Miller Trunk Highway
State:	MN	***Owner City:***	Hermantown
Zip:	55811	***Owner State:***	MN
Location Description:		***Owner Zip:***	55811
Data Source:	Minnesota Pollution Control Agency Tank Sites; Minnesota Pollution Control Agency Regulated Tank Systems		

Tank Information

Tank Site ID:	TS0125273	***Latitude:***	46.8340156
Tank ID:	134996-EQUI0000000001	***Longitude:***	-92.17159518
Tank Status:	Active	***Contractor of Tank:***	
Install Date:		***Tribal Land:***	
Status Change Date:			
Primary Naics:			
Primary Sic:			
Subject Item Description:			
Tanks URL:	https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0125273		
Coord Collect Meth Desc:	Address Matching House Number		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

On Tribal Land: N

Compartment Information

Compartment ID: 134996-EQUI0000000001-1
Compartment No: 1
Tank Wall Type: Double
Tank Material: Carbon steel
Subject Item Designation: 2014
Overfill Prevention System: AST Level 1 (High level alarm only)
Programs: AT
Capacity (gal): 1000
Cathodic Prot Sys:
Special Use Desc:

Pipe Information

Pipe Wall Type:
Pipe Leak Detection:
Pipe Material:
Pipe Corrosion Protection:
Stored Product: Diesel Fuel
Tank Leak Detection:
Vapor Recovery Flag:

MPCA Map Regulated Tank Systems

Item ID: 134996-EQUI0000000001
Int Doc ID: 0
Spatial ID:
SI Type: ABOV
SI Cat: EQUI
SI ID: 1
SI Cat Desc: Equipment
SI Type Desc: Aboveground Storage Tank
SI Designation: 2014
Status Desc: Active / Existing
Status Dt: 2010-01-28 15:32:04 UTC
Install Dt:
AI Prg Code: AT
AI Program: Aboveground Tanks
Compartments:
Substance: Diesel Fuel
Capacity: 1000
County: St. Louis
Latitude: 46.8340156
Longitude: -92.17159518
Point X: -92.17159518031487
Point Y: 46.83401560018154
Description:
Overfill Prevent Desc: AST Level 1 (High level alarm only)
Loc Desc:
CTU Name: Duluth
Cong Dist: 8
House Dist: 8B
Senate Dist: 8
Huc 8: 04010201
Huc 8 Name: St. Louis River
Huc10: 0401020116
Huc12: 040102011604
Huc12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
TRDSQQ:
Pls Twsp:
Range :
Range Dir:
Section:
Quarters:
Method Desc: Address Matching House Number
Ref Desc: General Location

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
22	2 of2	ESE	0.24 / 1,279.52	1,392.27 / 21	Drywall Supply 4424 Venture Ave Duluth MN 55811	MPCA AI

Agency Interest ID: 134996
Name (Map): Drywall Supply
Address (Map): 4424 Venture Ave
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.8340613
Longitude (Map): -92.171556
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Drywall Supply
Address (Site): 4424 Venture Ave
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.8340613

Longitude (Site):	-92.171556
County (Site):	St. Louis
Name (Req):	Drywall Supply
Address (Req):	4424 Venture Ave
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8340613
Longitude (Req):	-92.171556
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	134996-AISI0000134996	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Aboveground Tanks	**SI ID:**	134996
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	1/28/2010	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	57491196	**User Updt:**	spatial_
Name:	Drywall Supply		
Program List:	AT		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	TS0125273	**Cong Distr:**	8
Program Co:	TL	**Senate Dis:**	8
Program Name:	Tanks	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Duluth	**Latitude:**	46.8340613
County:	St. Louis	**Longitude:**	-92.171556
Activity:	Aboveground Tanks		
Addr St:	4424 Venture Ave		
Addr City:	Duluth		
MPCA ID List:	TS0125273		
Program 1:	Tanks		
Name:	Drywall Supply		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Aboveground Tanks		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/134996		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Agency Interests: File Request Details

Item ID:	134996-AISI0000134996	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Aboveground Tanks	***SI ID:***	134996
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	8B
Section:		***Senate Dist:***	8
Quarters:		***TRDSQQ:***	
Collection Date:	9/27/2015	***Ref Code:***	GEN
Tmsp Created:	1/28/2010	***Ref Desc:***	General Location
User Created:	DELTA_M_R1	***Verified:***	No
Tmsp Updt:	4/26/2016	***User Updt:***	spatial_
Spatial ID:	57491196		
Name:	Drywall Supply		
Program List:	AT		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

23	***1 of1***	***ESE***	***0.27 / 1,418.47***	***1,369.06 / -2***	***Mellin Promotional 4531 Airpark Blvd Duluth MN 55811***	***MPCA AI***

Agency Interest ID:	15928
Name (Map):	Mellin Promotional
Address (Map):	4531 Airpark Blvd
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8333117
Longitude (Map):	-92.1693908
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Mellin Promotional
Address (Site):	4531 Airpark Blvd
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811-5737
Latitude (Site):	46.8333117
Longitude (Site):	-92.1693908
County (Site):	St. Louis
Name (Req):	Mellin Promotional
Address (Req):	4531 Airpark Blvd
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8333117
Longitude (Req):	-92.1693908
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	15928-AISI0000015928	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	2011-12-01 00:00:00	***SI Cat:***	AISI
Program:	Hazardous Waste	***SI ID:***	15928
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	8B
Quarters:		***Senate Dist:***	8
Collection Date:	1/6/2026	***TRDSQQ:***	
Tmsp Created:	7/26/1999	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	1/6/2026	***Verified:***	No
Spatial ID:	19394	***User Updt:***	geo_nc
Name:	Mellin Promotional		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	DP		
Method Desc:	Digitized - MPCA online map		

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	MND006181077	***Cong Distr:***	8
Program Co:	HW	***Senate Dis:***	8
Program Name:	Hazardous Waste	***House Dist:***	8B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811-5737	***Coord Coll:***	DP
City:	Duluth	***Latitude:***	46.8333117
County:	St. Louis	***Longitude:***	-92.1693908
Activity:	Hazardous Waste, One time generator		
Addr St:	4531 Airpark Blvd		
Addr City:	Duluth		
MPCA ID List:	MND006181077		
Program 1:	Hazardous Waste		
Name:	Mellin Promotional		
Watershed :	St. Louis River		
Coord Co 1:	Digitized - MPCA online map		
Activity L:	Hazardous Waste, One time generator		
Industrial:	Business Associations		
Site URL:	https://webapp.pca.state.mn.us/wimn/site/15928		

Agency Interests: File Request Details

Item ID:	15928-AISI0000015928	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	12/1/2011	***SI Cat:***	AISI
Program:	Hazardous Waste	***SI ID:***	15928
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	8B
Section:		***Senate Dist:***	8

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Quarters:		**TRDSQQ:**	
Collection Date:	1/6/2026	**Ref Code:**	GEN
Tmsp Created:	7/26/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	1/6/2026	**User Updt:**	geo_nc
Spatial ID:	19394		
Name:	Mellin Promotional		
Program List:	HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	DP		
Method Desc:	Digitized - MPCA online map		

24	1 of3	SSE	0.29 / 1,516.83	1,360.08 / -11	**Const & Indust Services Inc** **4418 Haines Rd Ste 1500** **Duluth MN 55811**	MPCA AI

Agency Interest ID:	30099
Name (Map):	Const & Indust Services Inc
Address (Map):	4418 Haines Rd Ste 1500
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8328511
Longitude (Map):	-92.1744471
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Const & Indust Services Inc
Address (Site):	4418 Haines Rd Ste 1500
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811-1526
Latitude (Site):	46.8328511
Longitude (Site):	-92.1744471
County (Site):	St. Louis
Name (Req):	Const & Indust Services Inc
Address (Req):	4418 Haines Rd Ste 1500
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8328511
Longitude (Req):	-92.1744471
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	30099-AISI0000030099	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2000-02-14 00:00:00	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	30099
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8

Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	4/7/2016	**TRDSQQ:**	
Tmsp Created:	7/26/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	20053	**User Updt:**	spatial_
Name:	Const & Indust Services Inc		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	MNR000061341	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	8
Program Name:	Hazardous Waste	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-1526	**Coord Coll:**	A1
City:	Duluth	**Latitude:**	46.8328511
County:	St. Louis	**Longitude:**	-92.1744471
Activity:	Hazardous Waste		
Addr St:	4418 Haines Rd Ste 1500		
Addr City:	Duluth		
MPCA ID List:	MNR000061341		
Program 1:	Hazardous Waste		
Name:	Const & Indust Services Inc		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Hazardous Waste		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/30099		

Agency Interests: File Request Details

Item ID:	30099-AISI0000030099	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2/14/2000	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	30099
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	4/7/2016	**Ref Code:**	GEN
Tmsp Created:	7/26/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	20053		
Name:	Const & Indust Services Inc		
Program List:	HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
SI Type Desc:		Conventional Site				
DWSMA Code:						
DWSMA Name:						
Method Code:		A1				
Method Desc:		Address Matching House Number				
24	2 of3	SSE	0.29 / 1,516.83	1,360.08 / -11	Vishay HiRel Systems LLC - Duluth 4418 Haines Rd Duluth MN 55811	MPCA AI

Agency Interest ID:	123684
Name (Map):	Vishay HiRel Systems LLC - Duluth
Address (Map):	4418 Haines Rd
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8323867
Longitude (Map):	-92.17366135
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Vishay HiRel Systems LLC - Duluth
Address (Site):	4418 Haines Rd
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811-1514
Latitude (Site):	46.8323867
Longitude (Site):	-92.17366135
County (Site):	St. Louis
Name (Req):	Vishay HiRel Systems LLC - Duluth
Address (Req):	4418 Haines Rd
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8323867
Longitude (Req):	-92.17366135
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	123684-AISI0000123684	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	123684
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:	050	**Description:**	
Range :	14	**SI Designation:**	
Range Dir:	W	**Cong Dist:**	8
Section:	07	**House Dist:**	8B
Quarters:	b	**Senate Dist:**	8
Collection Date:	1/29/2020	**TRDSQQ:**	05014207b
Tmsp Created:	8/8/2008	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	1/29/2020	**Verified:**	No
Spatial ID:	54752636	**User Updt:**	geo_nc
Name:	Vishay HiRel Systems LLC - Duluth		
Program List:	HW, IS		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

My Neighborhood Site Details

Active FLA: Yes
MPCA ID: Multiple IDs
Program Co: HW; PP; ST
Program Name: Multiple Programs
Address: MN
Addr ZIP: 55811-1514
City: Duluth
County: St. Louis
HUC 8: 04010201
Cong Distr: 8
Senate Dis: 8
House Dist: 8B
IC Flag: No
Coord Coll: A1
Latitude: 46.8323867
Longitude: -92.17366135
Activity: Multiple Activities
Addr St: 4418 Haines Rd
Addr City: Duluth
MPCA ID List: 5581WHRLSY4418H; MNRNE3365; MNRNE3847; MNS000144006
Program 1: Hazardous Waste; Pollution Prevention; Stormwater
Name: Vishay HiRel Systems LLC - Duluth
Watershed : St. Louis River
Coord Co 1: Address Matching House Number
Activity L: Hazardous Waste, Very small quantity generator; Industrial Stormwater; Toxics Reduction
Industrial: Capacitor, Resistor, Coil, Transformer, and Other Inductor Manufacturing
Site URL: https://webapp.pca.state.mn.us/wimn/site/123684

Agency Interests: File Request Details

Item ID: 123684-AISI0000123684
Status: Active
Status Date:
Program: Multiple Programs
CTU Code: 239456
CTU Name: Duluth
PLS Twsp: 50
Range : 14
Range Dir: W
Section: 7
Quarters: b
Collection Date: 1/29/2020
Tmsp Created: 8/8/2008
User Created: DELTA_M_R1
Tmsp Updt: 1/29/2020
Spatial ID: 54752636
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 123684
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 8B
Senate Dist: 8
TRDSQQ: 05014207b
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: geo_nc
Name: Vishay HiRel Systems LLC - Duluth
Program List: HW, IS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

24	3 of3	SSE	0.29 / 1,516.83	1,360.08 / -11	Western States Fire Products 4418 Haines Rd Ste 600 Duluth MN 55811	MPCA AI

Agency Interest ID: 27998
Name (Map): Western States Fire Products

Address (Map):	4418 Haines Rd Ste 600
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8328511
Longitude (Map):	-92.1744471
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Western States Fire Products
Address (Site):	4418 Haines Rd Ste 600
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811-1514
Latitude (Site):	46.8328511
Longitude (Site):	-92.1744471
County (Site):	St. Louis
Name (Req):	Western States Fire Products
Address (Req):	4418 Haines Rd Ste 600
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8328511
Longitude (Req):	-92.1744471
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	27998-AISI0000027998	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	1999-07-27 00:00:00	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	27998
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	4/7/2016	**TRDSQQ:**	
Tmsp Created:	7/26/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	17970	**User Updt:**	spatial_
Name:	Western States Fire Products		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	148163280	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	8
Program Name:	Hazardous Waste	**House Dist:**	8B
Address:	MN	**IC Flag:**	No

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Addr ZIP:	55811-1514	**Coord Coll:**	A1
City:	Duluth	**Latitude:**	46.8328511
County:	St. Louis	**Longitude:**	-92.1744471
Activity:	Hazardous Waste		
Addr St:	4418 Haines Rd Ste 600		
Addr City:	Duluth		
MPCA ID List:	148163280		
Program 1:	Hazardous Waste		
Name:	Western States Fire Products		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Hazardous Waste		
Industrial:	Construction Special Trade Contractors		
Site URL:	https://webapp.pca.state.mn.us/wimn/site/27998		

Agency Interests: File Request Details

Item ID:	27998-AISI0000027998	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	7/27/1999	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	27998
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	4/7/2016	**Ref Code:**	GEN
Tmsp Created:	7/26/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	17970		
Name:	Western States Fire Products		
Program List:	HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

25	*1 of1*	*WNW*	*0.30 / 1,580.45*	*1,412.00 / 41*	***2021 taxiway A reconstruction Duluth Airport Duluth MN 55811***	*MPCA AI*

Agency Interest ID:	251251
Name (Map):	2021 taxiway A reconstruction
Address (Map):	Duluth Airport
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.839967
Longitude (Map):	-92.18199
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	2021 taxiway A reconstruction
Address (Site):	Duluth Airport
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811

Latitude (Site):	46.839967
Longitude (Site):	-92.18199
County (Site):	St. Louis
Name (Req):	2021 taxiway A reconstruction
Address (Req):	Duluth Airport
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.839967
Longitude (Req):	-92.18199
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	251251-AISI0000251251	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	251251
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	4/14/2022	**TRDSQQ:**	
Tmsp Created:	4/15/2022	**Ref Code:**	CEN
User Created:	RSP	**Ref Desc:**	Center of Feature Represented
Tmsp Updt:	4/24/2023	**Verified:**	No
Spatial ID:		**User Updt:**	WO_2132805

Name:	2021 taxiway A reconstruction
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	DP
Method Desc:	Digitized - MPCA online map

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00063455	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	8
Program Name:	Stormwater	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	DP
City:	Duluth	**Latitude:**	46.839967
County:	St. Louis	**Longitude:**	-92.18199

Activity:	Construction Stormwater
Addr St:	Duluth Airport
Addr City:	Duluth
MPCA ID List:	C00063455
Program 1:	Stormwater
Name:	2021 taxiway A reconstruction
Watershed :	St. Louis River
Coord Co 1:	Digitized - MPCA online map
Activity L:	Construction Stormwater
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/251251

Agency Interests: File Request Details

Item ID:	251251-AISI0000251251	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Const Stormwater	***SI ID:***	251251
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	8B
Section:		***Senate Dist:***	8
Quarters:		***TRDSQQ:***	
Collection Date:	4/14/2022	***Ref Code:***	CEN
Tmsp Created:	4/15/2022	***Ref Desc:***	Center of Feature Represented
User Created:	RSP	***Verified:***	No
Tmsp Updt:	4/24/2023	***User Updt:***	WO_2132805
Spatial ID:			
Name:	2021 taxiway A reconstruction		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	DP		
Method Desc:	Digitized - MPCA online map		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
26	1 of1	SE	0.30 / 1,602.99	1,368.11 / -3	North Country Business Prod 4602 Airpark Blvd Duluth MN 55811	MPCA AI

Agency Interest ID:	15647
Name (Map):	North Country Business Prod
Address (Map):	4602 Airpark Blvd
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8329801
Longitude (Map):	-92.1717364
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	North Country Business Prod
Address (Site):	4602 Airpark Blvd
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811-5751
Latitude (Site):	46.8329801
Longitude (Site):	-92.1717364
County (Site):	St. Louis
Name (Req):	North Country Business Prod
Address (Req):	4602 Airpark Blvd
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8329801
Longitude (Req):	-92.1717364
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14

Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	15647-AISI0000015647	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	1999-07-27 18:24:16	***SI Cat:***	AISI
Program:	Hazardous Waste	***SI ID:***	15647
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	8B
Quarters:		***Senate Dist:***	8
Collection Date:	9/27/2015	***TRDSQQ:***	
Tmsp Created:	7/26/1999	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	4/26/2016	***Verified:***	No
Spatial ID:	18760	***User Updt:***	spatial_
Name:	North Country Business Prod		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	713251668	***Cong Distr:***	8
Program Co:	HW	***Senate Dis:***	8
Program Name:	Hazardous Waste	***House Dist:***	8B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811-5751	***Coord Coll:***	A1
City:	Duluth	***Latitude:***	46.8329801
County:	St. Louis	***Longitude:***	-92.1717364
Activity:	Hazardous Waste		
Addr St:	4602 Airpark Blvd		
Addr City:	Duluth		
MPCA ID List:	713251668		
Program 1:	Hazardous Waste		
Name:	North Country Business Prod		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Hazardous Waste		
Industrial:	Calculating and Accounting Machines, Except Electronic Computers		
Site URL:	https://webapp.pca.state.mn.us/wimn/site/15647		

Agency Interests: File Request Details

Item ID:	15647-AISI0000015647	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	7/27/1999	***SI Cat:***	AISI
Program:	Hazardous Waste	***SI ID:***	15647
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	8B

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	7/26/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	18760		
Name:	North Country Business Prod		
Program List:	HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

27	**1 of4**	**ESE**	**0.30 / 1,607.34**	**1,388.45 / 17**	**Airpark Division 4503 Airpark Boulevard Duluth MN 55811**	**BROWNFIELDS**

Item ID:	187578-AREA0000000001	**Federal Reg:**	
Project ID:	VP10350	**Fed State Reg:**	
Project Type:	Brownfield Site	**Non Reg:**	
Project ID (RAP):		**SEMS?:**	
Project Type (RAP):		**NPL:**	
Site Status:	Closed	**Unpermitted Dump?:**	
Perm List of Prior?:		**Latitude:**	46.83321381
Petrol Brownfield?:		**Longitude:**	-92.16780853
VIC Site?:	Yes	**County (RAP):**	
Sf Voluntary:		**Latitude (RAP):**	
Inst Controls?:		**Longitude (RAP):**	
State Reg:			
Project Name:	Airpark Division		
Site Address 1:	4503 Airpark Boulevard		
Site Address 2:			
Site City:	Duluth		
Site State:	MN		
Site Zip:	55811		
Site County:	St. Louis		
Project Name(RAP):			
Address1 (RAP):			
Address2(RAP):			
City (RAP):			
State (RAP):			
Zip (RAP):			
Project Managers:	Jane Mosel (no longer at MPCA)		
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

Activity ID:	187578	**DWSMA Name:**	
AI Name:	Airpark Division	**Cong Dist:**	8
SI ID:	1	**House Dist:**	8B
SI Cat:	AREA	**Senate Dis:**	8
SI Type:	BROW	**HUC 8:**	04010201
Site Type:	CON	**HUC 10:**	0401020116
Acreage:	2.60	**HUC 12:**	040102011604
HRS Score:		**DWSMA Code:**	
Score Year:		**Method Des:**	Digitized-DRG
MNTBA:			
Loc Desc:	--2.6 acre vacant lot with evidence of filling. Located at 4503 Airpoark Boulevard in Duluth, MN		
HUC 8 Name:	St. Louis River		

HUC 12 Name:	Saint Louis River
Hydrologist:	Mark Elliott (former)
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/187578

Spatial Remediation Activity

AI ID:	187578	**Site Start:**	1998-08-17 00:00:00
Site ID:	VP10350	**Remedy Imp:**	
SI ID:	1	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	1998-08-17 00:00:00
Site Close:	2000-10-07 00:00:00	**NPL List:**	
Leak Discovered:		**NPL Delete:**	
Leak Reported:		**PLP List:**	
Leak Reopened:		**PLP Delist:**	
Activity No:	1	**Staff Assi:**	1998-08-25 00:00:00
Activity ID:	SIW19980001	**FF Aproved:**	
Activity Type:	Brownfield Site	**FF Closed:**	
Activity Code:	SIW	**Inv Comple:**	
Activity Year:	1998	**App Comple:**	1998-08-25 00:00:00
Discovered:		**Er Site Ev:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
27	2 of4	ESE	0.30 / 1,607.34	1,388.45 / 17	**Airpark Division** **4503 Airpark Boulevard** **Duluth MN 55811**	MPCA AI

Agency Interest ID:	187578
Name (Map):	Airpark Division
Address (Map):	4503 Airpark Boulevard
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83321193
Longitude (Map):	-92.16780686
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	CSLL: Center of Site *** Note:many records provided by the department have a truncated LOC_DESC field.
Name (Site):	Airpark Division
Address (Site):	4503 Airpark Boulevard
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83321193
Longitude (Site):	-92.16780686
County (Site):	St. Louis
Name (Req):	Airpark Division
Address (Req):	4503 Airpark Boulevard
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	CSLL: Center of Site
Latitude (Req):	46.83321193
Longitude (Req):	-92.16780686
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	187578-AISI0000187578	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Brownfields	**SI ID:**	187578
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site

PLS Twsp:	050	**Description:**	
Range :	14	**SI Designation:**	
Range Dir:	W	**Cong Dist:**	8
Section:	07	**House Dist:**	8B
Quarters:	ba	**Senate Dist:**	8
Collection Date:	4/25/2016	**TRDSQQ:**	05014207ba
Tmsp Created:	11/9/2005	**Ref Code:**	GEN
User Created:	DELTA_M_R2	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	50646824	**User Updt:**	spatial_
Name:	Airpark Division		
Program List:	BV		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	I1		
Method Desc:	Digitized-DRG		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	VP10350	**Cong Distr:**	8
Program Co:	SR	**Senate Dis:**	8
Program Name:	Investigation and Cleanup	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	I1
City:	Duluth	**Latitude:**	46.83321193
County:	St. Louis	**Longitude:**	-92.16780686
Activity:	Brownfields, Voluntary Investigation and Cleanup		
Addr St:	4503 Airpark Boulevard		
Addr City:	Duluth		
MPCA ID List:	VP10350		
Program 1:	Investigation and Cleanup		
Name:	Airpark Division		
Watershed :	St. Louis River		
Coord Co 1:	Digitized-DRG		
Activity L:	Brownfields, Voluntary Investigation and Cleanup		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/187578		

Agency Interests: File Request Details

Item ID:	187578-AISI0000187578	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Brownfields	**SI ID:**	187578
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:	50	**SI Designation:**	
Range :	14	**Cong Dist:**	8
Range Dir:	W	**House Dist:**	8B
Section:	7	**Senate Dist:**	8
Quarters:	ba	**TRDSQQ:**	05014207ba
Collection Date:	4/25/2016	**Ref Code:**	GEN
Tmsp Created:	11/9/2005	**Ref Desc:**	General Location
User Created:	DELTA_M_R2	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	50646824		
Name:	Airpark Division		
Program List:	BV		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: I1
Method Desc: Digitized-DRG

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
27	3 of4	ESE	0.30 / 1,607.34	1,388.45 / 17	Barr Engineering Co (WDFO) 4503 Airpark Blvd Duluth MN 55811	MPCA AI

Agency Interest ID: 122513
Name (Map): Barr Engineering Co (WDFO)
Address (Map): 4503 Airpark Blvd
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.833893
Longitude (Map): -92.16982677
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Barr Engineering Co (WDFO)
Address (Site): 4503 Airpark Blvd
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811-5737
Latitude (Site): 46.833893
Longitude (Site): -92.16982677
County (Site): St. Louis
Name (Req): Barr Engineering Co (WDFO)
Address (Req): 4503 Airpark Blvd
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.833893
Longitude (Req): -92.16982677
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 122513-AISI0000122513
Status: Active
Status Date:
Program: Multiple Programs
CTU Code: 239456
CTU Name: Duluth
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 5/12/2025
Tmsp Created: 9/4/2008
User Created: DELTA_M_R1
Tmsp Updt: 5/12/2025
Spatial ID: 54937809
Name: Barr Engineering Co (WDFO)
Program List: CS, HW
HUC 8: 04010201
HUC 8 Name: St. Louis River

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 122513
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 8B
Senate Dist: 8
TRDSQQ:
Ref Code: ENT
Ref Desc: Primary Entrance
Verified: No
User Updt: geo_nc

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: DP
Method Desc: Digitized - MPCA online map

My Neighborhood Site Details

Active FLA: Yes
MPCA ID: Multiple IDs
Program Co: HW; ST
Program Name: Multiple Programs
Address: MN
Addr ZIP: 55811-5737
City: Duluth
County: St. Louis
Activity: Multiple Activities
Addr St: 4503 Airpark Blvd
Addr City: Duluth
MPCA ID List: C00026461; MNS000359880
Program 1: Hazardous Waste; Stormwater
Name: Barr Engineering Co (WDFO)
Watershed : St. Louis River
Coord Co 1: Digitized - MPCA online map
Activity L: Construction Stormwater; Hazardous Waste, Minimal quantity generator
Industrial: Engineering Services
Site URL: https://webapp.pca.state.mn.us/wimn/site/122513

HUC 8: 04010201
Cong Distr: 8
Senate Dis: 8
House Dist: 8B
IC Flag: No
Coord Coll: DP
Latitude: 46.833893
Longitude: -92.16982677

Agency Interests: File Request Details

Item ID: 122513-AISI0000122513
Status: Active
Status Date:
Program: Multiple Programs
CTU Code: 239456
CTU Name: Duluth
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 5/12/2025
Tmsp Created: 9/4/2008
User Created: DELTA_M_R1
Tmsp Updt: 5/12/2025
Spatial ID: 54937809
Name: Barr Engineering Co (WDFO)
Program List: CS, HW
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: DP
Method Desc: Digitized - MPCA online map

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 122513
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 8B
Senate Dist: 8
TRDSQQ:
Ref Code: ENT
Ref Desc: Primary Entrance
Verified: No
User Updt: geo_nc

27	4 of4	ESE	0.30 / 1,607.34	1,388.45 / 17	Airpark Division 4503 Airpark Boulevard Duluth MN 55811	VIC

Item ID:	187578-AREA0000000001	**Unpermitted Dump?:**	
Project ID:	VP10350	**State Reg:**	
Project Type:	Brownfield Site	**Federal Reg:**	
Project ID (RAP):		**Fed State Reg:**	
Project Type (RAP):		**Non Reg:**	
Site Status:	Closed	**NPL:**	
Perm List of Prio?:		**Site County:**	St. Louis
Petrol Brownfield?:		**County (RAP):**	
VIC Site?:	Yes	**Latitude:**	46.83321381
Sf Voluntary:		**Longitude:**	-92.16780853
Inst Controls?:		**Latitude (RAP):**	
SEMS?:		**Longitude (RAP):**	
Project Name:	Airpark Division		
Project Managers:	Jane Mosel (no longer at MPCA)		
Site Address 1:	4503 Airpark Boulevard		
Site Address 2:			
Site City:	Duluth		
Site State:	MN		
Site Zip:	55811		
Project Name(RAP):			
Address1 (RAP):			
Address2(RAP):			
City (RAP):			
State (RAP):			
Zip (RAP):			
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

Activity ID:	187578	**Object ID:**	799
SI ID:	1	**Cong Dist:**	8
SI Cat:	AREA	**House Dist:**	8B
SI Type:	BROW	**Senate Dis:**	8
Site Type:	CON	**HUC 8:**	04010201
Acreage:	2.60	**HUC 10:**	0401020116
HRS Score:		**HUC 12:**	040102011604
Score Year:		**Gdb Geomattr Data:**	
DWSMA Code:		**MNTBA:**	
AI Name:	Airpark Division		
Hydrologists:	Mark Elliott (former)		
DWSMA Name:			
HUC 8 Name:	St. Louis River		
HUC 12 Name:	Saint Louis River		
Method Desc:	Digitized-DRG		
Loc Desc:	--2.6 acre vacant lot with evidence of filling. Located at 4503 Airpoark Boulevard in Duluth, MN		
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/187578		

Spatial Remediation Activity

AI ID:	187578	**Object ID:**	24090
Site ID:	VP10350	**Remedy Imp:**	
SI ID:	1	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	1998-08-17 00:00:00
Site Start:	1998-08-17 00:00:00	**NPL List:**	
Site Close:	2000-10-07 00:00:00	**NPL Delete:**	
Leak Discovered:		**PLP List:**	
Leak Reported:		**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	1998-08-25 00:00:00
Activity No:	1	**FF Aproved:**	
Activity ID:	SIW19980001	**FF Closed:**	
Activity Type:	Brownfield Site	**Inv Comple:**	
Activity Code:	SIW	**App Comple:**	1998-08-25 00:00:00
Activity Year:	1998	**Er Site Ev:**	
Discovered:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
28	1 of1	WNW	0.32 / 1,670.49	1,412.91 / 42	Minnesota Pollution Control Agency - Ambient Surface Water MN	PFAS WATER

Organization: Minnesota Pollution Control Agency - Ambient Surface Water
Monitoring Location Identifier: MNPCA-LD00584
Latitude: 46.8402180000
Longitude: -92.1821570000
State Territory or Tribe: MN
State Other:
Provider: STORET
EPA Region: 05
Huc:
Ejscreen Report:
Count: 1

Project Detail(s)

Activity Identifier: MNPCA-LD00584.2112070007.000ST
Location Name: Duluth Airport Study Area
Fish Species:
Environmental Media Name: Tissue
Activity Type Code: Sample-Routine
Project Identifier: PRJ08167
Project Name: Minnesota DNR PFAS in White-tailed deer livers/waterfowl
Project File Url:
Year: 2021
Qapp Approval Agency Name:
Qapp Approved: No

Sample Result(s)

Pfas Chemical Name: Perfluoropentanesulfonate
Cas No: 175905-36-9
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.585
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorododecanesulfonate
Cas No: 343629-43-6
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.585
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:

Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoro-3,6-dioxaheptanoic acid
Cas No: 151772-58-6
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.17
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name: FtS 4:2 ion
Cas No: 414911-30-1
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 2.34
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: 9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid
Cas No: -
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 2.34
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorononanoic acid
Cas No: 375-95-1

Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.585
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorobutanoate
Cas No: 45048-62-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 2.34
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorooctanoic acid
Cas No: 335-67-1
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.585
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoro-3-methoxypropanoic acid
Cas No: 377-73-1
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.17

Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	3:3 Fluorotelomer carboxylate, ion(1-)
Cas No:	1169706-83-5
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	2.34
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorotridecanoic acid
Cas No:	72629-94-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.585
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	FtS 6:2 ion
Cas No:	425670-75-3
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	1890
Result Measure Value:	1.890000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (B,J)

Sample Result(s)

Pfas Chemical Name:	Perfluorotetradecanoic acid
Cas No:	376-06-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.585
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	2-(N-methylperfluoro-1-octanesulfonamido)-ethanol
Cas No:	24448-09-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	5.85
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name:	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
Cas No:	763051-92-9
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	2.34
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Decanoic acid, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-pentadecafluoro-
Cas No:	812-70-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-

Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	14.6
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorododecanoic acid
Cas No:	307-55-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.585
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorohexanoic acid
Cas No:	307-24-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.585
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Sulfluramid
Cas No:	4151-50-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.673
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	

Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorohexanesulfonate
Cas No: 108427-53-8
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.585
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: FtS 8:2 ion
Cas No: 481071-78-7
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 2.34
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoroheptanesulfonate
Cas No: 146689-46-5
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.585
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: 1-Decanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heneicosafluoro-
Cas No: 335-77-3

Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.585
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoroheptanoic acid
Cas No:	375-85-9
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.585
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	N-methylperfluoro-1-octanesulfonamide
Cas No:	31506-32-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.585
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorobutanesulfonate
Cas No:	45187-15-3
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.585

Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	N-Ethyl-N-(2-hydroxyethyl)perfluorooctanesulfonamide
Cas No:	1691-99-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	4.39
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name:	N-methyl perfluorooctanesulfonamidoacetic acid
Cas No:	2355-31-9
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.585
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	2H,2H,3H,3H-Perfluorooctanoate
Cas No:	1799325-94-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	14.6
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Hexafluoropropylene oxide dimer acid
Cas No:	13252-13-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	2.22
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorooctanesulfonate
Cas No:	45298-90-6
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	1500
Result Measure Value:	1.500000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	

Sample Result(s)

Pfas Chemical Name:	Perfluoro(4-methoxybutanoic) acid
Cas No:	863090-89-5
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.585
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorooctanesulfonamide
Cas No:	754-91-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-

Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.585
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: N-ethyl perfluorooctanesulfonamidoacetic acid
Cas No: 2991-50-6
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.585
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoro(2-ethoxyethane)sulfonic acid
Cas No: 113507-82-7
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.585
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorovaleric acid
Cas No: 2706-90-3
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.17
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:

Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorodecanoic acid
Cas No: 335-76-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.585
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoroundecanoate
Cas No: 196859-54-8
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.585
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Ammonium 4,8-dioxa-3H-perfluorononanoate
Cas No: 958445-44-8
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 2.34
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorononanesulfonate
Cas No: 474511-07-4

Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.585
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Project Detail(s)

Activity Identifier:	MNPCA-LD00584.2112070011.000ST
Location Name:	Duluth Airport Study Area
Fish Species:	
Environmental Media Name:	Tissue
Activity Type Code:	Sample-Routine
Project Identifier:	PRJ08167
Project Name:	Minnesota DNR PFAS in White-tailed deer livers/waterfowl
Project File Url:	
Year:	2021
Qapp Approval Agency Name:	
Qapp Approved:	No

Sample Result(s)

Pfas Chemical Name:	Perfluorodecanoic acid
Cas No:	335-76-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Hexafluoropropylene oxide dimer acid
Cas No:	13252-13-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.49
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;

Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorovaleric acid
Cas No: 2706-90-3
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.784
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: FtS 6:2 ion
Cas No: 425670-75-3
Act Media Subdiv Nm: Unknown
Result Detection: PFAS Detected
Result Measure Value Ppt: 836
Result Measure Value: 0.836000
Result Unit of Measure: ng/g
Detection Quantitation Limit T:
Detection Quantitation Measure:
Detection Quantitation Unit Of:
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (B,J)

Sample Result(s)

Pfas Chemical Name: 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol
Cas No: 24448-09-7
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 3.92
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name: Decanoic acid, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-pentadecafluoro-
Cas No: 812-70-4
Act Media Subdiv Nm: Unknown

Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	9.8
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorooctanoic acid
Cas No:	335-67-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	N-methylperfluoro-1-octanesulfonamide
Cas No:	31506-32-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	N-Ethyl-N-(2-hydroxyethyl)perfluorooctanesulfonamide
Cas No:	1691-99-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	2.94
Detection Quantitation Unit Of:	ng/g

Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name: Perfluorohexanoic acid
Cas No: 307-24-4
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: .392
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorononanesulfonate
Cas No: 474511-07-4
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: .392
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Sulfluramid
Cas No: 4151-50-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.451
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorohexanesulfonate
Cas No:	108427-53-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoro-3,6-dioxaheptanoic acid
Cas No:	151772-58-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.784
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name:	Perfluoropentanesulfonate
Cas No:	175905-36-9
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorotetradecanoic acid
Cas No:	376-06-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	

Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorobutanesulfonate
Cas No:	45187-15-3
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid
Cas No:	-
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.57
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
Cas No:	763051-92-9
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.57
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;

Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorotridecanoic acid
Cas No: 72629-94-8
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: .392
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: 1-Decanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heneicosafluoro-
Cas No: 335-77-3
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: .392
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorooctanesulfonamide
Cas No: 754-91-6
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: .392
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoroundecanoate
Cas No: 196859-54-8
Act Media Subdiv Nm: Unknown

Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	FtS 4:2 ion
Cas No:	414911-30-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.57
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorododecanesulfonate
Cas No:	343629-43-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Ammonium 4,8-dioxa-3H-perfluorononanoate
Cas No:	958445-44-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.57
Detection Quantitation Unit Of:	ng/g

Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: FtS 8:2 ion
Cas No: 481071-78-7
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.57
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: N-ethyl perfluorooctanesulfonamidoacetic acid
Cas No: 2991-50-6
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: .392
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorooctanesulfonate
Cas No: 45298-90-6
Act Media Subdiv Nm: Unknown
Result Detection: PFAS Detected
Result Measure Value Ppt: 751
Result Measure Value: 0.751000
Result Unit of Measure: ng/g
Detection Quantitation Limit T:
Detection Quantitation Measure:
Detection Quantitation Unit Of:
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:

Sample Result(s)

Pfas Chemical Name: 3:3 Fluorotelomer carboxylate, ion(1-)
Cas No: 1169706-83-5
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.57
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoroheptanesulfonate
Cas No: 146689-46-5
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: .392
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoro-3-methoxypropanoic acid
Cas No: 377-73-1
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.784
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoro(2-ethoxyethane)sulfonic acid
Cas No: 113507-82-7
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:

Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	2H,2H,3H,3H-Perfluorooctanoate
Cas No:	1799325-94-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	9.8
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoro(4-methoxybutanoic) acid
Cas No:	863090-89-5
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorononanoic acid
Cas No:	375-95-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;

Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorobutanoate
Cas No: 45048-62-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.57
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoroheptanoic acid
Cas No: 375-85-9
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: .392
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorododecanoic acid
Cas No: 307-55-1
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: .392
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: N-methyl perfluorooctanesulfonamidoacetic acid
Cas No: 2355-31-9
Act Media Subdiv Nm: Unknown

Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Project Detail(s)

Activity Identifier:	MNPCA-LD00584.2112070012.000ST
Location Name:	Duluth Airport Study Area
Fish Species:	
Environmental Media Name:	Tissue
Activity Type Code:	Sample-Routine
Project Identifier:	PRJ08167
Project Name:	Minnesota DNR PFAS in White-tailed deer livers/waterfowl
Project File Url:	
Year:	2021
Qapp Approval Agency Name:	
Qapp Approved:	No

Sample Result(s)

Pfas Chemical Name:	Perfluorotetradecanoic acid
Cas No:	376-06-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	N-ethyl perfluorooctanesulfonamidoacetic acid
Cas No:	2991-50-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Sulfluramid
Cas No:	4151-50-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.451
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoroundecanoate
Cas No:	196859-54-8
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	101
Result Measure Value:	0.101000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (B,J)

Sample Result(s)

Pfas Chemical Name:	Ammonium 4,8-dioxa-3H-perfluorononanoate
Cas No:	958445-44-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.57
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	FtS 4:2 ion
Cas No:	414911-30-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit

Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.57
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorodecanoic acid
Cas No: 335-76-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: .392
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Decanoic acid, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-pentadecafluoro-
Cas No: 812-70-4
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 9.8
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorobutanesulfonate
Cas No: 45187-15-3
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: .392
Detection Quantitation Unit Of: ng/g
Analytical Method:

Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: 2H,2H,3H,3H-Perfluorooctanoate
Cas No: 1799325-94-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 9.8
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoropentanesulfonate
Cas No: 175905-36-9
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: .392
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: N-Ethyl-N-(2-hydroxyethyl)perfluorooctanesulfonamide
Cas No: 1691-99-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 2.94
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name:	Perfluorooctanoic acid
Cas No:	335-67-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	FtS 8:2 ion
Cas No:	481071-78-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.57
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoroheptanoic acid
Cas No:	375-85-9
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorooctanesulfonamide
Cas No:	754-91-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit

Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorotridecanoic acid
Cas No:	72629-94-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoroheptanesulfonate
Cas No:	146689-46-5
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorododecanoic acid
Cas No:	307-55-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoro-3-methoxypropanoic acid
Cas No:	377-73-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.784
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	N-methylperfluoro-1-octanesulfonamide
Cas No:	31506-32-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
Cas No:	763051-92-9
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.57
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	N-methyl perfluorooctanesulfonamidoacetic acid
Cas No:	2355-31-9
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit

Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: .392
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorohexanesulfonate
Cas No: 108427-53-8
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: .392
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorobutanoate
Cas No: 45048-62-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.57
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoro(4-methoxybutanoic) acid
Cas No: 863090-89-5
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: .392
Detection Quantitation Unit Of: ng/g
Analytical Method:

Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	1-Decanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heneicosafluoro-
Cas No:	335-77-3
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	FtS 6:2 ion
Cas No:	425670-75-3
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	637
Result Measure Value:	0.637000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (B,J)

Sample Result(s)

Pfas Chemical Name:	Perfluoro-3,6-dioxaheptanoic acid
Cas No:	151772-58-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.784
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name:	Perfluorododecanesulfonate
Cas No:	343629-43-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorononanesulfonate
Cas No:	474511-07-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorovaleric acid
Cas No:	2706-90-3
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.784
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoro(2-ethoxyethane)sulfonic acid
Cas No:	113507-82-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit

Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Hexafluoropropylene oxide dimer acid
Cas No:	13252-13-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.49
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid
Cas No:	-
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.57
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	3:3 Fluorotelomer carboxylate, ion(1-)
Cas No:	1169706-83-5
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.57
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorooctanesulfonate
Cas No:	45298-90-6
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	991
Result Measure Value:	0.991000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	

Sample Result(s)

Pfas Chemical Name:	2-(N-methylperfluoro-1-octanesulfonamido)-ethanol
Cas No:	24448-09-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	3.92
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name:	Perfluorohexanoic acid
Cas No:	307-24-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorononanoic acid
Cas No:	375-95-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit

Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.392
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Project Detail(s)

Activity Identifier:	MNPCA-LD00584.2112070006.000ST
Location Name:	Duluth Airport Study Area
Fish Species:	
Environmental Media Name:	Tissue
Activity Type Code:	Sample-Routine
Project Identifier:	PRJ08167
Project Name:	Minnesota DNR PFAS in White-tailed deer livers/waterfowl
Project File Url:	
Year:	2021
Qapp Approval Agency Name:	
Qapp Approved:	No

Sample Result(s)

Pfas Chemical Name:	N-Ethyl-N-(2-hydroxyethyl)perfluorooctanesulfonamide
Cas No:	1691-99-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	3.71
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name:	Perfluoroheptanoic acid
Cas No:	375-85-9
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.495
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Ammonium 4,8-dioxa-3H-perfluorononanoate
Cas No:	958445-44-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.98
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	3:3 Fluorotelomer carboxylate, ion(1-)
Cas No:	1169706-83-5
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.98
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorotridecanoic acid
Cas No:	72629-94-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.495
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorohexanesulfonate
Cas No:	108427-53-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-

Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.495
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	N-ethyl perfluorooctanesulfonamidoacetic acid
Cas No:	2991-50-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.495
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Sulfluramid
Cas No:	4151-50-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.569
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoropentanesulfonate
Cas No:	175905-36-9
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.495
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	

Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: 1-Decanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heneicosafluoro-
Cas No: 335-77-3
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: .495
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: N-methyl perfluorooctanesulfonamidoacetic acid
Cas No: 2355-31-9
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: .495
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoro-3-methoxypropanoic acid
Cas No: 377-73-1
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.99
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoroundecanoate
Cas No: 196859-54-8

Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: .495
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Hexafluoropropylene oxide dimer acid
Cas No: 13252-13-6
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.88
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: 9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid
Cas No: -
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.98
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: 11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
Cas No: 763051-92-9
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.98

Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	2-(N-methylperfluoro-1-octanesulfonamido)-ethanol
Cas No:	24448-09-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	4.95
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name:	Perfluoro(2-ethoxyethane)sulfonic acid
Cas No:	113507-82-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.495
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorobutanoate
Cas No:	45048-62-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.98
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Decanoic acid, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-pentadecafluoro-
Cas No:	812-70-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	12.4
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorononanesulfonate
Cas No:	474511-07-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.495
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorododecanesulfonate
Cas No:	343629-43-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.495
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorotetradecanoic acid
Cas No:	376-06-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-

Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: .495
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: N-methylperfluoro-1-octanesulfonamide
Cas No: 31506-32-8
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: .495
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorohexanoic acid
Cas No: 307-24-4
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: .495
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoroheptanesulfonate
Cas No: 146689-46-5
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: .495
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:

Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorovaleric acid
Cas No: 2706-90-3
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.99
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoro(4-methoxybutanoic) acid
Cas No: 863090-89-5
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: .495
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorononanoic acid
Cas No: 375-95-1
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: .495
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorooctanesulfonamide
Cas No: 754-91-6

Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.495
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	2H,2H,3H,3H-Perfluorooctanoate
Cas No:	1799325-94-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	12.4
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	FtS 6:2 ion
Cas No:	425670-75-3
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	1960
Result Measure Value:	1.960000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (B)

Sample Result(s)

Pfas Chemical Name:	FtS 4:2 ion
Cas No:	414911-30-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.98

Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoro-3,6-dioxaheptanoic acid
Cas No:	151772-58-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.99
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name:	Perfluorooctanesulfonate
Cas No:	45298-90-6
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	1580
Result Measure Value:	1.580000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	

Sample Result(s)

Pfas Chemical Name:	FtS 8:2 ion
Cas No:	481071-78-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.98
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorobutanesulfonate
Cas No:	45187-15-3
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.495
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorododecanoic acid
Cas No:	307-55-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.495
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorooctanoic acid
Cas No:	335-67-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.495
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorodecanoic acid
Cas No:	335-76-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-

Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.495
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Project Detail(s)

Activity Identifier:	MNPCA-LD00584.2112070008.000ST
Location Name:	Duluth Airport Study Area
Fish Species:	
Environmental Media Name:	Tissue
Activity Type Code:	Sample-Routine
Project Identifier:	PRJ08167
Project Name:	Minnesota DNR PFAS in White-tailed deer livers/waterfowl
Project File Url:	
Year:	2021
Qapp Approval Agency Name:	
Qapp Approved:	No

Sample Result(s)

Pfas Chemical Name:	Perfluorododecanesulfonate
Cas No:	343629-43-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.372
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorooctanesulfonate
Cas No:	45298-90-6
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	11800
Result Measure Value:	11.800000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	

Sample Result(s)

Pfas Chemical Name: Perfluorooctanesulfonamide
Cas No: 754-91-6
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.372
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoroheptanesulfonate
Cas No: 146689-46-5
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.372
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: N-methyl perfluorooctanesulfonamidoacetic acid
Cas No: 2355-31-9
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.372
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoro-3-methoxypropanoic acid
Cas No: 377-73-1
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:

Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.744
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid
Cas No:	-
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.49
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	1-Decanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heneicosafluoro-
Cas No:	335-77-3
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.372
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorobutanesulfonate
Cas No:	45187-15-3
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.372
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;

Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: FtS 8:2 ion
Cas No: 481071-78-7
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.49
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorohexanesulfonate
Cas No: 108427-53-8
Act Media Subdiv Nm: Unknown
Result Detection: PFAS Detected
Result Measure Value Ppt: 1450
Result Measure Value: 1.450000
Result Unit of Measure: ng/g
Detection Quantitation Limit T:
Detection Quantitation Measure:
Detection Quantitation Unit Of:
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:

Sample Result(s)

Pfas Chemical Name: Perfluorovaleric acid
Cas No: 2706-90-3
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: .744
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: FtS 4:2 ion
Cas No: 414911-30-1
Act Media Subdiv Nm: Unknown

Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.49
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorododecanoic acid
Cas No:	307-55-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.372
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Hexafluoropropylene oxide dimer acid
Cas No:	13252-13-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.41
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Decanoic acid, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-pentadecafluoro-
Cas No:	812-70-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	9.3
Detection Quantitation Unit Of:	ng/g

Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorononanoic acid
Cas No: 375-95-1
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.372
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoro(2-ethoxyethane)sulfonic acid
Cas No: 113507-82-7
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.372
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorooctanoic acid
Cas No: 335-67-1
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.372
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	N-ethyl perfluorooctanesulfonamidoacetic acid
Cas No:	2991-50-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.372
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	N-methylperfluoro-1-octanesulfonamide
Cas No:	31506-32-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.372
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoro-3,6-dioxaheptanoic acid
Cas No:	151772-58-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.744
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name:	2H,2H,3H,3H-Perfluorooctanoate
Cas No:	1799325-94-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	

Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	9.3
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorotetradecanoic acid
Cas No:	376-06-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.372
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	3:3 Fluorotelomer carboxylate, ion(1-)
Cas No:	1169706-83-5
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.49
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	2-(N-methylperfluoro-1-octanesulfonamido)-ethanol
Cas No:	24448-09-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	3.72
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;

Result Comment: Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name: N-Ethyl-N-(2-hydroxyethyl)perfluorooctanesulfonamide
Cas No: 1691-99-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 2.79
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name: FtS 6:2 ion
Cas No: 425670-75-3
Act Media Subdiv Nm: Unknown
Result Detection: PFAS Detected
Result Measure Value Ppt: 1220
Result Measure Value: 1.220000
Result Unit of Measure: ng/g
Detection Quantitation Limit T:
Detection Quantitation Measure:
Detection Quantitation Unit Of:
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (B,J)

Sample Result(s)

Pfas Chemical Name: 11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
Cas No: 763051-92-9
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.49
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorodecanoic acid
Cas No: 335-76-2
Act Media Subdiv Nm: Unknown

Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.372
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorohexanoic acid
Cas No:	307-24-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.372
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Ammonium 4,8-dioxa-3H-perfluorononanoate
Cas No:	958445-44-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.49
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoroheptanoic acid
Cas No:	375-85-9
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.372
Detection Quantitation Unit Of:	ng/g

Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoroundecanoate
Cas No: 196859-54-8
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.372
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoropentanesulfonate
Cas No: 175905-36-9
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.372
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Sulfluramid
Cas No: 4151-50-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.428
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorobutanoate
Cas No:	45048-62-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.49
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorotridecanoic acid
Cas No:	72629-94-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.372
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorononanesulfonate
Cas No:	474511-07-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.372
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoro(4-methoxybutanoic) acid
Cas No:	863090-89-5
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	

Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.372
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Project Detail(s)

Activity Identifier:	MNPCA-LD00584.2112070010.000ST
Location Name:	Duluth Airport Study Area
Fish Species:	
Environmental Media Name:	Tissue
Activity Type Code:	Sample-Routine
Project Identifier:	PRJ08167
Project Name:	Minnesota DNR PFAS in White-tailed deer livers/waterfowl
Project File Url:	
Year:	2021
Qapp Approval Agency Name:	
Qapp Approved:	No

Sample Result(s)

Pfas Chemical Name:	FtS 8:2 ion
Cas No:	481071-78-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.58
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Ammonium 4,8-dioxa-3H-perfluorononanoate
Cas No:	958445-44-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.58
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorotridecanoic acid
Cas No:	72629-94-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorononanesulfonate
Cas No:	474511-07-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorooctanesulfonamide
Cas No:	754-91-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Decanoic acid, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-pentadecafluoro-
Cas No:	812-70-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit

Detection Quantitation Measure:	9.9
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorododecanoic acid
Cas No:	307-55-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Sulfluramid
Cas No:	4151-50-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.455
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	N-Ethyl-N-(2-hydroxyethyl)perfluorooctanesulfonamide
Cas No:	1691-99-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	2.97
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name:	9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid
Cas No:	-
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.58
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoro(2-ethoxyethane)sulfonic acid
Cas No:	113507-82-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	N-ethyl perfluorooctanesulfonamidoacetic acid
Cas No:	2991-50-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorononanoic acid
Cas No:	375-95-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit

Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	FtS 6:2 ion
Cas No:	425670-75-3
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	1080
Result Measure Value:	1.080000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (B,J)

Sample Result(s)

Pfas Chemical Name:	Perfluorotetradecanoic acid
Cas No:	376-06-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoroundecanoate
Cas No:	196859-54-8
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	162
Result Measure Value:	0.162000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	

Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (B,J)

Sample Result(s)

Pfas Chemical Name: Perfluorobutanoate
Cas No: 45048-62-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.58
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorohexanoic acid
Cas No: 307-24-4
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.396
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorooctanoic acid
Cas No: 335-67-1
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.396
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoro-3-methoxypropanoic acid
Cas No:	377-73-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.792
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoro-3,6-dioxaheptanoic acid
Cas No:	151772-58-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.792
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name:	Perfluorohexanesulfonate
Cas No:	108427-53-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	N-methylperfluoro-1-octanesulfonamide
Cas No:	31506-32-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit

Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	N-methyl perfluorooctanesulfonamidoacetic acid
Cas No:	2355-31-9
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
Cas No:	763051-92-9
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.58
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoroheptanesulfonate
Cas No:	146689-46-5
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorodecanoic acid
Cas No:	335-76-2
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	126
Result Measure Value:	0.126000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (J)

Sample Result(s)

Pfas Chemical Name:	Hexafluoropropylene oxide dimer acid
Cas No:	13252-13-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.51
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	2H,2H,3H,3H-Perfluorooctanoate
Cas No:	1799325-94-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	9.9
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorovaleric acid
Cas No:	2706-90-3
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit

Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.792
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorooctanesulfonate
Cas No:	45298-90-6
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	2210
Result Measure Value:	2.210000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	

Sample Result(s)

Pfas Chemical Name:	Perfluorobutanesulfonate
Cas No:	45187-15-3
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	1-Decanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heneicosafluoro-
Cas No:	335-77-3
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	

Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoroheptanoic acid
Cas No: 375-85-9
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.396
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorododecanesulfonate
Cas No: 343629-43-6
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.396
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: 3:3 Fluorotelomer carboxylate, ion(1-)
Cas No: 1169706-83-5
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.58
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoro(4-methoxybutanoic) acid
Cas No:	863090-89-5
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	2-(N-methylperfluoro-1-octanesulfonamido)-ethanol
Cas No:	24448-09-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	3.96
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name:	FtS 4:2 ion
Cas No:	414911-30-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.58
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoropentanesulfonate
Cas No:	175905-36-9
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit

Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Project Detail(s)

Activity Identifier:	MNPCA-LD00584.2112070004.000ST
Location Name:	Duluth Airport Study Area
Fish Species:	
Environmental Media Name:	Tissue
Activity Type Code:	Sample-Routine
Project Identifier:	PRJ08167
Project Name:	Minnesota DNR PFAS in White-tailed deer livers/waterfowl
Project File Url:	
Year:	2021
Qapp Approval Agency Name:	
Qapp Approved:	No

Sample Result(s)

Pfas Chemical Name:	Perfluorododecanoic acid
Cas No:	307-55-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.486
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoroheptanesulfonate
Cas No:	146689-46-5
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.486
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	2-(N-methylperfluoro-1-octanesulfonamido)-ethanol

Cas No:	24448-09-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	4.86
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name:	1-Decanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heneicosafluoro-
Cas No:	335-77-3
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.486
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorobutanesulfonate
Cas No:	45187-15-3
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.486
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorooctanoic acid
Cas No:	335-67-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation	0.486

Measure:
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoropentanesulfonate
Cas No: 175905-36-9
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.486
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoro-3,6-dioxaheptanoic acid
Cas No: 151772-58-6
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.972
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name: Perfluorononanoic acid
Cas No: 375-95-1
Act Media Subdiv Nm: Unknown
Result Detection: PFAS Detected
Result Measure Value Ppt: 485
Result Measure Value: 0.485000
Result Unit of Measure: ng/g
Detection Quantitation Limit T:
Detection Quantitation Measure:
Detection Quantitation Unit Of:
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (J)

Sample Result(s)

Pfas Chemical Name:	N-methylperfluoro-1-octanesulfonamide
Cas No:	31506-32-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.486
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoro(2-ethoxyethane)sulfonic acid
Cas No:	113507-82-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.486
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	N-Ethyl-N-(2-hydroxyethyl)perfluorooctanesulfonamide
Cas No:	1691-99-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	3.64
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name:	Perfluorohexanoic acid
Cas No:	307-24-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-

Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.486
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoroundecanoate
Cas No: 196859-54-8
Act Media Subdiv Nm: Unknown
Result Detection: PFAS Detected
Result Measure Value Ppt: 150
Result Measure Value: 0.150000
Result Unit of Measure: ng/g
Detection Quantitation Limit T:
Detection Quantitation Measure:
Detection Quantitation Unit Of:
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (B,J)

Sample Result(s)

Pfas Chemical Name: 2H,2H,3H,3H-Perfluorooctanoate
Cas No: 1799325-94-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 12.2
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: N-ethyl perfluorooctanesulfonamidoacetic acid
Cas No: 2991-50-6
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.486
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:

Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorohexanesulfonate
Cas No:	108427-53-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.486
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Hexafluoropropylene oxide dimer acid
Cas No:	13252-13-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.85
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorooctanesulfonamide
Cas No:	754-91-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.486
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorovaleric acid
Cas No:	2706-90-3

Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.972
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Ammonium 4,8-dioxa-3H-perfluorononanoate
Cas No:	958445-44-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.94
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorononanesulfonate
Cas No:	474511-07-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.486
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	FtS 8:2 ion
Cas No:	481071-78-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.94

Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorobutanoate
Cas No:	45048-62-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.94
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorotridecanoic acid
Cas No:	72629-94-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.486
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoroheptanoic acid
Cas No:	375-85-9
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.486
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
Cas No:	763051-92-9
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.94
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoro-3-methoxypropanoic acid
Cas No:	377-73-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.972
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorododecanesulfonate
Cas No:	343629-43-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.486
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	3:3 Fluorotelomer carboxylate, ion(1-)
Cas No:	1169706-83-5
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-

Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.94
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Decanoic acid, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-pentadecafluoro-
Cas No:	812-70-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	12.2
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	FtS 4:2 ion
Cas No:	414911-30-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.94
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	FtS 6:2 ion
Cas No:	425670-75-3
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	1990
Result Measure Value:	1.990000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	

Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (B)

Sample Result(s)

Pfas Chemical Name: Perfluoro(4-methoxybutanoic) acid
Cas No: 863090-89-5
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.486
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Sulfluramid
Cas No: 4151-50-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.559
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: N-methyl perfluorooctanesulfonamidoacetic acid
Cas No: 2355-31-9
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.486
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorooctanesulfonate
Cas No: 45298-90-6

Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	2230
Result Measure Value:	2.230000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	

Sample Result(s)

Pfas Chemical Name:	Perfluorodecanoic acid
Cas No:	335-76-2
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	189
Result Measure Value:	0.189000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (J)

Sample Result(s)

Pfas Chemical Name:	9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid
Cas No:	-
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.94
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorotetradecanoic acid
Cas No:	376-06-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.486

Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Project Detail(s)

Activity Identifier: MNPCA-LD00584.2112070000.000ST
Location Name: Duluth Airport Study Area
Fish Species:
Environmental Media Name: Tissue
Activity Type Code: Sample-Routine
Project Identifier: PRJ08167
Project Name: Minnesota DNR PFAS in White-tailed deer livers/waterfowl
Project File Url:
Year: 2021
Qapp Approval Agency Name:
Qapp Approved: No

Sample Result(s)

Pfas Chemical Name: FtS 6:2 ion
Cas No: 425670-75-3
Act Media Subdiv Nm: Unknown
Result Detection: PFAS Detected
Result Measure Value Ppt: 2490
Result Measure Value: 2.490000
Result Unit of Measure: ng/g
Detection Quantitation Limit T:
Detection Quantitation Measure:
Detection Quantitation Unit Of:
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (B)

Sample Result(s)

Pfas Chemical Name: Perfluoro-3-methoxypropanoic acid
Cas No: 377-73-1
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.31
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: N-methylperfluoro-1-octanesulfonamide
Cas No: 31506-32-8
Act Media Subdiv Nm: Unknown

Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.653
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorononanesulfonate
Cas No:	474511-07-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.653
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	N-methyl perfluorooctanesulfonamidoacetic acid
Cas No:	2355-31-9
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.653
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorohexanesulfonate
Cas No:	108427-53-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.653
Detection Quantitation Unit Of:	ng/g

Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoropentanesulfonate
Cas No: 175905-36-9
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.653
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: FtS 8:2 ion
Cas No: 481071-78-7
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 2.61
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: 11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
Cas No: 763051-92-9
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 2.61
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorovaleric acid
Cas No: 2706-90-3
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.31
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorooctanoic acid
Cas No: 335-67-1
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.653
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoro-3,6-dioxaheptanoic acid
Cas No: 151772-58-6
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.31
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name: Sulfluramid
Cas No: 4151-50-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:

Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.751
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name:	Perfluoroheptanesulfonate
Cas No:	146689-46-5
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.653
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	FtS 4:2 ion
Cas No:	414911-30-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	2.61
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorooctanesulfonate
Cas No:	45298-90-6
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	1650
Result Measure Value:	1.650000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;

Result Comment:

Sample Result(s)

Pfas Chemical Name:	Perfluorononanoic acid
Cas No:	375-95-1
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	199
Result Measure Value:	0.199000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (J)

Sample Result(s)

Pfas Chemical Name:	Decanoic acid, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-pentadecafluoro-
Cas No:	812-70-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	16.3
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorotridecanoic acid
Cas No:	72629-94-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.653
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorohexanoic acid
Cas No:	307-24-4
Act Media Subdiv Nm:	Unknown

Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.653
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	2H,2H,3H,3H-Perfluorooctanoate
Cas No:	1799325-94-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	16.3
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorotetradecanoic acid
Cas No:	376-06-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.653
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorododecanoic acid
Cas No:	307-55-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.653
Detection Quantitation Unit Of:	ng/g

Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoroheptanoic acid
Cas No: 375-85-9
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.653
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoro(2-ethoxyethane)sulfonic acid
Cas No: 113507-82-7
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.653
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorobutanoate
Cas No: 45048-62-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 2.61
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: 3:3 Fluorotelomer carboxylate, ion(1-)
Cas No: 1169706-83-5
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 2.61
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: N-Ethyl-N-(2-hydroxyethyl)perfluorooctanesulfonamide
Cas No: 1691-99-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 4.9
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name: Perfluoro(4-methoxybutanoic) acid
Cas No: 863090-89-5
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.653
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorobutanesulfonate
Cas No: 45187-15-3
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:

Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.653
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Ammonium 4,8-dioxa-3H-perfluorononanoate
Cas No:	958445-44-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	2.61
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoroundecanoate
Cas No:	196859-54-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.653
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	N-ethyl perfluorooctanesulfonamidoacetic acid
Cas No:	2991-50-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.653
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;

Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: 1-Decanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heneicosafluoro-
Cas No: 335-77-3
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.653
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorooctanesulfonamide
Cas No: 754-91-6
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.653
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Hexafluoropropylene oxide dimer acid
Cas No: 13252-13-6
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 2.48
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorodecanoic acid
Cas No: 335-76-2
Act Media Subdiv Nm: Unknown

Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.653
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid
Cas No:	-
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	2.61
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorododecanesulfonate
Cas No:	343629-43-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.653
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	2-(N-methylperfluoro-1-octanesulfonamido)-ethanol
Cas No:	24448-09-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	6.53
Detection Quantitation Unit Of:	ng/g

Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U,H)

Project Detail(s)

Activity Identifier: MNPCA-LD00584.2112070009.000ST
Location Name: Duluth Airport Study Area
Fish Species:
Environmental Media Name: Tissue
Activity Type Code: Sample-Routine
Project Identifier: PRJ08167
Project Name: Minnesota DNR PFAS in White-tailed deer livers/waterfowl
Project File Url:
Year: 2021
Qapp Approval Agency Name:
Qapp Approved: No

Sample Result(s)

Pfas Chemical Name: Perfluorooctanesulfonate
Cas No: 45298-90-6
Act Media Subdiv Nm: Unknown
Result Detection: PFAS Detected
Result Measure Value Ppt: 2030
Result Measure Value: 2.030000
Result Unit of Measure: ng/g
Detection Quantitation Limit T:
Detection Quantitation Measure:
Detection Quantitation Unit Of:
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:

Sample Result(s)

Pfas Chemical Name: 9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid
Cas No: -
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.58
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorohexanesulfonate
Cas No: 108427-53-8
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit

Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorotridecanoic acid
Cas No:	72629-94-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	FtS 6:2 ion
Cas No:	425670-75-3
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	966
Result Measure Value:	0.966000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (B,J)

Sample Result(s)

Pfas Chemical Name:	Perfluoroheptanesulfonate
Cas No:	146689-46-5
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	

Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: 1-Decanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heneicosafluoro-
Cas No: 335-77-3
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.396
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorooctanesulfonamide
Cas No: 754-91-6
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.396
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: 11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
Cas No: 763051-92-9
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.58
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorododecanoic acid
Cas No:	307-55-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoro-3-methoxypropanoic acid
Cas No:	377-73-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.792
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Ammonium 4,8-dioxa-3H-perfluorononanoate
Cas No:	958445-44-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.58
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoro(2-ethoxyethane)sulfonic acid
Cas No:	113507-82-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit

Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	2H,2H,3H,3H-Perfluorooctanoate
Cas No:	1799325-94-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	9.9
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoropentanesulfonate
Cas No:	175905-36-9
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	3:3 Fluorotelomer carboxylate, ion(1-)
Cas No:	1169706-83-5
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.58
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorooctanoic acid
Cas No:	335-67-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	N-ethyl perfluorooctanesulfonamidoacetic acid
Cas No:	2991-50-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorobutanesulfonate
Cas No:	45187-15-3
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Hexafluoropropylene oxide dimer acid
Cas No:	13252-13-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit

Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.51
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: N-methyl perfluorooctanesulfonamidoacetic acid
Cas No: 2355-31-9
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.396
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Sulfluramid
Cas No: 4151-50-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.455
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name: FtS 8:2 ion
Cas No: 481071-78-7
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.58
Detection Quantitation Unit Of: ng/g
Analytical Method:

Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorononanoic acid
Cas No:	375-95-1
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	528
Result Measure Value:	0.528000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	

Sample Result(s)

Pfas Chemical Name:	Perfluorononanesulfonate
Cas No:	474511-07-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	2-(N-methylperfluoro-1-octanesulfonamido)-ethanol
Cas No:	24448-09-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	3.96
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name:	Perfluoro-3,6-dioxaheptanoic acid
Cas No:	151772-58-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.792
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name:	N-Ethyl-N-(2-hydroxyethyl)perfluorooctanesulfonamide
Cas No:	1691-99-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	2.97
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name:	N-methylperfluoro-1-octanesulfonamide
Cas No:	31506-32-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorobutanoate
Cas No:	45048-62-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit

Detection Quantitation Measure:	1.58
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Decanoic acid, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-pentadecafluoro-
Cas No:	812-70-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	9.9
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorotetradecanoic acid
Cas No:	376-06-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	FtS 4:2 ion
Cas No:	414911-30-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.58
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorodecanoic acid
Cas No:	335-76-2
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	178
Result Measure Value:	0.178000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (J)

Sample Result(s)

Pfas Chemical Name:	Perfluoroundecanoate
Cas No:	196859-54-8
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	198
Result Measure Value:	0.198000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (B,J)

Sample Result(s)

Pfas Chemical Name:	Perfluorohexanoic acid
Cas No:	307-24-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoro(4-methoxybutanoic) acid
Cas No:	863090-89-5
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit

Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorovaleric acid
Cas No:	2706-90-3
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	.792
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorododecanesulfonate
Cas No:	343629-43-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoroheptanoic acid
Cas No:	375-85-9
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.396
Detection Quantitation Unit Of:	ng/g
Analytical Method:	

Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Project Detail(s)

Activity Identifier: MNPCA-LD00584.2112070005.000ST
Location Name: Duluth Airport Study Area
Fish Species:
Environmental Media Name: Tissue
Activity Type Code: Sample-Routine
Project Identifier: PRJ08167
Project Name: Minnesota DNR PFAS in White-tailed deer livers/waterfowl
Project File Url:
Year: 2021
Qapp Approval Agency Name:
Qapp Approved: No

Sample Result(s)

Pfas Chemical Name: Perfluoro(2-ethoxyethane)sulfonic acid
Cas No: 113507-82-7
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.585
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: 1-Decanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heneicosafluoro-
Cas No: 335-77-3
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.585
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: N-methyl perfluorooctanesulfonamidoacetic acid
Cas No: 2355-31-9
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -

Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.585
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Decanoic acid, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-pentadecafluoro-
Cas No:	812-70-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	14.6
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoro-3-methoxypropanoic acid
Cas No:	377-73-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.17
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	N-ethyl perfluorooctanesulfonamidoacetic acid
Cas No:	2991-50-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.585
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-

Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorohexanesulfonate
Cas No: 108427-53-8
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.585
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: FtS 4:2 ion
Cas No: 414911-30-1
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 2.34
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoroheptanoic acid
Cas No: 375-85-9
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.585
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorododecanesulfonate

Cas No:	343629-43-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.585
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorovaleric acid
Cas No:	2706-90-3
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.17
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Sulfluramid
Cas No:	4151-50-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.673
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	2H,2H,3H,3H-Perfluorooctanoate
Cas No:	1799325-94-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation	14.6

Measure:	
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Hexafluoropropylene oxide dimer acid
Cas No:	13252-13-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	2.22
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoroundecanoate
Cas No:	196859-54-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.585
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
Cas No:	763051-92-9
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	2.34
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	N-Ethyl-N-(2-hydroxyethyl)perfluorooctanesulfonamide
Cas No:	1691-99-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	4.39
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name:	Perfluorodecanoic acid
Cas No:	335-76-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.585
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorododecanoic acid
Cas No:	307-55-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.585
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorooctanesulfonamide
Cas No:	754-91-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-

Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.585
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorononanoic acid
Cas No: 375-95-1
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.585
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: 9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid
Cas No: -
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 2.34
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorononanesulfonate
Cas No: 474511-07-4
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.585
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:

Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorotetradecanoic acid
Cas No: 376-06-7
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.585
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: N-methylperfluoro-1-octanesulfonamide
Cas No: 31506-32-8
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.585
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorobutanoate
Cas No: 45048-62-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 2.34
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorooctanesulfonate
Cas No: 45298-90-6

Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	1220
Result Measure Value:	1.220000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	

Sample Result(s)

Pfas Chemical Name:	Perfluorotridecanoic acid
Cas No:	72629-94-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.585
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoroheptanesulfonate
Cas No:	146689-46-5
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.585
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoropentanesulfonate
Cas No:	175905-36-9
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.585

Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	FtS 8:2 ion
Cas No:	481071-78-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	2.34
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorohexanoic acid
Cas No:	307-24-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.585
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorooctanoic acid
Cas No:	335-67-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.585
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	3:3 Fluorotelomer carboxylate, ion(1-)
Cas No:	1169706-83-5
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	2.34
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Ammonium 4,8-dioxa-3H-perfluorononanoate
Cas No:	958445-44-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	2.34
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	FtS 6:2 ion
Cas No:	425670-75-3
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	2300
Result Measure Value:	2.300000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (B)

Sample Result(s)

Pfas Chemical Name:	Perfluoro-3,6-dioxaheptanoic acid
Cas No:	151772-58-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-

Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.17
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name: 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol
Cas No: 24448-09-7
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 5.85
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name: Perfluoro(4-methoxybutanoic) acid
Cas No: 863090-89-5
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.585
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorobutanesulfonate
Cas No: 45187-15-3
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.585
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:

Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Project Detail(s)

Activity Identifier: MNPCA-LD00584.2112070003.000ST
Location Name: Duluth Airport Study Area
Fish Species:
Environmental Media Name: Tissue
Activity Type Code: Sample-Routine
Project Identifier: PRJ08167
Project Name: Minnesota DNR PFAS in White-tailed deer livers/waterfowl
Project File Url:
Year: 2021
Qapp Approval Agency Name:
Qapp Approved: No

Sample Result(s)

Pfas Chemical Name: 9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid
Cas No: -
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.83
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: 3:3 Fluorotelomer carboxylate, ion(1-)
Cas No: 1169706-83-5
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.83
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoro(2-ethoxyethane)sulfonic acid
Cas No: 113507-82-7
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:

Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.457
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
Cas No:	763051-92-9
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.83
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoro-3,6-dioxaheptanoic acid
Cas No:	151772-58-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.914
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name:	Perfluorononanesulfonate
Cas No:	474511-07-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.457
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;

Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: FtS 4:2 ion
Cas No: 414911-30-1
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.83
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorodecanoic acid
Cas No: 335-76-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.457
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorobutanesulfonate
Cas No: 45187-15-3
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.457
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Decanoic acid, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-pentadecafluoro-
Cas No: 812-70-4
Act Media Subdiv Nm: Unknown

Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	11.4
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorooctanesulfonamide
Cas No:	754-91-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.457
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	1-Decanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heneicosafluoro-
Cas No:	335-77-3
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.457
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	2H,2H,3H,3H-Perfluorooctanoate
Cas No:	1799325-94-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	11.4
Detection Quantitation Unit Of:	ng/g

Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorotetradecanoic acid
Cas No: 376-06-7
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.457
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Sulfluramid
Cas No: 4151-50-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.526
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoro(4-methoxybutanoic) acid
Cas No: 863090-89-5
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.457
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorobutanoate
Cas No: 45048-62-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.83
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorononanoic acid
Cas No: 375-95-1
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.457
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoroheptanoic acid
Cas No: 375-85-9
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.457
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Ammonium 4,8-dioxa-3H-perfluorononanoate
Cas No: 958445-44-8
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:

Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.83
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Hexafluoropropylene oxide dimer acid
Cas No:	13252-13-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.74
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	FtS 8:2 ion
Cas No:	481071-78-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.83
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorohexanoic acid
Cas No:	307-24-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.457
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;

Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoropentanesulfonate
Cas No: 175905-36-9
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.457
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorododecanoic acid
Cas No: 307-55-1
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.457
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: N-methyl perfluorooctanesulfonamidoacetic acid
Cas No: 2355-31-9
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.457
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoroundecanoate
Cas No: 196859-54-8
Act Media Subdiv Nm: Unknown

Result Detection:	PFAS Detected
Result Measure Value Ppt:	117
Result Measure Value:	0.117000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (B,J)

Sample Result(s)

Pfas Chemical Name:	Perfluorohexanesulfonate
Cas No:	108427-53-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.457
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorooctanesulfonate
Cas No:	45298-90-6
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	1290
Result Measure Value:	1.290000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	

Sample Result(s)

Pfas Chemical Name:	Perfluoro-3-methoxypropanoic acid
Cas No:	377-73-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.914
Detection Quantitation Unit Of:	ng/g

Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoroheptanesulfonate
Cas No: 146689-46-5
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.457
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: FtS 6:2 ion
Cas No: 425670-75-3
Act Media Subdiv Nm: Unknown
Result Detection: PFAS Detected
Result Measure Value Ppt: 1630
Result Measure Value: 1.630000
Result Unit of Measure: ng/g
Detection Quantitation Limit T:
Detection Quantitation Measure:
Detection Quantitation Unit Of:
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (B,J)

Sample Result(s)

Pfas Chemical Name: Perfluorovaleric acid
Cas No: 2706-90-3
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.914
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: N-Ethyl-N-(2-hydroxyethyl)perfluorooctanesulfonamide
Cas No: 1691-99-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 3.43
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name: Perfluorotridecanoic acid
Cas No: 72629-94-8
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.457
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorooctanoic acid
Cas No: 335-67-1
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.457
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: N-ethyl perfluorooctanesulfonamidoacetic acid
Cas No: 2991-50-6
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:

Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.457
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	N-methylperfluoro-1-octanesulfonamide
Cas No:	31506-32-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.457
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	2-(N-methylperfluoro-1-octanesulfonamido)-ethanol
Cas No:	24448-09-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	4.57
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name:	Perfluorododecanesulfonate
Cas No:	343629-43-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.457
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;

Result Comment: Lab qualifier: (U)

Project Detail(s)

Activity Identifier: MNPCA-LD00584.2112070001.000ST
Location Name: Duluth Airport Study Area
Fish Species:
Environmental Media Name: Tissue
Activity Type Code: Sample-Routine
Project Identifier: PRJ08167
Project Name: Minnesota DNR PFAS in White-tailed deer livers/waterfowl
Project File Url:
Year: 2021
Qapp Approval Agency Name:
Qapp Approved: No

Sample Result(s)

Pfas Chemical Name: N-Ethyl-N-(2-hydroxyethyl)perfluorooctanesulfonamide
Cas No: 1691-99-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 4.06
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name: Ammonium 4,8-dioxa-3H-perfluorononanoate
Cas No: 958445-44-8
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 2.17
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: FtS 8:2 ion
Cas No: 481071-78-7
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit

Detection Quantitation Measure:	2.17
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	N-methylperfluoro-1-octanesulfonamide
Cas No:	31506-32-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.542
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	FtS 6:2 ion
Cas No:	425670-75-3
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	650
Result Measure Value:	0.650000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (B,J)

Sample Result(s)

Pfas Chemical Name:	Hexafluoropropylene oxide dimer acid
Cas No:	13252-13-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	2.06
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoro(2-ethoxyethane)sulfonic acid
Cas No:	113507-82-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.542
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorobutanesulfonate
Cas No:	45187-15-3
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.542
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Decanoic acid, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-pentadecafluoro-
Cas No:	812-70-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	13.5
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	N-ethyl perfluorooctanesulfonamidoacetic acid
Cas No:	2991-50-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit

Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.542
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoro-3-methoxypropanoic acid
Cas No: 377-73-1
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.08
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorohexanesulfonate
Cas No: 108427-53-8
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.542
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: 2H,2H,3H,3H-Perfluorooctanoate
Cas No: 1799325-94-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 13.5
Detection Quantitation Unit Of: ng/g
Analytical Method:

Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoro(4-methoxybutanoic) acid
Cas No:	863090-89-5
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.542
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorononanoic acid
Cas No:	375-95-1
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	222
Result Measure Value:	0.222000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (J)

Sample Result(s)

Pfas Chemical Name:	Perfluorononanesulfonate
Cas No:	474511-07-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.542
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorovaleric acid
Cas No:	2706-90-3
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.08
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid
Cas No:	-
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	2.17
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	N-methyl perfluorooctanesulfonamidoacetic acid
Cas No:	2355-31-9
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.542
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorooctanoic acid
Cas No:	335-67-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit

Detection Quantitation Measure:	0.542
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorohexanoic acid
Cas No:	307-24-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.542
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoroundecanoate
Cas No:	196859-54-8
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	206
Result Measure Value:	0.206000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (B,J)

Sample Result(s)

Pfas Chemical Name:	Perfluorododecanesulfonate
Cas No:	343629-43-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.542
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorobutanoate
Cas No:	45048-62-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	2.17
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorooctanesulfonamide
Cas No:	754-91-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.542
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoro-3,6-dioxaheptanoic acid
Cas No:	151772-58-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.08
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name:	Perfluorotridecanoic acid
Cas No:	72629-94-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit

Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.542
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoroheptanoic acid
Cas No: 375-85-9
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.542
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol
Cas No: 24448-09-7
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 5.42
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name: 3:3 Fluorotelomer carboxylate, ion(1-)
Cas No: 1169706-83-5
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 2.17
Detection Quantitation Unit Of: ng/g
Analytical Method:

Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoropentanesulfonate
Cas No: 175905-36-9
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.542
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Sulfluramid
Cas No: 4151-50-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.623
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: 1-Decanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heneicosafluoro-
Cas No: 335-77-3
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.542
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorododecanoic acid
Cas No:	307-55-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.542
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorooctanesulfonate
Cas No:	45298-90-6
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	1780
Result Measure Value:	1.780000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	

Sample Result(s)

Pfas Chemical Name:	FtS 4:2 ion
Cas No:	414911-30-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	2.17
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
Cas No:	763051-92-9
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit

Detection Quantitation Measure:	2.17
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorotetradecanoic acid
Cas No:	376-06-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.542
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorodecanoic acid
Cas No:	335-76-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.542
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoroheptanesulfonate
Cas No:	146689-46-5
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.542
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Project Detail(s)

Activity Identifier: MNPCA-LD00584.2112070002.000ST
Location Name: Duluth Airport Study Area
Fish Species:
Environmental Media Name: Tissue
Activity Type Code: Sample-Routine
Project Identifier: PRJ08167
Project Name: Minnesota DNR PFAS in White-tailed deer livers/waterfowl
Project File Url:
Year: 2021
Qapp Approval Agency Name:
Qapp Approved: No

Sample Result(s)

Pfas Chemical Name: Perfluoropentanesulfonate
Cas No: 175905-36-9
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.552
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: N-ethyl perfluorooctanesulfonamidoacetic acid
Cas No: 2991-50-6
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.552
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Ammonium 4,8-dioxa-3H-perfluorononanoate
Cas No: 958445-44-8
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation 2.21

Measure:
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol
Cas No: 24448-09-7
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 5.52
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name: Perfluorobutanesulfonate
Cas No: 45187-15-3
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.552
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorododecanesulfonate
Cas No: 343629-43-6
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.552
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorooctanesulfonate
Cas No:	45298-90-6
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	1250
Result Measure Value:	1.250000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	

Sample Result(s)

Pfas Chemical Name:	Perfluoroheptanoic acid
Cas No:	375-85-9
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.552
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	3:3 Fluorotelomer carboxylate, ion(1-)
Cas No:	1169706-83-5
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	2.21
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorovaleric acid
Cas No:	2706-90-3
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-

Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.1
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoro(2-ethoxyethane)sulfonic acid
Cas No: 113507-82-7
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.552
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Decanoic acid, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-pentadecafluoro-
Cas No: 812-70-4
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 13.8
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorooctanesulfonamide
Cas No: 754-91-6
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.552
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:

Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorotetradecanoic acid
Cas No: 376-06-7
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.552
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Sulfluramid
Cas No: 4151-50-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.634
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: N-Ethyl-N-(2-hydroxyethyl)perfluorooctanesulfonamide
Cas No: 1691-99-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 4.14
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name: Perfluorodecanoic acid
Cas No: 335-76-2

Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.552
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: N-methylperfluoro-1-octanesulfonamide
Cas No: 31506-32-8
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.552
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorononanoic acid
Cas No: 375-95-1
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.552
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: 9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid
Cas No: -
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 2.21

Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoro-3,6-dioxaheptanoic acid
Cas No:	151772-58-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.1
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U,H)

Sample Result(s)

Pfas Chemical Name:	Perfluoro(4-methoxybutanoic) acid
Cas No:	863090-89-5
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.552
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorooctanoic acid
Cas No:	335-67-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.552
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorononanesulfonate
Cas No:	474511-07-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.552
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	FtS 6:2 ion
Cas No:	425670-75-3
Act Media Subdiv Nm:	Unknown
Result Detection:	PFAS Detected
Result Measure Value Ppt:	913
Result Measure Value:	0.913000
Result Unit of Measure:	ng/g
Detection Quantitation Limit T:	
Detection Quantitation Measure:	
Detection Quantitation Unit Of:	
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (B,J)

Sample Result(s)

Pfas Chemical Name:	Perfluorobutanoate
Cas No:	45048-62-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	2.21
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorohexanoic acid
Cas No:	307-24-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-

Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.552
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: N-methyl perfluorooctanesulfonamidoacetic acid
Cas No: 2355-31-9
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.552
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Hexafluoropropylene oxide dimer acid
Cas No: 13252-13-6
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 2.1
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorotridecanoic acid
Cas No: 72629-94-8
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.552
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:

Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoroheptanesulfonate
Cas No:	146689-46-5
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.552
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	FtS 4:2 ion
Cas No:	414911-30-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	2.21
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	2H,2H,3H,3H-Perfluorooctanoate
Cas No:	1799325-94-2
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	13.8
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
Cas No:	763051-92-9

Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	2.21
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoro-3-methoxypropanoic acid
Cas No:	377-73-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.1
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoroundecanoate
Cas No:	196859-54-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.552
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorohexanesulfonate
Cas No:	108427-53-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.552

Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	FtS 8:2 ion
Cas No:	481071-78-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	2.21
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorododecanoic acid
Cas No:	307-55-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.552
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	1-Decanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heneicosafluoro-
Cas No:	335-77-3
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.552
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	each sample = 4 subsets of a single deer liver, totaling 100g ;
Result Comment:	Lab qualifier: (U)

Project Detail(s)

Activity Identifier: MNPCA-LD00584.2104260020.000ST
Location Name: Duluth Airport Study Area
Fish Species:
Environmental Media Name: Tissue
Activity Type Code: Sample-Routine
Project Identifier: PRJ08167
Project Name: Minnesota DNR PFAS in White-tailed deer livers/waterfowl
Project File Url:
Year: 2021
Qapp Approval Agency Name:
Qapp Approved: No

Sample Result(s)

Pfas Chemical Name: Perfluorooctanoic acid
Cas No: 335-67-1
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.395
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: 1 subset of hunter harvested muscle, <100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorooctanesulfonate
Cas No: 45298-90-6
Act Media Subdiv Nm: Unknown
Result Detection: PFAS Detected
Result Measure Value Ppt: 221
Result Measure Value: 0.221000
Result Unit of Measure: ng/g
Detection Quantitation Limit T:
Detection Quantitation Measure:
Detection Quantitation Unit Of:
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: 1 subset of hunter harvested muscle, <100g ;
Result Comment: Lab qualifier: (B,J)

Sample Result(s)

Pfas Chemical Name: Decanoic acid, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-pentadecafluoro-
Cas No: 812-70-4
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 9.88
Detection Quantitation Unit Of: ng/g

Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: 1 subset of hunter harvested muscle, <100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: N-ethyl perfluorooctanesulfonamidoacetic acid
Cas No: 2991-50-6
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.395
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: 1 subset of hunter harvested muscle, <100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Sulfluramid
Cas No: 4151-50-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.454
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: 1 subset of hunter harvested muscle, <100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: N-methylperfluoro-1-octanesulfonamide
Cas No: 31506-32-8
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.395
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: 1 subset of hunter harvested muscle, <100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	1-Decanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heneicosafluoro-
Cas No:	335-77-3
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.395
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	1 subset of hunter harvested muscle, <100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoroundecanoate
Cas No:	196859-54-8
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.395
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	1 subset of hunter harvested muscle, <100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorobutanesulfonate
Cas No:	45187-15-3
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.395
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	1 subset of hunter harvested muscle, <100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	N-methyl perfluorooctanesulfonamidoacetic acid
Cas No:	2355-31-9
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	

Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.395
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	1 subset of hunter harvested muscle, <100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Hexafluoropropylene oxide dimer acid
Cas No:	13252-13-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.5
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	1 subset of hunter harvested muscle, <100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
Cas No:	763051-92-9
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.58
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	1 subset of hunter harvested muscle, <100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorononanesulfonate
Cas No:	474511-07-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.395
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	1 subset of hunter harvested muscle, <100g ;

Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoroheptanoic acid
Cas No: 375-85-9
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.395
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: 1 subset of hunter harvested muscle, <100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: 9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid
Cas No: -
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.58
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: 1 subset of hunter harvested muscle, <100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorotetradecanoic acid
Cas No: 376-06-7
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.395
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: 1 subset of hunter harvested muscle, <100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorovaleric acid
Cas No: 2706-90-3
Act Media Subdiv Nm: Unknown

Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.79
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	1 subset of hunter harvested muscle, <100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	3:3 Fluorotelomer carboxylate, ion(1-)
Cas No:	1169706-83-5
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.58
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	1 subset of hunter harvested muscle, <100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoro(2-ethoxyethane)sulfonic acid
Cas No:	113507-82-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.395
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	1 subset of hunter harvested muscle, <100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorododecanesulfonate
Cas No:	343629-43-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.395
Detection Quantitation Unit Of:	ng/g

Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: 1 subset of hunter harvested muscle, <100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Ammonium 4,8-dioxa-3H-perfluorononanoate
Cas No: 958445-44-8
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.58
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: 1 subset of hunter harvested muscle, <100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: FtS 4:2 ion
Cas No: 414911-30-1
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.58
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: 1 subset of hunter harvested muscle, <100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorohexanesulfonate
Cas No: 108427-53-8
Act Media Subdiv Nm: Unknown
Result Detection: PFAS Detected
Result Measure Value Ppt: 448
Result Measure Value: 0.448000
Result Unit of Measure: ng/g
Detection Quantitation Limit T:
Detection Quantitation Measure:
Detection Quantitation Unit Of:
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: 1 subset of hunter harvested muscle, <100g ;
Result Comment:

Sample Result(s)

Pfas Chemical Name: 2H,2H,3H,3H-Perfluorooctanoate
Cas No: 1799325-94-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 9.88
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: 1 subset of hunter harvested muscle, <100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoropentanesulfonate
Cas No: 175905-36-9
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.395
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: 1 subset of hunter harvested muscle, <100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorobutanoate
Cas No: 45048-62-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 1.58
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: 1 subset of hunter harvested muscle, <100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorodecanoic acid
Cas No: 335-76-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:

Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.395
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	1 subset of hunter harvested muscle, <100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorohexanoic acid
Cas No:	307-24-4
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.395
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	1 subset of hunter harvested muscle, <100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoroheptanesulfonate
Cas No:	146689-46-5
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.395
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	1 subset of hunter harvested muscle, <100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	FtS 8:2 ion
Cas No:	481071-78-7
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	1.58
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	1 subset of hunter harvested muscle, <100g ;

Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluoro(4-methoxybutanoic) acid
Cas No: 863090-89-5
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.395
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: 1 subset of hunter harvested muscle, <100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorooctanesulfonamide
Cas No: 754-91-6
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.395
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: 1 subset of hunter harvested muscle, <100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: Perfluorotridecanoic acid
Cas No: 72629-94-8
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.395
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: 1 subset of hunter harvested muscle, <100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol
Cas No: 24448-09-7
Act Media Subdiv Nm: Unknown

Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	3.95
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	1 subset of hunter harvested muscle, <100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoro-3-methoxypropanoic acid
Cas No:	377-73-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.79
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	1 subset of hunter harvested muscle, <100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluoro-3,6-dioxaheptanoic acid
Cas No:	151772-58-6
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.79
Detection Quantitation Unit Of:	ng/g
Analytical Method:	
Analysis Start Date:	-
Laboratory Accreditation Indic:	
Activity Comment:	1 subset of hunter harvested muscle, <100g ;
Result Comment:	Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name:	Perfluorododecanoic acid
Cas No:	307-55-1
Act Media Subdiv Nm:	Unknown
Result Detection:	Below Reporting Limit
Result Measure Value Ppt:	-
Result Measure Value:	-
Result Unit of Measure:	
Detection Quantitation Limit T:	Lower Reporting Limit
Detection Quantitation Measure:	0.395
Detection Quantitation Unit Of:	ng/g

Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: 1 subset of hunter harvested muscle, <100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: FtS 6:2 ion
Cas No: 425670-75-3
Act Media Subdiv Nm: Unknown
Result Detection: PFAS Detected
Result Measure Value Ppt: 2310
Result Measure Value: 2.310000
Result Unit of Measure: ng/g
Detection Quantitation Limit T:
Detection Quantitation Measure:
Detection Quantitation Unit Of:
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: 1 subset of hunter harvested muscle, <100g ;
Result Comment: Lab qualifier: (B)

Sample Result(s)

Pfas Chemical Name: Perfluorononanoic acid
Cas No: 375-95-1
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 0.395
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: 1 subset of hunter harvested muscle, <100g ;
Result Comment: Lab qualifier: (U)

Sample Result(s)

Pfas Chemical Name: N-Ethyl-N-(2-hydroxyethyl)perfluorooctanesulfonamide
Cas No: 1691-99-2
Act Media Subdiv Nm: Unknown
Result Detection: Below Reporting Limit
Result Measure Value Ppt: -
Result Measure Value: -
Result Unit of Measure:
Detection Quantitation Limit T: Lower Reporting Limit
Detection Quantitation Measure: 2.96
Detection Quantitation Unit Of: ng/g
Analytical Method:
Analysis Start Date: -
Laboratory Accreditation Indic:
Activity Comment: 1 subset of hunter harvested muscle, <100g ;
Result Comment: Lab qualifier: (U,H)

29	1 of1	SSE	0.43 /	1,364.48 /	Spee Dee Delivery Service Inc -	MPCA AI

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
			2,262.97	-6	Duluth 4408 Haines Rd Duluth MN 55811	

Agency Interest ID:	104251
Name (Map):	Spee Dee Delivery Service Inc - Duluth
Address (Map):	4408 Haines Rd
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8309383
Longitude (Map):	-92.174763
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Spee Dee Delivery Service Inc - Duluth
Address (Site):	4408 Haines Rd
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811-1528
Latitude (Site):	46.8309383
Longitude (Site):	-92.174763
County (Site):	St. Louis
Name (Req):	Spee Dee Delivery Service Inc - Duluth
Address (Req):	4408 Haines Rd
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8309383
Longitude (Req):	-92.174763
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	104251-AISI0000104251	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2021-02-10 00:00:00	**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	104251
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	2/10/2021	**TRDSQQ:**	
Tmsp Created:	10/17/2005	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	2/12/2021	**Verified:**	No
Spatial ID:	103054	**User Updt:**	ceidem

Name:	Spee Dee Delivery Service Inc - Duluth
Program List:	HW, IS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	A1
Method Desc:	Address Matching House Number

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	Multiple IDs	**Cong Distr:**	8
Program Co:	HW; ST	**Senate Dis:**	8
Program Name:	Multiple Programs	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-1528	**Coord Coll:**	A1
City:	Duluth	**Latitude:**	46.8309383
County:	St. Louis	**Longitude:**	-92.174763

Activity:	Multiple Activities
Addr St:	4408 Haines Rd
Addr City:	Duluth
MPCA ID List:	MNRNE3567; MNRNE39QX; MNS000114686
Program 1:	Hazardous Waste; Stormwater
Name:	Spee Dee Delivery Service Inc - Duluth
Watershed :	St. Louis River
Coord Co 1:	Address Matching House Number
Activity L:	Hazardous Waste; Industrial Stormwater
Industrial:	Local Messengers and Local Delivery
Site URL:	https://webapp.pca.state.mn.us/wimn/site/104251

Agency Interests: File Request Details

Item ID:	104251-AISI0000104251	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2/10/2021	**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	104251
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	2/10/2021	**Ref Code:**	GEN
Tmsp Created:	10/17/2005	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	2/12/2021	**User Updt:**	ceidem
Spatial ID:	103054		

Name:	Spee Dee Delivery Service Inc - Duluth
Program List:	HW, IS
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	A1
Method Desc:	Address Matching House Number

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
30	1 of1	ESE	0.43 / 2,277.75	1,379.74 / 9	UHL Company 4444 Airpark Blvd Duluth MN 55811	MPCA AI

Agency Interest ID:	22625
Name (Map):	UHL Company
Address (Map):	4444 Airpark Blvd
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8328757
Longitude (Map):	-92.1664652
County (Map):	St. Louis
County Code (Map):	137

Loc Desc (Map):	
Name (Site):	UHL Company
Address (Site):	4444 Airpark Blvd
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811-5712
Latitude (Site):	46.8328757
Longitude (Site):	-92.1664652
County (Site):	St. Louis
Name (Req):	UHL Company
Address (Req):	4444 Airpark Blvd
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8328757
Longitude (Req):	-92.1664652
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	22625-AISI0000022625	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Hazardous Waste	***SI ID:***	22625
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	8B
Quarters:		***Senate Dist:***	8
Collection Date:		***TRDSQQ:***	
Tmsp Created:	7/26/1999	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	8/24/2017	***Verified:***	No
Spatial ID:	20408	***User Updt:***	RSP
Name:	UHL Company		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	Yes	***HUC 8:***	04010201
MPCA ID:	MND985694504	***Cong Distr:***	8
Program Co:	HW	***Senate Dis:***	8
Program Name:	Hazardous Waste	***House Dist:***	8B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811-5712	***Coord Coll:***	A1
City:	Duluth	***Latitude:***	46.8328757
County:	St. Louis	***Longitude:***	-92.1664652
Activity:	Hazardous Waste, Minimal quantity generator		
Addr St:	4444 Airpark Blvd		
Addr City:	Duluth		
MPCA ID List:	MND985694504		
Program 1:	Hazardous Waste		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Name: UHL Company
Watershed : St. Louis River
Coord Co 1: Address Matching House Number
Activity L: Hazardous Waste, Minimal quantity generator
Industrial: Security Systems Services (except Locksmiths)
Site URL: https://webapp.pca.state.mn.us/wimn/site/22625

Agency Interests: File Request Details

Item ID: 22625-AISI0000022625
Status: Active
Status Date:
Program: Hazardous Waste
CTU Code: 239456
CTU Name: Duluth
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date:
Tmsp Created: 7/26/1999
User Created: DELTA_M_R1
Tmsp Updt: 8/24/2017
Spatial ID: 20408
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 22625
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 8B
Senate Dist: 8
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: RSP
Name: UHL Company
Program List: HW
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

31	1 of2	SW	0.43 / 2,296.12	1,396.95 / 26	**Lee K Older** **4801 Swan Lake Rd** **Hermantown MN 55811**	MPCA AI

Agency Interest ID: 209130
Name (Map):
Address (Map):
City (Map):
State (Map):
ZIP (Map):
Latitude (Map):
Longitude (Map):
County (Map):
County Code (Map):
Loc Desc (Map):
Name (Site):
Address (Site):
City (Site):
State (Site):
ZIP (Site):
Latitude (Site):
Longitude (Site):
County (Site):
Name (Req): Lee K Older
Address (Req): 4801 Swan Lake Rd
City (Req): Hermantown
State (Req): MN
ZIP (Req): 55811

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Loc Desc (Req):
Latitude (Req):
Longitude (Req):
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026)

Agency Interests: File Request Details

Item ID:	209130-AISI0000209130	***Int Doc ID:***	0
Status:	Active	***SI Type:***	LCP
Status Date:		***SI Cat:***	AISI
Program:	SSTS	***SI ID:***	209130
CTU Code:		***SI Cat Desc:***	Agency Interest
CTU Name:		***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	
Range Dir:		***House Dist:***	
Section:		***Senate Dist:***	
Quarters:		***TRDSQQ:***	
Collection Date:		***Ref Code:***	
Tmsp Created:	4/25/2016	***Ref Desc:***	
User Created:	DELTA_M_R2	***Verified:***	No
Tmsp Updt:	4/25/2016	***User Updt:***	SSTS
Spatial ID:			

Name: Lee K Older
Program List: SS
HUC 8:
HUC 8 Name:
HUC 10:
HUC 10 Name:
HUC 12:
HUC 12 Name:
SI Type Desc: Licensed / Certified Person
DWSMA Code:
DWSMA Name:
Method Code:
Method Desc:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
31	2 of2	SW	0.43 / 2,296.12	1,396.95 / 26	LKO Enterprises Inc 4801 Swan Lake Rd Hermantown MN 55811	MPCA AI

Agency Interest ID: 203864.0
Name (Map):
Address (Map):
City (Map):
State (Map):
ZIP (Map):
Latitude (Map):
Longitude (Map):
County (Map):
County Code (Map):
Loc Desc (Map):
Name (Site): LKO Enterprises Inc
Address (Site): 4801 Swan Lake Rd
City (Site): Hermantown
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.84808277
Longitude (Site): -92.23806468
County (Site): St. Louis
Name (Req): LKO Enterprises Inc
Address (Req): 4801 Swan Lake Rd
City (Req): Hermantown
State (Req): MN
ZIP (Req): 55811

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Loc Desc (Req):
Latitude (Req): 46.84808277
Longitude (Req): -92.23806468
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

My Neighborhood Site Details

Active FLA: Yes
MPCA ID: L126
Program Co: SS
Program Name: SSTS
Address: MN
Addr ZIP: 55811
City: Hermantown
County: St. Louis
HUC 8: 04010201
Cong Distr: 8
Senate Dis: 3
House Dist: 3B
IC Flag: No
Coord Coll: Z1
Latitude: 46.84808277
Longitude: -92.23806468
Activity: SSTS, Licensed Organization
Addr St: 4801 Swan Lake Rd
Addr City: Hermantown
MPCA ID List: L126
Program 1: SSTS
Name: LKO Enterprises Inc
Watershed : St. Louis River
Coord Co 1: Zip Code Centroid
Activity L: SSTS, Licensed Organization
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/203864

Agency Interests: File Request Details

Item ID: 203864-AISI0000203864
Status: Active
Status Date:
Program: SSTS
CTU Code: 239436
CTU Name: Hermantown
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 6/20/2017
Tmsp Created: 4/25/2016
User Created: DELTA_M_R2
Tmsp Updt: 4/24/2023
Int Doc ID: 0
SI Type: LCO
SI Cat: AISI
SI ID: 203864
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 3B
Senate Dist: 3
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: WO_2132805
Spatial ID:
Name: LKO Enterprises Inc
Program List: SS
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020114
HUC 10 Name: Midway River
HUC 12: 40102011401
HUC 12 Name: Upper Midway River
SI Type Desc: Licensed / Certified Organization
DWSMA Code:
DWSMA Name:
Method Code: Z1
Method Desc: Zip Code Centroid

32	1 of1	ESE	0.44 / 2,299.93	1,375.78 / 5	Lots 4 & 5, Block 3 of th Airpark Airpark Blvd. Duluth MN 55811	MPCA AI

Agency Interest ID: 142279

Name (Map):	Lots 4 & 5, Block 3 of th Airpark
Address (Map):	Airpark Blvd.
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83347
Longitude (Map):	-92.16692
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Lots 4 & 5, Block 3 of th Airpark
Address (Site):	Airpark Blvd.
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83347
Longitude (Site):	-92.16692
County (Site):	St. Louis
Name (Req):	Lots 4 & 5, Block 3 of th Airpark
Address (Req):	Airpark Blvd.
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83347
Longitude (Req):	-92.16692
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	142279-AISI0000142279	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2013-10-29 00:00:00	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	142279
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	6/11/2013	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	66238948	**User Updt:**	spatial_

Name:	Lots 4 & 5, Block 3 of th Airpark
Program List:	CS
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	DP
Method Desc:	Digitized - MPCA online map

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	C00036103	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	8
Program Name:	Stormwater	**House Dist:**	8B

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	DP
City:	Duluth	**Latitude:**	46.83347
County:	St. Louis	**Longitude:**	-92.16692
Activity:	Construction Stormwater		
Addr St:	Airpark Blvd.		
Addr City:	Duluth		
MPCA ID List:	C00036103		
Program 1:	Stormwater		
Name:	Lots 4 & 5, Block 3 of th Airpark		
Watershed :	St. Louis River		
Coord Co 1:	Digitized - MPCA online map		
Activity L:	Construction Stormwater		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/142279		

Agency Interests: File Request Details

Item ID:	142279-AISI0000142279	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	10/29/2013	**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	142279
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	6/11/2013	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	66238948		
Name:	Lots 4 & 5, Block 3 of th Airpark		
Program List:	CS		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	DP		
Method Desc:	Digitized - MPCA online map		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
33	1 of1	SSE	0.46 / 2,447.93	1,360.78 / -10	Sears Roebuck & Co 7502 4402 Haines Rd Duluth MN 55811	MPCA AI

Agency Interest ID:	15794
Name (Map):	Sears Roebuck & Co 7502
Address (Map):	4402 Haines Rd
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8297427
Longitude (Map):	-92.174437
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Sears Roebuck & Co 7502
Address (Site):	4402 Haines Rd
City (Site):	Duluth
State (Site):	MN

ZIP (Site):	55811
Latitude (Site):	46.8297427
Longitude (Site):	-92.174437
County (Site):	St. Louis
Name (Req):	Sears Roebuck & Co 7502
Address (Req):	4402 Haines Rd
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8297427
Longitude (Req):	-92.174437
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	15794-AISI0000015794	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2010-01-28 00:00:00	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	15794
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	7/26/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	18387	**User Updt:**	spatial_

Name:	Sears Roebuck & Co 7502
Program List:	HW
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	A1
Method Desc:	Address Matching House Number

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	MND982640161	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	8
Program Name:	Hazardous Waste	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Duluth	**Latitude:**	46.8297427
County:	St. Louis	**Longitude:**	-92.174437

Activity:	Hazardous Waste
Addr St:	4402 Haines Rd
Addr City:	Duluth
MPCA ID List:	MND982640161
Program 1:	Hazardous Waste
Name:	Sears Roebuck & Co 7502
Watershed :	St. Louis River
Coord Co 1:	Address Matching House Number
Activity L:	Hazardous Waste
Industrial:	Department Stores

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Site URL: https://webapp.pca.state.mn.us/wimn/site/15794

Agency Interests: File Request Details

Item ID:	15794-AISI0000015794	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	1/28/2010	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	15794
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	7/26/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	18387		

Name: Sears Roebuck & Co 7502
Program List: HW
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
34	1 of12	W	0.47 / 2,458.94	1,409.63 / 39	Federal Aviation Administration - Duluth 4525 Airport Approach Rd Duluth MN 55811	DELISTED TANK

Delisted Aboveground Storage Tanks

Tank Site ID:	TS0121964	**Owner City:**	
AI ID:	103101	**Owner State:**	
Tank Type:	Aboveground Storage Tank	**Owner Zip:**	
County:	St. Louis	**Address2:**	
Owner:	Federal Aviation Administration(Faa)	**Address3:**	
Owner Address:			
Location Description:			
AI Name(Map):			
Address1(Map):			
Address2(Map):			
City(Map):			
State(Map):			
Zip(Map):			
County Code(Map):			
County(Map):			
Latitude(Map):			
Longitude(Map):			
Data Source:			

Tanks URL: https://webapp.pca.state.mn.us/tank-leak/sites/TS/TS0121964
Record Date: 04-SEP-2020
Original Source: AST

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
34	2 of12	W	0.47 / 2,458.94	1,409.63 / 39	Faa/dlh Rcag 4525 Airport Approach Rd Duluth MN 55811	DELISTED TANK

Delisted Storage Tanks

Program in ID:	229727	**AI ID:**	
Site ID:	182875	**AI Name:**	
Tank Site ID:		**Address:**	
Tank Site:	121964	**City:**	
Tank Type:		**State:**	
Active?:	Yes	**Zip:**	
Interest Type:	TS	**Owner:**	
Interest Type Desc:	Tank Site	**Owner Address:**	
Interest State Date:	01/29/2001 00:00:00	**Owner City:**	
Interest Eng Date:		**Owner State:**	
Interest Name:	Faa/dlh Rcag	**Owner Zip:**	
Interest Phone:	NO CORE PI PH.	**Addr ID:**	22700
Org Name Source:		**Address1:**	4525 Airport Approach Rd
Lat/Long ID:	155646	**Address2:**	
Lat Degrees:	46	**Addr Time Added:**	01/27/1999 09:24:31
Lat Minutes:	50	**Addr Time Lat Updt:**	08/01/2007 21:43:50
Lat Seconds:	20.61	**Addr Staff ID Last U:**	SYSTEM
Long Degrees:	-92	**Staff ID Updt:**	SFRYE
Long Minutes:	11	**Addr Source:**	CORE
Long Seconds:	23.64	**Source:**	CORE
Lat/Long Desc:		**Timestamp Added:**	03/24/2006 12:22:16
Lat/Long Time Add:	03/22/2010 18:25:51	**Timestamp Updt:**	03/08/2011 09:42:29
Lat/Long Time Updt:	05/03/2011 07:03:42	**Township Name:**	Whiteface Reservoir
Lat/Long Staff ID:	MAPTOOL	**City Name:**	Duluth
Collection Date:	05/03/2011 07:03:42	**State Code:**	MN
Coord Src Type:		**Zip Code:**	55811
Coord Src Desc:		**Country Code:**	USA
Coord Coll Meth Cd:	DM	**State County Code:**	69
Coord Coll Method:	Digitized - Map Tool	**FIPS County Code1:**	137
Map Scale Code:		**County Name:**	St. Louis
Lat/Long Source:	CORE	**Address Web:**	
Lat/Long Site ID:	182875	**City Web:**	
Lat/Long Spatial ID:	51069745	**Postal Code Web:**	
Latitude Selected:		**Foreign State:**	
Longitude Selected:		**Foreign Zone:**	
Comments:			
Tanks URL:			
Original Source:	UST		
Record Date:	02-DEC-2016		
Location Description:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
34	3 of12	W	0.47 / 2,458.94	1,409.63 / 39	Duluth International Airport 4525 Airport Approach Rd Duluth MN 55811	HIST LEAKSITES

Prog Int ID:	223907	**Address Source:**	CORE
Site ID:	182875	**Township Name:**	Whiteface Reservoir
State County Code:	69	**County Name:**	St. Louis
Country:	USA	**Lat/Long ID:**	155646
Interest Type Cd:	LS	**Interest Type Dsc:**	Leak Site
ADDR ID:	22700	**Lat Degrees:**	46
Tank Site:	11496	**Lat Minutes:**	50
Interest Phone:	NO CORE PI PH.	**Lat Seconds:**	20.61
Interest Start Dt:	09/03/1999 09:02:54	**Long Degrees:**	-92
Interest End Dt:	03/08/2011 09:28:42	**Long Minutes:**	11
Active?:	No	**Long Seconds:**	23.64
Timestamp Added:	11/30/2006 07:15:49	**Lat/Long Source:**	CORE
Timestamp Updt:	11/10/2014 08:17:06	**Lat/Long Site ID:**	182875
Staff ID Updt:	RGAGLE	**Lat/Long Spatial ID:**	51834114

Source:	CORE	**Collection Date:**	05/03/2011 07:03:42
Coord Src Type:		**Map Scale Code:**	
Coord Src Desc:		**Org Name Source:**	
Foreign State:		**Foreign Zone:**	
FIPS County Cd1:	137		
Addr Timestmp Add:	01/27/1999 09:24:31		
Addr Timestamp Lst Updt:	08/01/2007 21:43:50		
Addr Updater Staff ID:	SYSTEM		
Lat/Long Timestamp Added:	03/22/2010 18:25:51		
Lat/Long Tmstmp Last Upd:	05/03/2011 07:03:42		
Lat/Long Updater Staff ID:	MAPTOOL		
Lat/Long Desc:			
Coord Coll Method Desc:	Digitized - Map Tool		
Coord Coll Method Code:	DM		
Comments:			

Leak Site

Complete Site Closure Date:	12/11/1998 00:00:00
Cond Closure Date:	
Release Discovered Date:	05/11/1998 00:00:00
Leaksite Type Code:	1
Leaksite Type Desc:	Leak Site
Leak Report Date:	05/14/1998 00:00:00
Tank Reg Status Code:	F
TMSP Added:	12/04/1999 14:03:52
TMSP Last Updt:	06/19/2014 08:29:58
CU Yds Excavated Qty:	78
ENF Action Begin Date:	07/09/1998 00:00:00
Residence Type Code:	
File Archive Box:	
File Archive Lot:	
Soil Digout Date:	08/06/1998 00:00:00
Staff ID Last Updt:	DBOETTC
Std Letter Response Date:	05/11/1998 00:00:00
VPIC Acres:	
VPIC Application Date:	
Contam Soils Remaining Flag:	U
Indoor Air Collected Flag:	
LUST Trust Eligible Flag:	Yes
Offsite Contam Flag:	U
REIMB Awarded Flag:	No
Release From AST Flag:	No
Release From UST Flag:	No
Soil Gas Action Level Flag:	
Soil Gas Data Collected Flag:	
Sub Slab Sample Collected Flag:	
Surface Water Impact Flag:	U
Utility Project Flag:	No
Vapor Intrusion Action Flag:	
Vapor Intrusion Checked Flag:	
Leaksite Type Defn:	Leak site (tank and petroleum contamination).
Soil Gas Data Comments:	
Vapor Intrusion Comments:	

Leak Product Rls

Product Rls Seq ID:	323982
Leak Product Desc:	Diesel
Leak Product Defn:	The product is diesel oil.

Leak GW Info

Well Type Code:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Affected Non Res Props:
Affected Residential Props:
Staff ID Last Updt: RSUCHAN
Staff ID Wellhead Area Assess:
TMSP Added: 12/04/1999 14:07:35
TMSP Last Updt: 11/04/2003 12:57:08
Water Supply Exceeds Ral Flag:
Cleanup Goal Achieved Flag:
DW Supply Contam Flag:
Free Product at Close Flag:
Free Product Observed Flag:
Free Product Thickness:
Ground Water Contam Flag: N
GW Cleanup Goal: 0
GW Exceeds Cleanup Goal Flag:
Impacted Aquifer Code:
MTBE High Level Date:
MTBE High Ug Per Liter Char:
MTBE High Ug Per Liter Numb:
MTBE Present Historically Flag:
MTBE Present Now Flag:
Protected Area Flag:
PWS Well Impacted Flag:
Sensitive Area Flag:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
34	4 of12	W	0.47 / 2,458.94	1,409.63 / 39	NOAA Station - Duluth Int'l Airport 4525 Airport Approach Rd Duluth MN 55811	HIST LEAKSITES

Prog Int ID: 222219
Site ID: 217550
State County Code: 69
Country: USA
Interest Type Cd: LS
ADDR ID: 22700
Tank Site: 9696
Interest Phone: NO CORE PI PH.
Interest Start Dt: 07/16/1997 10:10:06
Interest End Dt: 03/10/2011 11:53:50
Active?: No
Timestamp Added: 11/29/2006 07:23:52
Timestamp Updt: 11/10/2014 08:17:06
Staff ID Updt: RGAGLE
Source: CORE
Coord Src Type:
Coord Src Desc:
Foreign State:
FIPS County Cd1: 137
Addr Timestmp Add: 01/27/1999 09:24:31
Addr Timestamp Lst Updt: 08/01/2007 21:43:50
Addr Updater Staff ID: SYSTEM
Lat/Long Timestamp Added: 03/29/2010 19:01:22
Lat/Long Tmstmp Last Upd: 05/03/2011 07:03:29
Lat/Long Updater Staff ID: MAPTOOL
Lat/Long Desc:
Coord Coll Method Desc: Digitized - Map Tool
Coord Coll Method Code: DM
Comments:

Address Source: CORE
Township Name: Whiteface Reservoir
County Name: St. Louis
Lat/Long ID: 169720
Interest Type Dsc: Leak Site
Lat Degrees: 46
Lat Minutes: 50
Lat Seconds: 20.61
Long Degrees: -92
Long Minutes: 11
Long Seconds: 23.64
Lat/Long Source: CORE
Lat/Long Site ID: 217550
Lat/Long Spatial ID: 51829956
Collection Date: 05/03/2011 07:03:27
Map Scale Code:
Org Name Source:
Foreign Zone:

Leak Site

Complete Site Closure Date: 07/21/1997 00:00:00
Cond Closure Date:
Release Discovered Date: 10/01/1996 00:00:00
Leaksite Type Code: 1

Leaksite Type Desc:	Leak Site
Leak Report Date:	10/01/1996 00:00:00
Tank Reg Status Code:	U
TMSP Added:	12/04/1999 14:03:50
TMSP Last Updt:	08/19/2014 14:30:34
CU Yds Excavated Qty:	0
ENF Action Begin Date:	10/09/1996 00:00:00
Residence Type Code:	
File Archive Box:	25
File Archive Lot:	00/298
Soil Digout Date:	09/09/1996 00:00:00
Staff ID Last Updt:	DBOETTC
Std Letter Response Date:	10/22/1996 00:00:00
VPIC Acres:	
VPIC Application Date:	
Contam Soils Remaining Flag:	Y
Indoor Air Collected Flag:	
LUST Trust Eligible Flag:	No
Offsite Contam Flag:	U
REIMB Awarded Flag:	No
Release From AST Flag:	No
Release From UST Flag:	No
Soil Gas Action Level Flag:	
Soil Gas Data Collected Flag:	
Sub Slab Sample Collected Flag:	
Surface Water Impact Flag:	U
Utility Project Flag:	No
Vapor Intrusion Action Flag:	
Vapor Intrusion Checked Flag:	
Leaksite Type Defn:	Leak site (tank and petroleum contamination).
Soil Gas Data Comments:	
Vapor Intrusion Comments:	

Leak Product Rls

Product Rls Seq ID:	323493
Leak Product Desc:	Diesel
Leak Product Defn:	The product is diesel oil.

Leak GW Info

Well Type Code:	
Affected Non Res Props:	
Affected Residential Props:	
Staff ID Last Updt:	RSUCHAN
Staff ID Wellhead Area Assess:	
TMSP Added:	12/04/1999 14:07:34
TMSP Last Updt:	11/04/2003 12:57:08
Water Supply Exceeds Ral Flag:	
Cleanup Goal Achieved Flag:	
DW Supply Contam Flag:	
Free Product at Close Flag:	
Free Product Observed Flag:	
Free Product Thickness:	
Ground Water Contam Flag:	N
GW Cleanup Goal:	0
GW Exceeds Cleanup Goal Flag:	
Impacted Aquifer Code:	
MTBE High Level Date:	
MTBE High Ug Per Liter Char:	
MTBE High Ug Per Liter Numb:	
MTBE Present Historically Flag:	
MTBE Present Now Flag:	
Protected Area Flag:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
PWS Well Impacted Flag:						
Sensitive Area Flag:						
34	5 of12	W	0.47 / 2,458.94	1,409.63 / 39	Old Terminal 4525 Airport Approach Rd Duluth MN 55811	HIST LUST

Prog Int ID:	224893	Address Source:	CORE
Site ID:	182875	Township Name:	Whiteface Reservoir
State County Code:	69	County Name:	St. Louis
Country:	USA	Lat/Long ID:	155646
Interest Type Cd:	LS	Interest Type Dsc:	Leak Site
ADDR ID:	22700	Lat Degrees:	46
Tank Site:	12506	Lat Minutes:	50
Interest Phone:	NO CORE PI PH.	Lat Seconds:	20.61
Interest Start Dt:	09/03/1999 13:54:18	Long Degrees:	-92
Interest End Dt:	03/08/2011 09:42:25	Long Minutes:	11
Active?:	No	Long Seconds:	23.64
Timestamp Added:	03/24/2006 13:06:13	Lat/Long Source:	CORE
Timestamp Updt:	11/10/2014 08:17:05	Lat/Long Site ID:	182875
Staff ID Updt:	RGAGLE	Lat/Long Spatial ID:	51071172
Source:	CORE	Collection Date:	05/03/2011 07:03:42
Coord Src Type:		Map Scale Code:	
Coord Src Desc:		Org Name Source:	
Foreign State:		Foreign Zone:	
FIPS County Cd1:	137		
Addr Timestmp Add:	01/27/1999 09:24:31		
Addr Timestamp Lst Updt:	08/01/2007 21:43:50		
Addr Updater Staff ID:	SYSTEM		
Lat/Long Timestamp Added:	03/22/2010 18:25:51		
Lat/Long Tmstmp Last Upd:	05/03/2011 07:03:42		
Lat/Long Updater Staff ID:	MAPTOOL		
Lat/Long Desc:			
Coord Coll Method Desc:	Digitized - Map Tool		
Coord Coll Method Code:	DM		
Comments:			

Leak Site

Complete Site Closure Date:	03/02/2007 00:00:00
Cond Closure Date:	
Release Discovered Date:	10/12/1998 00:00:00
Leaksite Type Code:	1
Leaksite Type Desc:	Leak Site
Leak Report Date:	10/13/1998 00:00:00
Tank Reg Status Code:	S
TMSP Added:	12/04/1999 14:03:52
TMSP Last Updt:	05/24/2011 15:16:57
CU Yds Excavated Qty:	
ENF Action Begin Date:	04/07/1999 00:00:00
Residence Type Code:	
File Archive Box:	
File Archive Lot:	
Soil Digout Date:	
Staff ID Last Updt:	GZARLIN
Std Letter Response Date:	05/21/1999 00:00:00
VPIC Acres:	
VPIC Application Date:	
Contam Soils Remaining Flag:	Y
Indoor Air Collected Flag:	
LUST Trust Eligible Flag:	No
Offsite Contam Flag:	N
REIMB Awarded Flag:	No
Release From AST Flag:	No
Release From UST Flag:	Yes
Soil Gas Action Level Flag:	
Soil Gas Data Collected Flag:	No

Sub Slab Sample Collected Flag:
Surface Water Impact Flag: N
Utility Project Flag: No
Vapor Intrusion Action Flag:
Vapor Intrusion Checked Flag: No
Leaksite Type Defn: Leak site (tank and petroleum contamination).
Soil Gas Data Comments:
Vapor Intrusion Comments: Low levels of contamination were found that are unlikely to impact the nearby receptors.

Leak Product Rls

Product Rls Seq ID: 106258
Leak Product Desc: Fuel Oil 1 & 2
Leak Product Defn: The product is fuel oil 1 & 2.

Leak GW Info

Well Type Code:
Affected Non Res Props:
Affected Residential Props:
Staff ID Last Updt: GZARLIN
Staff ID Wellhead Area Assess: 3451
TMSP Added: 12/04/1999 14:07:36
TMSP Last Updt: 03/08/2007 11:50:00
Water Supply Exceeds Ral Flag: No
Cleanup Goal Achieved Flag:
DW Supply Contam Flag: N
Free Product at Close Flag: No
Free Product Observed Flag: N
Free Product Thickness:
Ground Water Contam Flag: N
GW Cleanup Goal: 0
GW Exceeds Cleanup Goal Flag:
Impacted Aquifer Code:
MTBE High Level Date:
MTBE High Ug Per Liter Char:
MTBE High Ug Per Liter Numb:
MTBE Present Historically Flag: N
MTBE Present Now Flag: N
Protected Area Flag: No
PWS Well Impacted Flag: No
Sensitive Area Flag: No

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
34	6 of12	W	0.47 / 2,458.94	1,409.63 / 39	NOAA Station - Duluth Int'l Airport 4525 Airport Approach Rd Duluth MN 55811	LST REM SITE

Item ID: 113636-AREA0000000002
Project ID: LS0009696
Project Type: Leak Site
Project ID (RAP):
Project Type (RAP):
Site Status: Closed
Perm List of Prio?:
Petrol Brownfield?:
VIC Site?:
Sf Voluntary:
Inst Controls?:
SEMS?:
Project Name: NOAA Station - Duluth Int'l Airport
Project Managers: Bonnie Mallory (no longer at MPCA)
Site Address 1: 4525 Airport Approach Rd
Site Address 2:

Unpermitted Dump?:
State Reg:
Federal Reg:
Fed State Reg:
Non Reg:
NPL:
Site County: St. Louis
County (RAP):
Latitude: 46.8390529
Longitude: -92.19014668
Latitude (RAP):
Longitude (RAP):

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Site City: Duluth
Site State: MN
Site ZIP: 55811
Project Name(RAP):
Address1 (RAP):
Address2 (RAP):
City (RAP):
State (RAP):
ZIP (RAP):
Data Source: MPCA Remediation Sites

Remediation Sites Details

Activity ID: 113636
SI ID: 2
Si Cat: AREA
SI Type: LEAK
Site Type: CON
Acreage:
HRS Score:
Score Year:
DWSMA Code:
AI Name: National Weather Service Station
DWSMA Name:
Hydrologists:
Huc 8 Name: St. Louis River
Huc12 Name: Saint Louis River
Method Desc: Digitized - MPCA internal map
Loc Desc:
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/113636

Object ID: 21437
Cong Dist: 8
House Dist: 8B
Senate Dis: 8
HUC 8: 04010201
HUC 10: 0401020116
HUC 12: 040102011604
Gdb Geomattr Data:
MNTBA:

Spatial Remediation Activity

AI ID: 113636
Site ID: LS0009696
SI ID: 2
SI Cat: AREA
NFA Decisi:
Site Start: 1996-10-01 00:00:00
Site Close: 1997-07-21 00:00:00
Leak Discovered: 1996-10-01 00:00:00
Leak Reported: 1996-10-01 00:00:00
Leak Reopened:
Activity No: 1
Activity ID: SIW19960001
Activity Type: Leak Site Investigation
Activity Code: SIW
Activity Year: 1996
Discovered:

Object ID: 16681
Remedy Imp:
Remedy Sel:
ASMT Compl:
Received:
NPL List:
NPL Delete:
PLP List:
PLP Delist:
Staff Assi:
FF Aproved:
FF Closed:
Inv Comple:
App Comple:
Er Site Ev:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
34	7 of12	W	0.47 / 2,458.94	1,409.63 / 39	Old Municipal Hanger 4525 Airport Approach Rd Duluth MN 55811	LST REM SITE

Item ID: 113636-AREA0000000001
Project ID: LS0012924
Project Type: Leak Site
Project ID (RAP):
Project Type (RAP):
Site Status: Closed
Perm List of Prio?:
Petrol Brownfield?:
VIC Site?:
Sf Voluntary:
Inst Controls?:
SEMS?:

Unpermitted Dump?:
State Reg: Yes
Federal Reg:
Fed State Reg:
Non Reg:
NPL:
Site County: St. Louis
County (RAP):
Latitude: 46.83775787
Longitude: -92.18951829
Latitude (RAP):
Longitude (RAP):

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Project Name: Old Municipal Hanger
Project Managers: Gary Zarling (no longer at MPCA)
Site Address 1: 4525 Airport Approach Rd
Site Address 2:
Site City: Duluth
Site State: MN
Site ZIP: 55811
Project Name(RAP):
Address1 (RAP):
Address2 (RAP):
City (RAP):
State (RAP):
ZIP (RAP):
Data Source: MPCA Remediation Sites

Remediation Sites Details

Activity ID: 113636
SI ID: 1
Si Cat: AREA
SI Type: LEAK
Site Type: CON
Acreage:
HRS Score:
Score Year:
DWSMA Code:
AI Name: National Weather Service Station
DWSMA Name:
Hydrologists:
Huc 8 Name: St. Louis River
Huc12 Name: Saint Louis River
Method Desc: Digitized - MPCA internal map
Loc Desc: Main Site Building
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/113636

Object ID: 684
Cong Dist: 8
House Dist: 8B
Senate Dis: 8
HUC 8: 04010201
HUC 10: 0401020116
HUC 12: 040102011604
Gdb Geomattr Data:
MNTBA:

Spatial Remediation Activity

AI ID: 113636
Site ID: LS0012924
SI ID: 1
SI Cat: AREA
NFA Decisi:
Site Start: 1998-10-13 00:00:00
Site Close: 2007-09-13 00:00:00
Leak Discovered: 1998-10-12 00:00:00
Leak Reported: 1998-10-13 00:00:00
Leak Reopened:
Activity No: 1
Activity ID: SIW19980001
Activity Type: Leak Site Investigation
Activity Code: SIW
Activity Year: 1998
Discovered:

Object ID: 16680
Remedy Imp:
Remedy Sel:
ASMT Compl:
Received:
NPL List:
NPL Delete:
PLP List:
PLP Delist:
Staff Assi:
FF Aproved:
FF Closed:
Inv Comple:
App Comple:
Er Site Ev:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
34	8 of12	W	0.47 / 2,458.94	1,409.63 / 39	Duluth International Airport 4525 Airport Approach Rd Duluth MN 55811	LST REM SITE

Item ID: 103101-AREA0000000004
Project ID: LS0011496
Project Type: Leak Site
Project ID (RAP):
Project Type (RAP):
Site Status: Closed
Perm List of Prio?:
Petrol Brownfield?:

Unpermitted Dump?:
State Reg:
Federal Reg: Yes
Fed State Reg:
Non Reg:
NPL:
Site County: St. Louis
County (RAP):

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

VIC Site?:		**Latitude:**	46.83920712
Sf Voluntary:		**Longitude:**	-92.19013274
Inst Controls?:		**Latitude (RAP):**	
SEMS?:		**Longitude (RAP):**	
Project Name:	Duluth International Airport		
Project Managers:	Steve Leppala (no longer at MPCA)		
Site Address 1:	4525 Airport Approach Rd		
Site Address 2:			
Site City:	Duluth		
Site State:	MN		
Site ZIP:	55811		
Project Name(RAP):			
Address1 (RAP):			
Address2 (RAP):			
City (RAP):			
State (RAP):			
ZIP (RAP):			
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

Activity ID:	103101	**Object ID:**	9540
SI ID:	4	**Cong Dist:**	8
Si Cat:	AREA	**House Dist:**	8B
SI Type:	LEAK	**Senate Dis:**	8
Site Type:	CON	**HUC 8:**	04010201
Acreage:		**HUC 10:**	0401020116
HRS Score:		**HUC 12:**	040102011604
Score Year:		**Gdb Geomattr Data:**	
DWSMA Code:		**MNTBA:**	
AI Name:	Federal Aviation Administration - Duluth		
DWSMA Name:			
Hydrologists:			
Huc 8 Name:	St. Louis River		
Huc12 Name:	Saint Louis River		
Method Desc:	Digitized - MPCA internal map		
Loc Desc:			
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/103101		

Spatial Remediation Activity

AI ID:	103101	**Object ID:**	12453
Site ID:	LS0011496	**Remedy Imp:**	
SI ID:	4	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	
Site Start:	1998-05-14 00:00:00	**NPL List:**	
Site Close:	1998-12-11 00:00:00	**NPL Delete:**	
Leak Discovered:	1998-05-11 00:00:00	**PLP List:**	
Leak Reported:	1998-05-14 00:00:00	**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	
Activity No:	2	**FF Aproved:**	
Activity ID:	SIW19980002	**FF Closed:**	
Activity Type:	Leak Site Investigation	**Inv Comple:**	
Activity Code:	SIW	**App Comple:**	
Activity Year:	1998	**Er Site Ev:**	
Discovered:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
34	9 of12	W	0.47 / 2,458.94	1,409.63 / 39	**Old Terminal** **4525 Airport Approach Rd** **Duluth MN 55811**	LST REM SITE

Item ID:	103101-AREA0000000005	**Unpermitted Dump?:**	
Project ID:	LS0012506	**State Reg:**	Yes
Project Type:	Leak Site	**Federal Reg:**	
Project ID (RAP):		**Fed State Reg:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Project Type (RAP):		**Non Reg:**	
Site Status:	Closed	**NPL:**	
Perm List of Prio?:		**Site County:**	St. Louis
Petrol Brownfield?:		**County (RAP):**	
VIC Site?:		**Latitude:**	46.83906235
Sf Voluntary:		**Longitude:**	-92.1899062
Inst Controls?:		**Latitude (RAP):**	
SEMS?:		**Longitude (RAP):**	
Project Name:	Old Terminal		
Project Managers:	Gary Zarling (no longer at MPCA)		
Site Address 1:	4525 Airport Approach Rd		
Site Address 2:			
Site City:	Duluth		
Site State:	MN		
Site ZIP:	55811		
Project Name(RAP):			
Address1 (RAP):			
Address2 (RAP):			
City (RAP):			
State (RAP):			
ZIP (RAP):			
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

Activity ID:	103101	**Object ID:**	18698
SI ID:	5	**Cong Dist:**	8
Si Cat:	AREA	**House Dist:**	8B
SI Type:	LEAK	**Senate Dis:**	8
Site Type:	CON	**HUC 8:**	04010201
Acreage:		**HUC 10:**	0401020116
HRS Score:		**HUC 12:**	040102011604
Score Year:		**Gdb Geomattr Data:**	
DWSMA Code:		**MNTBA:**	
AI Name:	Federal Aviation Administration - Duluth		
DWSMA Name:			
Hydrologists:			
Huc 8 Name:	St. Louis River		
Huc12 Name:	Saint Louis River		
Method Desc:	Digitized - MPCA internal map		
Loc Desc:	Main Site Building		
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/103101		

Spatial Remediation Activity

AI ID:	103101	**Object ID:**	12452
Site ID:	LS0012506	**Remedy Imp:**	
SI ID:	5	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	
Site Start:	1998-10-13 00:00:00	**NPL List:**	
Site Close:	2007-03-02 00:00:00	**NPL Delete:**	
Leak Discovered:	1998-10-12 00:00:00	**PLP List:**	
Leak Reported:	1998-10-13 00:00:00	**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	
Activity No:	1	**FF Aproved:**	
Activity ID:	SIW19980001	**FF Closed:**	
Activity Type:	Leak Site Investigation	**Inv Comple:**	
Activity Code:	SIW	**App Comple:**	
Activity Year:	1998	**Er Site Ev:**	
Discovered:			

34	***10 of12***	***W***	***0.47 / 2,458.94***	***1,409.63 / 39***	***National Weather Service Station 4525 Airport Approach Rd Duluth MN 55811***	***MPCA AI***

Agency Interest ID:	113636
Name (Map):	National Weather Service Station
Address (Map):	4525 Airport Approach Rd
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83906
Longitude (Map):	-92.1899022
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	National Weather Service Station
Address (Site):	4525 Airport Approach Rd
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83906
Longitude (Site):	-92.1899022
County (Site):	St. Louis
Name (Req):	National Weather Service Station
Address (Req):	4525 Airport Approach Rd
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83906
Longitude (Req):	-92.1899022
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	113636-AISI0000113636	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2011-03-10 11:53:50	**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	113636
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	8/30/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	9/27/2015	**Verified:**	No
Spatial ID:	51378941	**User Updt:**	geo_nc
Name:	National Weather Service Station		
Program List:	PR, UT		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010201
MPCA ID:	Multiple IDs	**Cong Distr:**	8
Program Co:	SR; TL	**Senate Dis:**	8

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program Name:	Multiple Programs	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	DM
City:	Duluth	**Latitude:**	46.83906
County:	St. Louis	**Longitude:**	-92.1899022
Activity:	Multiple Activities		
Addr St:	4525 Airport Approach Rd		
Addr City:	Duluth		
MPCA ID List:	LS0009696; LS0012924; TS0005259		
Program 1:	Investigation and Cleanup; Tanks		
Name:	National Weather Service Station		
Watershed :	St. Louis River		
Coord Co 1:	Digitized - MPCA internal map		
Activity L:	Petroleum Remediation, Leak Site; Underground Tanks		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/113636		

Agency Interests: File Request Details

Item ID:	113636-AISI0000113636	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	3/10/2011	**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	113636
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	8/30/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	9/27/2015	**User Updt:**	geo_nc
Spatial ID:	51378941		
Name:	National Weather Service Station		
Program List:	PR, UT		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
34	11 of12	W	0.47 / 2,458.94	1,409.63 / 39	**Federal Aviation Administration - Duluth** **4525 Airport Approach Rd** **Duluth MN 55811**	MPCA AI

Agency Interest ID:	103101
Name (Map):	Federal Aviation Administration - Duluth
Address (Map):	4525 Airport Approach Rd
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83906
Longitude (Map):	-92.1899022
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Federal Aviation Administration - Duluth
Address (Site):	4525 Airport Approach Rd

City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83906
Longitude (Site):	-92.1899022
County (Site):	St. Louis
Name (Req):	Federal Aviation Administration - Duluth
Address (Req):	4525 Airport Approach Rd
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83906
Longitude (Req):	-92.1899022
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	103101-AISI0000103101	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	103101
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	10/15/2025	**TRDSQQ:**	
Tmsp Created:	3/24/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	10/16/2025	**Verified:**	No
Spatial ID:	51069744	**User Updt:**	eu01100468
Name:	Federal Aviation Administration - Duluth		
Program List:	AT, HW, PR		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	Multiple IDs	**Cong Distr:**	8
Program Co:	HW; SR; TL	**Senate Dis:**	8
Program Name:	Multiple Programs	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	DM
City:	Duluth	**Latitude:**	46.83906
County:	St. Louis	**Longitude:**	-92.1899022
Activity:	Multiple Activities		
Addr St:	4525 Airport Approach Rd		
Addr City:	Duluth		
MPCA ID List:	LS0011496; LS0012506; MNS000171868; TS0055904; TS0121964		
Program 1:	Hazardous Waste; Investigation and Cleanup; Tanks		
Name:	Federal Aviation Administration - Duluth		
Watershed :	St. Louis River		
Coord Co 1:	Digitized - MPCA internal map		

Activity L: Aboveground Tanks; Hazardous Waste; Petroleum Remediation, Leak Site
Industrial: Scheduled Air Transportation
Site URL: https://webapp.pca.state.mn.us/wimn/site/103101

Agency Interests: File Request Details

Item ID:	103101-AISI0000103101	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	103101
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	10/15/2025	**Ref Code:**	GEN
Tmsp Created:	3/24/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	10/16/2025	**User Updt:**	eu01100468
Spatial ID:	51069744		

Name: Federal Aviation Administration - Duluth
Program List: AT, HW, PR
HUC 8: 4010201
HUC 8 Name: St. Louis River
HUC 10: 401020116
HUC 10 Name: Saint Louis River
HUC 12: 40102011604
HUC 12 Name: Saint Louis River
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: DM
Method Desc: Digitized - MPCA internal map

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
34	12 of12	W	0.47 / 2,458.94	1,409.63 / 39	Lake Superior Helicopters LLC 4525 Airport Approach Rd Duluth MN 55811	MPCA AI

Agency Interest ID: 157456
Name (Map): Lake Superior Helicopters LLC
Address (Map): 4525 Airport Approach Rd
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.83908
Longitude (Map): -92.19002
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Lake Superior Helicopters LLC
Address (Site): 4525 Airport Approach Rd
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811-1534
Latitude (Site): 46.83908
Longitude (Site): -92.19002
County (Site): St. Louis
Name (Req): Lake Superior Helicopters LLC
Address (Req): 4525 Airport Approach Rd
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.83908
Longitude (Req): -92.19002

County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 157456-AISI0000157456
Status: Active
Status Date:
Program: Hazardous Waste
CTU Code: 239456
CTU Name: Duluth
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date:
Tmsp Created: 2/22/2016
User Created: kkircho
Tmsp Updt: 2/14/2017
Spatial ID:
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 157456
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 8B
Senate Dist: 8
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: RSP
Name: Lake Superior Helicopters LLC
Program List: HW
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: DP
Method Desc: Digitized - MPCA online map

My Neighborhood Site Details

Active FLA: Yes
MPCA ID: MNS000302496
Program Co: HW
Program Name: Hazardous Waste
Address: MN
Addr ZIP: 55811-1534
City: Duluth
County: St. Louis
HUC 8: 04010201
Cong Distr: 8
Senate Dis: 8
House Dist: 8B
IC Flag: No
Coord Coll: DP
Latitude: 46.83908
Longitude: -92.19002
Activity: Hazardous Waste, Minimal quantity generator
Addr St: 4525 Airport Approach Rd
Addr City: Duluth
MPCA ID List: MNS000302496
Program 1: Hazardous Waste
Name: Lake Superior Helicopters LLC
Watershed : St. Louis River
Coord Co 1: Digitized - MPCA online map
Activity L: Hazardous Waste, Minimal quantity generator
Industrial: Nonscheduled Air Transportation; Tour Operators; Flight Training
Site URL: https://webapp.pca.state.mn.us/wimn/site/157456

Agency Interests: File Request Details

Item ID: 157456-AISI0000157456
Status: Active
Status Date:
Program: Hazardous Waste
CTU Code: 239456
CTU Name: Duluth
PLS Twsp:
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 157456
SI Cat Desc: Agency Interest
Description:
SI Designation:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:		**Ref Code:**	GEN
Tmsp Created:	2/22/2016	**Ref Desc:**	General Location
User Created:	kkircho	**Verified:**	No
Tmsp Updt:	2/14/2017	**User Updt:**	RSP
Spatial ID:			
Name:	Lake Superior Helicopters LLC		
Program List:	HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	DP		
Method Desc:	Digitized - MPCA online map		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
35	1 of1	ESE	0.49 / 2,569.56	1,380.51 / 10	UA Local 11 Duluth Facility - Building Addition 4402 Airpark Blvd Duluth MN 55811	MPCA AI

Agency Interest ID:	263518
Name (Map):	UA Local 11 Duluth Facility - Building Addition
Address (Map):	4402 Airpark Blvd
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.832331
Longitude (Map):	-92.166314
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	UA Local 11 Duluth Facility - Building Addition
Address (Site):	4402 Airpark Blvd
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811-5712
Latitude (Site):	46.832331
Longitude (Site):	-92.166314
County (Site):	St. Louis
Name (Req):	UA Local 11 Duluth Facility - Building Addition
Address (Req):	4402 Airpark Blvd
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.832331
Longitude (Req):	-92.166314
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	263518-AISI0000263518	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	263518
CTU Code:	239456	**SI Cat Desc:**	Agency Interest

CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	5/16/2025	**TRDSQQ:**	
Tmsp Created:	5/16/2025	**Ref Code:**	CEN
User Created:	RSP	**Ref Desc:**	Center of Feature Represented
Tmsp Updt:	5/16/2025	**Verified:**	No
Spatial ID:		**User Updt:**	geo_nc

Name: UA Local 11 Duluth Facility - Building Addition
Program List: CS
HUC 8: 04010201
HUC 8 Name: St. Louis River
HUC 10: 0401020116
HUC 12: 040102011604
HUC 12 Name: Saint Louis River
DWSMA Code:
DWSMA Name:
Method Code: DP
Method Desc: Digitized - MPCA online map

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010201
MPCA ID:	C00072275	**Cong Distr:**	8
Program Co:	ST	**Senate Dis:**	8
Program Name:	Stormwater	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811-5712	**Coord Coll:**	DP
City:	Duluth	**Latitude:**	46.832331
County:	St. Louis	**Longitude:**	-92.166314

Activity: Construction Stormwater
Addr St: 4402 Airpark Blvd
Addr City: Duluth
MPCA ID List: C00072275
Program 1: Stormwater
Name: UA Local 11 Duluth Facility - Building Addition
Watershed : St. Louis River
Coord Co 1: Digitized - MPCA online map
Activity L: Construction Stormwater
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/263518

Agency Interests: File Request Details

Item ID:	263518-AISI0000263518	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Const Stormwater	**SI ID:**	263518
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	5/16/2025	**Ref Code:**	CEN
Tmsp Created:	5/16/2025	**Ref Desc:**	Center of Feature Represented
User Created:	RSP	**Verified:**	No
Tmsp Updt:	5/16/2025	**User Updt:**	geo_nc
Spatial ID:			

Name: UA Local 11 Duluth Facility - Building Addition
Program List: CS
HUC 8: 4010201
HUC 8 Name: St. Louis River

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	DP
Method Desc:	Digitized - MPCA online map

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
36	1 of1	NNE	0.49 / 2,573.02	1,410.56 / 40	MN Air National Guard Tank #6/Bldg 230 4623 Phantom Dr Duluth MN 55811	HIST LEAKSITES

Prog Int ID:	220568	**Address Source:**	CORE
Site ID:	223559	**Township Name:**	Whiteface Reservoir
State County Code:	69	**County Name:**	St. Louis
Country:	USA	**Lat/Long ID:**	170229
Interest Type Cd:	LS	**Interest Type Dsc:**	Leak Site
ADDR ID:	267586	**Lat Degrees:**	46
Tank Site:	7973	**Lat Minutes:**	50
Interest Phone:	NO CORE PI PH.	**Lat Seconds:**	56.23
Interest Start Dt:	07/01/1999 10:47:16	**Long Degrees:**	-92
Interest End Dt:	04/14/2011 15:05:23	**Long Minutes:**	10
Active?:	No	**Long Seconds:**	25.56
Timestamp Added:	11/21/2006 08:01:31	**Lat/Long Source:**	CORE
Timestamp Updt:	11/10/2014 08:17:06	**Lat/Long Site ID:**	223559
Staff ID Updt:	RGAGLE	**Lat/Long Spatial ID:**	51821074
Source:	CORE	**Collection Date:**	03/02/2011 18:23:50
Coord Src Type:		**Map Scale Code:**	
Coord Src Desc:		**Org Name Source:**	
Foreign State:		**Foreign Zone:**	
FIPS County Cd1:	137		

Addr Timestmp Add:	11/21/2006 08:01:18
Addr Timestamp Lst Updt:	04/14/2011 15:04:24
Addr Updater Staff ID:	SFRYE
Lat/Long Timestamp Added:	03/29/2010 19:02:04
Lat/Long Tmstmp Last Upd:	03/02/2011 18:56:53
Lat/Long Updater Staff ID:	MAPT_NC
Lat/Long Desc:	
Coord Coll Method Desc:	Address Matching House Number
Coord Coll Method Code:	A1
Comments:	

Leak Site

Complete Site Closure Date:	07/30/1996 00:00:00
Cond Closure Date:	
Release Discovered Date:	10/20/1994 00:00:00
Leaksite Type Code:	1
Leaksite Type Desc:	Leak Site
Leak Report Date:	10/20/1994 00:00:00
Tank Reg Status Code:	F
TMSP Added:	12/04/1999 14:03:49
TMSP Last Updt:	04/04/2011 08:34:53
CU Yds Excavated Qty:	0
ENF Action Begin Date:	
Residence Type Code:	
File Archive Box:	54
File Archive Lot:	98/223
Soil Digout Date:	
Staff ID Last Updt:	JDIETZ
Std Letter Response Date:	11/10/1994 00:00:00
VPIC Acres:	
VPIC Application Date:	
Contam Soils Remaining Flag:	U

Indoor Air Collected Flag:	
LUST Trust Eligible Flag:	Yes
Offsite Contam Flag:	U
REIMB Awarded Flag:	No
Release From AST Flag:	No
Release From UST Flag:	No
Soil Gas Action Level Flag:	
Soil Gas Data Collected Flag:	
Sub Slab Sample Collected Flag:	
Surface Water Impact Flag:	U
Utility Project Flag:	No
Vapor Intrusion Action Flag:	
Vapor Intrusion Checked Flag:	
Leaksite Type Defn:	Leak site (tank and petroleum contamination).
Soil Gas Data Comments:	
Vapor Intrusion Comments:	

Leak Product Rls

Product Rls Seq ID:	322489
Leak Product Desc:	Fuel Oil 1 & 2
Leak Product Defn:	The product is fuel oil 1 & 2.

Leak GW Info

Well Type Code:	
Affected Non Res Props:	
Affected Residential Props:	
Staff ID Last Updt:	RSUCHAN
Staff ID Wellhead Area Assess:	
TMSP Added:	12/04/1999 14:07:32
TMSP Last Updt:	11/04/2003 12:57:07
Water Supply Exceeds Ral Flag:	
Cleanup Goal Achieved Flag:	
DW Supply Contam Flag:	
Free Product at Close Flag:	
Free Product Observed Flag:	
Free Product Thickness:	
Ground Water Contam Flag:	S
GW Cleanup Goal:	0
GW Exceeds Cleanup Goal Flag:	
Impacted Aquifer Code:	
MTBE High Level Date:	
MTBE High Ug Per Liter Char:	
MTBE High Ug Per Liter Numb:	
MTBE Present Historically Flag:	
MTBE Present Now Flag:	
Protected Area Flag:	
PWS Well Impacted Flag:	
Sensitive Area Flag:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
37	1 of2	SW	0.49 / 2,575.99	1,405.23 / 34	United Piping Inc - Hermantown 4785 Swan Lake Rd Hermantown MN 55811	MPCA AI

Agency Interest ID:	26815
Name (Map):	United Piping Inc - Hermantown
Address (Map):	4785 Swan Lake Rd
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8298836
Longitude (Map):	-92.1830954

County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	United Piping Inc - Hermantown
Address (Site):	4785 Swan Lake Rd
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811-1511
Latitude (Site):	46.8298836
Longitude (Site):	-92.1830954
County (Site):	St. Louis
Name (Req):	United Piping Inc - Hermantown
Address (Req):	4785 Swan Lake Rd
City (Req):	Hermantown
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8298836
Longitude (Req):	-92.1830954
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	26815-AISI0000026815	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	2001-05-15 00:00:00	***SI Cat:***	AISI
Program:	Hazardous Waste	***SI ID:***	26815
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	9/28/2015	***TRDSQQ:***	
Tmsp Created:	7/26/1999	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	4/26/2016	***Verified:***	No
Spatial ID:	18038	***User Updt:***	spatial_

Name:	United Piping Inc - Hermantown
Program List:	HW
HUC 8:	04010201
HUC 8 Name:	St. Louis River
HUC 10:	0401020116
HUC 12:	040102011604
HUC 12 Name:	Saint Louis River
DWSMA Code:	
DWSMA Name:	
Method Code:	A1
Method Desc:	Address Matching House Number

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	MND985703891	***Cong Distr:***	8
Program Co:	HW	***Senate Dis:***	3
Program Name:	Hazardous Waste	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811-1511	***Coord Coll:***	A1
City:	Hermantown	***Latitude:***	46.8298836
County:	St. Louis	***Longitude:***	-92.1830954

Activity:	Hazardous Waste
Addr St:	4785 Swan Lake Rd
Addr City:	Hermantown

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

MPCA ID List:	MND985703891
Program 1:	Hazardous Waste
Name:	United Piping Inc - Hermantown
Watershed :	St. Louis River
Coord Co 1:	Address Matching House Number
Activity L:	Hazardous Waste
Industrial:	
Site URL:	https://webapp.pca.state.mn.us/wimn/site/26815

Agency Interests: File Request Details

Item ID:	26815-AISI0000026815	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	5/15/2001	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	26815
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	9/28/2015	**Ref Code:**	GEN
Tmsp Created:	7/26/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	18038		

Name:	United Piping Inc - Hermantown
Program List:	HW
HUC 8:	4010201
HUC 8 Name:	St. Louis River
HUC 10:	401020116
HUC 10 Name:	Saint Louis River
HUC 12:	40102011604
HUC 12 Name:	Saint Louis River
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	A1
Method Desc:	Address Matching House Number

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
37	2 of2	SW	0.49 / 2,575.99	1,405.23 / 34	Swan Lake Road Property 4785 Swan Lake Road Hermantown MN 55811	MPCA AI

Agency Interest ID:	108402
Name (Map):	Swan Lake Road Property
Address (Map):	4785 Swan Lake Road
City (Map):	Hermantown
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8300169
Longitude (Map):	-92.1833135
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Swan Lake Road Property
Address (Site):	4785 Swan Lake Road
City (Site):	Hermantown
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8300169
Longitude (Site):	-92.1833135
County (Site):	St. Louis
Name (Req):	Swan Lake Road Property
Address (Req):	4785 Swan Lake Road
City (Req):	Hermantown

State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8300169
Longitude (Req):	-92.1833135
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	108402-AISI0000108402	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	2006-09-14 13:37:05	***SI Cat:***	AISI
Program:	Underground Tanks	***SI ID:***	108402
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	9/27/2015	***TRDSQQ:***	
Tmsp Created:	9/14/2006	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	9/27/2015	***Verified:***	No
Spatial ID:	51436234	***User Updt:***	geo_nc
Name:	Swan Lake Road Property		
Program List:	UT		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	TS0119060	***Cong Distr:***	8
Program Co:	TL	***Senate Dis:***	3
Program Name:	Tanks	***House Dist:***	3B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	A1
City:	Hermantown	***Latitude:***	46.8300169
County:	St. Louis	***Longitude:***	-92.1833135
Activity:	Underground Tanks		
Addr St:	4785 Swan Lake Road		
Addr City:	Hermantown		
MPCA ID List:	TS0119060		
Program 1:	Tanks		
Name:	Swan Lake Road Property		
Watershed :	St. Louis River		
Coord Co 1:	Address Matching House Number		
Activity L:	Underground Tanks		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/108402		

Agency Interests: File Request Details

Item ID:	108402-AISI0000108402	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Status Date:	9/14/2006	**SI Cat:**	AISI
Program:	Underground Tanks	**SI ID:**	108402
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	9/14/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	9/27/2015	**User Updt:**	geo_nc
Spatial ID:	51436234		
Name:	Swan Lake Road Property		
Program List:	UT		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

38	*1 of2*	*NNE*	*0.62 / 3,283.32*	*1,394.77 / 24*	***DULUTH AIR FORCE BASE OU31-MANG Site 21 TCE Plume Minnesota Air National Guard Facility Duluth International Airport Duluth MN 55811***	***DEL PLP***

Delisted Permanent List of Priorities (PLP)

Project ID:	SR366	**Created By:**	Pjensen
Site ID2:		**Created Date:**	12/1/2008
Core Prgm Int ID:	56574824	**Last Update:**	2/23/2016
Item ID:		**Site City:**	272
Link ID:	455	**Site County:**	69
Active:	TRUE	**Legal District:**	7
Remed Site Type:	Other	**PLS Method:**	
Agency Interest ID:		**Pls Scal:**	
AI Name:		**Township:**	
EPA ID:		**Range:**	
Site Type:		**Range E W:**	
MPCA Region:	Duluth	**Section:**	
EPA HRS Score:		**Qtr 160:**	
NPL:	FALSE	**Qtr 40:**	
Perm List of Prior?:	TRUE	**Qtr 10:**	
PLP Listed Dt:		**Qtr 2 5:**	
PLP Delisted Dt:		**Quad:**	
NPL Listed Dt:		**NAD No:**	83
NPL Deleted Dt:		**Coord Pt Desc:**	Center of Site
Site Closed Dt:		**Coord Src Type:**	2
Agency Interest Own:		**Coord Src Org:**	MPCA
Leak Discovered Dt:		**Meth Col:**	I1
Leak Reported Dt:		**Coldate:**	01-Dec-08
Application Received:		**Hydrogeol/Hydrol:**	
District:		**Project Manager:**	
Pgm Ref from:		**File Location:**	Regional Office
Pgm Int:	SF	**Congression Dist:**	8
Reservation:	FALSE	**VIC App GIS:**	FALSE
Reservation Name:		**Latitude:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

MPCA Wells:	FALSE	**Longitude:**	
Federal Facility:	TRUE	**UTM Source:**	
Primary Fund:	11	**UTM Method:**	
Basin Code:	1	**UTM Scale:**	
Major Watershed:	3	**UTM East:**	563240
Minor Watershed:	3001	**UTM North:**	5188350
PBP:	FALSE	**UTM Zone:**	15
ENF Lead Agency:	MPCA	**Site Size:**	35
Fed Def Pilot:	FALSE	**Pay Complete:**	FALSE
Site Class A:	FALSE	**Owner Address:**	
Site Class B:	FALSE	**Owner City:**	
Site Class C:	FALSE	**Owner State:**	
Site Class D:	FALSE	**Owner ZIP:**	
NATRESDMG:	FALSE	**County Name:**	St. Louis
Fund Fin:	FALSE		

Migrated from Old Database:
Coord Collection Method:
What's in My Neighborhood:
Physical Location: Site encompasses abou 25 to 50 acres along the eastern side of the MANG facility at the northeast corner of the Duluth International Airport. Site 21 or Duluth Air Force Base OU21 was formerly known as Site 21/25 or OU21/25
Source Orig: PLP
Record Date: 04-AUG-2016

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
38	2 of2	NNE	0.62 / 3,283.32	1,394.77 / 24	DULUTH AIR FORCE BASE OU31-MANG Site 21 TCE Plume See location description Duluth MN	DEL PLP

Delisted Delisted Permanent List of Priorities (PLP)

Item ID:	192224-AREA0000000025	**Site Address 1:**	See location description
Project ID:	SR0000366	**Site Address 2:**	
Project Type:	Superfund sub-area	**Site City:**	Duluth
Project ID (RAP):	SR0000366	**Site State:**	MN
Project Type (RAP):	Superfund sub-area	**Site ZIP:**	55811
Project Name:	DULUTH AIR FORCE BASE OU31-MANG Site 21 TCE Plume	**Site County:**	St. Louis
Site Status:	Active / Existing	**Latitude:**	46.84568662
Perm List of Prior?:	Yes	**Longitude:**	-92.1705579
Petrol Brownfield?:		**Project Name(RAP):**	DULUTH AIR FORCE BASE OU31-MANG Site 21 TCE Plume
VIC Site?:		**Address1 (RAP):**	See location description
Sf Volunta:		**Address2(RAP):**	
Inst Controls?:		**City (RAP):**	Duluth
Federal Re:		**State (RAP):**	MN
Fed State:		**ZIP(RAP):**	55811
State Reg:		**County (RAP):**	St. Louis
Non Reg:		**Latitude (RAP):**	46.84568662
SEMS?:		**Longitude (RAP):**	-92.1705579
NPL:		**Data Source:**	MPCA Remediation Sites; MPCA Remediation Sites with RAP approvals

Unpermitted Dump?:
Project Ma: David Knight (former), Heidi Bauman (current), Mark Elliott (current)
Original Source: PLP
Record Date: 08-JUN-2022

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
39	1 of1	NNE	0.62 / 3,284.31	1,394.77 / 24	DULUTH AIR FORCE BASE OU31-MANG Site 21 TCE Plume See location description Duluth MN 55811	PLP

Item ID:	192224-AREA0000000025	**Federal Reg:**	
Project ID:	SR0000366	**Fed State Reg:**	
Project Type:	Superfund sub-area	**Non Reg:**	
Project ID (RAP):	SR0000366	**SEMS?:**	

Project Type (RAP):	Superfund sub-area	**NPL:**	
Site Status:	Active / Existing	**Unpermitted Dump?:**	
Perm List of Prior?:	Yes	**Latitude:**	46.84568662
Petrol Brownfield?:		**Longitude:**	-92.1705579
VIC Site?:		**County (RAP):**	St. Louis
Sf Voluntary:		**Latitude (RAP):**	46.84568662
Inst Controls?:		**Longitude (RAP):**	-92.1705579
State Reg:			

Project Name:	DULUTH AIR FORCE BASE OU31-MANG Site 21 TCE Plume
Site Address 1:	See location description
Site Address 2:	
Site City:	Duluth
Site State:	MN
Site ZIP:	55811
Site County:	St. Louis
Project Name(RAP):	DULUTH AIR FORCE BASE OU31-MANG Site 21 TCE Plume
Address1 (RAP):	See location description
Address2(RAP):	
City (RAP):	Duluth
State (RAP):	MN
ZIP(RAP):	55811
Project Managers:	Dan Cervin (current), Mark Elliott (former)
Data Source:	MPCA Remediation Sites; MPCA Remediation Sites with RAP approvals

Remediation Sites Details

AI Name:	Duluth Air Force Base	**DWSMA Code:**	
Activity ID:	192224	**DWSMA Name:**	
SI ID:	25	**Cong Dist:**	8
SI Cat:	AREA	**House Dist:**	8B
SI Type:	OPER	**Senate Dis:**	8
Site Type:	CON	**HUC 8:**	04010201
Acreage:	6.30	**HUC 10:**	0401020116
HRS Score:		**HUC 12:**	040102011604
Score Year:		**Method Des:**	Interpolation Other
MNTBA:			

Loc Desc:	Site is located in the MANG installation which encompasses approximately 50 acres of property near the northeast corner of Duluth International Airport. Site 21 is a chlorinated solvent release and plume that covers about 7 acres along the eastern side of the MANG facility. It is located along north and south sides of Mustang drive near the main entryway to the MANG installation. Site 21 or Duluth Air Force Base OU21 was formerly known as Site 21/25 or OU21/25
HUC 8 Name:	St. Louis River
HUC 12 Name:	Saint Louis River
Hydrologist(s):	Mark Elliott (current)
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/192224

Remediation Sites with RAP Approval

Activity ID:	192224	**Rap Date:**	
No Assoc Date:		**Site Start:**	
No Assoc Letter:	No	**Rap Approved:**	
Has Rp:	Yes	**Rap Completed:**	
Coord Collect Methd:	Interpolation Other	**Site Closed:**	
Parcels:			

WIMN:	https://webapp.pca.state.mn.us/wimn/site/192224
AI Name:	Duluth Air Force Base
Rp Names:	(TBD)

Spatial Remediation Activity

AI ID:	192224	**Site Start:**	2005-01-01 00:00:00
Site ID:	SR0000366	**Remedy Imp:**	
SI ID:	25	**Remedy Sel:**	2013-06-25 00:00:00
SI Cat:	AREA	**ASMT Compl:**	2005-01-01 00:00:00
NFA Decisi:		**Received:**	2005-01-01 00:00:00

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Site Close:		**NPL List:**	
Leak Discovered:		**NPL Delete:**	
Leak Reported:		**PLP List:**	
Leak Reopened:		**PLP Delist:**	
Activity No:	2	**Staff Assi:**	2008-12-01 00:00:00
Activity ID:	SIW20080002	**FF Aproved:**	
Activity Type:	Superfund Investigation/Cleanup	**FF Closed:**	
Activity Code:	SIW	**Inv Comple:**	2010-12-31 00:00:00
Activity Year:	2008	**App Comple:**	2008-12-01 00:00:00
Discovered:		**Er Site Ev:**	

40	1 of1	WNW	0.74 / 3,882.90	1,424.41 / 53	**DULUTH AIR FORCE BASE Site 29 - (FUDS)Site 102 TCE** **Lots 2 and 3 Block 4 and 5 of the Airport Division** **Duluth MN 55811**	DEL PLP

Delisted Permanent List of Priorities (PLP)

Project ID:	SR355	**Created By:**	Mark Elliott
Site ID2:		**Created Date:**	5/31/2006
Core Prgm Int ID:	55132344	**Last Update:**	2/19/2016
Item ID:		**Site City:**	272
Link ID:	455	**Site County:**	69
Active:	FALSE	**Legal District:**	06B
Remed Site Type:	Military Base	**PLS Method:**	M
Agency Interest ID:		**Pls Scal:**	A
AI Name:		**Township:**	50
EPA ID:		**Range:**	15
Site Type:		**Range E W:**	W
MPCA Region:	Duluth	**Section:**	2
EPA HRS Score:		**Qtr 160:**	SE
NPL:	FALSE	**Qtr 40:**	SE
Perm List of Prior?:	TRUE	**Qtr 10:**	NW
PLP Listed Dt:		**Qtr 2 5:**	
PLP Delisted Dt:		**Quad:**	771
NPL Listed Dt:		**NAD No:**	83
NPL Deleted Dt:		**Coord Pt Desc:**	
Site Closed Dt:		**Coord Src Type:**	
Agency Interest Own:		**Coord Src Org:**	
Leak Discovered Dt:		**Meth Col:**	
Leak Reported Dt:		**Coldate:**	
Application Received:		**Hydrogeol/Hydrol:**	
District:	North	**Project Manager:**	
Pgm Ref from:	Other	**File Location:**	Regional Office
Pgm Int:	SF	**Congression Dist:**	8
Reservation:	FALSE	**VIC App GIS:**	FALSE
Reservation Name:		**Latitude:**	
MPCA Wells:	FALSE	**Longitude:**	
Federal Facility:	TRUE	**UTM Source:**	2
Primary Fund:	4	**UTM Method:**	I1
Basin Code:	1	**UTM Scale:**	A
Major Watershed:	3	**UTM East:**	561741.33001
Minor Watershed:	3001	**UTM North:**	5188021.6282
PBP:	FALSE	**UTM Zone:**	15
ENF Lead Agency:	MPCA	**Site Size:**	3
Fed Def Pilot:	FALSE	**Pay Complete:**	TRUE
Site Class A:	FALSE	**Owner Address:**	
Site Class B:	FALSE	**Owner City:**	
Site Class C:	TRUE	**Owner State:**	
Site Class D:	TRUE	**Owner ZIP:**	
NATRESDMG:	FALSE	**County Name:**	St. Louis
Fund Fin:	FALSE		
Migrated from Old Database:			
Coord Collection Method:			
What's in My Neighborhood:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Physical Location: OU29 is also known as the Lot 3 Project Area (LP3) or the Building 102 Site. It is located in the southwest part of the DAB. This area is owned by the DAA and currently occupied by two lease holders, Cirrus Design Corp. and the Commorative Air Force.
Source Orig: PLP
Record Date: 04-AUG-2016

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
41	1 of21	NNE	0.78 / 4,118.46	1,421.03 / 50	DULUTH AIR FORCE BASE Site 2 - MANG fire training 4680 Viper St Duluth MN	DEL PLP

Delisted Delisted Permanent List of Priorities (PLP)

Item ID:	192224-AREA0000000004	**Site Address 1:**	4680 Viper St
Project ID:	SR0000252	**Site Address 2:**	
Project Type:	Superfund sub-area	**Site City:**	Duluth
Project ID (RAP):	SR0000252	**Site State:**	MN
Project Type (RAP):	Superfund sub-area	**Site ZIP:**	55811
Project Name:	DULUTH AIR FORCE BASE Site 2 - MANG fire training	**Site County:**	St. Louis
Site Status:	Active / Existing	**Latitude:**	46.84896294
Perm List of Prior?:	Yes	**Longitude:**	-92.17377453
Petrol Brownfield?:		**Project Name(RAP):**	DULUTH AIR FORCE BASE Site 2 - MANG fire training
VIC Site?:		**Address1 (RAP):**	4680 Viper St
Sf Volunta:		**Address2(RAP):**	
Inst Controls?:		**City (RAP):**	Duluth
Federal Re:		**State (RAP):**	MN
Fed State:		**ZIP(RAP):**	55811
State Reg:		**County (RAP):**	St. Louis
Non Reg:		**Latitude (RAP):**	46.84896294
SEMS?:		**Longitude (RAP):**	-92.17377453
NPL:		**Data Source:**	MPCA Remediation Sites; MPCA Remediation Sites with RAP approvals

Unpermitted Dump?:
Project Ma: David Knight (former), Heidi Bauman (former), Jane Mosel (no longer at MPCA), Mark Elliott (current)
Original Source: PLP
Record Date: 08-JUN-2022

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
41	2 of21	NNE	0.78 / 4,118.46	1,421.03 / 50	Duluth Air Force Base OU5 4680 Viper St Duluth MN 55811	PLP

Item ID:	192224-AREA0000000007	**Federal Reg:**	
Project ID:	SR0000255	**Fed State Reg:**	
Project Type:	Superfund sub-area	**Non Reg:**	
Project ID (RAP):		**SEMS?:**	
Project Type (RAP):		**NPL:**	
Site Status:	Closed	**Unpermitted Dump?:**	
Perm List of Prior?:	Yes	**Latitude:**	46.84767998
Petrol Brownfield?:		**Longitude:**	-92.17153432
VIC Site?:		**County (RAP):**	
Sf Voluntary:		**Latitude (RAP):**	
Inst Controls?:		**Longitude (RAP):**	
State Reg:			
Project Name:	Duluth Air Force Base OU5		
Site Address 1:	4680 Viper St		
Site Address 2:			
Site City:	Duluth		
Site State:	MN		
Site ZIP:	55811		
Site County:	St. Louis		
Project Name(RAP):			
Address1 (RAP):			
Address2(RAP):			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

City (RAP):
State (RAP):
ZIP(RAP):
Project Managers: David Knight (former), Heidi Bauman (former), Jane Mosel (no longer at MPCA)
Data Source: MPCA Remediation Sites

Remediation Sites Details

AI Name:	Duluth Air Force Base	**DWSMA Code:**	
Activity ID:	192224	**DWSMA Name:**	
SI ID:	7	**Cong Dist:**	8
SI Cat:	AREA	**House Dist:**	8B
SI Type:	OPER	**Senate Dis:**	8
Site Type:	CON	**HUC 8:**	04010201
Acreage:		**HUC 10:**	0401020116
HRS Score:	21.00	**HUC 12:**	040102011604
Score Year:	2016	**Method Des:**	Address Matching House Number
MNTBA:			

Loc Desc:
HUC 8 Name: St. Louis River
HUC 12 Name: Saint Louis River
Hydrologist(s): Mike Bares (no longer at MPCA)
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/192224

Spatial Remediation Activity

AI ID:	192224	**Site Start:**	1984-10-30 00:00:00
Site ID:	SR0000255	**Remedy Imp:**	
SI ID:	7	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	1984-10-30 00:00:00
Site Close:		**NPL List:**	
Leak Discovered:		**NPL Delete:**	
Leak Reported:		**PLP List:**	1984-10-30 00:00:00
Leak Reopened:		**PLP Delist:**	
Activity No:	5	**Staff Assi:**	1984-10-30 00:00:00
Activity ID:	SIW19840005	**FF Aproved:**	
Activity Type:	Superfund Investigation/Cleanup	**FF Closed:**	
Activity Code:	SIW	**Inv Comple:**	
Activity Year:	1984	**App Comple:**	1984-10-30 00:00:00
Discovered:		**Er Site Ev:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
41	3 of21	NNE	0.78 / 4,118.46	1,421.03 / 50	Duluth Air Force Base OU27 4680 Viper St Duluth MN 55811	PLP

Item ID:	192224-AREA0000000017	**Federal Reg:**	
Project ID:	SR0000320	**Fed State Reg:**	
Project Type:	Superfund sub-area	**Non Reg:**	
Project ID (RAP):		**SEMS?:**	
Project Type (RAP):		**NPL:**	
Site Status:	Closed	**Unpermitted Dump?:**	
Perm List of Prior?:	Yes	**Latitude:**	46.84767998
Petrol Brownfield?:		**Longitude:**	-92.17153432
VIC Site?:		**County (RAP):**	
Sf Voluntary:		**Latitude (RAP):**	
Inst Controls?:		**Longitude (RAP):**	

State Reg:
Project Name: Duluth Air Force Base OU27
Site Address 1: 4680 Viper St
Site Address 2:
Site City: Duluth
Site State: MN
Site ZIP: 55811
Site County: St. Louis
Project Name(RAP):

Address1 (RAP):
Address2(RAP):
City (RAP):
State (RAP):
ZIP(RAP):
Project Managers: David Knight (former), Heidi Bauman (former), Jane Mosel (no longer at MPCA)
Data Source: MPCA Remediation Sites

Remediation Sites Details

AI Name: Duluth Air Force Base
Activity ID: 192224
SI ID: 17
SI Cat: AREA
SI Type: OPER
Site Type: CON
Acreage:
HRS Score:
Score Year:
MNTBA:
Loc Desc:
HUC 8 Name: St. Louis River
HUC 12 Name: Saint Louis River
Hydrologist(s): Mike Bares (no longer at MPCA)
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/192224

DWSMA Code:
DWSMA Name:
Cong Dist: 8
House Dist: 8B
Senate Dis: 8
HUC 8: 04010201
HUC 10: 0401020116
HUC 12: 040102011604
Method Des: Address Matching House Number

Spatial Remediation Activity

AI ID: 192224
Site ID: SR0000320
SI ID: 17
SI Cat: AREA
NFA Decisi:
Site Close: 2001-03-14 00:00:00
Leak Discovered:
Leak Reported:
Leak Reopened:
Activity No: 3
Activity ID: SIW19990003
Activity Type: Superfund Investigation/Cleanup
Activity Code: SIW
Activity Year: 1999
Discovered:

Site Start: 1999-03-09 00:00:00
Remedy Imp:
Remedy Sel:
ASMT Compl:
Received:
NPL List:
NPL Delete:
PLP List: 1984-10-30 00:00:00
PLP Delist:
Staff Assi: 1999-03-09 00:00:00
FF Aproved:
FF Closed:
Inv Comple:
App Comple: 1999-03-09 00:00:00
Er Site Ev:

41	4 of21	NNE	0.78 / 4,118.46	1,421.03 / 50	Duluth Air Force Base OU12 4680 Viper St Duluth MN 55811	PLP

Item ID: 192224-AREA0000000018
Project ID: SR0000321
Project Type: Superfund sub-area
Project ID (RAP):
Project Type (RAP):
Site Status: Closed
Perm List of Prior?: Yes
Petrol Brownfield?:
VIC Site?:
Sf Voluntary:
Inst Controls?:
State Reg:
Project Name: Duluth Air Force Base OU12
Site Address 1: 4680 Viper St
Site Address 2:
Site City: Duluth
Site State: MN
Site ZIP: 55811

Federal Reg:
Fed State Reg:
Non Reg:
SEMS?:
NPL:
Unpermitted Dump?:
Latitude: 46.84896294
Longitude: -92.17377453
County (RAP):
Latitude (RAP):
Longitude (RAP):

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Site County: St. Louis
Project Name(RAP):
Address1 (RAP):
Address2(RAP):
City (RAP):
State (RAP):
ZIP(RAP):
Project Managers: David Knight (former), Heidi Bauman (former), Jane Mosel (no longer at MPCA)
Data Source: MPCA Remediation Sites

Remediation Sites Details

AI Name: Duluth Air Force Base
Activity ID: 192224
SI ID: 18
SI Cat: AREA
SI Type: OPER
Site Type: CON
Acreage:
HRS Score: 21.00
Score Year: 2016
MNTBA:
Loc Desc:
HUC 8 Name: Cloquet River
HUC 12 Name: Wild Rice Lake Reservoir
Hydrologist(s): Mike Bares (no longer at MPCA)
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/192224

DWSMA Code:
DWSMA Name:
Cong Dist: 8
House Dist: 8B
Senate Dis: 8
HUC 8: 04010202
HUC 10: 0401020205
HUC 12: 040102020501
Method Des: Address Matching House Number

Spatial Remediation Activity

AI ID: 192224
Site ID: SR0000321
SI ID: 18
SI Cat: AREA
NFA Decisi:
Site Close: 2000-01-01 00:00:00
Leak Discovered:
Leak Reported:
Leak Reopened:
Activity No: 2
Activity ID: SIW19990002
Activity Type: Superfund Investigation/Cleanup
Activity Code: SIW
Activity Year: 1999
Discovered:

Site Start: 1999-04-05 00:00:00
Remedy Imp:
Remedy Sel:
ASMT Compl:
Received:
NPL List:
NPL Delete:
PLP List: 1984-10-30 00:00:00
PLP Delist:
Staff Assi: 1999-04-05 00:00:00
FF Aproved:
FF Closed:
Inv Comple:
App Comple: 1999-04-05 00:00:00
Er Site Ev:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
41	5 of21	NNE	0.78 / 4,118.46	1,421.03 / 50	Duluth Air Force Base OU6 4680 Viper St Duluth MN 55811	PLP

Item ID: 192224-AREA0000000008
Project ID: SR0000256
Project Type: Superfund sub-area
Project ID (RAP):
Project Type (RAP):
Site Status: Closed
Perm List of Prior?: Yes
Petrol Brownfield?:
VIC Site?:
Sf Voluntary:
Inst Controls?:
State Reg:
Project Name: Duluth Air Force Base OU6
Site Address 1: 4680 Viper St
Site Address 2:
Site City: Duluth

Federal Reg:
Fed State Reg:
Non Reg:
SEMS?:
NPL:
Unpermitted Dump?:
Latitude: 46.84767998
Longitude: -92.17153432
County (RAP):
Latitude (RAP):
Longitude (RAP):

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Site State: MN
Site ZIP: 55811
Site County: St. Louis
Project Name(RAP):
Address1 (RAP):
Address2(RAP):
City (RAP):
State (RAP):
ZIP(RAP):
Project Managers: David Knight (former), Heidi Bauman (former), Jane Mosel (no longer at MPCA)
Data Source: MPCA Remediation Sites

Remediation Sites Details

AI Name: Duluth Air Force Base
Activity ID: 192224
SI ID: 8
SI Cat: AREA
SI Type: OPER
Site Type: CON
Acreage:
HRS Score: 21.00
Score Year: 2016
MNTBA:
Loc Desc:
DWSMA Code:
DWSMA Name:
Cong Dist: 8
House Dist: 8B
Senate Dis: 8
HUC 8: 04010201
HUC 10: 0401020116
HUC 12: 040102011604
Method Des: Address Matching House Number
HUC 8 Name: St. Louis River
HUC 12 Name: Saint Louis River
Hydrologist(s): Mike Bares (no longer at MPCA)
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/192224

Spatial Remediation Activity

AI ID: 192224
Site ID: SR0000256
SI ID: 8
SI Cat: AREA
NFA Decisi:
Site Close:
Leak Discovered:
Leak Reported:
Leak Reopened:
Activity No: 8
Activity ID: SIW19840008
Activity Type: Superfund Investigation/Cleanup
Activity Code: SIW
Activity Year: 1984
Discovered:
Site Start: 1984-10-30 00:00:00
Remedy Imp:
Remedy Sel:
ASMT Compl:
Received: 1984-10-30 00:00:00
NPL List:
NPL Delete:
PLP List: 1984-10-30 00:00:00
PLP Delist:
Staff Assi: 1984-10-30 00:00:00
FF Aproved:
FF Closed:
Inv Comple:
App Comple: 1984-10-30 00:00:00
Er Site Ev:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
41	6 of21	NNE	0.78 / 4,118.46	1,421.03 / 50	DULUTH AIR FORCE BASE Site 7 - (FUDS) TCE Plume 4680 Viper St Duluth MN 55811	PLP

Item ID: 192224-AREA0000000009
Project ID: SR0000257
Project Type: Superfund sub-area
Project ID (RAP):
Project Type (RAP):
Site Status: Closed
Perm List of Prior?: Yes
Petrol Brownfield?:
VIC Site?:
Sf Voluntary:
Inst Controls?:
State Reg:
Federal Reg:
Fed State Reg:
Non Reg:
SEMS?:
NPL:
Unpermitted Dump?:
Latitude: 46.84767998
Longitude: -92.17153432
County (RAP):
Latitude (RAP):
Longitude (RAP):
Project Name: DULUTH AIR FORCE BASE Site 7 - (FUDS) TCE Plume

Site Address 1:	4680 Viper St
Site Address 2:	
Site City:	Duluth
Site State:	MN
Site ZIP:	55811
Site County:	St. Louis
Project Name(RAP):	
Address1 (RAP):	
Address2(RAP):	
City (RAP):	
State (RAP):	
ZIP(RAP):	
Project Managers:	David Knight (former), Heidi Bauman (former), Jane Mosel (no longer at MPCA)
Data Source:	MPCA Remediation Sites

Remediation Sites Details

AI Name:	Duluth Air Force Base	**DWSMA Code:**	
Activity ID:	192224	**DWSMA Name:**	
SI ID:	9	**Cong Dist:**	8
SI Cat:	AREA	**House Dist:**	8B
SI Type:	OPER	**Senate Dis:**	8
Site Type:	CON	**HUC 8:**	04010201
Acreage:		**HUC 10:**	0401020116
HRS Score:	21.00	**HUC 12:**	040102011604
Score Year:	1984	**Method Des:**	Address Matching House Number
MNTBA:			
Loc Desc:			
HUC 8 Name:	St. Louis River		
HUC 12 Name:	Saint Louis River		
Hydrologist(s):	Mike Bares (no longer at MPCA)		
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/192224		

Spatial Remediation Activity

AI ID:	192224	**Site Start:**	1984-10-30 00:00:00
Site ID:	SR0000257	**Remedy Imp:**	
SI ID:	9	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	1984-10-30 00:00:00
Site Close:		**NPL List:**	
Leak Discovered:		**NPL Delete:**	
Leak Reported:		**PLP List:**	1984-10-30 00:00:00
Leak Reopened:		**PLP Delist:**	2010-04-07 00:00:00
Activity No:	1	**Staff Assi:**	1991-08-10 00:00:00
Activity ID:	SIW19910001	**FF Aproved:**	
Activity Type:	Superfund Investigation/Cleanup	**FF Closed:**	
Activity Code:	SIW	**Inv Comple:**	
Activity Year:	1991	**App Comple:**	1991-08-10 00:00:00
Discovered:		**Er Site Ev:**	

Spatial Remediation Activity

AI ID:	192224	**Site Start:**	2017-08-01 00:00:00
Site ID:	SR0001459	**Remedy Imp:**	
SI ID:	9	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	2017-08-01 00:00:00
Site Close:		**NPL List:**	
Leak Discovered:		**NPL Delete:**	
Leak Reported:		**PLP List:**	
Leak Reopened:		**PLP Delist:**	
Activity No:	2	**Staff Assi:**	
Activity ID:	SIW20170002	**FF Aproved:**	
Activity Type:	Superfund Investigation/Cleanup	**FF Closed:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Activity Code:	SIW	**Inv Comple:**	
Activity Year:	2017	**App Comple:**	
Discovered:		**Er Site Ev:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
41	7 of21	NNE	0.78 / 4,118.46	1,421.03 / 50	Duluth Air Force Base OU8 4680 Viper St Duluth MN 55811	PLP

Item ID:	192224-AREA0000000010	**Federal Reg:**	
Project ID:	SR0000258	**Fed State Reg:**	
Project Type:	Superfund sub-area	**Non Reg:**	
Project ID (RAP):		**SEMS?:**	
Project Type (RAP):		**NPL:**	
Site Status:	Closed	**Unpermitted Dump?:**	
Perm List of Prior?:	Yes	**Latitude:**	46.84767998
Petrol Brownfield?:		**Longitude:**	-92.17153432
VIC Site?:		**County (RAP):**	
Sf Voluntary:		**Latitude (RAP):**	
Inst Controls?:		**Longitude (RAP):**	
State Reg:			
Project Name:	Duluth Air Force Base OU8		
Site Address 1:	4680 Viper St		
Site Address 2:			
Site City:	Duluth		
Site State:	MN		
Site ZIP:	55811		
Site County:	St. Louis		
Project Name(RAP):			
Address1 (RAP):			
Address2(RAP):			
City (RAP):			
State (RAP):			
ZIP(RAP):			
Project Managers:	David Knight (former), Heidi Bauman (former), Jane Mosel (no longer at MPCA)		
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

AI Name:	Duluth Air Force Base	**DWSMA Code:**	
Activity ID:	192224	**DWSMA Name:**	
SI ID:	10	**Cong Dist:**	8
SI Cat:	AREA	**House Dist:**	8B
SI Type:	OPER	**Senate Dis:**	8
Site Type:	CON	**HUC 8:**	04010201
Acreage:		**HUC 10:**	0401020116
HRS Score:	21.00	**HUC 12:**	040102011604
Score Year:	2016	**Method Des:**	Address Matching House Number
MNTBA:			
Loc Desc:			
HUC 8 Name:	St. Louis River		
HUC 12 Name:	Saint Louis River		
Hydrologist(s):	Mike Bares (no longer at MPCA)		
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/192224		

Spatial Remediation Activity

AI ID:	192224	**Site Start:**	1984-10-30 00:00:00
Site ID:	SR0000258	**Remedy Imp:**	
SI ID:	10	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	1984-10-30 00:00:00
Site Close:		**NPL List:**	
Leak Discovered:		**NPL Delete:**	
Leak Reported:		**PLP List:**	1984-10-30 00:00:00
Leak Reopened:		**PLP Delist:**	
Activity No:	4	**Staff Assi:**	1984-10-30 00:00:00

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Activity ID:	SIW19840004		**FF Aproved:**		
Activity Type:	Superfund Investigation/Cleanup		**FF Closed:**		
Activity Code:	SIW		**Inv Comple:**		
Activity Year:	1984		**App Comple:**	1984-10-30 00:00:00	
Discovered:			**Er Site Ev:**		

41	8 of21	NNE	0.78 / 4,118.46	1,421.03 / 50	**Duluth Air Force Base OU9** **4680 Viper St** **Duluth MN 55811**	PLP

Item ID:	192224-AREA0000000011	**Federal Reg:**	
Project ID:	SR0000259	**Fed State Reg:**	
Project Type:	Superfund sub-area	**Non Reg:**	
Project ID (RAP):		**SEMS?:**	
Project Type (RAP):		**NPL:**	
Site Status:	Closed	**Unpermitted Dump?:**	
Perm List of Prior?:	Yes	**Latitude:**	46.84767998
Petrol Brownfield?:		**Longitude:**	-92.17153432
VIC Site?:		**County (RAP):**	
Sf Voluntary:		**Latitude (RAP):**	
Inst Controls?:		**Longitude (RAP):**	
State Reg:			
Project Name:	Duluth Air Force Base OU9		
Site Address 1:	4680 Viper St		
Site Address 2:			
Site City:	Duluth		
Site State:	MN		
Site ZIP:	55811		
Site County:	St. Louis		
Project Name(RAP):			
Address1 (RAP):			
Address2(RAP):			
City (RAP):			
State (RAP):			
ZIP(RAP):			
Project Managers:	David Knight (former), Heidi Bauman (former), Jane Mosel (no longer at MPCA)		
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

AI Name:	Duluth Air Force Base	**DWSMA Code:**	
Activity ID:	192224	**DWSMA Name:**	
SI ID:	11	**Cong Dist:**	8
SI Cat:	AREA	**House Dist:**	8B
SI Type:	OPER	**Senate Dis:**	8
Site Type:	CON	**HUC 8:**	04010201
Acreage:		**HUC 10:**	0401020116
HRS Score:	21.00	**HUC 12:**	040102011604
Score Year:	2016	**Method Des:**	Address Matching House Number
MNTBA:			
Loc Desc:			
HUC 8 Name:	St. Louis River		
HUC 12 Name:	Saint Louis River		
Hydrologist(s):	Mike Bares (no longer at MPCA)		
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/192224		

Spatial Remediation Activity

AI ID:	192224	**Site Start:**	1984-10-30 00:00:00
Site ID:	SR0000259	**Remedy Imp:**	
SI ID:	11	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	1984-10-30 00:00:00
Site Close:		**NPL List:**	
Leak Discovered:		**NPL Delete:**	
Leak Reported:		**PLP List:**	1984-10-30 00:00:00

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Leak Reopened:		**PLP Delist:**	
Activity No:	6	**Staff Assi:**	1984-10-30 00:00:00
Activity ID:	SIW19840006	**FF Aproved:**	
Activity Type:	Superfund Investigation/Cleanup	**FF Closed:**	
Activity Code:	SIW	**Inv Comple:**	
Activity Year:	1984	**App Comple:**	1984-10-30 00:00:00
Discovered:		**Er Site Ev:**	

41	9 of21	NNE	0.78 / 4,118.46	1,421.03 / 50	**DULUTH AIR FORCE BASE Site 30 - (FUDS)Former Solve** **4680 Viper St** **Duluth MN 55811**	PLP

Item ID:	192224-AREA0000000021	**Federal Reg:**	
Project ID:	SR0000356	**Fed State Reg:**	
Project Type:	Superfund sub-area	**Non Reg:**	
Project ID (RAP):		**SEMS?:**	
Project Type (RAP):		**NPL:**	
Site Status:	Active / Existing	**Unpermitted Dump?:**	
Perm List of Prior?:	Yes	**Latitude:**	46.83908161
Petrol Brownfield?:		**Longitude:**	-92.20225173
VIC Site?:		**County (RAP):**	
Sf Voluntary:		**Latitude (RAP):**	
Inst Controls?:		**Longitude (RAP):**	
State Reg:			

Project Name:	DULUTH AIR FORCE BASE Site 30 - (FUDS)Former Solve
Site Address 1:	4680 Viper St
Site Address 2:	
Site City:	Duluth
Site State:	MN
Site ZIP:	55811
Site County:	St. Louis
Project Name(RAP):	
Address1 (RAP):	
Address2(RAP):	
City (RAP):	
State (RAP):	
ZIP(RAP):	
Project Managers:	Dan Cervin (current), Mark Elliott (current), David Knight (former), Heidi Bauman (former), Jane Mosel (no longer at MPCA)
Data Source:	MPCA Remediation Sites

Remediation Sites Details

AI Name:	Duluth Air Force Base	**DWSMA Code:**	
Activity ID:	192224	**DWSMA Name:**	
SI ID:	21	**Cong Dist:**	8
SI Cat:	AREA	**House Dist:**	8B
SI Type:	OPER	**Senate Dis:**	8
Site Type:	CON	**HUC 8:**	04010201
Acreage:	4.00	**HUC 10:**	0401020116
HRS Score:		**HUC 12:**	040102011604
Score Year:		**Method Des:**	Interpolation Other
MNTBA:			

Loc Desc:	Approximate Middle of Investigation area. This site is located south of the main east-west runway in the former USAF central airfield complex, just northeast of the main cirrus MFG facility. The site consists of a aviation and jet fuel storage tank and hydrant system complex and solvent wash rack area. This area in now occupied by paved taxiways. There general investigation areas is about 4 acres. The anticipated remedial footprint is about 2 acrea
HUC 8 Name:	St. Louis River
HUC 12 Name:	Saint Louis River
Hydrologist(s):	Mark Elliott (current)
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/192224

Spatial Remediation Activity

AI ID:	192224	**Site Start:**	1984-10-30 00:00:00

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Site ID:	SR0000356	**Remedy Imp:**	
SI ID:	21	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	2000-05-01 00:00:00
NFA Decisi:		**Received:**	1984-10-30 00:00:00
Site Close:		**NPL List:**	
Leak Discovered:		**NPL Delete:**	
Leak Reported:		**PLP List:**	1984-10-30 00:00:00
Leak Reopened:		**PLP Delist:**	
Activity No:	3	**Staff Assi:**	2006-05-31 00:00:00
Activity ID:	SIW20060003	**FF Aproved:**	
Activity Type:	Superfund Investigation/Cleanup	**FF Closed:**	
Activity Code:	SIW	**Inv Comple:**	2006-01-01 00:00:00
Activity Year:	2006	**App Comple:**	2006-05-31 00:00:00
Discovered:		**Er Site Ev:**	

41	10 of21	NNE	0.78 / 4,118.46	1,421.03 / 50	**Duluth Air Force Base OU10** **4680 Viper St** **Duluth MN 55811**	PLP

Item ID:	192224-AREA0000000012	**Federal Reg:**	
Project ID:	SR0000260	**Fed State Reg:**	
Project Type:	Superfund sub-area	**Non Reg:**	
Project ID (RAP):		**SEMS?:**	
Project Type (RAP):		**NPL:**	
Site Status:	Closed	**Unpermitted Dump?:**	
Perm List of Prior?:	Yes	**Latitude:**	46.84767998
Petrol Brownfield?:		**Longitude:**	-92.17153432
VIC Site?:		**County (RAP):**	
Sf Voluntary:		**Latitude (RAP):**	
Inst Controls?:		**Longitude (RAP):**	
State Reg:			
Project Name:	Duluth Air Force Base OU10		
Site Address 1:	4680 Viper St		
Site Address 2:			
Site City:	Duluth		
Site State:	MN		
Site ZIP:	55811		
Site County:	St. Louis		
Project Name(RAP):			
Address1 (RAP):			
Address2(RAP):			
City (RAP):			
State (RAP):			
ZIP(RAP):			
Project Managers:	David Knight (former), Heidi Bauman (former), Jane Mosel (no longer at MPCA)		
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

AI Name:	Duluth Air Force Base	**DWSMA Code:**	
Activity ID:	192224	**DWSMA Name:**	
SI ID:	12	**Cong Dist:**	8
SI Cat:	AREA	**House Dist:**	8B
SI Type:	OPER	**Senate Dis:**	8
Site Type:	CON	**HUC 8:**	04010201
Acreage:		**HUC 10:**	0401020116
HRS Score:	21.00	**HUC 12:**	040102011604
Score Year:	2016	**Method Des:**	Address Matching House Number
MNTBA:			
Loc Desc:			
HUC 8 Name:	St. Louis River		
HUC 12 Name:	Saint Louis River		
Hydrologist(s):	Mike Bares (no longer at MPCA)		
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/192224		

Spatial Remediation Activity

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

AI ID:	192224	***Site Start:***	1984-10-30 00:00:00
Site ID:	SR0000260	***Remedy Imp:***	
SI ID:	12	***Remedy Sel:***	
SI Cat:	AREA	***ASMT Compl:***	
NFA Decisi:		***Received:***	1984-10-30 00:00:00
Site Close:	2012-12-28 00:00:00	***NPL List:***	
Leak Discovered:		***NPL Delete:***	
Leak Reported:		***PLP List:***	1984-10-30 00:00:00
Leak Reopened:		***PLP Delist:***	
Activity No:	1	***Staff Assi:***	1984-10-30 00:00:00
Activity ID:	SIW19840001	***FF Aproved:***	
Activity Type:	Superfund Investigation/Cleanup	***FF Closed:***	
Activity Code:	SIW	***Inv Comple:***	
Activity Year:	1984	***App Comple:***	1984-10-30 00:00:00
Discovered:		***Er Site Ev:***	

41	11 of21	NNE	0.78 / 4,118.46	1,421.03 / 50	Duluth Air Force Base OU20 4680 Viper St Duluth MN 55811	PLP

Item ID:	192224-AREA0000000013	***Federal Reg:***	
Project ID:	SR0000267	***Fed State Reg:***	
Project Type:	Superfund sub-area	***Non Reg:***	
Project ID (RAP):		***SEMS?:***	
Project Type (RAP):		***NPL:***	
Site Status:	Closed	***Unpermitted Dump?:***	
Perm List of Prior?:	Yes	***Latitude:***	46.84767998
Petrol Brownfield?:		***Longitude:***	-92.17153432
VIC Site?:		***County (RAP):***	
Sf Voluntary:		***Latitude (RAP):***	
Inst Controls?:		***Longitude (RAP):***	
State Reg:			
Project Name:	Duluth Air Force Base OU20		
Site Address 1:	4680 Viper St		
Site Address 2:			
Site City:	Duluth		
Site State:	MN		
Site ZIP:	55811		
Site County:	St. Louis		
Project Name(RAP):			
Address1 (RAP):			
Address2(RAP):			
City (RAP):			
State (RAP):			
ZIP(RAP):			
Project Managers:	David Knight (former), Heidi Bauman (former), Jane Mosel (no longer at MPCA)		
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

AI Name:	Duluth Air Force Base	***DWSMA Code:***	
Activity ID:	192224	***DWSMA Name:***	
SI ID:	13	***Cong Dist:***	8
SI Cat:	AREA	***House Dist:***	8B
SI Type:	OPER	***Senate Dis:***	8
Site Type:	CON	***HUC 8:***	04010201
Acreage:		***HUC 10:***	0401020116
HRS Score:	21.00	***HUC 12:***	040102011604
Score Year:	2016	***Method Des:***	Address Matching House Number
MNTBA:			
Loc Desc:			
HUC 8 Name:	St. Louis River		
HUC 12 Name:	Saint Louis River		
Hydrologist(s):	Mike Bares (no longer at MPCA)		
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/192224		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Spatial Remediation Activity

AI ID:	192224	***Site Start:***	1984-10-30 00:00:00
Site ID:	SR0000267	***Remedy Imp:***	
SI ID:	13	***Remedy Sel:***	
SI Cat:	AREA	***ASMT Compl:***	
NFA Decisi:		***Received:***	1984-10-30 00:00:00
Site Close:		***NPL List:***	
Leak Discovered:		***NPL Delete:***	
Leak Reported:		***PLP List:***	1984-10-30 00:00:00
Leak Reopened:		***PLP Delist:***	
Activity No:	2	***Staff Assi:***	1984-10-30 00:00:00
Activity ID:	SIW19840002	***FF Aproved:***	
Activity Type:	Superfund Investigation/Cleanup	***FF Closed:***	
Activity Code:	SIW	***Inv Comple:***	
Activity Year:	1984	***App Comple:***	1984-10-30 00:00:00
Discovered:		***Er Site Ev:***	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
41	12 of21	NNE	0.78 / 4,118.46	1,421.03 / 50	Duluth Air Force Base OU23 4680 Viper St Duluth MN 55811	PLP

Item ID:	192224-AREA0000000014	***Federal Reg:***	
Project ID:	SR0000269	***Fed State Reg:***	
Project Type:	Superfund sub-area	***Non Reg:***	
Project ID (RAP):		***SEMS?:***	
Project Type (RAP):		***NPL:***	
Site Status:	Closed	***Unpermitted Dump?:***	
Perm List of Prior?:	Yes	***Latitude:***	46.84767998
Petrol Brownfield?:		***Longitude:***	-92.17153432
VIC Site?:		***County (RAP):***	
Sf Voluntary:		***Latitude (RAP):***	
Inst Controls?:		***Longitude (RAP):***	
State Reg:			
Project Name:	Duluth Air Force Base OU23		
Site Address 1:	4680 Viper St		
Site Address 2:			
Site City:	Duluth		
Site State:	MN		
Site ZIP:	55811		
Site County:	St. Louis		
Project Name(RAP):			
Address1 (RAP):			
Address2(RAP):			
City (RAP):			
State (RAP):			
ZIP(RAP):			
Project Managers:	David Knight (former), Heidi Bauman (former), Jane Mosel (no longer at MPCA)		
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

AI Name:	Duluth Air Force Base	***DWSMA Code:***	
Activity ID:	192224	***DWSMA Name:***	
SI ID:	14	***Cong Dist:***	8
SI Cat:	AREA	***House Dist:***	8B
SI Type:	OPER	***Senate Dis:***	8
Site Type:	CON	***HUC 8:***	04010201
Acreage:		***HUC 10:***	0401020116
HRS Score:	21.00	***HUC 12:***	040102011604
Score Year:	2016	***Method Des:***	Address Matching House Number
MNTBA:			
Loc Desc:			
HUC 8 Name:	St. Louis River		
HUC 12 Name:	Saint Louis River		
Hydrologist(s):	Mike Bares (no longer at MPCA)		

WIMN Url: https://webapp.pca.state.mn.us/wimn/site/192224

Spatial Remediation Activity

AI ID:	192224	***Site Start:***	1984-10-30 00:00:00
Site ID:	SR0000269	***Remedy Imp:***	
SI ID:	14	***Remedy Sel:***	
SI Cat:	AREA	***ASMT Compl:***	
NFA Decisi:		***Received:***	1984-10-30 00:00:00
Site Close:		***NPL List:***	
Leak Discovered:		***NPL Delete:***	
Leak Reported:		***PLP List:***	1984-10-30 00:00:00
Leak Reopened:		***PLP Delist:***	
Activity No:	2	***Staff Assi:***	2002-04-03 00:00:00
Activity ID:	SIW20020002	***FF Aproved:***	
Activity Type:	Superfund Investigation/Cleanup	***FF Closed:***	
Activity Code:	SIW	***Inv Comple:***	
Activity Year:	2002	***App Comple:***	2002-04-03 00:00:00
Discovered:		***Er Site Ev:***	

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41 | ***13 of21*** | ***NNE*** | ***0.78 / 4,118.46*** | ***1,421.03 / 50*** | ***Duluth Air Force Base OU24***
4680 Viper St
Duluth MN 55811 | ***PLP***

Item ID:	192224-AREA0000000015	***Federal Reg:***	
Project ID:	SR0000270	***Fed State Reg:***	
Project Type:	Superfund sub-area	***Non Reg:***	
Project ID (RAP):		***SEMS?:***	
Project Type (RAP):		***NPL:***	
Site Status:	Closed	***Unpermitted Dump?:***	
Perm List of Prior?:	Yes	***Latitude:***	46.84767998
Petrol Brownfield?:		***Longitude:***	-92.17153432
VIC Site?:		***County (RAP):***	
Sf Voluntary:		***Latitude (RAP):***	
Inst Controls?:		***Longitude (RAP):***	
State Reg:			
Project Name:	Duluth Air Force Base OU24		
Site Address 1:	4680 Viper St		
Site Address 2:			
Site City:	Duluth		
Site State:	MN		
Site ZIP:	55811		
Site County:	St. Louis		
Project Name(RAP):			
Address1 (RAP):			
Address2(RAP):			
City (RAP):			
State (RAP):			
ZIP(RAP):			
Project Managers:	David Knight (former), Heidi Bauman (former), Jane Mosel (no longer at MPCA)		
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

AI Name:	Duluth Air Force Base	***DWSMA Code:***	
Activity ID:	192224	***DWSMA Name:***	
SI ID:	15	***Cong Dist:***	8
SI Cat:	AREA	***House Dist:***	8B
SI Type:	OPER	***Senate Dis:***	8
Site Type:	CON	***HUC 8:***	04010201
Acreage:		***HUC 10:***	0401020116
HRS Score:		***HUC 12:***	040102011604
Score Year:		***Method Des:***	Address Matching House Number
MNTBA:			
Loc Desc:			
HUC 8 Name:	St. Louis River		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 12 Name: Saint Louis River
Hydrologist(s): Mike Bares (no longer at MPCA)
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/192224

Spatial Remediation Activity

AI ID:	192224	**Site Start:**	1984-10-30 00:00:00
Site ID:	SR0000270	**Remedy Imp:**	
SI ID:	15	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	1984-10-30 00:00:00
Site Close:		**NPL List:**	
Leak Discovered:		**NPL Delete:**	
Leak Reported:		**PLP List:**	1984-10-30 00:00:00
Leak Reopened:		**PLP Delist:**	
Activity No:	1	**Staff Assi:**	1993-08-01 00:00:00
Activity ID:	SIW19930001	**FF Aproved:**	
Activity Type:	Superfund Investigation/Cleanup	**FF Closed:**	
Activity Code:	SIW	**Inv Comple:**	
Activity Year:	1993	**App Comple:**	1993-08-01 00:00:00
Discovered:		**Er Site Ev:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
41	14 of21	NNE	0.78 / 4,118.46	1,421.03 / 50	Duluth Air Force Base OU26 4680 Viper St Duluth MN 55811	PLP

Item ID:	192224-AREA0000000016	**Federal Reg:**	
Project ID:	SR0000271	**Fed State Reg:**	
Project Type:	Superfund sub-area	**Non Reg:**	
Project ID (RAP):		**SEMS?:**	
Project Type (RAP):		**NPL:**	
Site Status:	Closed	**Unpermitted Dump?:**	
Perm List of Prior?:	Yes	**Latitude:**	46.84767998
Petrol Brownfield?:		**Longitude:**	-92.17153432
VIC Site?:		**County (RAP):**	
Sf Voluntary:		**Latitude (RAP):**	
Inst Controls?:		**Longitude (RAP):**	

State Reg:
Project Name: Duluth Air Force Base OU26
Site Address 1: 4680 Viper St
Site Address 2:
Site City: Duluth
Site State: MN
Site ZIP: 55811
Site County: St. Louis
Project Name(RAP):
Address1 (RAP):
Address2(RAP):
City (RAP):
State (RAP):
ZIP(RAP):
Project Managers: David Knight (former), Heidi Bauman (former), Jane Mosel (no longer at MPCA)
Data Source: MPCA Remediation Sites

Remediation Sites Details

AI Name:	Duluth Air Force Base	**DWSMA Code:**	
Activity ID:	192224	**DWSMA Name:**	
SI ID:	16	**Cong Dist:**	8
SI Cat:	AREA	**House Dist:**	8B
SI Type:	OPER	**Senate Dis:**	8
Site Type:	CON	**HUC 8:**	04010201
Acreage:		**HUC 10:**	0401020116
HRS Score:	21.00	**HUC 12:**	040102011604
Score Year:	2016	**Method Des:**	Address Matching House Number
MNTBA:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Loc Desc:
HUC 8 Name: St. Louis River
HUC 12 Name: Saint Louis River
Hydrologist(s): Mike Bares (no longer at MPCA)
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/192224

Spatial Remediation Activity

AI ID:	192224	**Site Start:**	1984-10-30 00:00:00
Site ID:	SR0000271	**Remedy Imp:**	
SI ID:	16	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	1984-10-30 00:00:00
Site Close:		**NPL List:**	
Leak Discovered:		**NPL Delete:**	
Leak Reported:		**PLP List:**	1984-10-30 00:00:00
Leak Reopened:		**PLP Delist:**	
Activity No:	7	**Staff Assi:**	1984-10-30 00:00:00
Activity ID:	SIW19840007	**FF Aproved:**	
Activity Type:	Superfund Investigation/Cleanup	**FF Closed:**	
Activity Code:	SIW	**Inv Comple:**	
Activity Year:	1984	**App Comple:**	1984-10-30 00:00:00
Discovered:		**Er Site Ev:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
41	15 of21	NNE	0.78 / 4,118.46	1,421.03 / 50	DULUTH AIR FORCE BASE OU28 - BUILDING 500, JET FUE 4680 Viper St Duluth MN 55811	PLP

Item ID:	192224-AREA0000000019	**Federal Reg:**	
Project ID:	SR0000354	**Fed State Reg:**	
Project Type:	Superfund sub-area	**Non Reg:**	
Project ID (RAP):		**SEMS?:**	
Project Type (RAP):		**NPL:**	
Site Status:	Active / Existing	**Unpermitted Dump?:**	
Perm List of Prior?:	Yes	**Latitude:**	46.84348113
Petrol Brownfield?:		**Longitude:**	-92.17669046
VIC Site?:		**County (RAP):**	
Sf Voluntary:		**Latitude (RAP):**	
Inst Controls?:		**Longitude (RAP):**	

State Reg:
Project Name: DULUTH AIR FORCE BASE OU28 - BUILDING 500, JET FUE
Site Address 1: 4680 Viper St
Site Address 2:
Site City: Duluth
Site State: MN
Site ZIP: 55811
Site County: St. Louis
Project Name(RAP):
Address1 (RAP):
Address2(RAP):
City (RAP):
State (RAP):
ZIP(RAP):
Project Managers: Heidi Bauman (current), Mark Elliott (current), David Knight (former), Jane Mosel (no longer at MPCA)
Data Source: MPCA Remediation Sites

Remediation Sites Details

AI Name:	Duluth Air Force Base	**DWSMA Code:**	
Activity ID:	192224	**DWSMA Name:**	
SI ID:	19	**Cong Dist:**	8
SI Cat:	AREA	**House Dist:**	8B
SI Type:	OPER	**Senate Dis:**	8
Site Type:	CON	**HUC 8:**	04010202
Acreage:	5.00	**HUC 10:**	0401020205

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HRS Score:		**HUC 12:**	040102020501
Score Year:		**Method Des:**	Interpolation Other
MNTBA:			
Loc Desc:	Stand By Fighter Jet Hangar on MANG Airbase on the Duluth International Airport. Located about 700 feet north of east end of main west-east runway		
HUC 8 Name:	Cloquet River		
HUC 12 Name:	Wild Rice Lake Reservoir		
Hydrologist(s):	Mark Elliott (current)		
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/192224		

Spatial Remediation Activity

AI ID:	192224	**Site Start:**	2004-11-01 00:00:00
Site ID:	SR0000354	**Remedy Imp:**	
SI ID:	19	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	2005-01-01 00:00:00
NFA Decisi:		**Received:**	2004-11-01 00:00:00
Site Close:		**NPL List:**	
Leak Discovered:		**NPL Delete:**	
Leak Reported:		**PLP List:**	1984-10-30 00:00:00
Leak Reopened:		**PLP Delist:**	1984-10-30 00:00:00
Activity No:	1	**Staff Assi:**	2009-05-01 00:00:00
Activity ID:	SIW20060001	**FF Aproved:**	
Activity Type:	Superfund Investigation/Cleanup	**FF Closed:**	
Activity Code:	SIW	**Inv Comple:**	
Activity Year:	2006	**App Comple:**	2006-05-31 00:00:00
Discovered:	2004-11-01 00:00:00	**Er Site Ev:**	

41	***16 of21***	***NNE***	***0.78 / 4,118.46***	***1,421.03 / 50***	***DULUTH AIR FORCE BASE Site 3 - DPDO Storage Area 4680 Viper St Duluth MN 55811***	***PLP***

Item ID:	192224-AREA0000000005	**Federal Reg:**	
Project ID:	SR0000253	**Fed State Reg:**	
Project Type:	Superfund sub-area	**Non Reg:**	
Project ID (RAP):	SR0000253	**SEMS?:**	
Project Type (RAP):	Superfund sub-area	**NPL:**	
Site Status:	Active / Existing	**Unpermitted Dump?:**	
Perm List of Prior?:	Yes	**Latitude:**	46.84767161
Petrol Brownfield?:		**Longitude:**	-92.17152666
VIC Site?:		**County (RAP):**	St. Louis
Sf Voluntary:		**Latitude (RAP):**	46.84767161
Inst Controls?:		**Longitude (RAP):**	-92.17152666
State Reg:			
Project Name:	DULUTH AIR FORCE BASE Site 3 - DPDO Storage Area		
Site Address 1:	4680 Viper St		
Site Address 2:			
Site City:	Duluth		
Site State:	MN		
Site ZIP:	55811		
Site County:	St. Louis		
Project Name(RAP):	DULUTH AIR FORCE BASE Site 3 - DPDO Storage Area		
Address1 (RAP):	4680 Viper St		
Address2(RAP):			
City (RAP):	Duluth		
State (RAP):	MN		
ZIP(RAP):	55811		
Project Managers:	Dan Cervin (current), David Knight (former), Mark Elliott (former), Jane Mosel (no longer at MPCA)		
Data Source:	MPCA Remediation Sites; MPCA Remediation Sites with RAP approvals		

Remediation Sites Details

AI Name:	Duluth Air Force Base	**DWSMA Code:**	
Activity ID:	192224	**DWSMA Name:**	
SI ID:	5	**Cong Dist:**	8

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

SI Cat:	AREA	**House Dist:**	8B
SI Type:	OPER	**Senate Dis:**	8
Site Type:	CON	**HUC 8:**	04010201
Acreage:	8.00	**HUC 10:**	0401020116
HRS Score:	21.00	**HUC 12:**	040102011604
Score Year:	1996	**Method Des:**	Address Matching House Number
MNTBA:			

Loc Desc: Located along the south side of the Duluth international Airport main east-west runway. it is at the far west end of the former USAF and MANG central airfield facility. This area is adjacent to the west or the former USAF and MANG POL facility.

HUC 8 Name: St. Louis River
HUC 12 Name: Saint Louis River
Hydrologist(s): Mark Elliott (current), Mike Bares (no longer at MPCA)
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/192224

Remediation Sites with RAP Approval

Activity ID:	192224	**Rap Date:**	
No Assoc Date:		**Site Start:**	
No Assoc Letter:	No	**Rap Approved:**	
Has Rp:	Yes	**Rap Completed:**	
Coord Collect Methd:	Address Matching House Number	**Site Closed:**	
Parcels:			

WIMN: https://webapp.pca.state.mn.us/wimn/site/192224
AI Name: Duluth Air Force Base
Rp Names: Air National Guard, Paul Wheeler

Spatial Remediation Activity

AI ID:	192224	**Site Start:**	1996-09-25 00:00:00
Site ID:	SR0000253	**Remedy Imp:**	
SI ID:	5	**Remedy Sel:**	2015-02-01 00:00:00
SI Cat:	AREA	**ASMT Compl:**	1996-01-01 00:00:00
NFA Decisi:		**Received:**	1996-09-25 00:00:00
Site Close:		**NPL List:**	
Leak Discovered:		**NPL Delete:**	
Leak Reported:		**PLP List:**	1984-10-30 00:00:00
Leak Reopened:		**PLP Delist:**	
Activity No:	2	**Staff Assi:**	1996-09-25 00:00:00
Activity ID:	SIW19960002	**FF Aproved:**	
Activity Type:	Superfund Investigation/Cleanup	**FF Closed:**	
Activity Code:	SIW	**Inv Comple:**	2015-10-31 00:00:00
Activity Year:	1996	**App Comple:**	1996-09-25 00:00:00
Discovered:		**Er Site Ev:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
41	17 of21	NNE	0.78 / 4,118.46	1,421.03 / 50	DULUTH AIR FORCE BASE Site 4 - MANG Tank Farm 4680 Viper St Duluth MN 55811	PLP

Item ID:	192224-AREA0000000006	**Federal Reg:**	
Project ID:	SR0000254	**Fed State Reg:**	
Project Type:	Superfund sub-area	**Non Reg:**	
Project ID (RAP):	SR0000254	**SEMS?:**	
Project Type (RAP):	Superfund sub-area	**NPL:**	
Site Status:	Active / Existing	**Unpermitted Dump?:**	
Perm List of Prior?:	Yes	**Latitude:**	46.84896294
Petrol Brownfield?:		**Longitude:**	-92.17377453
VIC Site?:		**County (RAP):**	St. Louis
Sf Voluntary:		**Latitude (RAP):**	46.84896294
Inst Controls?:		**Longitude (RAP):**	-92.17377453
State Reg:			

Project Name: DULUTH AIR FORCE BASE Site 4 - MANG Tank Farm
Site Address 1: 4680 Viper St
Site Address 2:
Site City: Duluth

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Site State:	MN
Site ZIP:	55811
Site County:	St. Louis
Project Name(RAP):	DULUTH AIR FORCE BASE Site 4 - MANG Tank Farm
Address1 (RAP):	4680 Viper St
Address2(RAP):	
City (RAP):	Duluth
State (RAP):	MN
ZIP(RAP):	55811
Project Managers:	Dan Cervin (current), David Knight (former), Mark Elliott (former), Jane Mosel (no longer at MPCA)
Data Source:	MPCA Remediation Sites; MPCA Remediation Sites with RAP approvals

Remediation Sites Details

AI Name:	Duluth Air Force Base	**DWSMA Code:**	
Activity ID:	192224	**DWSMA Name:**	
SI ID:	6	**Cong Dist:**	8
SI Cat:	AREA	**House Dist:**	8B
SI Type:	OPER	**Senate Dis:**	8
Site Type:	CON	**HUC 8:**	04010202
Acreage:	9.00	**HUC 10:**	0401020205
HRS Score:	21.00	**HUC 12:**	040102020501
Score Year:	1996	**Method Des:**	Address Matching House Number
MNTBA:			

Loc Desc:	Located on south side of Duluth International Airport near the west end of the old USAF central air field area south of the main runway. This site is the former USAF and MANG POL facility. The Cirrus Aircraft MFG facility is located about 1 block to the east.
HUC 8 Name:	Cloquet River
HUC 12 Name:	Wild Rice Lake Reservoir
Hydrologist(s):	Mark Elliott (current), Mike Bares (no longer at MPCA)
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/192224

Remediation Sites with RAP Approval

Activity ID:	192224	**Rap Date:**	
No Assoc Date:		**Site Start:**	
No Assoc Letter:	No	**Rap Approved:**	
Has Rp:	Yes	**Rap Completed:**	
Coord Collect Methd:	Address Matching House Number	**Site Closed:**	
Parcels:			

WIMN:	https://webapp.pca.state.mn.us/wimn/site/192224
AI Name:	Duluth Air Force Base
Rp Names:	Air National Guard, Paul Wheeler

Spatial Remediation Activity

AI ID:	192224	**Site Start:**	1996-09-25 00:00:00
Site ID:	SR0000254	**Remedy Imp:**	
SI ID:	6	**Remedy Sel:**	2015-12-31 00:00:00
SI Cat:	AREA	**ASMT Compl:**	1986-01-01 00:00:00
NFA Decisi:		**Received:**	1996-09-25 00:00:00
Site Close:		**NPL List:**	
Leak Discovered:		**NPL Delete:**	
Leak Reported:		**PLP List:**	1984-10-30 00:00:00
Leak Reopened:		**PLP Delist:**	
Activity No:	1	**Staff Assi:**	2017-05-23 00:00:00
Activity ID:	SIW19960001	**FF Aproved:**	
Activity Type:	Superfund Investigation/Cleanup	**FF Closed:**	
Activity Code:	SIW	**Inv Comple:**	2013-12-31 00:00:00
Activity Year:	1996	**App Comple:**	1996-09-25 00:00:00
Discovered:		**Er Site Ev:**	

41	18 of21	NNE	0.78 / 4,118.46	1,421.03 / 50	**DULUTH AIR FORCE BASE OU1** **4680 Viper St** **Duluth MN 55811**	PLP

Item ID:	192224-AREA0000000022	**Federal Reg:**	
Project ID:	SR0000095	**Fed State Reg:**	
Project Type:	Superfund Site	**Non Reg:**	
Project ID (RAP):		**SEMS?:**	
Project Type (RAP):		**NPL:**	
Site Status:	Closed	**Unpermitted Dump?:**	
Perm List of Prior?:	Yes	**Latitude:**	46.84287262
Petrol Brownfield?:		**Longitude:**	-92.19025421
VIC Site?:		**County (RAP):**	
Sf Voluntary:		**Latitude (RAP):**	
Inst Controls?:		**Longitude (RAP):**	
State Reg:			
Project Name:	DULUTH AIR FORCE BASE OU1		
Site Address 1:	4680 Viper St		
Site Address 2:			
Site City:	Duluth		
Site State:	MN		
Site ZIP:	55811		
Site County:	St. Louis		
Project Name(RAP):			
Address1 (RAP):			
Address2(RAP):			
City (RAP):			
State (RAP):			
ZIP(RAP):			
Project Managers:	David Knight (former), Heidi Bauman (former), Jane Mosel (no longer at MPCA)		
Data Source:	MPCA Remediation Sites		

Remediation Sites Details

AI Name:	Duluth Air Force Base	**DWSMA Code:**	
Activity ID:	192224	**DWSMA Name:**	
SI ID:	22	**Cong Dist:**	8
SI Cat:	AREA	**House Dist:**	8B
SI Type:	SUPE	**Senate Dis:**	8
Site Type:	CON	**HUC 8:**	04010202
Acreage:		**HUC 10:**	0401020205
HRS Score:	21.00	**HUC 12:**	040102020501
Score Year:	2016	**Method Des:**	Digitized-DRG
MNTBA:			
Loc Desc:			
HUC 8 Name:	Cloquet River		
HUC 12 Name:	Wild Rice Lake Reservoir		
Hydrologist(s):	Mike Bares (no longer at MPCA)		
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/192224		

Spatial Remediation Activity

AI ID:	192224	**Site Start:**	1980-12-11 00:00:00
Site ID:	SR0000095	**Remedy Imp:**	
SI ID:	22	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	1980-12-11 00:00:00
Site Close:		**NPL List:**	
Leak Discovered:		**NPL Delete:**	
Leak Reported:		**PLP List:**	1984-10-30 00:00:00
Leak Reopened:		**PLP Delist:**	
Activity No:	3	**Staff Assi:**	1984-10-31 00:00:00
Activity ID:	SIW19840003	**FF Aproved:**	
Activity Type:	Superfund Investigation/Cleanup	**FF Closed:**	
Activity Code:	SIW	**Inv Comple:**	2024-01-01 00:00:00
Activity Year:	1984	**App Comple:**	1984-10-31 00:00:00
Discovered:		**Er Site Ev:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
41	19 of21	NNE	0.78 / 4,118.46	1,421.03 / 50	DULUTH AIR FORCE BASE Site 29 - (FUDS)Site 102 TCE 4680 Viper St Duluth MN 55811	PLP

Item ID: 192224-AREA0000000020
Project ID: SR0000355
Project Type: Superfund sub-area
Project ID (RAP):
Project Type (RAP):
Site Status: Active / Existing
Perm List of Prior?: Yes
Petrol Brownfield?:
VIC Site?:
Sf Voluntary:
Inst Controls?:
State Reg:
Federal Reg:
Fed State Reg:
Non Reg:
SEMS?:
NPL:
Unpermitted Dump?:
Latitude: 46.8379659
Longitude: -92.19841274
County (RAP):
Latitude (RAP):
Longitude (RAP):
Project Name: DULUTH AIR FORCE BASE Site 29 - (FUDS)Site 102 TCE
Site Address 1: 4680 Viper St
Site Address 2:
Site City: Duluth
Site State: MN
Site ZIP: 55811
Site County: St. Louis
Project Name(RAP):
Address1 (RAP):
Address2(RAP):
City (RAP):
State (RAP):
ZIP(RAP):
Project Managers: Mark Elliott (current), David Knight (former), Heidi Bauman (former), Jane Mosel (no longer at MPCA)
Data Source: MPCA Remediation Sites

Remediation Sites Details

AI Name: Duluth Air Force Base
Activity ID: 192224
SI ID: 20
SI Cat: AREA
SI Type: OPER
Site Type: CON
Acreage: 10.00
HRS Score:
Score Year:
MNTBA:
DWSMA Code:
DWSMA Name:
Cong Dist: 8
House Dist: 8B
Senate Dis: 8
HUC 8: 04010201
HUC 10: 0401020116
HUC 12: 040102011604
Method Des: Interpolation Other
Loc Desc: Site is located at former USAF Hangar (Building 102) located in the middle of the Mid-Air Field complex along the south side of the main east-west runway of the Duluth International Airport. The investigation area, encompassing Hangar 102 and areas to the west, NW, and SW is about 10 acres.
HUC 8 Name: St. Louis River
HUC 12 Name: Saint Louis River
Hydrologist(s): Mark Elliott (current)
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/192224

Spatial Remediation Activity

AI ID: 192224
Site ID: SR0000355
SI ID: 20
SI Cat: AREA
NFA Decisi:
Site Close:
Leak Discovered:
Leak Reported:
Leak Reopened:
Activity No: 2
Activity ID: SIW20060002
Activity Type: Superfund Investigation/Cleanup
Site Start: 2005-09-09 00:00:00
Remedy Imp:
Remedy Sel:
ASMT Compl: 2006-05-01 00:00:00
Received: 2005-09-09 00:00:00
NPL List:
NPL Delete:
PLP List:
PLP Delist:
Staff Assi: 2009-05-01 00:00:00
FF Aproved:
FF Closed:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Activity Code: SIW
Activity Year: 2006
Discovered:
Inv Comple:
App Comple: 2006-05-31 00:00:00
Er Site Ev:

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41 | **20 of21** | **NNE** | **0.78 / 4,118.46** | **1,421.03 / 50** | **DULUTH AIR FORCE BASE Site 2 - MANG fire training**
4680 Viper St
Duluth MN 55811 | **PLP**

Item ID: 192224-AREA0000000004
Project ID: SR0000252
Project Type: Superfund sub-area
Project ID (RAP): SR0000252
Project Type (RAP): Superfund sub-area
Site Status: Active / Existing
Perm List of Prior?: Yes
Petrol Brownfield?:
VIC Site?:
Sf Voluntary:
Inst Controls?:
State Reg:
Federal Reg:
Fed State Reg:
Non Reg:
SEMS?:
NPL:
Unpermitted Dump?:
Latitude: 46.84896294
Longitude: -92.17377453
County (RAP): St. Louis
Latitude (RAP): 46.84896294
Longitude (RAP): -92.17377453
Project Name: DULUTH AIR FORCE BASE Site 2 - MANG fire training
Site Address 1: 4680 Viper St
Site Address 2:
Site City: Duluth
Site State: MN
Site ZIP: 55811
Site County: St. Louis
Project Name(RAP): DULUTH AIR FORCE BASE Site 2 - MANG fire training
Address1 (RAP): 4680 Viper St
Address2(RAP):
City (RAP): Duluth
State (RAP): MN
ZIP(RAP): 55811
Project Managers: Dan Cervin (current), Mark Elliott (current), David Knight (former), Heidi Bauman (former), Jane Mosel (no longer at MPCA)
Data Source: MPCA Remediation Sites; MPCA Remediation Sites with RAP approvals

Remediation Sites Details

AI Name: Duluth Air Force Base
Activity ID: 192224
SI ID: 4
SI Cat: AREA
SI Type: OPER
Site Type: CON
Acreage: 54.00
HRS Score:
Score Year:
MNTBA:
DWSMA Code:
DWSMA Name:
Cong Dist: 8
House Dist: 8B
Senate Dis: 8
HUC 8: 04010202
HUC 10: 0401020205
HUC 12: 040102020501
Method Des: Address Matching House Number
Loc Desc: The primary source area of the PFAS release associated with Site 2 is a former fire fighting training area which consist of several locations with an approximate 55 acre area located at the northwest quadrant of the intersection of the two main east-west and northeast-southwest runways.
HUC 8 Name: Cloquet River
HUC 12 Name: Wild Rice Lake Reservoir
Hydrologist(s): Mark Elliott (current), Mike Bares (no longer at MPCA)
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/192224

Remediation Sites with RAP Approval

Activity ID: 192224
No Assoc Date:
No Assoc Letter: No
Has Rp: No
Coord Collect Methd: Address Matching House Number
Parcels:
Rap Date:
Site Start:
Rap Approved:
Rap Completed:
Site Closed:

WIMN: https://webapp.pca.state.mn.us/wimn/site/192224
AI Name: Duluth Air Force Base
Rp Names:

Spatial Remediation Activity

AI ID:	192224	***Site Start:***	1993-10-18 00:00:00
Site ID:	SR0000252	***Remedy Imp:***	
SI ID:	4	***Remedy Sel:***	1997-11-13 00:00:00
SI Cat:	AREA	***ASMT Compl:***	1990-01-01 00:00:00
NFA Decisi:	2002-05-01 00:00:00	***Received:***	1993-10-18 00:00:00
Site Close:		***NPL List:***	
Leak Discovered:		***NPL Delete:***	
Leak Reported:		***PLP List:***	1984-10-30 00:00:00
Leak Reopened:		***PLP Delist:***	
Activity No:	2	***Staff Assi:***	1993-10-18 00:00:00
Activity ID:	SIW19930002	***FF Aproved:***	
Activity Type:	Superfund Investigation/Cleanup	***FF Closed:***	
Activity Code:	SIW	***Inv Comple:***	1995-11-01 00:00:00
Activity Year:	1993	***App Comple:***	1993-10-18 00:00:00
Discovered:		***Er Site Ev:***	

41	***21 of21***	***NNE***	***0.78 / 4,118.46***	***1,421.03 / 50***	***DULUTH AIR NATIONAL GUARD BASE 4680 VIPER ST DULUTH MN 55811-6005***	***RCRA CORRACTS***

Handler ID: MND000773341
Generator Status: SQG
Recycler Activity?: YES
Recycler Activity Note: This facility has been identified as a Recycler Facility with indication of Reclamation and Recovery in the RCRA Biennial Report Module for Management Methods
H010 - Metals recovery including retorting, smelting, chemical, etc.
H011 - Mercury recovery (includes mercury retorting, bulb/lamp crushing and mercury vapor recovery, thermostat recovery, mercury from medical equipment recovery, mercury car switch recovery, etc.)
H015 - Deployment/deactivation of airbag waste followed by metals recovery
H020 - Solvents recovery
H039 - Other recovery or reclamation for reuse including acid regeneration, organics recovery, etc.
H050 - Energy recovery at this site; used as fuel (includes on-site fuel blending before energy recovery)
H061 - Fuel blending prior to energy recovery at another site (waste generated on-site or received from off-site)

Event/Area Details

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA050
Corrective Action Event Descri: RFA COMPLETED
Actual Date: 19900928
Schedule Date Orig:
Schedule Date New:
Best Date: 19900928
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA075HI
Corrective Action Event Descri: CA PRIORITIZATION-HIGH CA PRIORITY
Actual Date: 19920811
Schedule Date Orig:
Schedule Date New:
Best Date: 19920811
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:

Surface Water Release Ind:
Event Agency: E

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA350
Corrective Action Event Descri: CMS COMPLETE
Actual Date: 19960812
Schedule Date Orig:
Schedule Date New:
Best Date: 19960812
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: SWMUS 21 & 25(OLD MOTOR POOL)
Event Code: CA077
Corrective Action Event Descri: SITE VISIT
Actual Date: 19971021
Schedule Date Orig:
Schedule Date New:
Best Date: 19971021
Groundwater Release Ind: Yes
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind: Yes
Event Agency: S

Area Name: SWMUS 21 & 25(OLD MOTOR POOL)
Event Code: CA200
Corrective Action Event Descri: INVESTIGATION COMPLETE
Actual Date: 19960329
Schedule Date Orig:
Schedule Date New:
Best Date: 19960329
Groundwater Release Ind: Yes
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind: Yes
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA196
Corrective Action Event Descri: RFI REPORT MOD REQUESTED BY AGENCY
Actual Date: 19950330
Schedule Date Orig:
Schedule Date New:
Best Date: 19950330
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: SWMUS 21 & 25(OLD MOTOR POOL)
Event Code: CA400
Corrective Action Event Descri: REMEDY DECISION
Actual Date: 19970107
Schedule Date Orig:
Schedule Date New:
Best Date: 19970107
Groundwater Release Ind: Yes
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind: Yes
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)

Event Code: CA070YE
Corrective Action Event Descri: DETERMINATION OF NEED FOR AN INVESTIGATION-INVESTIGATION IS NECESSARY
Actual Date: 19900928
Schedule Date Orig:
Schedule Date New:
Best Date: 19900928
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: SWMUS 21 & 25(OLD MOTOR POOL)
Event Code: CA077
Corrective Action Event Descri: SITE VISIT
Actual Date: 19950512
Schedule Date Orig:
Schedule Date New:
Best Date: 19950512
Groundwater Release Ind: Yes
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind: Yes
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA077
Corrective Action Event Descri: SITE VISIT
Actual Date: 19970604
Schedule Date Orig:
Schedule Date New:
Best Date: 19970604
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA077
Corrective Action Event Descri: SITE VISIT
Actual Date: 19961016
Schedule Date Orig:
Schedule Date New:
Best Date: 19961016
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA160
Corrective Action Event Descri: INVESTIGATION SUPPLEMENTAL INFORMATION RECEIVED
Actual Date: 19950706
Schedule Date Orig:
Schedule Date New:
Best Date: 19950706
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA750YE
Corrective Action Event Descri: RELEASE TO GW CONTROLLED DETERMINATION-YES, APPLICABLE AS OF THIS DATE
Actual Date: 20040114
Schedule Date Orig:

Schedule Date New:
Best Date: 20040114
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA146
Corrective Action Event Descri: ASSOCIATED SUP DOCUMENTS DUE/REC
Actual Date: 19911002
Schedule Date Orig:
Schedule Date New:
Best Date: 19911002
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA496
Corrective Action Event Descri: CMI WORKPLAN DUE/RECEIVED
Actual Date: 19960501
Schedule Date Orig:
Schedule Date New:
Best Date: 19960501
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: SWMUS 21 & 25(OLD MOTOR POOL)
Event Code: CA070YE
Corrective Action Event Descri: DETERMINATION OF NEED FOR AN INVESTIGATION-INVESTIGATION IS NECESSARY
Actual Date: 19900928
Schedule Date Orig:
Schedule Date New:
Best Date: 19900928
Groundwater Release Ind: Yes
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind: Yes
Event Agency: S

Area Name: SWMUS 21 & 25(OLD MOTOR POOL)
Event Code: CA260
Corrective Action Event Descri: CMS WORKPLAN RECEIVED
Actual Date: 19971110
Schedule Date Orig:
Schedule Date New:
Best Date: 19971110
Groundwater Release Ind: Yes
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind: Yes
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA536
Corrective Action Event Descri: CMI REPORT DUE/RECEIVED
Actual Date: 19961224
Schedule Date Orig:
Schedule Date New:
Best Date: 19961224
Groundwater Release Ind:
Soil Release Ind: Yes

Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA546
Corrective Action Event Descri: CMI PROGRESS REPORT DUE/RECEIVED
Actual Date: 19970703
Schedule Date Orig:
Schedule Date New:
Best Date: 19970703
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA750IN
Corrective Action Event Descri: RELEASE TO GW CONTROLLED DETERMINATION-MORE INFORMATION NEEDED
Actual Date: 19970930
Schedule Date Orig:
Schedule Date New:
Best Date: 19970930
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: SWMUS 21 & 25(OLD MOTOR POOL)
Event Code: CA550
Corrective Action Event Descri: REMEDY CONSTRUCTION
Actual Date: 20040114
Schedule Date Orig:
Schedule Date New:
Best Date: 20040114
Groundwater Release Ind: Yes
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind: Yes
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA077
Corrective Action Event Descri: SITE VISIT
Actual Date: 19920325
Schedule Date Orig:
Schedule Date New:
Best Date: 19920325
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA110
Corrective Action Event Descri: INVESTIGATION WORKPLAN RECEIVED
Actual Date: 19910727
Schedule Date Orig:
Schedule Date New:
Best Date: 19910727
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA146
Corrective Action Event Descri: ASSOCIATED SUP DOCUMENTS DUE/REC
Actual Date: 19911223
Schedule Date Orig:
Schedule Date New:
Best Date: 19911223
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA156
Corrective Action Event Descri: RFI WORKPLAN CONDITIONAL APPROVAL
Actual Date: 19940429
Schedule Date Orig:
Schedule Date New:
Best Date: 19940429
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA167
Corrective Action Event Descri: RFI SUP WORKPLAN CONDITIONAL APPR
Actual Date: 19920117
Schedule Date Orig:
Schedule Date New:
Best Date: 19920117
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA340
Corrective Action Event Descri: CMS REPORT RECEIVED
Actual Date: 19960305
Schedule Date Orig:
Schedule Date New:
Best Date: 19960305
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: SWMUS 21 & 25(OLD MOTOR POOL)
Event Code: CA100
Corrective Action Event Descri: INVESTIGATION IMPOSITION
Actual Date: 19950331
Schedule Date Orig:
Schedule Date New:
Best Date: 19950331
Groundwater Release Ind: Yes
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind: Yes
Event Agency: S

Area Name: SWMUS 21 & 25(OLD MOTOR POOL)
Event Code: CA156
Corrective Action Event Descri: RFI WORKPLAN CONDITIONAL APPROVAL
Actual Date: 19950426

Schedule Date Orig:
Schedule Date New:
Best Date: 19950426
Groundwater Release Ind: Yes
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind: Yes
Event Agency: S

Area Name: SWMUS 21 & 25(OLD MOTOR POOL)
Event Code: CA506
Corrective Action Event Descri: CMI SUP WORKPLAN DUE/RECEIVED
Actual Date: 19970805
Schedule Date Orig:
Schedule Date New:
Best Date: 19970805
Groundwater Release Ind: Yes
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind: Yes
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA380
Corrective Action Event Descri: DATE FOR PUBLIC NOTICE ON PROPOSED REMEDY
Actual Date: 19960926
Schedule Date Orig:
Schedule Date New:
Best Date: 19960926
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA507
Corrective Action Event Descri: CMI SUP WORKPLAN APPROVED
Actual Date: 19980210
Schedule Date Orig:
Schedule Date New:
Best Date: 19980210
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: SWMUS 21 & 25(OLD MOTOR POOL)
Event Code: CA260
Corrective Action Event Descri: CMS WORKPLAN RECEIVED
Actual Date: 19970723
Schedule Date Orig:
Schedule Date New:
Best Date: 19970723
Groundwater Release Ind: Yes
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind: Yes
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA200
Corrective Action Event Descri: INVESTIGATION COMPLETE
Actual Date: 19950330
Schedule Date Orig:
Schedule Date New:
Best Date: 19950330
Groundwater Release Ind:

Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA450
Corrective Action Event Descri: CORRECTIVE MEASURES DESIGN APPROVED
Actual Date: 19970107
Schedule Date Orig: 19970120
Schedule Date New:
Best Date: 19970107
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: SWMUS 21 & 25(OLD MOTOR POOL)
Event Code: CA340
Corrective Action Event Descri: CMS REPORT RECEIVED
Actual Date: 19980326
Schedule Date Orig:
Schedule Date New:
Best Date: 19980326
Groundwater Release Ind: Yes
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind: Yes
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA190
Corrective Action Event Descri: INVESTIGATION REPORT RECEIVED
Actual Date: 19920826
Schedule Date Orig:
Schedule Date New:
Best Date: 19920826
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA400
Corrective Action Event Descri: REMEDY DECISION
Actual Date: 19970107
Schedule Date Orig:
Schedule Date New:
Best Date: 19970107
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA077
Corrective Action Event Descri: SITE VISIT
Actual Date: 19940721
Schedule Date Orig:
Schedule Date New:
Best Date: 19940721
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA500
Corrective Action Event Descri: CMI WORKPLAN APPROVED
Actual Date: 19961003
Schedule Date Orig:
Schedule Date New:
Best Date: 19961003
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA160
Corrective Action Event Descri: INVESTIGATION SUPPLEMENTAL INFORMATION RECEIVED
Actual Date: 19940615
Schedule Date Orig:
Schedule Date New:
Best Date: 19940615
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA190
Corrective Action Event Descri: INVESTIGATION REPORT RECEIVED
Actual Date: 19941212
Schedule Date Orig:
Schedule Date New:
Best Date: 19941212
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA250
Corrective Action Event Descri: CMS IMPOSITION
Actual Date: 19950721
Schedule Date Orig:
Schedule Date New:
Best Date: 19950721
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA260
Corrective Action Event Descri: CMS WORKPLAN RECEIVED
Actual Date: 19950821
Schedule Date Orig:
Schedule Date New:
Best Date: 19950821
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA155
Corrective Action Event Descri: INVESTIGATION SUPPLEMENTAL INFO REQ BY AGENCY

Actual Date: 19921209
Schedule Date Orig:
Schedule Date New:
Best Date: 19921209
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA225NR
Corrective Action Event Descri: STABILIZATION MEASURES EVALUATION-FACILITY NOT AMENABLE TO STABILIZATION
Actual Date: 19920811
Schedule Date Orig:
Schedule Date New:
Best Date: 19920811
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: E

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA160
Corrective Action Event Descri: INVESTIGATION SUPPLEMENTAL INFORMATION RECEIVED
Actual Date: 19911002
Schedule Date Orig:
Schedule Date New:
Best Date: 19911002
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA550
Corrective Action Event Descri: REMEDY CONSTRUCTION
Actual Date: 20040114
Schedule Date Orig:
Schedule Date New:
Best Date: 20040114
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: SWMUS 21 & 25(OLD MOTOR POOL)
Event Code: CA750YE
Corrective Action Event Descri: RELEASE TO GW CONTROLLED DETERMINATION-YES, APPLICABLE AS OF THIS DATE
Actual Date: 20040114
Schedule Date Orig:
Schedule Date New:
Best Date: 20040114
Groundwater Release Ind: Yes
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind: Yes
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA180
Corrective Action Event Descri: INVESTIGATION IMPLEMENTATION BEGUN
Actual Date: 19920127
Schedule Date Orig:
Schedule Date New:
Best Date: 19920127

Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA497
Corrective Action Event Descri: CMI MODIFICATION REQUESTED
Actual Date: 19960920
Schedule Date Orig:
Schedule Date New:
Best Date: 19960920
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA507
Corrective Action Event Descri: CMI SUP WORKPLAN APPROVED
Actual Date: 19970520
Schedule Date Orig:
Schedule Date New:
Best Date: 19970520
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA725YE
Corrective Action Event Descri: HUMAN EXPOSURES CONTROLLED DETERMINATION-YES, APPLICABLE AS OF THIS DATE
Actual Date: 19970930
Schedule Date Orig:
Schedule Date New:
Best Date: 19970930
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA140
Corrective Action Event Descri: INVESTIGATION WORKPLAN NOTICE OF DEFICIENCY ISSUED
Actual Date: 19910906
Schedule Date Orig:
Schedule Date New:
Best Date: 19910906
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA077
Corrective Action Event Descri: SITE VISIT
Actual Date: 19920207
Schedule Date Orig:
Schedule Date New:
Best Date: 19920207
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:

Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA077
Corrective Action Event Descri: SITE VISIT
Actual Date: 19961025
Schedule Date Orig:
Schedule Date New:
Best Date: 19961025
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA110
Corrective Action Event Descri: INVESTIGATION WORKPLAN RECEIVED
Actual Date: 19910419
Schedule Date Orig:
Schedule Date New:
Best Date: 19910419
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA550
Corrective Action Event Descri: REMEDY CONSTRUCTION
Actual Date: 19990827
Schedule Date Orig:
Schedule Date New:
Best Date: 19990827
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: SWMUS 21 & 25(OLD MOTOR POOL)
Event Code: CA345
Corrective Action Event Descri: CMS PROGRESS REPORTS RECEIVED
Actual Date: 19981013
Schedule Date Orig:
Schedule Date New:
Best Date: 19981013
Groundwater Release Ind: Yes
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind: Yes
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA516
Corrective Action Event Descri: CMI IMPLEMENTATION BEGUN
Actual Date: 19961014
Schedule Date Orig:
Schedule Date New:
Best Date: 19961014
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA999

Corrective Action Event Descri: CA PROCESS IS TERMINATED
Actual Date: 20110104
Schedule Date Orig:
Schedule Date New:
Best Date: 20110104
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA300
Corrective Action Event Descri: CMS WORKPLAN APPROVED
Actual Date: 19951219
Schedule Date Orig:
Schedule Date New:
Best Date: 19951219
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA077
Corrective Action Event Descri: SITE VISIT
Actual Date: 19980820
Schedule Date Orig:
Schedule Date New:
Best Date: 19980820
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA100
Corrective Action Event Descri: INVESTIGATION IMPOSITION
Actual Date: 19920127
Schedule Date Orig:
Schedule Date New:
Best Date: 19920127
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA506
Corrective Action Event Descri: CMI SUP WORKPLAN DUE/RECEIVED
Actual Date: 19970122
Schedule Date Orig:
Schedule Date New:
Best Date: 19970122
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: SWMUS 21 & 25(OLD MOTOR POOL)
Event Code: CA110
Corrective Action Event Descri: INVESTIGATION WORKPLAN RECEIVED
Actual Date: 19950331
Schedule Date Orig:
Schedule Date New:

Best Date: 19950331
Groundwater Release Ind: Yes
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind: Yes
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA140
Corrective Action Event Descri: INVESTIGATION WORKPLAN NOTICE OF DEFICIENCY ISSUED
Actual Date: 19911203
Schedule Date Orig:
Schedule Date New:
Best Date: 19911203
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA150
Corrective Action Event Descri: INVESTIGATION WORKPLAN APPROVED
Actual Date: 19920117
Schedule Date Orig:
Schedule Date New:
Best Date: 19920117
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA160
Corrective Action Event Descri: INVESTIGATION SUPPLEMENTAL INFORMATION RECEIVED
Actual Date: 19940311
Schedule Date Orig:
Schedule Date New:
Best Date: 19940311
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Area Name: SWMUS 21 & 25(OLD MOTOR POOL)
Event Code: CA507
Corrective Action Event Descri: CMI SUP WORKPLAN APPROVED
Actual Date: 19970903
Schedule Date Orig:
Schedule Date New:
Best Date: 19970903
Groundwater Release Ind: Yes
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind: Yes
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA077
Corrective Action Event Descri: SITE VISIT
Actual Date: 19960404
Schedule Date Orig:
Schedule Date New:
Best Date: 19960404
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:

Surface Water Release Ind:
Event Agency: S

Area Name: ENTIRE FACILITY(SWMUS 17,18,19,22)
Event Code: CA110
Corrective Action Event Descri: INVESTIGATION WORKPLAN RECEIVED
Actual Date: 19911002
Schedule Date Orig:
Schedule Date New:
Best Date: 19911002
Groundwater Release Ind:
Soil Release Ind: Yes
Air Release Ind:
Surface Water Release Ind:
Event Agency: S

Violation/Evaluation Summary

Note: VIOLATION or UNDETERMINED: There are VIOLATION or UNDETERMINED details or records associated with this facility (EPA ID) in the Compliance Monitoring and Enforcement table dated Nov 2025.

Violation Details

Viol Type: 270.C
Citation:
Determined Date: 20020820
Scheduled Compliance Date:
Eval Activity Location: MN
Viol Determined By Agency: EPA
Viol Short Desc: Permits - Conditions
Actual Rtc Date: 20021205
Found Violation: Yes
Rtc Qualifier: Documented

Enforcement Details

Enf Type: 120
Enf Type Desc: WRITTEN INFORMAL
Enf Action Date: 20021022
Disposition Status Desc:
Disposition Status Date:
Enf Agency: EPA
Proposed Amount:
Final Amount:
Paid Amount:

Violation Details

Viol Type: 264.E
Citation: FR - 40 CFR 264.71 (b)(1)
Determined Date: 19950810
Scheduled Compliance Date:
Eval Activity Location: MN
Viol Determined By Agency: EPA
Viol Short Desc: TSD - Manifest/Records/Reporting
Actual Rtc Date: 19950810
Found Violation: Yes
Rtc Qualifier: Observed

Enforcement Details

Enf Type: 120
Enf Type Desc: WRITTEN INFORMAL
Enf Action Date: 19960620
Disposition Status Desc:
Disposition Status Date:
Enf Agency: EPA
Proposed Amount:
Final Amount:

Paid Amount:

Violation Details

Viol Type: 268.A
Citation: FR - 40 CFR 264.73 & 268.7
Determined Date: 19940811
Scheduled Compliance Date: 19941112
Eval Activity Location: MN
Viol Determined By Agency: EPA
Viol Short Desc: LDR - General
Actual Rtc Date: 19950111
Found Violation: Yes
Rtc Qualifier: Observed

Enforcement Details

Enf Type: 120
Enf Type Desc: WRITTEN INFORMAL
Enf Action Date: 19941012
Disposition Status Desc:
Disposition Status Date:
Enf Agency: EPA
Proposed Amount:
Final Amount:
Paid Amount:

Violation Details

Viol Type: 262.A
Citation:
Determined Date: 19920519
Scheduled Compliance Date: 19920720
Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - General
Actual Rtc Date: 19940603
Found Violation: Yes
Rtc Qualifier: Observed

Enforcement Details

Enf Type: 123
Enf Type Desc: TEN DAY LETTER
Enf Action Date: 19920720
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Violation Details

Viol Type: 262.C
Citation:
Determined Date: 19920519
Scheduled Compliance Date: 19920720
Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - Pre-transport
Actual Rtc Date: 19940603
Found Violation: Yes
Rtc Qualifier: Observed

Enforcement Details

Enf Type: 123
Enf Type Desc: TEN DAY LETTER
Enf Action Date: 19920720
Disposition Status Desc:

Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Violation Details

Viol Type: 268.A
Citation:
Determined Date: 19910626
Scheduled Compliance Date:
Eval Activity Location: MN
Viol Determined By Agency: EPA
Viol Short Desc: LDR - General
Actual Rtc Date: 19921014
Found Violation: Yes
Rtc Qualifier: Observed

Enforcement Details

Enf Type: 120
Enf Type Desc: WRITTEN INFORMAL
Enf Action Date: 19911023
Disposition Status Desc:
Disposition Status Date:
Enf Agency: EPA
Proposed Amount:
Final Amount:
Paid Amount:

Violation Details

Viol Type: 262.A
Citation:
Determined Date: 19900620
Scheduled Compliance Date: 19900720
Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - General
Actual Rtc Date: 19900817
Found Violation: Yes
Rtc Qualifier: Observed

Enforcement Details

Enf Type: 121
Enf Type Desc: Letter of Warning (LOW)
Enf Action Date: 19900720
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Violation Details

Viol Type: 262.A
Citation:
Determined Date: 19880915
Scheduled Compliance Date: 19881114
Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - General
Actual Rtc Date: 19890216
Found Violation: Yes
Rtc Qualifier: Observed

Enforcement Details

Enf Type: 122
Enf Type Desc: Notice of Violation (NOV)
Enf Action Date: 19881114
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Violation Details

Viol Type: 264.A
Citation:
Determined Date: 19880428
Scheduled Compliance Date: 19880911
Eval Activity Location: MN
Viol Determined By Agency: EPA
Viol Short Desc: TSD - General
Actual Rtc Date: 19880928
Found Violation: Yes
Rtc Qualifier: Observed

Enforcement Details

Enf Type: 120
Enf Type Desc: WRITTEN INFORMAL
Enf Action Date: 19880809
Disposition Status Desc:
Disposition Status Date:
Enf Agency: EPA
Proposed Amount:
Final Amount:
Paid Amount:

Violation Details

Viol Type: 268.A
Citation:
Determined Date: 19880428
Scheduled Compliance Date: 19880911
Eval Activity Location: MN
Viol Determined By Agency: EPA
Viol Short Desc: LDR - General
Actual Rtc Date: 19880928
Found Violation: Yes
Rtc Qualifier: Observed

Enforcement Details

Enf Type: 120
Enf Type Desc: WRITTEN INFORMAL
Enf Action Date: 19880809
Disposition Status Desc:
Disposition Status Date:
Enf Agency: EPA
Proposed Amount:
Final Amount:
Paid Amount:

Violation Details

Viol Type: 262.A
Citation:
Determined Date: 19870116
Scheduled Compliance Date:
Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - General
Actual Rtc Date: 19870116
Found Violation: Yes
Rtc Qualifier: Observed

Violation Details

Viol Type: 262.A
Citation:
Determined Date: 19861126
Scheduled Compliance Date: 19861219
Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - General
Actual Rtc Date: 19870116
Found Violation: Yes
Rtc Qualifier: Observed

Enforcement Details

Enf Type: 122
Enf Type Desc: Notice of Violation (NOV)
Enf Action Date: 19861219
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Violation Details

Viol Type: 262.A
Citation:
Determined Date: 19850716
Scheduled Compliance Date: 19850716
Eval Activity Location: MN
Viol Determined By Agency: State
Viol Short Desc: Generators - General
Actual Rtc Date: 19851120
Found Violation: Yes
Rtc Qualifier: Observed

Enforcement Details

Enf Type: 122
Enf Type Desc: Notice of Violation (NOV)
Enf Action Date: 19850716
Disposition Status Desc:
Disposition Status Date:
Enf Agency: State
Proposed Amount:
Final Amount:
Paid Amount:

Evaluation Details

Eval Start Date: 20161220
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:
Actual Rtc Date:
Eval Agency: State

Eval Start Date: 20110608
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:
Actual Rtc Date:
Eval Agency: EPA

Eval Start Date: 20100708
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:
Actual Rtc Date:

Eval Agency:	EPA
Eval Start Date:	20090514
Eval Type Desc:	COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:	
Actual Rtc Date:	
Eval Agency:	EPA
Eval Start Date:	20080702
Eval Type Desc:	COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:	
Actual Rtc Date:	
Eval Agency:	EPA
Eval Start Date:	20080702
Eval Type Desc:	COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:	
Actual Rtc Date:	
Eval Agency:	State
Eval Start Date:	20061003
Eval Type Desc:	COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:	
Actual Rtc Date:	
Eval Agency:	EPA
Eval Start Date:	20060616
Eval Type Desc:	COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:	
Actual Rtc Date:	
Eval Agency:	EPA
Eval Start Date:	20050831
Eval Type Desc:	COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:	
Actual Rtc Date:	
Eval Agency:	EPA
Eval Start Date:	20040811
Eval Type Desc:	COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:	
Actual Rtc Date:	
Eval Agency:	EPA
Eval Start Date:	20030611
Eval Type Desc:	COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:	
Actual Rtc Date:	
Eval Agency:	EPA
Eval Start Date:	20020820
Eval Type Desc:	COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:	Permits - Conditions
Actual Rtc Date:	20021205
Eval Agency:	EPA
Eval Start Date:	20010506
Eval Type Desc:	COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:	
Actual Rtc Date:	
Eval Agency:	EPA
Eval Start Date:	20000725
Eval Type Desc:	FOCUSED COMPLIANCE INSPECTION
Viol Short Desc:	
Actual Rtc Date:	
Eval Agency:	EPA
Eval Start Date:	19990610

Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:
Actual Rtc Date:
Eval Agency: EPA

Eval Start Date: 19990610
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:
Actual Rtc Date:
Eval Agency: State

Eval Start Date: 19980728
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:
Actual Rtc Date:
Eval Agency: State

Eval Start Date: 19980728
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:
Actual Rtc Date:
Eval Agency: EPA

Eval Start Date: 19970722
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:
Actual Rtc Date:
Eval Agency: EPA

Eval Start Date: 19970722
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:
Actual Rtc Date:
Eval Agency: State

Eval Start Date: 19960606
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:
Actual Rtc Date:
Eval Agency: State

Eval Start Date: 19960606
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:
Actual Rtc Date:
Eval Agency: EPA

Eval Start Date: 19950810
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:
Actual Rtc Date:
Eval Agency: State

Eval Start Date: 19950810
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc: TSD - Manifest/Records/Reporting
Actual Rtc Date: 19950810
Eval Agency: EPA

Eval Start Date: 19940811
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:
Actual Rtc Date:
Eval Agency: State

Eval Start Date: 19940811
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc: LDR - General
Actual Rtc Date: 19950111

Eval Agency: EPA

Eval Start Date: 19930826
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:
Actual Rtc Date:
Eval Agency: EPA

Eval Start Date: 19930826
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:
Actual Rtc Date:
Eval Agency: State

Eval Start Date: 19920519
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc: Generators - Pre-transport
Actual Rtc Date: 19940603
Eval Agency: State

Eval Start Date: 19920519
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc: Generators - General
Actual Rtc Date: 19940603
Eval Agency: State

Eval Start Date: 19920519
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:
Actual Rtc Date:
Eval Agency: EPA

Eval Start Date: 19911023
Eval Type Desc: NON-FINANCIAL RECORD REVIEW
Viol Short Desc:
Actual Rtc Date:
Eval Agency: EPA

Eval Start Date: 19910626
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:
Actual Rtc Date:
Eval Agency: State

Eval Start Date: 19910626
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc: LDR - General
Actual Rtc Date: 19921014
Eval Agency: EPA

Eval Start Date: 19900817
Eval Type Desc: COMPLIANCE SCHEDULE EVALUATION
Viol Short Desc:
Actual Rtc Date:
Eval Agency: State

Eval Start Date: 19900620
Eval Type Desc: NON-FINANCIAL RECORD REVIEW
Viol Short Desc:
Actual Rtc Date:
Eval Agency: EPA

Eval Start Date: 19900620
Eval Type Desc: FOCUSED COMPLIANCE INSPECTION
Viol Short Desc:
Actual Rtc Date:
Eval Agency: State

Eval Start Date: 19900620

Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc: Generators - General
Actual Rtc Date: 19900817
Eval Agency: State

Eval Start Date: 19890406
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:
Actual Rtc Date:
Eval Agency: EPA

Eval Start Date: 19890216
Eval Type Desc: COMPLIANCE SCHEDULE EVALUATION
Viol Short Desc:
Actual Rtc Date:
Eval Agency: State

Eval Start Date: 19880915
Eval Type Desc: FOCUSED COMPLIANCE INSPECTION
Viol Short Desc:
Actual Rtc Date:
Eval Agency: State

Eval Start Date: 19880915
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc: Generators - General
Actual Rtc Date: 19890216
Eval Agency: State

Eval Start Date: 19880428
Eval Type Desc: FOCUSED COMPLIANCE INSPECTION
Viol Short Desc: LDR - General
Actual Rtc Date: 19880928
Eval Agency: EPA

Eval Start Date: 19880428
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc: TSD - General
Actual Rtc Date: 19880928
Eval Agency: EPA

Eval Start Date: 19870116
Eval Type Desc: COMPLIANCE SCHEDULE EVALUATION
Viol Short Desc: Generators - General
Actual Rtc Date: 19870116
Eval Agency: State

Eval Start Date: 19861126
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc: Generators - General
Actual Rtc Date: 19870116
Eval Agency: State

Eval Start Date: 19850812
Eval Type Desc: COMPLIANCE SCHEDULE EVALUATION
Viol Short Desc:
Actual Rtc Date:
Eval Agency: State

Eval Start Date: 19850716
Eval Type Desc: COMPLIANCE EVALUATION INSPECTION
Viol Short Desc: Generators - General
Actual Rtc Date: 19851120
Eval Agency: State

Eval Start Date: 19841119
Eval Type Desc: COMPLIANCE SCHEDULE EVALUATION
Viol Short Desc:
Actual Rtc Date:

Eval Agency:	State
Eval Start Date:	19841010
Eval Type Desc:	COMPLIANCE EVALUATION INSPECTION
Viol Short Desc:	
Actual Rtc Date:	
Eval Agency:	State

Additional Handler Summary Details

Source Type:	I	***NAIC 1:***	
Seq No:	53	***NAIC 2:***	
Non Notifier:		***NAIC 3:***	
Receive Date:	20231218	***NAIC 4:***	
Active Site:	H----	***State:***	MN
Land Type:		***Location Latitude:***	46.853395
In Handler Univ:	Y	***Location Longitude:***	-92.269724
In A Universe:	Y	***Loc GIS Primary:***	N
Gen Status:	SQG	***Loc GIS Origin:***	UC
Report Cycle:		***State District Owner:***	
Accessibility:		***State District:***	
Region:	05		

Fed Waste Gen Owner:	HQ
State Waste Generator Owner:	MN
State Waste Generator:	2
Short Term Generator:	N
Uni Waste:	N
Universal Waste Dest Facility:	N
Federal Universal Waste:	N
As Federally Regulated Tsdf:	------
As Converter Tsdf:	------
As State Regulated Tsdf:	------
As State Regulated Handler:	---
Federal Indicator:	---
Hsm:	N
Subpart K:	----
GPRA Permit:	N
GPRA Renewal:	N
Permit Renewal Wrkld:	------
Permwrk ID:	------
Perm Prog:	---S--
Pcwrkld:	------
Closwrkld:	------
GPRA Ca:	Y
Cawrkld:	N
Subjca Tsd Discretion:	Y
NCAPS:	H
EC Indicator:	N
Ca725 Indicator:	+
Ca750 Indicator:	+
Operating Tsdf:	------
Full Enforcement:	------
Snc:	N
Unaddressed Snc:	N
Addressed Snc:	N
Snc With Comp Sched:	N
Fa Required:	-----
Hhandler Last Change:	20231220
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	EN
Handler Name:	DULUTH AIR NATIONAL GUARD BASE
Location Street No:	
Location Street1:	4680 VIPER ST

Location Street2:	
Location City:	DULUTH
Location State:	MN
Location Zip:	55811-6005
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	
Contact Name:	RYAN M BLAZEVIC
Contact Street No:	
Contact Street1:	4680 VIPER ST
Contact Street2:	
Contact City:	DULUTH
Contact State:	MN
Contact Zip:	55811-6005
Contact Country:	
Contact Phone & Ext:	218-788-7868
Contact Fax:	
Contact Email Address:	RYAN.M.BLAZEVIC.MIL@MAIL.MIL
Contact Title:	ENGINEER
Owner Name:	
Owner Type:	
Owner Seq:	
Operator Name:	
Operator Type:	
Operator Seq:	
Public Notes:	

Handler Summary

Importer:	No	***Used Oil Transpor:***	No
Mixed Waste Gen:	No	***Used Oil Trans Fac:***	No
Transporter:	No	***Used Oil Processor:***	No
Transfer Facility:	No	***Used Oil Refiner:***	No
Recycler:	No	***Used Oil Burner:***	No
Onsite Burner Exem:	No	***Commercial TSD:***	No
Furnace Exemption:	No	***Recycl Nonstorage:***	No
Underground Injec:	No		
Used Oil Market Burner:	No		
Used Oil Spec Marketer:	No		

Hazardous Waste Handler Details

Seq No:	1
Receive Date:	19800912
Handler Name:	MINNESOTA AIR NATIONAL GUARD DULUTH
Fed Waste Generator:	1
Generator Code Description:	Large Quantity Generator
Source Type:	Implementer
TSD Activity:	Y

Hazardous Waste Handler Details

Seq No:	1
Receive Date:	19841120
Handler Name:	MINNESOTA AIR NATIONAL GUARD DULUTH
Fed Waste Generator:	N
Generator Code Description:	Not a Generator, Verified
Source Type:	Part A
TSD Activity:	Y

Waste Code Details

Waste Code:	D001

Waste Code Desc: IGNITABLE WASTE

Waste Code: D002
Waste Code Desc: CORROSIVE WASTE

Waste Code: F005
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: U151
Waste Code Desc: MERCURY

Waste Code: U159
Waste Code Desc: 2-BUTANONE (I,T) (OR) METHYL ETHYL KETONE (MEK) (I,T)

Waste Code: U226
Waste Code Desc: ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM

Hazardous Waste Handler Details

Seq No: 1
Receive Date: 19900226
Handler Name: MINNESOTA AIR NATIONAL GUARD-DULUTH
Fed Waste Generator: 1
Generator Code Description: Large Quantity Generator
Source Type: Annual/Biennial Report
TSD Activity: Y

Hazardous Waste Handler Details

Seq No: 2
Receive Date: 19920209
Handler Name: MINNESOTA AIR NATIONAL GUARD
Fed Waste Generator: 1
Generator Code Description: Large Quantity Generator
Source Type: Annual/Biennial Report
TSD Activity: Y

Hazardous Waste Handler Details

Seq No: 3
Receive Date: 19940225
Handler Name: MN AIR NATIONAL GUARD - DULUTH
Fed Waste Generator: 1
Generator Code Description: Large Quantity Generator
Source Type: Annual/Biennial Report
TSD Activity: Y

Hazardous Waste Handler Details

Seq No: 2
Receive Date: 19950526
Handler Name: MINNESOTA AIR NATIONAL GUARD DULUTH
Fed Waste Generator: 1
Generator Code Description: Large Quantity Generator
Source Type: Implementer
TSD Activity: Y

Hazardous Waste Handler Details

Seq No: 4
Receive Date: 19960227
Handler Name: MN AIR NATIONAL GUARD
Fed Waste Generator: 1
Generator Code Description: Large Quantity Generator
Source Type: Annual/Biennial Report
TSD Activity: Y

Hazardous Waste Handler Details

Seq No: 5
Receive Date: 19980212
Handler Name: MINNESOTA AIR NATIONAL GUARD
Fed Waste Generator: 2
Generator Code Description: Small Quantity Generator
Source Type: Annual/Biennial Report
TSD Activity: Y

Hazardous Waste Handler Details

Seq No: 6
Receive Date: 20000203
Handler Name: MINNESOTA AIR NATIONAL GUARD
Fed Waste Generator: 2
Generator Code Description: Small Quantity Generator
Source Type: Annual/Biennial Report
TSD Activity: Y

Hazardous Waste Handler Details

Seq No: 1
Receive Date: 20000313
Handler Name: DULUTH AIR NATIONAL GUARD BASE
Fed Waste Generator: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Notification
TSD Activity: Y

Waste Code Details

Waste Code: D000
Waste Code Desc: DESCRIPTION

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: D002
Waste Code Desc: CORROSIVE WASTE

Waste Code: D003
Waste Code Desc: REACTIVE WASTE

Waste Code: D004
Waste Code Desc: ARSENIC

Waste Code: D005
Waste Code Desc: BARIUM

Waste Code: D006
Waste Code Desc: CADMIUM

Waste Code: D007
Waste Code Desc: CHROMIUM

Waste Code: D008
Waste Code Desc: LEAD

Waste Code: D009
Waste Code Desc: MERCURY

Waste Code: D011
Waste Code Desc: SILVER

Waste Code: D013
Waste Code Desc: LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)

Waste Code: D014
Waste Code Desc: METHOXYCHLOR (1,1,1-TRICHLORO-2,2-BIS [P-METHOXYPHENYL] ETHANE)

Waste Code: D015
Waste Code Desc: TOXAPHENE (C10 H10 CL8, TECHNICAL CHLORINATED CAMPHENE, 67-69 PERCENT CHLORINE)

Waste Code: D017
Waste Code Desc: 2,4,5-TP SILVEX (2,4,5-TRICHLOROPHENOXYPROPIONIC ACID)

Waste Code: D020
Waste Code Desc: CHLORDANE

Waste Code: D021
Waste Code Desc: CHLOROBENZENE

Waste Code: D022
Waste Code Desc: CHLOROFORM

Waste Code: D023
Waste Code Desc: O-CRESOL

Waste Code: D024
Waste Code Desc: M-CRESOL

Waste Code: D026
Waste Code Desc: CRESOL

Waste Code: D028
Waste Code Desc: 1,2-DICHLOROETHANE

Waste Code: D029
Waste Code Desc: 1,1-DICHLOROETHYLENE

Waste Code: D030
Waste Code Desc: 2,4-DINITROTOLUENE

Waste Code: D031
Waste Code Desc: HEPTACHLOR (AND ITS EPOXIDE)

Waste Code: D032
Waste Code Desc: HEXACHLOROBENZENE

Waste Code: D034
Waste Code Desc: HEXACHLOROETHANE

Waste Code: D036
Waste Code Desc: NITROBENZENE

Waste Code: D037
Waste Code Desc: PENTACHLOROPHENOL

Waste Code: D038
Waste Code Desc: PYRIDINE

Waste Code: D039
Waste Code Desc: TETRACHLOROETHYLENE

Waste Code:	D040
Waste Code Desc:	TRICHLOROETHYLENE
Waste Code:	D042
Waste Code Desc:	2,4,6-TRICHLOROPHENOL
Waste Code:	F001
Waste Code Desc:	THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste Code:	F002
Waste Code Desc:	THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste Code:	F003
Waste Code Desc:	THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste Code:	F004
Waste Code Desc:	THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: CRESOLS, CRESYLIC ACID, AND NITROBENZENE; AND THE STILL BOTTOMS FROM THE RECOVERY OF THESE SOLVENTS; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste Code:	F005
Waste Code Desc:	THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste Code:	F027
Waste Code Desc:	DISCARDED UNUSED FORMULATIONS CONTAINING TRI-, TETRA-, OR PENTACHLOROPHENOL OR DISCARDED UNUSED FORMULATIONS CONTAINING COMPOUNDS DERIVED FROM THESE CHLOROPHENOLS. (THIS LISTING DOES NOT INCLUDE FORMULATIONS CONTAINING HEXACHLOROPHENE SYNTHESIZED FROM PREPURIFIED 2,4,5-TRICHLOROPHENOL AS THE SOLE COMPONENT.)
Waste Code:	P004
Waste Code Desc:	1,4,5,8-DIMETHANONAPHTHALENE, 1,2,3,4,10,10-HEXA-CHLORO-1,4,4A,5,8,8A,-HEXAHYDRO-, (1ALPHA, 4ALPHA, 4ABETA, 5ALPHA, 8ALPHA, 8ABETA)- (OR) ALDRIN
Waste Code:	P030
Waste Code Desc:	CYANIDES (SOLUBLE CYANIDE SALTS), NOT OTHERWISE SPECIFIED
Waste Code:	P037
Waste Code Desc:	2,7:3,6-DIMETHANONAPHTH[2,3-B]OXIRENE, 3,4,5,6,9,9-HEXACHLORO-1A,2,2A,3,6,6A,7,7A-OCTAHYDRO-, (1AALPHA, 2BETA, 2AALPHA, 3BETA, 6BETA, 6AALPHA, 7BETA, 7AALPHA)- (OR) DIELDRIN
Waste Code:	P066
Waste Code Desc:	ETHANIMIDOTHIOIC ACID, N-[[(METHYLAMINO)CARBONYL]OXY]-, METHYL ESTER (OR) METHOMYL

Waste Code: U002
Waste Code Desc: 2-PROPANONE (I) (OR) ACETONE (I)

Waste Code: U031
Waste Code Desc: 1-BUTANOL (I) (OR) N-BUTYL ALCOHOL (I)

Waste Code: U032
Waste Code Desc: CALCIUM CHROMATE (OR) CHROMIC ACID H2CRO4, CALCIUM SALT

Waste Code: U075
Waste Code Desc: DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-

Waste Code: U080
Waste Code Desc: METHANE, DICHLORO- (OR) METHYLENE CHLORIDE

Waste Code: U088
Waste Code Desc: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE

Waste Code: U103
Waste Code Desc: DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER

Waste Code: U120
Waste Code Desc: FLUORANTHENE

Waste Code: U129
Waste Code Desc: CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1ALPHA, 2ALPHA, 3BETA, 4ALPHA, 5ALPHA, 6BETA)- (OR) LINDANE

Waste Code: U134
Waste Code Desc: HYDROFLUORIC ACID (C,T) (OR) HYDROGEN FLUORIDE (C,T)

Waste Code: U154
Waste Code Desc: METHANOL (I) (OR) METHYL ALCOHOL (I)

Waste Code: U159
Waste Code Desc: 2-BUTANONE (I,T) (OR) METHYL ETHYL KETONE (MEK) (I,T)

Waste Code: U161
Waste Code Desc: 4-METHYL-2-PENTANONE (I) (OR) METHYL ISOBUTYL KETONE (I) (OR) PENTANOL, 4-METHYL-

Waste Code: U165
Waste Code Desc: NAPHTHALENE

Waste Code: U188
Waste Code Desc: PHENOL

Waste Code: U220
Waste Code Desc: BENZENE, METHYL- (OR) TOLUENE

Waste Code: U226
Waste Code Desc: ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM

Waste Code: U239
Waste Code Desc: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

Waste Code: U249
Waste Code Desc: ZINC PHOSPHIDE ZN3P2, WHEN PRESENT AT CONCENTRATIONS OF 10% OR LESS

Waste Code: U359
Waste Code Desc: ETHANOL, 2-ETHOXY- (OR) ETHYLENE GLYCOL MONOETHYL ETHER

Hazardous Waste Handler Details

Seq No: 7
Receive Date: 20020219
Handler Name: DULUTH AIR NATIONAL GUARD BASE
Fed Waste Generator: 1

Generator Code Description: Large Quantity Generator
Source Type: Annual/Biennial Report
TSD Activity: Y

Waste Code Details

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: D002
Waste Code Desc: CORROSIVE WASTE

Waste Code: D003
Waste Code Desc: REACTIVE WASTE

Waste Code: D004
Waste Code Desc: ARSENIC

Waste Code: D005
Waste Code Desc: BARIUM

Waste Code: D006
Waste Code Desc: CADMIUM

Waste Code: D007
Waste Code Desc: CHROMIUM

Waste Code: D008
Waste Code Desc: LEAD

Waste Code: D009
Waste Code Desc: MERCURY

Waste Code: D010
Waste Code Desc: SELENIUM

Waste Code: D011
Waste Code Desc: SILVER

Waste Code: D012
Waste Code Desc: ENDRIN (1,2,3,4,10,10-HEXACHLORO-1,7-EPOXY-1,4,4A,5,6,7,8,8A-OCTAHYDRO-1,4-ENDO, ENDO-5,8-DIMETH-ANO-NAPHTHALENE)

Waste Code: D013
Waste Code Desc: LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)

Waste Code: D014
Waste Code Desc: METHOXYCHLOR (1,1,1-TRICHLORO-2,2-BIS [P-METHOXYPHENYL] ETHANE)

Waste Code: D015
Waste Code Desc: TOXAPHENE (C10 H10 CL8, TECHNICAL CHLORINATED CAMPHENE, 67-69 PERCENT CHLORINE)

Waste Code: D016
Waste Code Desc: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

Waste Code: D017
Waste Code Desc: 2,4,5-TP SILVEX (2,4,5-TRICHLOROPHENOXYPROPIONIC ACID)

Waste Code: D018
Waste Code Desc: BENZENE

Waste Code: D019
Waste Code Desc: CARBON TETRACHLORIDE

Waste Code: D020
Waste Code Desc: CHLORDANE

Waste Code: D021

Waste Code Desc:	CHLOROBENZENE
Waste Code:	D022
Waste Code Desc:	CHLOROFORM
Waste Code:	D023
Waste Code Desc:	O-CRESOL
Waste Code:	D024
Waste Code Desc:	M-CRESOL
Waste Code:	D025
Waste Code Desc:	P-CRESOL
Waste Code:	D026
Waste Code Desc:	CRESOL
Waste Code:	D027
Waste Code Desc:	1,4-DICHLOROBENZENE
Waste Code:	D028
Waste Code Desc:	1,2-DICHLOROETHANE
Waste Code:	D029
Waste Code Desc:	1,1-DICHLOROETHYLENE
Waste Code:	D030
Waste Code Desc:	2,4-DINITROTOLUENE
Waste Code:	D031
Waste Code Desc:	HEPTACHLOR (AND ITS EPOXIDE)
Waste Code:	D032
Waste Code Desc:	HEXACHLOROBENZENE
Waste Code:	D033
Waste Code Desc:	HEXACHLOROBUTADIENE
Waste Code:	D034
Waste Code Desc:	HEXACHLOROETHANE
Waste Code:	D035
Waste Code Desc:	METHYL ETHYL KETONE
Waste Code:	D036
Waste Code Desc:	NITROBENZENE
Waste Code:	D037
Waste Code Desc:	PENTACHLOROPHENOL
Waste Code:	D038
Waste Code Desc:	PYRIDINE
Waste Code:	D039
Waste Code Desc:	TETRACHLOROETHYLENE
Waste Code:	D040
Waste Code Desc:	TRICHLOROETHYLENE
Waste Code:	D041
Waste Code Desc:	2,4,5-TRICHLOROPHENOL
Waste Code:	D042
Waste Code Desc:	2,4,6-TRICHLOROPHENOL
Waste Code:	D043
Waste Code Desc:	VINYL CHLORIDE
Waste Code:	F001

Waste Code Desc:	THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste Code:	F002
Waste Code Desc:	THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste Code:	F003
Waste Code Desc:	THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste Code:	F004
Waste Code Desc:	THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: CRESOLS, CRESYLIC ACID, AND NITROBENZENE; AND THE STILL BOTTOMS FROM THE RECOVERY OF THESE SOLVENTS; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste Code:	F005
Waste Code Desc:	THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste Code:	F027
Waste Code Desc:	DISCARDED UNUSED FORMULATIONS CONTAINING TRI-, TETRA-, OR PENTACHLOROPHENOL OR DISCARDED UNUSED FORMULATIONS CONTAINING COMPOUNDS DERIVED FROM THESE CHLOROPHENOLS. (THIS LISTING DOES NOT INCLUDE FORMULATIONS CONTAINING HEXACHLOROPHENE SYNTHESIZED FROM PREPURIFIED 2,4,5-TRICHLOROPHENOL AS THE SOLE COMPONENT.)
Waste Code:	MN01
Waste Code Desc:	Lethal Waste
Waste Code:	MN02
Waste Code Desc:	Lab Pack Waste
Waste Code:	MN03
Waste Code Desc:	PCB Waste
Waste Code:	P004
Waste Code Desc:	1,4,5,8-DIMETHANONAPHTHALENE, 1,2,3,4,10,10-HEXA-CHLORO-1,4,4A,5,8,8A,-HEXAHYDRO-, (1ALPHA, 4ALPHA, 4ABETA, 5ALPHA, 8ALPHA, 8ABETA)- (OR) ALDRIN
Waste Code:	P030
Waste Code Desc:	CYANIDES (SOLUBLE CYANIDE SALTS), NOT OTHERWISE SPECIFIED
Waste Code:	P037
Waste Code Desc:	2,7:3,6-DIMETHANONAPHTH[2,3-B]OXIRENE, 3,4,5,6,9,9-HEXACHLORO-1A,2,2A,3,6,6A,7,7A-OCTAHYDRO-, (1AALPHA, 2BETA, 2AALPHA, 3BETA, 6BETA, 6AALPHA, 7BETA, 7AALPHA)- (OR) DIELDRIN
Waste Code:	P066

Waste Code Desc: ETHANIMIDOTHIOIC ACID, N-[[(METHYLAMINO)CARBONYL]OXY]-, METHYL ESTER (OR) METHOMYL

Waste Code: U002
Waste Code Desc: 2-PROPANONE (I) (OR) ACETONE (I)

Waste Code: U031
Waste Code Desc: 1-BUTANOL (I) (OR) N-BUTYL ALCOHOL (I)

Waste Code: U032
Waste Code Desc: CALCIUM CHROMATE (OR) CHROMIC ACID H2CRO4, CALCIUM SALT

Waste Code: U075
Waste Code Desc: DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-

Waste Code: U080
Waste Code Desc: METHANE, DICHLORO- (OR) METHYLENE CHLORIDE

Waste Code: U088
Waste Code Desc: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE

Waste Code: U103
Waste Code Desc: DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER

Waste Code: U120
Waste Code Desc: FLUORANTHENE

Waste Code: U129
Waste Code Desc: CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1ALPHA, 2ALPHA, 3BETA, 4ALPHA, 5ALPHA, 6BETA)- (OR) LINDANE

Waste Code: U134
Waste Code Desc: HYDROFLUORIC ACID (C,T) (OR) HYDROGEN FLUORIDE (C,T)

Waste Code: U154
Waste Code Desc: METHANOL (I) (OR) METHYL ALCOHOL (I)

Waste Code: U159
Waste Code Desc: 2-BUTANONE (I,T) (OR) METHYL ETHYL KETONE (MEK) (I,T)

Waste Code: U161
Waste Code Desc: 4-METHYL-2-PENTANONE (I) (OR) METHYL ISOBUTYL KETONE (I) (OR) PENTANOL, 4-METHYL-

Waste Code: U165
Waste Code Desc: NAPHTHALENE

Waste Code: U188
Waste Code Desc: PHENOL

Waste Code: U220
Waste Code Desc: BENZENE, METHYL- (OR) TOLUENE

Waste Code: U226
Waste Code Desc: ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM

Waste Code: U239
Waste Code Desc: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

Waste Code: U249
Waste Code Desc: ZINC PHOSPHIDE ZN3P2, WHEN PRESENT AT CONCENTRATIONS OF 10% OR LESS

Waste Code: U359
Waste Code Desc: ETHANOL, 2-ETHOXY- (OR) ETHYLENE GLYCOL MONOETHYL ETHER

Hazardous Waste Handler Details

Seq No: 8
Receive Date: 20040306
Handler Name: DULUTH AIR NATIONAL GUARD BASE

Fed Waste Generator: 2
Generator Code Description: Small Quantity Generator
Source Type: Annual/Biennial Report
TSD Activity: Y

Waste Code Details

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: D002
Waste Code Desc: CORROSIVE WASTE

Waste Code: D003
Waste Code Desc: REACTIVE WASTE

Waste Code: D004
Waste Code Desc: ARSENIC

Waste Code: D005
Waste Code Desc: BARIUM

Waste Code: D006
Waste Code Desc: CADMIUM

Waste Code: D007
Waste Code Desc: CHROMIUM

Waste Code: D008
Waste Code Desc: LEAD

Waste Code: D009
Waste Code Desc: MERCURY

Waste Code: D010
Waste Code Desc: SELENIUM

Waste Code: D011
Waste Code Desc: SILVER

Waste Code: D012
Waste Code Desc: ENDRIN (1,2,3,4,10,10-HEXACHLORO-1,7-EPOXY-1,4,4A,5,6,7,8,8A-OCTAHYDRO-1,4-ENDO, ENDO-5,8-DIMETH-ANO-NAPHTHALENE)

Waste Code: D013
Waste Code Desc: LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)

Waste Code: D014
Waste Code Desc: METHOXYCHLOR (1,1,1-TRICHLORO-2,2-BIS [P-METHOXYPHENYL] ETHANE)

Waste Code: D015
Waste Code Desc: TOXAPHENE (C10 H10 CL8, TECHNICAL CHLORINATED CAMPHENE, 67-69 PERCENT CHLORINE)

Waste Code: D016
Waste Code Desc: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

Waste Code: D017
Waste Code Desc: 2,4,5-TP SILVEX (2,4,5-TRICHLOROPHENOXYPROPIONIC ACID)

Waste Code: D018
Waste Code Desc: BENZENE

Waste Code: D019
Waste Code Desc: CARBON TETRACHLORIDE

Waste Code: D020
Waste Code Desc: CHLORDANE

Waste Code: D021
Waste Code Desc: CHLOROBENZENE

Waste Code: D022
Waste Code Desc: CHLOROFORM

Waste Code: D023
Waste Code Desc: O-CRESOL

Waste Code: D024
Waste Code Desc: M-CRESOL

Waste Code: D025
Waste Code Desc: P-CRESOL

Waste Code: D026
Waste Code Desc: CRESOL

Waste Code: D027
Waste Code Desc: 1,4-DICHLOROBENZENE

Waste Code: D028
Waste Code Desc: 1,2-DICHLOROETHANE

Waste Code: D029
Waste Code Desc: 1,1-DICHLOROETHYLENE

Waste Code: D030
Waste Code Desc: 2,4-DINITROTOLUENE

Waste Code: D031
Waste Code Desc: HEPTACHLOR (AND ITS EPOXIDE)

Waste Code: D032
Waste Code Desc: HEXACHLOROBENZENE

Waste Code: D033
Waste Code Desc: HEXACHLOROBUTADIENE

Waste Code: D034
Waste Code Desc: HEXACHLOROETHANE

Waste Code: D035
Waste Code Desc: METHYL ETHYL KETONE

Waste Code: D036
Waste Code Desc: NITROBENZENE

Waste Code: D037
Waste Code Desc: PENTACHLOROPHENOL

Waste Code: D038
Waste Code Desc: PYRIDINE

Waste Code: D039
Waste Code Desc: TETRACHLOROETHYLENE

Waste Code: D040
Waste Code Desc: TRICHLOROETHYLENE

Waste Code: D041
Waste Code Desc: 2,4,5-TRICHLOROPHENOL

Waste Code: D042
Waste Code Desc: 2,4,6-TRICHLOROPHENOL

Waste Code: D043
Waste Code Desc: VINYL CHLORIDE

Waste Code:	F001
Waste Code Desc:	THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste Code:	F002
Waste Code Desc:	THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste Code:	F003
Waste Code Desc:	THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste Code:	F004
Waste Code Desc:	THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: CRESOLS, CRESYLIC ACID, AND NITROBENZENE; AND THE STILL BOTTOMS FROM THE RECOVERY OF THESE SOLVENTS; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste Code:	F005
Waste Code Desc:	THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste Code:	F027
Waste Code Desc:	DISCARDED UNUSED FORMULATIONS CONTAINING TRI-, TETRA-, OR PENTACHLOROPHENOL OR DISCARDED UNUSED FORMULATIONS CONTAINING COMPOUNDS DERIVED FROM THESE CHLOROPHENOLS. (THIS LISTING DOES NOT INCLUDE FORMULATIONS CONTAINING HEXACHLOROPHENE SYNTHESIZED FROM PREPURIFIED 2,4,5-TRICHLOROPHENOL AS THE SOLE COMPONENT.)
Waste Code:	MN01
Waste Code Desc:	Lethal Waste
Waste Code:	MN02
Waste Code Desc:	Lab Pack Waste
Waste Code:	MN03
Waste Code Desc:	PCB Waste
Waste Code:	P004
Waste Code Desc:	1,4,5,8-DIMETHANONAPHTHALENE, 1,2,3,4,10,10-HEXA-CHLORO-1,4,4A,5,8,8A,-HEXAHYDRO-, (1ALPHA, 4ALPHA, 4ABETA, 5ALPHA, 8ALPHA, 8ABETA)- (OR) ALDRIN
Waste Code:	P030
Waste Code Desc:	CYANIDES (SOLUBLE CYANIDE SALTS), NOT OTHERWISE SPECIFIED
Waste Code:	P037
Waste Code Desc:	2,7:3,6-DIMETHANONAPHTH[2,3-B]OXIRENE, 3,4,5,6,9,9-HEXACHLORO-1A,2,2A,3,6,6A,7,7A-OCTAHYDRO-, (1AALPHA, 2BETA, 2AALPHA, 3BETA, 6BETA, 6AALPHA, 7BETA, 7AALPHA)- (OR) DIELDRIN

Waste Code: P066
Waste Code Desc: ETHANIMIDOTHIOIC ACID, N-[[(METHYLAMINO)CARBONYL]OXY]-, METHYL ESTER (OR) METHOMYL

Waste Code: U002
Waste Code Desc: 2-PROPANONE (I) (OR) ACETONE (I)

Waste Code: U031
Waste Code Desc: 1-BUTANOL (I) (OR) N-BUTYL ALCOHOL (I)

Waste Code: U032
Waste Code Desc: CALCIUM CHROMATE (OR) CHROMIC ACID H2CRO4, CALCIUM SALT

Waste Code: U075
Waste Code Desc: DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-

Waste Code: U080
Waste Code Desc: METHANE, DICHLORO- (OR) METHYLENE CHLORIDE

Waste Code: U088
Waste Code Desc: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE

Waste Code: U103
Waste Code Desc: DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER

Waste Code: U120
Waste Code Desc: FLUORANTHENE

Waste Code: U129
Waste Code Desc: CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1ALPHA, 2ALPHA, 3BETA, 4ALPHA, 5ALPHA, 6BETA)- (OR) LINDANE

Waste Code: U134
Waste Code Desc: HYDROFLUORIC ACID (C,T) (OR) HYDROGEN FLUORIDE (C,T)

Waste Code: U154
Waste Code Desc: METHANOL (I) (OR) METHYL ALCOHOL (I)

Waste Code: U159
Waste Code Desc: 2-BUTANONE (I,T) (OR) METHYL ETHYL KETONE (MEK) (I,T)

Waste Code: U161
Waste Code Desc: 4-METHYL-2-PENTANONE (I) (OR) METHYL ISOBUTYL KETONE (I) (OR) PENTANOL, 4-METHYL-

Waste Code: U165
Waste Code Desc: NAPHTHALENE

Waste Code: U188
Waste Code Desc: PHENOL

Waste Code: U220
Waste Code Desc: BENZENE, METHYL- (OR) TOLUENE

Waste Code: U226
Waste Code Desc: ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM

Waste Code: U239
Waste Code Desc: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

Waste Code: U249
Waste Code Desc: ZINC PHOSPHIDE ZN3P2, WHEN PRESENT AT CONCENTRATIONS OF 10% OR LESS

Waste Code: U359
Waste Code Desc: ETHANOL, 2-ETHOXY- (OR) ETHYLENE GLYCOL MONOETHYL ETHER

Hazardous Waste Handler Details

Seq No: 3
Receive Date: 20041217

Handler Name: DULUTH AIR NATIONAL GUARD BASE
Fed Waste Generator: 1
Generator Code Description: Large Quantity Generator
Source Type: Implementer
TSD Activity: Y

Waste Code Details

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: D002
Waste Code Desc: CORROSIVE WASTE

Waste Code: D003
Waste Code Desc: REACTIVE WASTE

Waste Code: D004
Waste Code Desc: ARSENIC

Waste Code: D005
Waste Code Desc: BARIUM

Waste Code: D006
Waste Code Desc: CADMIUM

Waste Code: D007
Waste Code Desc: CHROMIUM

Waste Code: D008
Waste Code Desc: LEAD

Waste Code: D009
Waste Code Desc: MERCURY

Waste Code: D010
Waste Code Desc: SELENIUM

Waste Code: D011
Waste Code Desc: SILVER

Waste Code: D012
Waste Code Desc: ENDRIN (1,2,3,4,10,10-HEXACHLORO-1,7-EPOXY-1,4,4A,5,6,7,8,8A-OCTAHYDRO-1,4-ENDO, ENDO-5,8-DIMETH-ANO-NAPHTHALENE)

Waste Code: D013
Waste Code Desc: LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)

Waste Code: D014
Waste Code Desc: METHOXYCHLOR (1,1,1-TRICHLORO-2,2-BIS [P-METHOXYPHENYL] ETHANE)

Waste Code: D015
Waste Code Desc: TOXAPHENE (C10 H10 CL8, TECHNICAL CHLORINATED CAMPHENE, 67-69 PERCENT CHLORINE)

Waste Code: D016
Waste Code Desc: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

Waste Code: D017
Waste Code Desc: 2,4,5-TP SILVEX (2,4,5-TRICHLOROPHENOXYPROPIONIC ACID)

Waste Code: D018
Waste Code Desc: BENZENE

Waste Code: D019
Waste Code Desc: CARBON TETRACHLORIDE

Waste Code: D020
Waste Code Desc: CHLORDANE

Waste Code: D021
Waste Code Desc: CHLOROBENZENE

Waste Code: D022
Waste Code Desc: CHLOROFORM

Waste Code: D023
Waste Code Desc: O-CRESOL

Waste Code: D024
Waste Code Desc: M-CRESOL

Waste Code: D025
Waste Code Desc: P-CRESOL

Waste Code: D026
Waste Code Desc: CRESOL

Waste Code: D027
Waste Code Desc: 1,4-DICHLOROBENZENE

Waste Code: D028
Waste Code Desc: 1,2-DICHLOROETHANE

Waste Code: D029
Waste Code Desc: 1,1-DICHLOROETHYLENE

Waste Code: D030
Waste Code Desc: 2,4-DINITROTOLUENE

Waste Code: D031
Waste Code Desc: HEPTACHLOR (AND ITS EPOXIDE)

Waste Code: D032
Waste Code Desc: HEXACHLOROBENZENE

Waste Code: D033
Waste Code Desc: HEXACHLOROBUTADIENE

Waste Code: D034
Waste Code Desc: HEXACHLOROETHANE

Waste Code: D035
Waste Code Desc: METHYL ETHYL KETONE

Waste Code: D036
Waste Code Desc: NITROBENZENE

Waste Code: D037
Waste Code Desc: PENTACHLOROPHENOL

Waste Code: D038
Waste Code Desc: PYRIDINE

Waste Code: D039
Waste Code Desc: TETRACHLOROETHYLENE

Waste Code: D040
Waste Code Desc: TRICHLOROETHYLENE

Waste Code: D041
Waste Code Desc: 2,4,5-TRICHLOROPHENOL

Waste Code: D042
Waste Code Desc: 2,4,6-TRICHLOROPHENOL

Waste Code: D043
Waste Code Desc: VINYL CHLORIDE

Waste Code:	F001
Waste Code Desc:	THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste Code:	F002
Waste Code Desc:	THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste Code:	F003
Waste Code Desc:	THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste Code:	F004
Waste Code Desc:	THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: CRESOLS, CRESYLIC ACID, AND NITROBENZENE; AND THE STILL BOTTOMS FROM THE RECOVERY OF THESE SOLVENTS; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste Code:	F005
Waste Code Desc:	THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste Code:	F027
Waste Code Desc:	DISCARDED UNUSED FORMULATIONS CONTAINING TRI-, TETRA-, OR PENTACHLOROPHENOL OR DISCARDED UNUSED FORMULATIONS CONTAINING COMPOUNDS DERIVED FROM THESE CHLOROPHENOLS. (THIS LISTING DOES NOT INCLUDE FORMULATIONS CONTAINING HEXACHLOROPHENE SYNTHESIZED FROM PREPURIFIED 2,4,5-TRICHLOROPHENOL AS THE SOLE COMPONENT.)
Waste Code:	MN01
Waste Code Desc:	Lethal Waste
Waste Code:	MN02
Waste Code Desc:	Lab Pack Waste
Waste Code:	MN03
Waste Code Desc:	PCB Waste
Waste Code:	P004
Waste Code Desc:	1,4,5,8-DIMETHANONAPHTHALENE, 1,2,3,4,10,10-HEXA-CHLORO-1,4,4A,5,8,8A,-HEXAHYDRO-, (1ALPHA, 4ALPHA, 4ABETA, 5ALPHA, 8ALPHA, 8ABETA)- (OR) ALDRIN
Waste Code:	P030
Waste Code Desc:	CYANIDES (SOLUBLE CYANIDE SALTS), NOT OTHERWISE SPECIFIED
Waste Code:	P037
Waste Code Desc:	2,7:3,6-DIMETHANONAPHTH[2,3-B]OXIRENE, 3,4,5,6,9,9-HEXACHLORO-1A,2,2A,3,6,6A,7,7A-OCTAHYDRO-, (1AALPHA, 2BETA, 2AALPHA, 3BETA, 6BETA, 6AALPHA, 7BETA, 7AALPHA)- (OR) DIELDRIN

Waste Code:	P066
Waste Code Desc:	ETHANIMIDOTHIOIC ACID, N-[[(METHYLAMINO)CARBONYL]OXY]-, METHYL ESTER (OR) METHOMYL
Waste Code:	U002
Waste Code Desc:	2-PROPANONE (I) (OR) ACETONE (I)
Waste Code:	U031
Waste Code Desc:	1-BUTANOL (I) (OR) N-BUTYL ALCOHOL (I)
Waste Code:	U032
Waste Code Desc:	CALCIUM CHROMATE (OR) CHROMIC ACID H2CRO4, CALCIUM SALT
Waste Code:	U075
Waste Code Desc:	DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-
Waste Code:	U080
Waste Code Desc:	METHANE, DICHLORO- (OR) METHYLENE CHLORIDE
Waste Code:	U088
Waste Code Desc:	1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE
Waste Code:	U103
Waste Code Desc:	DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER
Waste Code:	U120
Waste Code Desc:	FLUORANTHENE
Waste Code:	U129
Waste Code Desc:	CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1ALPHA, 2ALPHA, 3BETA, 4ALPHA, 5ALPHA, 6BETA)- (OR) LINDANE
Waste Code:	U134
Waste Code Desc:	HYDROFLUORIC ACID (C,T) (OR) HYDROGEN FLUORIDE (C,T)
Waste Code:	U154
Waste Code Desc:	METHANOL (I) (OR) METHYL ALCOHOL (I)
Waste Code:	U159
Waste Code Desc:	2-BUTANONE (I,T) (OR) METHYL ETHYL KETONE (MEK) (I,T)
Waste Code:	U161
Waste Code Desc:	4-METHYL-2-PENTANONE (I) (OR) METHYL ISOBUTYL KETONE (I) (OR) PENTANOL, 4-METHYL-
Waste Code:	U165
Waste Code Desc:	NAPHTHALENE
Waste Code:	U188
Waste Code Desc:	PHENOL
Waste Code:	U220
Waste Code Desc:	BENZENE, METHYL- (OR) TOLUENE
Waste Code:	U226
Waste Code Desc:	ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM
Waste Code:	U239
Waste Code Desc:	BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)
Waste Code:	U249
Waste Code Desc:	ZINC PHOSPHIDE ZN3P2, WHEN PRESENT AT CONCENTRATIONS OF 10% OR LESS
Waste Code:	U359
Waste Code Desc:	ETHANOL, 2-ETHOXY- (OR) ETHYLENE GLYCOL MONOETHYL ETHER

Hazardous Waste Handler Details

Seq No:	9

Receive Date: 20060215
Handler Name: DULUTH AIR NATIONAL GUARD BASE
Fed Waste Generator: 2
Generator Code Description: Small Quantity Generator
Source Type: Annual/Biennial Report
TSD Activity: Y

Waste Code Details

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: D002
Waste Code Desc: CORROSIVE WASTE

Waste Code: D003
Waste Code Desc: REACTIVE WASTE

Waste Code: D004
Waste Code Desc: ARSENIC

Waste Code: D005
Waste Code Desc: BARIUM

Waste Code: D006
Waste Code Desc: CADMIUM

Waste Code: D007
Waste Code Desc: CHROMIUM

Waste Code: D008
Waste Code Desc: LEAD

Waste Code: D009
Waste Code Desc: MERCURY

Waste Code: D010
Waste Code Desc: SELENIUM

Waste Code: D011
Waste Code Desc: SILVER

Waste Code: D012
Waste Code Desc: ENDRIN (1,2,3,4,10,10-HEXACHLORO-1,7-EPOXY-1,4,4A,5,6,7,8,8A-OCTAHYDRO-1,4-ENDO, ENDO-5,8-DIMETH-ANO-NAPHTHALENE)

Waste Code: D013
Waste Code Desc: LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)

Waste Code: D014
Waste Code Desc: METHOXYCHLOR (1,1,1-TRICHLORO-2,2-BIS [P-METHOXYPHENYL] ETHANE)

Waste Code: D015
Waste Code Desc: TOXAPHENE (C10 H10 CL8, TECHNICAL CHLORINATED CAMPHENE, 67-69 PERCENT CHLORINE)

Waste Code: D016
Waste Code Desc: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

Waste Code: D017
Waste Code Desc: 2,4,5-TP SILVEX (2,4,5-TRICHLOROPHENOXYPROPIONIC ACID)

Waste Code: D018
Waste Code Desc: BENZENE

Waste Code: D019
Waste Code Desc: CARBON TETRACHLORIDE

Waste Code: D020

Waste Code Desc: CHLORDANE

Waste Code: D021
Waste Code Desc: CHLOROBENZENE

Waste Code: D022
Waste Code Desc: CHLOROFORM

Waste Code: D023
Waste Code Desc: O-CRESOL

Waste Code: D024
Waste Code Desc: M-CRESOL

Waste Code: D025
Waste Code Desc: P-CRESOL

Waste Code: D026
Waste Code Desc: CRESOL

Waste Code: D027
Waste Code Desc: 1,4-DICHLOROBENZENE

Waste Code: D028
Waste Code Desc: 1,2-DICHLOROETHANE

Waste Code: D029
Waste Code Desc: 1,1-DICHLOROETHYLENE

Waste Code: D030
Waste Code Desc: 2,4-DINITROTOLUENE

Waste Code: D031
Waste Code Desc: HEPTACHLOR (AND ITS EPOXIDE)

Waste Code: D032
Waste Code Desc: HEXACHLOROBENZENE

Waste Code: D033
Waste Code Desc: HEXACHLOROBUTADIENE

Waste Code: D034
Waste Code Desc: HEXACHLOROETHANE

Waste Code: D035
Waste Code Desc: METHYL ETHYL KETONE

Waste Code: D036
Waste Code Desc: NITROBENZENE

Waste Code: D037
Waste Code Desc: PENTACHLOROPHENOL

Waste Code: D038
Waste Code Desc: PYRIDINE

Waste Code: D039
Waste Code Desc: TETRACHLOROETHYLENE

Waste Code: D040
Waste Code Desc: TRICHLOROETHYLENE

Waste Code: D041
Waste Code Desc: 2,4,5-TRICHLOROPHENOL

Waste Code: D042
Waste Code Desc: 2,4,6-TRICHLOROPHENOL

Waste Code: D043

Waste Code Desc: VINYL CHLORIDE

Waste Code: F001
Waste Code Desc: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F002
Waste Code Desc: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F003
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F004
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: CRESOLS, CRESYLIC ACID, AND NITROBENZENE; AND THE STILL BOTTOMS FROM THE RECOVERY OF THESE SOLVENTS; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F005
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F027
Waste Code Desc: DISCARDED UNUSED FORMULATIONS CONTAINING TRI-, TETRA-, OR PENTACHLOROPHENOL OR DISCARDED UNUSED FORMULATIONS CONTAINING COMPOUNDS DERIVED FROM THESE CHLOROPHENOLS. (THIS LISTING DOES NOT INCLUDE FORMULATIONS CONTAINING HEXACHLOROPHENE SYNTHESIZED FROM PREPURIFIED 2,4,5-TRICHLOROPHENOL AS THE SOLE COMPONENT.)

Waste Code: P004
Waste Code Desc: 1,4,5,8-DIMETHANONAPHTHALENE, 1,2,3,4,10,10-HEXA-CHLORO-1,4,4A,5,8,8A,-HEXAHYDRO-, (1ALPHA, 4ALPHA, 4ABETA, 5ALPHA, 8ALPHA, 8ABETA)- (OR) ALDRIN

Waste Code: P030
Waste Code Desc: CYANIDES (SOLUBLE CYANIDE SALTS), NOT OTHERWISE SPECIFIED

Waste Code: P037
Waste Code Desc: 2,7:3,6-DIMETHANONAPHTH[2,3-B]OXIRENE, 3,4,5,6,9,9-HEXACHLORO-1A,2,2A,3,6,6A,7,7A-OCTAHYDRO-, (1AALPHA, 2BETA, 2AALPHA, 3BETA, 6BETA, 6AALPHA, 7BETA, 7AALPHA)- (OR) DIELDRIN

Waste Code: P066
Waste Code Desc: ETHANIMIDOTHIOIC ACID, N-[[(METHYLAMINO)CARBONYL]OXY]-, METHYL ESTER (OR) METHOMYL

Waste Code: U002
Waste Code Desc: 2-PROPANONE (I) (OR) ACETONE (I)

Waste Code: U031

Waste Code Desc:	1-BUTANOL (I) (OR) N-BUTYL ALCOHOL (I)
Waste Code:	U032
Waste Code Desc:	CALCIUM CHROMATE (OR) CHROMIC ACID H2CRO4, CALCIUM SALT
Waste Code:	U075
Waste Code Desc:	DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-
Waste Code:	U080
Waste Code Desc:	METHANE, DICHLORO- (OR) METHYLENE CHLORIDE
Waste Code:	U088
Waste Code Desc:	1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE
Waste Code:	U103
Waste Code Desc:	DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER
Waste Code:	U120
Waste Code Desc:	FLUORANTHENE
Waste Code:	U129
Waste Code Desc:	CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1ALPHA, 2ALPHA, 3BETA, 4ALPHA, 5ALPHA, 6BETA)- (OR) LINDANE
Waste Code:	U134
Waste Code Desc:	HYDROFLUORIC ACID (C,T) (OR) HYDROGEN FLUORIDE (C,T)
Waste Code:	U154
Waste Code Desc:	METHANOL (I) (OR) METHYL ALCOHOL (I)
Waste Code:	U159
Waste Code Desc:	2-BUTANONE (I,T) (OR) METHYL ETHYL KETONE (MEK) (I,T)
Waste Code:	U161
Waste Code Desc:	4-METHYL-2-PENTANONE (I) (OR) METHYL ISOBUTYL KETONE (I) (OR) PENTANOL, 4-METHYL-
Waste Code:	U165
Waste Code Desc:	NAPHTHALENE
Waste Code:	U188
Waste Code Desc:	PHENOL
Waste Code:	U220
Waste Code Desc:	BENZENE, METHYL- (OR) TOLUENE
Waste Code:	U226
Waste Code Desc:	ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM
Waste Code:	U239
Waste Code Desc:	BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)
Waste Code:	U249
Waste Code Desc:	ZINC PHOSPHIDE ZN3P2, WHEN PRESENT AT CONCENTRATIONS OF 10% OR LESS
Waste Code:	U359
Waste Code Desc:	ETHANOL, 2-ETHOXY- (OR) ETHYLENE GLYCOL MONOETHYL ETHER

Hazardous Waste Handler Details

Seq No:	4
Receive Date:	20060412
Handler Name:	DULUTH AIR NATIONAL GUARD BASE
Fed Waste Generator:	2
Generator Code Description:	Small Quantity Generator
Source Type:	Implementer
TSD Activity:	Y

Waste Code Details

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: D002
Waste Code Desc: CORROSIVE WASTE

Waste Code: D003
Waste Code Desc: REACTIVE WASTE

Waste Code: D004
Waste Code Desc: ARSENIC

Waste Code: D005
Waste Code Desc: BARIUM

Waste Code: D006
Waste Code Desc: CADMIUM

Waste Code: D007
Waste Code Desc: CHROMIUM

Waste Code: D008
Waste Code Desc: LEAD

Waste Code: D009
Waste Code Desc: MERCURY

Waste Code: D010
Waste Code Desc: SELENIUM

Waste Code: D011
Waste Code Desc: SILVER

Waste Code: D012
Waste Code Desc: ENDRIN (1,2,3,4,10,10-HEXACHLORO-1,7-EPOXY-1,4,4A,5,6,7,8,8A-OCTAHYDRO-1,4-ENDO, ENDO-5,8-DIMETH-ANO-NAPHTHALENE)

Waste Code: D013
Waste Code Desc: LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)

Waste Code: D014
Waste Code Desc: METHOXYCHLOR (1,1,1-TRICHLORO-2,2-BIS [P-METHOXYPHENYL] ETHANE)

Waste Code: D015
Waste Code Desc: TOXAPHENE (C10 H10 CL8, TECHNICAL CHLORINATED CAMPHENE, 67-69 PERCENT CHLORINE)

Waste Code: D016
Waste Code Desc: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

Waste Code: D017
Waste Code Desc: 2,4,5-TP SILVEX (2,4,5-TRICHLOROPHENOXYPROPIONIC ACID)

Waste Code: D018
Waste Code Desc: BENZENE

Waste Code: D019
Waste Code Desc: CARBON TETRACHLORIDE

Waste Code: D020
Waste Code Desc: CHLORDANE

Waste Code: D021
Waste Code Desc: CHLOROBENZENE

Waste Code: D022
Waste Code Desc: CHLOROFORM

Waste Code:	D023
Waste Code Desc:	O-CRESOL
Waste Code:	D024
Waste Code Desc:	M-CRESOL
Waste Code:	D025
Waste Code Desc:	P-CRESOL
Waste Code:	D026
Waste Code Desc:	CRESOL
Waste Code:	D027
Waste Code Desc:	1,4-DICHLOROBENZENE
Waste Code:	D028
Waste Code Desc:	1,2-DICHLOROETHANE
Waste Code:	D029
Waste Code Desc:	1,1-DICHLOROETHYLENE
Waste Code:	D030
Waste Code Desc:	2,4-DINITROTOLUENE
Waste Code:	D031
Waste Code Desc:	HEPTACHLOR (AND ITS EPOXIDE)
Waste Code:	D032
Waste Code Desc:	HEXACHLOROBENZENE
Waste Code:	D033
Waste Code Desc:	HEXACHLOROBUTADIENE
Waste Code:	D034
Waste Code Desc:	HEXACHLOROETHANE
Waste Code:	D035
Waste Code Desc:	METHYL ETHYL KETONE
Waste Code:	D036
Waste Code Desc:	NITROBENZENE
Waste Code:	D037
Waste Code Desc:	PENTACHLOROPHENOL
Waste Code:	D038
Waste Code Desc:	PYRIDINE
Waste Code:	D039
Waste Code Desc:	TETRACHLOROETHYLENE
Waste Code:	D040
Waste Code Desc:	TRICHLOROETHYLENE
Waste Code:	D041
Waste Code Desc:	2,4,5-TRICHLOROPHENOL
Waste Code:	D042
Waste Code Desc:	2,4,6-TRICHLOROPHENOL
Waste Code:	D043
Waste Code Desc:	VINYL CHLORIDE
Waste Code:	F001
Waste Code Desc:	THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND

STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F002
Waste Code Desc: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F003
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F004
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: CRESOLS, CRESYLIC ACID, AND NITROBENZENE; AND THE STILL BOTTOMS FROM THE RECOVERY OF THESE SOLVENTS; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F005
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F027
Waste Code Desc: DISCARDED UNUSED FORMULATIONS CONTAINING TRI-, TETRA-, OR PENTACHLOROPHENOL OR DISCARDED UNUSED FORMULATIONS CONTAINING COMPOUNDS DERIVED FROM THESE CHLOROPHENOLS. (THIS LISTING DOES NOT INCLUDE FORMULATIONS CONTAINING HEXACHLOROPHENE SYNTHESIZED FROM PREPURIFIED 2,4,5-TRICHLOROPHENOL AS THE SOLE COMPONENT.)

Waste Code: MN01
Waste Code Desc: Lethal Waste

Waste Code: MN02
Waste Code Desc: Lab Pack Waste

Waste Code: MN03
Waste Code Desc: PCB Waste

Waste Code: P004
Waste Code Desc: 1,4,5,8-DIMETHANONAPHTHALENE, 1,2,3,4,10,10-HEXA-CHLORO-1,4,4A,5,8,8A,-HEXAHYDRO-, (1ALPHA, 4ALPHA, 4ABETA, 5ALPHA, 8ALPHA, 8ABETA)- (OR) ALDRIN

Waste Code: P030
Waste Code Desc: CYANIDES (SOLUBLE CYANIDE SALTS), NOT OTHERWISE SPECIFIED

Waste Code: P037
Waste Code Desc: 2,7:3,6-DIMETHANONAPHTH[2,3-B]OXIRENE, 3,4,5,6,9,9-HEXACHLORO-1A,2,2A,3,6,6A,7,7A-OCTAHYDRO-, (1AALPHA, 2BETA, 2AALPHA, 3BETA, 6BETA, 6AALPHA, 7BETA, 7AALPHA)- (OR) DIELDRIN

Waste Code: P066
Waste Code Desc: ETHANIMIDOTHIOIC ACID, N-[[(METHYLAMINO)CARBONYL]OXY]-, METHYL ESTER (OR) METHOMYL

Waste Code: U002
Waste Code Desc: 2-PROPANONE (I) (OR) ACETONE (I)

Waste Code:	U031
Waste Code Desc:	1-BUTANOL (I) (OR) N-BUTYL ALCOHOL (I)
Waste Code:	U032
Waste Code Desc:	CALCIUM CHROMATE (OR) CHROMIC ACID H2CRO4, CALCIUM SALT
Waste Code:	U075
Waste Code Desc:	DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-
Waste Code:	U080
Waste Code Desc:	METHANE, DICHLORO- (OR) METHYLENE CHLORIDE
Waste Code:	U088
Waste Code Desc:	1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE
Waste Code:	U103
Waste Code Desc:	DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER
Waste Code:	U120
Waste Code Desc:	FLUORANTHENE
Waste Code:	U129
Waste Code Desc:	CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1ALPHA, 2ALPHA, 3BETA, 4ALPHA, 5ALPHA, 6BETA)- (OR) LINDANE
Waste Code:	U134
Waste Code Desc:	HYDROFLUORIC ACID (C,T) (OR) HYDROGEN FLUORIDE (C,T)
Waste Code:	U154
Waste Code Desc:	METHANOL (I) (OR) METHYL ALCOHOL (I)
Waste Code:	U159
Waste Code Desc:	2-BUTANONE (I,T) (OR) METHYL ETHYL KETONE (MEK) (I,T)
Waste Code:	U161
Waste Code Desc:	4-METHYL-2-PENTANONE (I) (OR) METHYL ISOBUTYL KETONE (I) (OR) PENTANOL, 4-METHYL-
Waste Code:	U165
Waste Code Desc:	NAPHTHALENE
Waste Code:	U188
Waste Code Desc:	PHENOL
Waste Code:	U220
Waste Code Desc:	BENZENE, METHYL- (OR) TOLUENE
Waste Code:	U226
Waste Code Desc:	ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM
Waste Code:	U239
Waste Code Desc:	BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)
Waste Code:	U249
Waste Code Desc:	ZINC PHOSPHIDE ZN3P2, WHEN PRESENT AT CONCENTRATIONS OF 10% OR LESS
Waste Code:	U359
Waste Code Desc:	ETHANOL, 2-ETHOXY- (OR) ETHYLENE GLYCOL MONOETHYL ETHER

Hazardous Waste Handler Details

Seq No:	5
Receive Date:	20080128
Handler Name:	DULUTH AIR NATIONAL GUARD BASE
Fed Waste Generator:	3
Generator Code Description:	Very Small Quantity Generator
Source Type:	Implementer
TSD Activity:	Y

Waste Code Details

Waste Code:	D001
Waste Code Desc:	IGNITABLE WASTE
Waste Code:	D002
Waste Code Desc:	CORROSIVE WASTE
Waste Code:	D003
Waste Code Desc:	REACTIVE WASTE
Waste Code:	D004
Waste Code Desc:	ARSENIC
Waste Code:	D005
Waste Code Desc:	BARIUM
Waste Code:	D006
Waste Code Desc:	CADMIUM
Waste Code:	D007
Waste Code Desc:	CHROMIUM
Waste Code:	D008
Waste Code Desc:	LEAD
Waste Code:	D009
Waste Code Desc:	MERCURY
Waste Code:	D010
Waste Code Desc:	SELENIUM
Waste Code:	D011
Waste Code Desc:	SILVER
Waste Code:	D012
Waste Code Desc:	ENDRIN (1,2,3,4,10,10-HEXACHLORO-1,7-EPOXY-1,4,4A,5,6,7,8,8A-OCTAHYDRO-1,4-ENDO, ENDO-5,8-DIMETH-ANO-NAPHTHALENE)
Waste Code:	D013
Waste Code Desc:	LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)
Waste Code:	D014
Waste Code Desc:	METHOXYCHLOR (1,1,1-TRICHLORO-2,2-BIS [P-METHOXYPHENYL] ETHANE)
Waste Code:	D015
Waste Code Desc:	TOXAPHENE (C10 H10 CL8, TECHNICAL CHLORINATED CAMPHENE, 67-69 PERCENT CHLORINE)
Waste Code:	D016
Waste Code Desc:	2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)
Waste Code:	D017
Waste Code Desc:	2,4,5-TP SILVEX (2,4,5-TRICHLOROPHENOXYPROPIONIC ACID)
Waste Code:	D018
Waste Code Desc:	BENZENE
Waste Code:	D019
Waste Code Desc:	CARBON TETRACHLORIDE
Waste Code:	D020
Waste Code Desc:	CHLORDANE
Waste Code:	D021
Waste Code Desc:	CHLOROBENZENE
Waste Code:	D022
Waste Code Desc:	CHLOROFORM

Waste Code:	D023
Waste Code Desc:	O-CRESOL
Waste Code:	D024
Waste Code Desc:	M-CRESOL
Waste Code:	D025
Waste Code Desc:	P-CRESOL
Waste Code:	D026
Waste Code Desc:	CRESOL
Waste Code:	D027
Waste Code Desc:	1,4-DICHLOROBENZENE
Waste Code:	D028
Waste Code Desc:	1,2-DICHLOROETHANE
Waste Code:	D029
Waste Code Desc:	1,1-DICHLOROETHYLENE
Waste Code:	D030
Waste Code Desc:	2,4-DINITROTOLUENE
Waste Code:	D031
Waste Code Desc:	HEPTACHLOR (AND ITS EPOXIDE)
Waste Code:	D032
Waste Code Desc:	HEXACHLOROBENZENE
Waste Code:	D033
Waste Code Desc:	HEXACHLOROBUTADIENE
Waste Code:	D034
Waste Code Desc:	HEXACHLOROETHANE
Waste Code:	D035
Waste Code Desc:	METHYL ETHYL KETONE
Waste Code:	D036
Waste Code Desc:	NITROBENZENE
Waste Code:	D037
Waste Code Desc:	PENTACHLOROPHENOL
Waste Code:	D038
Waste Code Desc:	PYRIDINE
Waste Code:	D039
Waste Code Desc:	TETRACHLOROETHYLENE
Waste Code:	D040
Waste Code Desc:	TRICHLOROETHYLENE
Waste Code:	D041
Waste Code Desc:	2,4,5-TRICHLOROPHENOL
Waste Code:	D042
Waste Code Desc:	2,4,6-TRICHLOROPHENOL
Waste Code:	D043
Waste Code Desc:	VINYL CHLORIDE
Waste Code:	F001
Waste Code Desc:	THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF

THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F002
Waste Code Desc: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F003
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F004
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: CRESOLS, CRESYLIC ACID, AND NITROBENZENE; AND THE STILL BOTTOMS FROM THE RECOVERY OF THESE SOLVENTS; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F005
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F027
Waste Code Desc: DISCARDED UNUSED FORMULATIONS CONTAINING TRI-, TETRA-, OR PENTACHLOROPHENOL OR DISCARDED UNUSED FORMULATIONS CONTAINING COMPOUNDS DERIVED FROM THESE CHLOROPHENOLS. (THIS LISTING DOES NOT INCLUDE FORMULATIONS CONTAINING HEXACHLOROPHENE SYNTHESIZED FROM PREPURIFIED 2,4,5-TRICHLOROPHENOL AS THE SOLE COMPONENT.)

Waste Code: MN01
Waste Code Desc: Lethal Waste

Waste Code: MN02
Waste Code Desc: Lab Pack Waste

Waste Code: MN03
Waste Code Desc: PCB Waste

Waste Code: P004
Waste Code Desc: 1,4,5,8-DIMETHANONAPHTHALENE, 1,2,3,4,10,10-HEXA-CHLORO-1,4,4A,5,8,8A,-HEXAHYDRO-, (1ALPHA, 4ALPHA, 4ABETA, 5ALPHA, 8ALPHA, 8ABETA)- (OR) ALDRIN

Waste Code: P030
Waste Code Desc: CYANIDES (SOLUBLE CYANIDE SALTS), NOT OTHERWISE SPECIFIED

Waste Code: P037
Waste Code Desc: 2,7:3,6-DIMETHANONAPHTH[2,3-B]OXIRENE, 3,4,5,6,9,9-HEXACHLORO-1A,2,2A,3,6,6A,7,7A-OCTAHYDRO-, (1AALPHA, 2BETA, 2AALPHA, 3BETA, 6BETA, 6AALPHA, 7BETA, 7AALPHA)- (OR) DIELDRIN

Waste Code: P066
Waste Code Desc: ETHANIMIDOTHIOIC ACID, N-[[(METHYLAMINO)CARBONYL]OXY]-, METHYL ESTER (OR) METHOMYL

Waste Code: U002
Waste Code Desc: 2-PROPANONE (I) (OR) ACETONE (I)

Waste Code: U031
Waste Code Desc: 1-BUTANOL (I) (OR) N-BUTYL ALCOHOL (I)

Waste Code: U032
Waste Code Desc: CALCIUM CHROMATE (OR) CHROMIC ACID H2CRO4, CALCIUM SALT

Waste Code: U075
Waste Code Desc: DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-

Waste Code: U080
Waste Code Desc: METHANE, DICHLORO- (OR) METHYLENE CHLORIDE

Waste Code: U088
Waste Code Desc: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE

Waste Code: U103
Waste Code Desc: DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER

Waste Code: U120
Waste Code Desc: FLUORANTHENE

Waste Code: U129
Waste Code Desc: CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1ALPHA, 2ALPHA, 3BETA, 4ALPHA, 5ALPHA, 6BETA)- (OR) LINDANE

Waste Code: U134
Waste Code Desc: HYDROFLUORIC ACID (C,T) (OR) HYDROGEN FLUORIDE (C,T)

Waste Code: U154
Waste Code Desc: METHANOL (I) (OR) METHYL ALCOHOL (I)

Waste Code: U159
Waste Code Desc: 2-BUTANONE (I,T) (OR) METHYL ETHYL KETONE (MEK) (I,T)

Waste Code: U161
Waste Code Desc: 4-METHYL-2-PENTANONE (I) (OR) METHYL ISOBUTYL KETONE (I) (OR) PENTANOL, 4-METHYL-

Waste Code: U165
Waste Code Desc: NAPHTHALENE

Waste Code: U188
Waste Code Desc: PHENOL

Waste Code: U220
Waste Code Desc: BENZENE, METHYL- (OR) TOLUENE

Waste Code: U226
Waste Code Desc: ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM

Waste Code: U239
Waste Code Desc: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

Waste Code: U249
Waste Code Desc: ZINC PHOSPHIDE ZN3P2, WHEN PRESENT AT CONCENTRATIONS OF 10% OR LESS

Waste Code: U359
Waste Code Desc: ETHANOL, 2-ETHOXY- (OR) ETHYLENE GLYCOL MONOETHYL ETHER

Hazardous Waste Handler Details

Seq No: 10
Receive Date: 20080219
Handler Name: DULUTH AIR NATIONAL GUARD BASE
Fed Waste Generator: 2
Generator Code Description: Small Quantity Generator
Source Type: Annual/Biennial Report
TSD Activity: Y

Waste Code Details

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: MN01
Waste Code Desc: Lethal Waste

Waste Code: MN02
Waste Code Desc: Lab Pack Waste

Waste Code: MN03
Waste Code Desc: PCB Waste

Hazardous Waste Handler Details

Seq No: 6
Receive Date: 20090128
Handler Name: DULUTH AIR NATIONAL GUARD BASE
Fed Waste Generator: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Implementer
TSD Activity: Y

Waste Code Details

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: MN01
Waste Code Desc: Lethal Waste

Waste Code: MN02
Waste Code Desc: Lab Pack Waste

Waste Code: MN03
Waste Code Desc: PCB Waste

Hazardous Waste Handler Details

Seq No: 7
Receive Date: 20100205
Handler Name: DULUTH AIR NATIONAL GUARD BASE
Fed Waste Generator: 2
Generator Code Description: Small Quantity Generator
Source Type: Implementer
TSD Activity: Y

Waste Code Details

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: MN01
Waste Code Desc: Lethal Waste

Waste Code: MN02
Waste Code Desc: Lab Pack Waste

Waste Code: MN03
Waste Code Desc: PCB Waste

Hazardous Waste Handler Details

Seq No: 4
Receive Date: 20100304
Handler Name: DULUTH AIR NATIONAL GUARD BASE
Fed Waste Generator: 2
Generator Code Description: Small Quantity Generator
Source Type: Annual/Biennial Report update with Notification
TSD Activity: N

Waste Code Details

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: D002
Waste Code Desc: CORROSIVE WASTE

Waste Code: D003
Waste Code Desc: REACTIVE WASTE

Waste Code: D004
Waste Code Desc: ARSENIC

Waste Code: D005
Waste Code Desc: BARIUM

Waste Code: D006
Waste Code Desc: CADMIUM

Waste Code: D007
Waste Code Desc: CHROMIUM

Waste Code: D008
Waste Code Desc: LEAD

Waste Code: D009
Waste Code Desc: MERCURY

Waste Code: D010
Waste Code Desc: SELENIUM

Waste Code: D011
Waste Code Desc: SILVER

Waste Code: D012
Waste Code Desc: ENDRIN (1,2,3,4,10,10-HEXACHLORO-1,7-EPOXY-1,4,4A,5,6,7,8,8A-OCTAHYDRO-1,4-ENDO, ENDO-5,8-DIMETH-ANO-NAPHTHALENE)

Waste Code: D013
Waste Code Desc: LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)

Waste Code: D014
Waste Code Desc: METHOXYCHLOR (1,1,1-TRICHLORO-2,2-BIS [P-METHOXYPHENYL] ETHANE)

Waste Code: D015
Waste Code Desc: TOXAPHENE (C10 H10 CL8, TECHNICAL CHLORINATED CAMPHENE, 67-69 PERCENT CHLORINE)

Waste Code: D016
Waste Code Desc: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

Waste Code: D017
Waste Code Desc: 2,4,5-TP SILVEX (2,4,5-TRICHLOROPHENOXYPROPIONIC ACID)

Waste Code: D018
Waste Code Desc: BENZENE

Waste Code: D020
Waste Code Desc: CHLORDANE

Waste Code: D021
Waste Code Desc: CHLOROBENZENE

Waste Code: D022
Waste Code Desc: CHLOROFORM

Waste Code: D023
Waste Code Desc: O-CRESOL

Waste Code: D024
Waste Code Desc: M-CRESOL

Waste Code: D025
Waste Code Desc: P-CRESOL

Waste Code: D026
Waste Code Desc: CRESOL

Waste Code: D027
Waste Code Desc: 1,4-DICHLOROBENZENE

Waste Code: D028
Waste Code Desc: 1,2-DICHLOROETHANE

Waste Code: D029
Waste Code Desc: 1,1-DICHLOROETHYLENE

Waste Code: D030
Waste Code Desc: 2,4-DINITROTOLUENE

Waste Code: D031
Waste Code Desc: HEPTACHLOR (AND ITS EPOXIDE)

Waste Code: D032
Waste Code Desc: HEXACHLOROBENZENE

Waste Code: D033
Waste Code Desc: HEXACHLOROBUTADIENE

Waste Code: D034
Waste Code Desc: HEXACHLOROETHANE

Waste Code: D035
Waste Code Desc: METHYL ETHYL KETONE

Waste Code: D036
Waste Code Desc: NITROBENZENE

Waste Code: D037
Waste Code Desc: PENTACHLOROPHENOL

Waste Code: D038
Waste Code Desc: PYRIDINE

Waste Code: D039
Waste Code Desc: TETRACHLOROETHYLENE

Waste Code: D040
Waste Code Desc: TRICHLOROETHYLENE

Waste Code: D041
Waste Code Desc: 2,4,5-TRICHLOROPHENOL

Waste Code: D042
Waste Code Desc: 2,4,6-TRICHLOROPHENOL

Waste Code:	D043
Waste Code Desc:	VINYL CHLORIDE
Waste Code:	F001
Waste Code Desc:	THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste Code:	F002
Waste Code Desc:	THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste Code:	F004
Waste Code Desc:	THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: CRESOLS, CRESYLIC ACID, AND NITROBENZENE; AND THE STILL BOTTOMS FROM THE RECOVERY OF THESE SOLVENTS; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste Code:	F005
Waste Code Desc:	THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste Code:	F027
Waste Code Desc:	DISCARDED UNUSED FORMULATIONS CONTAINING TRI-, TETRA-, OR PENTACHLOROPHENOL OR DISCARDED UNUSED FORMULATIONS CONTAINING COMPOUNDS DERIVED FROM THESE CHLOROPHENOLS. (THIS LISTING DOES NOT INCLUDE FORMULATIONS CONTAINING HEXACHLOROPHENE SYNTHESIZED FROM PREPURIFIED 2,4,5-TRICHLOROPHENOL AS THE SOLE COMPONENT.)
Waste Code:	MN01
Waste Code Desc:	Lethal Waste
Waste Code:	MN02
Waste Code Desc:	Lab Pack Waste
Waste Code:	MN03
Waste Code Desc:	PCB Waste
Waste Code:	P004
Waste Code Desc:	1,4,5,8-DIMETHANONAPHTHALENE, 1,2,3,4,10,10-HEXA-CHLORO-1,4,4A,5,8,8A,-HEXAHYDRO-, (1ALPHA, 4ALPHA, 4ABETA, 5ALPHA, 8ALPHA, 8ABETA)- (OR) ALDRIN
Waste Code:	P030
Waste Code Desc:	CYANIDES (SOLUBLE CYANIDE SALTS), NOT OTHERWISE SPECIFIED
Waste Code:	P037
Waste Code Desc:	2,7:3,6-DIMETHANONAPHTH[2,3-B]OXIRENE, 3,4,5,6,9,9-HEXACHLORO-1A,2,2A,3,6,6A,7,7A-OCTAHYDRO-, (1AALPHA, 2BETA, 2AALPHA, 3BETA, 6BETA, 6AALPHA, 7BETA, 7AALPHA)- (OR) DIELDRIN
Waste Code:	P066
Waste Code Desc:	ETHANIMIDOTHIOIC ACID, N-[[(METHYLAMINO)CARBONYL]OXY]-, METHYL ESTER (OR) METHOMYL
Waste Code:	U002
Waste Code Desc:	2-PROPANONE (I) (OR) ACETONE (I)
Waste Code:	U032

Waste Code Desc: CALCIUM CHROMATE (OR) CHROMIC ACID H2CRO4, CALCIUM SALT

Waste Code: U075
Waste Code Desc: DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-

Waste Code: U080
Waste Code Desc: METHANE, DICHLORO- (OR) METHYLENE CHLORIDE

Waste Code: U088
Waste Code Desc: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE

Waste Code: U103
Waste Code Desc: DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER

Waste Code: U120
Waste Code Desc: FLUORANTHENE

Waste Code: U129
Waste Code Desc: CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1ALPHA, 2ALPHA, 3BETA, 4ALPHA, 5ALPHA, 6BETA)- (OR) LINDANE

Waste Code: U134
Waste Code Desc: HYDROFLUORIC ACID (C,T) (OR) HYDROGEN FLUORIDE (C,T)

Waste Code: U154
Waste Code Desc: METHANOL (I) (OR) METHYL ALCOHOL (I)

Waste Code: U159
Waste Code Desc: 2-BUTANONE (I,T) (OR) METHYL ETHYL KETONE (MEK) (I,T)

Waste Code: U165
Waste Code Desc: NAPHTHALENE

Waste Code: U188
Waste Code Desc: PHENOL

Waste Code: U220
Waste Code Desc: BENZENE, METHYL- (OR) TOLUENE

Waste Code: U226
Waste Code Desc: ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM

Waste Code: U239
Waste Code Desc: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

Waste Code: U249
Waste Code Desc: ZINC PHOSPHIDE ZN3P2, WHEN PRESENT AT CONCENTRATIONS OF 10% OR LESS

Waste Code: U359
Waste Code Desc: ETHANOL, 2-ETHOXY- (OR) ETHYLENE GLYCOL MONOETHYL ETHER

Hazardous Waste Handler Details

Seq No: 18
Receive Date: 20171128
Handler Name: DULUTH AIR NATIONAL GUARD BASE
Fed Waste Generator: 2
Generator Code Description: Small Quantity Generator
Source Type: Implementer
TSD Activity: N

Waste Code Details

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: D002

Waste Code Desc: CORROSIVE WASTE

Waste Code: D005
Waste Code Desc: BARIUM

Waste Code: D006
Waste Code Desc: CADMIUM

Waste Code: D007
Waste Code Desc: CHROMIUM

Waste Code: D008
Waste Code Desc: LEAD

Waste Code: D035
Waste Code Desc: METHYL ETHYL KETONE

Waste Code: F005
Waste Code Desc: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: MN03
Waste Code Desc: PCB Waste

Waste Code: P066
Waste Code Desc: ETHANIMIDOTHIOIC ACID, N-[[(METHYLAMINO)CARBONYL]OXY]-, METHYL ESTER (OR) METHOMYL

Waste Code: U002
Waste Code Desc: 2-PROPANONE (I) (OR) ACETONE (I)

Waste Code: U056
Waste Code Desc: BENZENE, HEXAHYDRO- (I) (OR) CYCLOHEXANE (I)

Hazardous Waste Handler Details

Seq No: 53
Receive Date: 20231218
Handler Name: DULUTH AIR NATIONAL GUARD BASE
Fed Waste Generator: 2
Generator Code Description: Small Quantity Generator
Source Type: Implementer
TSD Activity: N

Owner/Operator Details

Owner/Operator Ind: Current Operator
Type: Federal
Name: MINNESOTA AIR NATIONAL GUARD
Dt Became Current: 19480101
Dt Ended Current:
Phone:
Source Type: Implementer
Street No:
Street1:
Street2:
City:
State:
Country: US
Zip:

Owner/Operator Ind: Current Owner
Type: Federal
Name: MINNESOTA AIR NATIONAL GUARD
Dt Became Current: 19480101
Dt Ended Current:
Phone:
Source Type: Annual/Biennial Report
Street No:
Street1: 4680 VIPER STREET
Street2:
City: DULUTH
State: MN
Country: US
Zip: 55811

Owner/Operator Ind: Current Owner
Type: Federal
Street No:
Street1: 4680 VIPER STREET

Name:	MINNESOTA AIR NATIONAL GUARD	**Street2:**	
Dt Became Current:	19480101	**City:**	DULUTH
Dt Ended Current:		**State:**	MN
Phone:		**Country:**	US
Source Type:	Implementer	**Zip:**	55811
Owner/Operator Ind:	Current Operator	**Street No:**	4680
Type:	Federal	**Street1:**	VIPER STREET
Name:	MINNESOTA AIR NATIONAL GURAD	**Street2:**	
Dt Became Current:	19480101	**City:**	DULUTH
Dt Ended Current:		**State:**	MN
Phone:	218-788-7868	**Country:**	US
Source Type:	Annual/Biennial Report update with Notification	**Zip:**	55811
Owner/Operator Ind:	Current Operator	**Street No:**	
Type:	Federal	**Street1:**	4680 VIPER ST
Name:	MINNESOTA AIR NATIONAL GUARD - DULUTH	**Street2:**	
Dt Became Current:	19800912	**City:**	DULUTH
Dt Ended Current:		**State:**	MN
Phone:	218-788-7868	**Country:**	US
Source Type:	Notification	**Zip:**	55811-6015
Owner/Operator Ind:	Current Owner	**Street No:**	
Type:	Federal	**Street1:**	4680 VIPER ST
Name:	MN AIR NATIONAL GUARD	**Street2:**	
Dt Became Current:		**City:**	DULUTH
Dt Ended Current:		**State:**	MN
Phone:	218-723-7200	**Country:**	US
Source Type:	Implementer	**Zip:**	55811-6033
Owner/Operator Ind:	Current Operator	**Street No:**	
Type:	Federal	**Street1:**	4680 VIPER STREET
Name:	MINNESOTA AIR NATIONAL GUARD	**Street2:**	
Dt Became Current:	19480101	**City:**	DULUTH
Dt Ended Current:		**State:**	MN
Phone:		**Country:**	US
Source Type:	Annual/Biennial Report	**Zip:**	55811
Owner/Operator Ind:	Current Owner	**Street No:**	
Type:	Federal	**Street1:**	4680 VIPER STRRET
Name:	MINNESOTA AIR NATIONAL GUARD	**Street2:**	
Dt Became Current:	19480101	**City:**	DULUTH
Dt Ended Current:		**State:**	MN
Phone:	218-788-7868	**Country:**	US
Source Type:	Annual/Biennial Report update with Notification	**Zip:**	
Owner/Operator Ind:	Current Operator	**Street No:**	
Type:	Federal	**Street1:**	
Name:	MINNESOTA AIR NATIONAL GUARD	**Street2:**	
Dt Became Current:	19480101	**City:**	
Dt Ended Current:		**State:**	
Phone:		**Country:**	US
Source Type:	Annual/Biennial Report	**Zip:**	
Owner/Operator Ind:	Current Owner	**Street No:**	
Type:	Federal	**Street1:**	
Name:	MINNESOTA AIR NATIONAL GUARD	**Street2:**	
Dt Became Current:	19480101	**City:**	
Dt Ended Current:		**State:**	
Phone:		**Country:**	US
Source Type:	Annual/Biennial Report	**Zip:**	
Owner/Operator Ind:	Current Operator	**Street No:**	
Type:	State	**Street1:**	ADDRESS NOT REPORTED
Name:	NAME NOT REPORTED	**Street2:**	
Dt Became Current:		**City:**	CITY NOT REPORTED
Dt Ended Current:		**State:**	AK
Phone:	312-555-1212	**Country:**	

Source Type:	Part A	**Zip:**	99998
Owner/Operator Ind:	Current Owner	**Street No:**	
Type:	State	**Street1:**	4680 VIPER ST
Name:	MN AIR NATIONAL GUARD	**Street2:**	
Dt Became Current:		**City:**	DULUTH
Dt Ended Current:		**State:**	MN
Phone:	218-723-7200	**Country:**	
Source Type:	Implementer	**Zip:**	55811-6033

Historical Handler Details

Receive Dt:	20171128
Generator Code Description:	Small Quantity Generator
Handler Name:	DULUTH AIR NATIONAL GUARD BASE
Receive Dt:	20100304
Generator Code Description:	Small Quantity Generator
Handler Name:	DULUTH AIR NATIONAL GUARD BASE
Receive Dt:	20100205
Generator Code Description:	Small Quantity Generator
Handler Name:	DULUTH AIR NATIONAL GUARD BASE
Receive Dt:	20090128
Generator Code Description:	Very Small Quantity Generator
Handler Name:	DULUTH AIR NATIONAL GUARD BASE
Receive Dt:	20080219
Generator Code Description:	Small Quantity Generator
Handler Name:	DULUTH AIR NATIONAL GUARD BASE
Receive Dt:	20080128
Generator Code Description:	Very Small Quantity Generator
Handler Name:	DULUTH AIR NATIONAL GUARD BASE
Receive Dt:	20060412
Generator Code Description:	Small Quantity Generator
Handler Name:	DULUTH AIR NATIONAL GUARD BASE
Receive Dt:	20060215
Generator Code Description:	Small Quantity Generator
Handler Name:	DULUTH AIR NATIONAL GUARD BASE
Receive Dt:	20041217
Generator Code Description:	Large Quantity Generator
Handler Name:	DULUTH AIR NATIONAL GUARD BASE
Receive Dt:	20040306
Generator Code Description:	Small Quantity Generator
Handler Name:	DULUTH AIR NATIONAL GUARD BASE
Receive Dt:	20020219
Generator Code Description:	Large Quantity Generator
Handler Name:	DULUTH AIR NATIONAL GUARD BASE
Receive Dt:	20000313
Generator Code Description:	Very Small Quantity Generator
Handler Name:	DULUTH AIR NATIONAL GUARD BASE
Receive Dt:	20000203
Generator Code Description:	Small Quantity Generator
Handler Name:	MINNESOTA AIR NATIONAL GUARD
Receive Dt:	19980212
Generator Code Description:	Small Quantity Generator
Handler Name:	MINNESOTA AIR NATIONAL GUARD

Receive Dt: 19960227
Generator Code Description: Large Quantity Generator
Handler Name: MN AIR NATIONAL GUARD

Receive Dt: 19950526
Generator Code Description: Large Quantity Generator
Handler Name: MINNESOTA AIR NATIONAL GUARD DULUTH

Receive Dt: 19940225
Generator Code Description: Large Quantity Generator
Handler Name: MN AIR NATIONAL GUARD - DULUTH

Receive Dt: 19920209
Generator Code Description: Large Quantity Generator
Handler Name: MINNESOTA AIR NATIONAL GUARD

Receive Dt: 19900226
Generator Code Description: Large Quantity Generator
Handler Name: MINNESOTA AIR NATIONAL GUARD-DULUTH

Receive Dt: 19841120
Generator Code Description: Not a Generator, Verified
Handler Name: MINNESOTA AIR NATIONAL GUARD DULUTH

Receive Dt: 19800912
Generator Code Description: Large Quantity Generator
Handler Name: MINNESOTA AIR NATIONAL GUARD DULUTH

Biennial Report - Reclamation and Recovery Details

Reporting Cycle Year: 2001
Total Metals Recovery(Tons): 1.031
Total Solvents Recovery(Tons):
Total Other Recovery(Tons):

Unplottable Summary

Total: 38 Unplottable sites

DB	Company Name/Site Name	Address	City	Zip	ERIS ID
FINDS/FRS	DULUTH INTERNATIONAL AIRPORT	DULUTH INTERNATIONAL AIRPORT ***Registry ID:*** 110068922740	DULUTH MN	55811	857973890
FINDS/FRS	2021 TAXIWAY A RECONSTRUCTION	DULUTH AIRPORT ***Registry ID:*** 110071494411	DULUTH MN	55811	921909125
FINDS/FRS	SITE 4 REMEDIAL ACTION - 148T	AIRPORT RD ***Registry ID:*** 110068376929	DULUTH MN	55811	857952985
FINDS/FRS	MSAS 199 - AIRPORT ROAD RECON	SEE LOCATION DESCRIPTION ***Registry ID:*** 110068208549	HERMANTOWN MN	55811	857947844
FINDS/FRS	DULUTH INTERNATIONAL AIRPORT	AIRPORT ROAD, SITE 102 ***Registry ID:*** 110068541812	HERMANTOWN MN	55811	857943255
FINDS/FRS	DULUTH INTERNATIONAL AIRPORT	AIRPORT ROAD ***Registry ID:*** 110068244778	HERMANTOWN MN	55811	857943254
FINDS/FRS	DULUTH INTERNATIONAL AIRPORT	SEE LOCATION DESCRIPTION ***Registry ID:*** 110068770789	HERMANTOWN MN	55811	857934831
FINDS/FRS	DULUTH AIR FORCE BASE OU31 -	SEE LOCATION DESCRIPTION ***Registry ID:*** 110069046017	DULUTH MN	55811	857933368
FINDS/FRS	RUNWAY 9/27 RECONSTRUCTION, P	DULUTH AIRPORT ***Registry ID:*** 110068971991	HERMANTOWN MN	55811	857916165
FINDS/FRS	DULUTH AIR FORCE BASE - MANG	SEE LOCATION DESCRIPTION ***Registry ID:*** 110068675918	DULUTH MN	55811	857916044
FINDS/FRS	NORTH COUNTRY AVIATION	DULUTH INTERNATIONAL AIRPORT	HERMANTOWN MN	55811	857911908

		Registry ID: 110069063872			
FINDS/FRS	DULUTH AIRPORT TERMINAL EXPAN	ADDRESS UNKNOWN ***Registry ID:*** 110068631626	DULUTH MN	55811	857899709
FINDS/FRS	DULUTH INTERNATIONAL AIRPORT	DULUTH INTERNATIONAL AIRPORT ***Registry ID:*** 110067857545	DULUTH MN	55811	857897206
FINDS/FRS	CSAH 32 ARROWHEAD RD	BETWEEN HAINES RD & RICE LAKE RD ***Registry ID:*** 110068563780	DULUTH MN	55802	857863672
FINDS/FRS	AIRPORT ROAD PARKING LOT	SEE LOCATION DESCRIPTION ***Registry ID:*** 110068294205	HERMANTOWN MN	55811	857978199
FINDS/FRS	SCS AIRCRAFT INTERIORS - DULU	SEE LOCATION DESCRIPTION ***Registry ID:*** 110067843819	HERMANTOWN MN	55811	857980383
FINDS/FRS	DULUTH INT'L AIRPORT PASSENG	ADDRESS UNKNOWN ***Registry ID:*** 110068282888	CANOSIA TOWNSHIP MN	55811	857996089
FINDS/FRS	AIRBASE ROAD CONSTRUCTION - H	SEE LOCATION DESCRIPTION ***Registry ID:*** 110068400830	HERMANTOWN MN	55811	857998358
FINDS/FRS	DULUTH INTL AIRPORT RADAR TOW	SEE LOCATION DESCRIPTION ***Registry ID:*** 110068441207	DULUTH MN	55811	858003479
FINDS/FRS	RECONDITIONING OF AIRPORT RD	SEE LOCATION DESCRIPTION ***Registry ID:*** 110068024435	DULUTH MN	55802	858019155
FINDS/FRS	NORTH COUNTRY AVIATION	HANGAR 1 DULUTH INTL AIRPORT ***Registry ID:*** 110068554380	HERMANTOWN MN	55811	858019411
FINDS/FRS	AIR NATIONAL GUARD BY-PASS TA	SEE LOCATION DESCRIPTION ***Registry ID:*** 110068889493	HERMANTOWN MN	55811	858019601
FINDS/FRS	DULUTH AIR FORCE BASE OU32 -	SEE LOCATION DESCRIPTION ***Registry ID:*** 110068056613	DULUTH MN	55811	858027605
FINDS/FRS	TAXI A PHASE 2 & 4	DULUTH AIRPORT	DULUTH MN	55811	921907749

		Registry ID: 110071491491			
FINDS/FRS	SPEE DEE DELIVERY	AIRPORT ROAD ***Registry ID:*** 110071495060	DULUTH MN	55811	921909050
FINDS/FRS	DULUTH INTERNATIONAL AIRPORT	SEE LOCATION DESCRIPTION ***Registry ID:*** 110068189999	DULUTH MN	55811	857962306
HIST SPL	Unknown - abandoned drum	HAINES ROAD ***Program Int ID:*** 177178	DULUTH MN		819466708
HIST SPL	Duluth International Airport	Gate 3 ***Program Int ID:*** 288013	Duluth MN		819440142
HIST SPL	COMMERCIAL - DULUTH INTERNATIONAL AIRPORT	GATE 1 - DULUTH IAP ***Program Int ID:*** 183145	DULUTH MN		819433159
HIST SPL	COMMERCIAL	Duluth Intl Airport ***Program Int ID:*** 186672	Duluth MN	55811	819432448
HMIRS		DULUTH INTERNATIONAL AIRPORT	DULUTH MN		818264585
MPCA AI	Federal Express Corp	5431 To 33 Airpark Blvd	Duluth MN	55811	825239121
MPCA AI	Unknown - abandoned drum	Haines Road	Duluth MN		894056101
SPILLS	Unknown - abandoned drum	HAINES ROAD MN ***Incident ID*** **|** ***Incident Status:*** 19261 | Closed or Completed	DULUTH MN		860668546
SPILLS		Duluth Intl Airport MN 55811 ***Incident ID*** **|** ***Incident Status:*** 29597 | Closed or Completed	Duluth MN		860656112
SPILLS		Airport Rd and Venture ***Incident ID*** **|** ***Incident Status:*** 209882 | Closed or Completed	Duluth MN		920725142

SPILLS	Ulland Bros. Inc. - Cloquet	Venture Avenue and Airport Road	Hermantown MN		920724813
		Incident ID* | *Incident Status: 209871 | Closed or Completed			
SPILLS	Minnesota Air National Guard	Building # 500 on Site # 26 MN	Duluth MN	55811	860715314
		Incident ID* | *Incident Status: 62339 | Closed or Completed			

Unplottable Report

Site: ***DULUTH INTERNATIONAL AIRPORT***
DULUTH INTERNATIONAL AIRPORT DULUTH MN 55811

FINDS/FRS

Registry ID:	110068922740
FIPS Code:	27137
HUC Code:	
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	03-JUN-16
Update Date:	
Interest Types:	STATE MASTER
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	
Census Block Code:	
EPA Region Code:	05
County Name:	ST. LOUIS
US/Mexico Border Ind:	
Latitude:	
Longitude:	
Reference Point:	
Coord Collection Method:	
Accuracy Value:	
Datum:	NAD83
Source:	
Frs Facility Detail Report URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068922740
Program Acronyms:	

MN-TEMPO:11034

Site: ***2021 TAXIWAY A RECONSTRUCTION***
DULUTH AIRPORT DULUTH MN 55811

FINDS/FRS

Registry ID:	110071494411
FIPS Code:	27137
HUC Code:	
Site Type Name:	
Location Description:	
Supplemental Location:	
Create Date:	04-OCT-23
Update Date:	
Interest Types:	STATE MASTER
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	

Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110071494411
Program Acronyms:

MN-TEMPO:251251

Site: ***SITE 4 REMEDIAL ACTION - 148T***
AIRPORT RD DULUTH MN 55811

FINDS/FRS

Registry ID: 110068376929
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 02-JUN-16
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068376929
Program Acronyms:

MN-TEMPO:144465

Site: ***MSAS 199 - AIRPORT ROAD RECON***
SEE LOCATION DESCRIPTION HERMANTOWN MN 55811

FINDS/FRS

Registry ID: 110068208549
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 02-JUN-16
Update Date:

Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068208549
Program Acronyms:

MN-TEMPO:120957

Site: ***DULUTH INTERNATIONAL AIRPORT***
AIRPORT ROAD, SITE 102 HERMANTOWN MN 55811 FINDS/FRS

Registry ID: 110068541812
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description: CSLL: CENTER OF SITE
Supplemental Location:
Create Date: 02-JUN-16
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068541812
Program Acronyms:

MN-TEMPO:193566

Site: ***DULUTH INTERNATIONAL AIRPORT***

AIRPORT ROAD HERMANTOWN MN 55811 FINDS/FRS

Registry ID:	110068244778
FIPS Code:	27137
HUC Code:	
Site Type Name:	STATIONARY
Location Description:	CSLL: CENTER OF SITE
Supplemental Location:	
Create Date:	02-JUN-16
Update Date:	
Interest Types:	STATE MASTER
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	
Census Block Code:	
EPA Region Code:	05
County Name:	ST. LOUIS
US/Mexico Border Ind:	
Latitude:	
Longitude:	
Reference Point:	
Coord Collection Method:	
Accuracy Value:	
Datum:	NAD83
Source:	
Frs Facility Detail Report URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068244778
Program Acronyms:	

MN-TEMPO:189213

Site: ***DULUTH INTERNATIONAL AIRPORT***
SEE LOCATION DESCRIPTION HERMANTOWN MN 55811 FINDS/FRS

Registry ID:	110068770789
FIPS Code:	27137
HUC Code:	
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	02-JUN-16
Update Date:	
Interest Types:	STATE MASTER
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	
Census Block Code:	
EPA Region Code:	05
County Name:	ST. LOUIS
US/Mexico Border Ind:	
Latitude:	
Longitude:	
Reference Point:	
Coord Collection Method:	
Accuracy Value:	

Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068770789
Program Acronyms:

MN-TEMPO:208489

Site: ***DULUTH AIR FORCE BASE OU31 -***
SEE LOCATION DESCRIPTION DULUTH MN 55811

FINDS/FRS

Registry ID: 110069046017
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description: CSLL: CENTER OF SITE
Supplemental Location:
Create Date: 03-JUN-16
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110069046017
Program Acronyms:

MN-TEMPO:191172

Site: ***RUNWAY 9/27 RECONSTRUCTION, P***
DULUTH AIRPORT HERMANTOWN MN 55811

FINDS/FRS

Registry ID: 110068971991
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description: RUNWAY 9/27 RECONSTRUCTION
Supplemental Location: 4701 GRINDEN DR.
Create Date: 03-JUN-16
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:

Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068971991
Program Acronyms:

MN-TEMPO:212423

Site: ***DULUTH AIR FORCE BASE - MANG***
SEE LOCATION DESCRIPTION DULUTH MN 55811

FINDS/FRS

Registry ID: 110068675918
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description: CSLL: MAIN ENTRANCE/GATE
Supplemental Location:
Create Date: 02-JUN-16
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068675918
Program Acronyms:

MN-TEMPO:189781

Site: ***NORTH COUNTRY AVIATION***
DULUTH INTERNATIONAL AIRPORT HERMANTOWN MN 55811

FINDS/FRS

Registry ID: 110069063872
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 03-JUN-16
Update Date:

Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110069063872
Program Acronyms:

MN-TEMPO:116062, MN-TEMPO:263516

Site: ***DULUTH AIRPORT TERMINAL EXPAN***
ADDRESS UNKNOWN DULUTH MN 55811 FINDS/FRS

Registry ID: 110068631626
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 02-JUN-16
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068631626
Program Acronyms:

MN-TEMPO:137956

Site: ***DULUTH INTERNATIONAL AIRPORT***

DULUTH INTERNATIONAL AIRPORT DULUTH MN 55811 FINDS/FRS

Registry ID:	110067857545
FIPS Code:	27137
HUC Code:	
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	02-JUN-16
Update Date:	
Interest Types:	STATE MASTER
SIC Codes:	0096
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	
Census Block Code:	
EPA Region Code:	05
County Name:	ST. LOUIS
US/Mexico Border Ind:	
Latitude:	
Longitude:	
Reference Point:	
Coord Collection Method:	
Accuracy Value:	
Datum:	NAD83
Source:	
Frs Facility Detail Report URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110067857545
Program Acronyms:	

MN-TEMPO:37342

Site: ***CSAH 32 ARROWHEAD RD***
BETWEEN HAINES RD & RICE LAKE RD DULUTH MN 55802 FINDS/FRS

Registry ID:	110068563780
FIPS Code:	27137
HUC Code:	04010102
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	02-JUN-16
Update Date:	
Interest Types:	STATE MASTER
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	MN-TEMPO
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	08
Census Block Code:	271370156001002
EPA Region Code:	05
County Name:	ST. LOUIS
US/Mexico Border Ind:	
Latitude:	46.770093
Longitude:	-92.10421
Reference Point:	
Coord Collection Method:	ZIP CODE-CENTROID
Accuracy Value:	

Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068563780
Program Acronyms:

MN-TEMPO:6291

Site: ***AIRPORT ROAD PARKING LOT***
SEE LOCATION DESCRIPTION HERMANTOWN MN 55811

FINDS/FRS

Registry ID: 110068294205
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 02-JUN-16
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068294205
Program Acronyms:

MN-TEMPO:106663

Site: ***SCS AIRCRAFT INTERIORS - DULU***
SEE LOCATION DESCRIPTION HERMANTOWN MN 55811

FINDS/FRS

Registry ID: 110067843819
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 02-JUN-16
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:

Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110067843819
Program Acronyms:

MN-TEMPO:120205

Site: ***DULUTH INT'L AIRPORT PASSENG***
ADDRESS UNKNOWN CANOSIA TOWNSHIP MN 55811

FINDS/FRS

Registry ID: 110068282888
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 02-JUN-16
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068282888
Program Acronyms:

MN-TEMPO:130816

Site: ***AIRBASE ROAD CONSTRUCTION - H***
SEE LOCATION DESCRIPTION HERMANTOWN MN 55811

FINDS/FRS

Registry ID: 110068400830
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 02-JUN-16
Update Date:

Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068400830
Program Acronyms:

MN-TEMPO:119363

Site: ***DULUTH INTL AIRPORT RADAR TOW***
SEE LOCATION DESCRIPTION DULUTH MN 55811

FINDS/FRS

Registry ID: 110068441207
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 02-JUN-16
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068441207
Program Acronyms:

MN-TEMPO:188827

Site: ***RECONDITIONING OF AIRPORT RD***

SEE LOCATION DESCRIPTION DULUTH MN 55802 FINDS/FRS

Registry ID:	110068024435
FIPS Code:	27137
HUC Code:	
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	02-JUN-16
Update Date:	
Interest Types:	STATE MASTER
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	
Census Block Code:	
EPA Region Code:	05
County Name:	ST. LOUIS
US/Mexico Border Ind:	
Latitude:	
Longitude:	
Reference Point:	
Coord Collection Method:	
Accuracy Value:	
Datum:	NAD83
Source:	
Frs Facility Detail Report URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068024435
Program Acronyms:	

MN-TEMPO:126137

Site: ***NORTH COUNTRY AVIATION***
HANGAR 1 DULUTH INTL AIRPORT HERMANTOWN MN 55811 FINDS/FRS

Registry ID:	110068554380
FIPS Code:	27137
HUC Code:	
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	02-JUN-16
Update Date:	
Interest Types:	STATE MASTER
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	
Census Block Code:	
EPA Region Code:	05
County Name:	ST. LOUIS
US/Mexico Border Ind:	
Latitude:	
Longitude:	
Reference Point:	
Coord Collection Method:	
Accuracy Value:	

Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068554380
Program Acronyms:

MN-TEMPO:116052

Site: ***AIR NATIONAL GUARD BY-PASS TA***
SEE LOCATION DESCRIPTION HERMANTOWN MN 55811

FINDS/FRS

Registry ID: 110068889493
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 02-JUN-16
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068889493
Program Acronyms:

MN-TEMPO:102575

Site: ***DULUTH AIR FORCE BASE OU32 -***
SEE LOCATION DESCRIPTION DULUTH MN 55811

FINDS/FRS

Registry ID: 110068056613
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description: CSLL: CENTER OF SITE
Supplemental Location:
Create Date: 02-JUN-16
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:

Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068056613
Program Acronyms:

MN-TEMPO:190291

Site: ***TAXI A PHASE 2 & 4***
DULUTH AIRPORT DULUTH MN 55811

FINDS/FRS

Registry ID: 110071491491
FIPS Code: 27137
HUC Code:
Site Type Name:
Location Description:
Supplemental Location:
Create Date: 04-OCT-23
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110071491491
Program Acronyms:

MN-TEMPO:253437

Site: ***SPEE DEE DELIVERY***
AIRPORT ROAD DULUTH MN 55811

FINDS/FRS

Registry ID: 110071495060
FIPS Code: 27137
HUC Code:
Site Type Name:
Location Description:
Supplemental Location:
Create Date: 04-OCT-23
Update Date:

Interest Types:
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110071495060
Program Acronyms:

MN-TEMPO:224097

Site: ***DULUTH INTERNATIONAL AIRPORT***
SEE LOCATION DESCRIPTION DULUTH MN 55811

FINDS/FRS

Registry ID: 110068189999
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 02-JUN-16
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068189999
Program Acronyms:

MN-TEMPO:194375

Site: ***Unknown - abandoned drum***

HAINES ROAD DULUTH MN HIST SPL

Program Int ID:	177178	***Tmsp Added:***	03/21/1996 00:00:00
Site ID:	0	***TMSP Update:***	03/12/2009 13:22:55
Interest Type:	Spill Site	***Prgm Int Source:***	TALES
Preferred ID:	19261	***Address Source:***	TALES
Active?:		***Interest Phone:***	
Interest Start:	03/21/1996 00:00:00	***Township:***	
Interest End:		***County:***	St. Louis

Comments: A 55-gallon drum containing a solvent waste was abandoned in the\n\nalong Haines Road.

Spill Site

Spill Site Closure Date:	04/19/1994 00:00:00
Spill Date:	04/04/1994 00:00:00
Spill Reported Date:	04/05/1994 00:00:00
Priority Code:	4
MPCA Involvement:	
Initial Cause:	ABOUT 5-10 GALLONS
Initial Source:	
Public Safety Spill ID:	
Duty Officer Report Number:	
Spill Reported by:	TIM MUSICK
Report Taken By Initials:	4146
Rpt Taken by Duty Officer Flag:	
MPCA Project Manager:	4146
Tmsp Added:	03/21/1996 00:00:00
Tmsp Last Updt:	04/11/2007 08:22:55
Staff ID Last Updt:	RSUCHAN
Rep Name:	
Rep Phone:	
Archive Lot:	
Archive Box:	
Response Desc:	

Spill Released Product

Spill Product:	Other (Described In Remarks)
Spill Released Quantity:	0
Spill Qty Units:	Gallons
Spill Incident Accuracy:	Known
Date Added:	03/21/1996 00:00:00
Last Update:	05/04/2002 07:00:52
Staff ID Last Update:	TANKS

Site: ***Duluth International Airport Gate 3 Duluth MN*** HIST SPL

Program Int ID:	288013	***Tmsp Added:***	04/20/2004 09:19:06
Site ID:	0	***TMSP Update:***	10/27/2005 10:58:20
Interest Type:	Spill Site	***Prgm Int Source:***	TALES
Preferred ID:	60878	***Address Source:***	TALES
Active?:		***Interest Phone:***	
Interest Start:	04/20/2004 09:19:06	***Township:***	
Interest End:		***County:***	St. Louis

Comments: **No file** Caller Reporting spill of fuel from tanker. Cause of spill was a broken line (weld) on tanker that was filling airplane (NWA). Spill has been cleaned and placed into containers for disposal.

Spill Site

Spill Site Closure Date:	04/02/2004 00:00:00
Spill Date:	04/02/2004 00:00:00
Spill Reported Date:	04/02/2004 04:00:00
Priority Code:	
MPCA Involvement:	None
Initial Cause:	
Initial Source:	Other
Public Safety Spill ID:	12972

Duty Officer Report Number: 58912
Spill Reported by: Mike
Report Taken By Initials:
Rpt Taken by Duty Officer Flag: Yes
MPCA Project Manager: 3094
Tmsp Added: 04/20/2004 09:19:06
Tmsp Last Updt: 04/11/2007 08:23:07
Staff ID Last Updt: RSUCHAN
Rep Name: Mike
Rep Phone: 2187887434
Archive Lot:
Archive Box:
Response Desc:

Spill Released Product

Spill Product: Jet Fuel (Kerosene Based)
Spill Released Quantity: 20
Spill Qty Units: Gallons
Spill Incident Accuracy: Estimated
Date Added: 04/20/2004 09:19:07
Last Update: 04/20/2004 09:19:07
Staff ID Last Update: SLEPPAL

Spill Incident Affected

Spill Incident Affect: Paved, Not Street
Date Added: 04/20/2004 09:19:07
Last Update: 04/20/2004 09:19:07
Staff ID Last Update: SLEPPAL

Site: ***COMMERCIAL - DULUTH INTERNATIONAL AIRPORT***
GATE 1 - DULUTH IAP DULUTH MN

HIST SPL

Program Int ID: 183145
Site ID: 0
Interest Type: Spill Site
Preferred ID: 25730
Active?:
Interest Start: 06/23/1997 13:38:47
Interest End:
Tmsp Added: 06/23/1997 13:38:47
TMSP Update: 05/04/2002 07:19:35
Prgm Int Source: TALES
Address Source: TALES
Interest Phone:
Township:
County: St. Louis
Comments: RELEASE OF APPROXIMATELY 100 GALLONS OF JET FUEL TO CONCRETE\n\nAPRON. CAUSE ATTRIBUTED TO MALFUNCTIONING TRASFER VALVE.

Spill Site

Spill Site Closure Date: 06/18/1997 00:00:00
Spill Date: 06/18/1997 00:00:00
Spill Reported Date: 06/18/1997 00:00:00
Priority Code: 2
MPCA Involvement:
Initial Cause: EQUIPMENT FAILURE
Initial Source: Aircraft
Public Safety Spill ID:
Duty Officer Report Number:
Spill Reported by: MINNESOTA AIR NATIONAL GUARD - DULUTH IAP, FIRE RESPONSE TEAM
Report Taken By Initials: 2829
Rpt Taken by Duty Officer Flag:
MPCA Project Manager: 2829
Tmsp Added: 06/23/1997 13:38:47
Tmsp Last Updt: 04/11/2007 08:22:59
Staff ID Last Updt: RSUCHAN
Rep Name:
Rep Phone:
Archive Lot:
Archive Box:
Response Desc:

Spill Released Product

Spill Product:	Other (Described In Remarks)
Spill Released Quantity:	100
Spill Qty Units:	Gallons
Spill Incident Accuracy:	Estimated
Date Added:	06/23/1997 13:38:47
Last Update:	05/04/2002 07:19:35
Staff ID Last Update:	TANKS

Spill Incident Affected

Spill Incident Affect:	Street, Parking Lot
Date Added:	06/23/1997 13:38:47
Last Update:	05/04/2002 07:19:35
Staff ID Last Update:	TANKS

Spill Action

Spill Action:	Consulted/Advised
Spill Action Person:	
Date Added:	06/23/1997 13:38:47
Last Update:	05/04/2002 07:19:35
Staff ID Last Update:	TANKS

Site: ***COMMERCIAL***
Duluth Intl Airport Duluth MN 55811

HIST SPL

Program Int ID:	186672	***Tmsp Added:***	12/21/1998 10:18:17
Site ID:	0	***TMSP Update:***	05/04/2002 07:30:48
Interest Type:	Spill Site	***Prgm Int Source:***	TALES
Preferred ID:	29597	***Address Source:***	TALES
Active?:		***Interest Phone:***	
Interest Start:	12/21/1998 10:18:17	***Township:***	
Interest End:		***County:***	St. Louis
Comments:	TRANSFER OF FUEL FROM 1 WING TO ANOTHER. CLEAN UP IN PROGRESS.		

Spill Site

Spill Site Closure Date:	12/19/1998 00:00:00
Spill Date:	12/19/1998 00:00:00
Spill Reported Date:	12/19/1998 00:00:00
Priority Code:	3
MPCA Involvement:	
Initial Cause:	UNKNOWN
Initial Source:	Truck/Vehicle Fuel
Public Safety Spill ID:	
Duty Officer Report Number:	
Spill Reported by:	CARL ANDERSON, DULUTH AIR GUARD
Report Taken By Initials:	3297
Rpt Taken by Duty Officer Flag:	
MPCA Project Manager:	3094
Tmsp Added:	12/21/1998 10:18:17
Tmsp Last Updt:	04/11/2007 08:23:02
Staff ID Last Updt:	RSUCHAN
Rep Name:	
Rep Phone:	
Archive Lot:	
Archive Box:	
Response Desc:	

Spill Released Product

Spill Product:	Aviation Gas (High Octane)
Spill Released Quantity:	30
Spill Qty Units:	Square Feet

Spill Incident Accuracy: Known
Date Added: 12/21/1998 10:18:17
Last Update: 05/04/2002 07:30:48
Staff ID Last Update: TANKS

Spill Incident Affected

Spill Incident Affect: Street, Parking Lot
Date Added: 12/21/1998 10:18:17
Last Update: 05/04/2002 07:30:48
Staff ID Last Update: TANKS

Spill Action

Spill Action: None, No File
Spill Action Person:
Date Added: 12/21/1998 10:18:17
Last Update: 05/04/2002 07:30:48
Staff ID Last Update: TANKS

Site:
DULUTH INTERNATIONAL AIRPORT DULUTH MN

HMIRS

Incident County: ST LOUIS

HMIR Historical Reports

Report No: I-1989120518
Report Type: A hazardous material incident
Date of Incident: 1989-12-19
Time of Incident: 1600
Haz Class Code:
Hazardous Class: 3
Commodity Short Nm: FUEL, AVIATION, TURBINE
Commodity Long Nm: FUEL, AVIATION, TURBINE ENGINE
Trade Name: JP-4
ID No: UN1863
Haz Waste Ind: No
Haz Waste EPA No:
HMIS Tox Inhalation?: No
TIH Hazard Zone:
Qty Released: 25
Unit of Measure: Liquid - Gallon
What Failed: ;
What Failed Desc: ;
How Failed Code: ;
How Failed Desc: ;
Failure Cause Code: 514; 538
Failure Cause Desc: Freezing; Water Damage
Ident. Markings:
Cont1 Pkging Type:
Cont1 Const Mat:
Cont1 Head Type:
Cont1 Pkg Capacity: 9400
C1 Capacity UOM: LGA
Cont1 Pkg Amt: 0
C1 Pkg Amt UOM:
Cont1 Pkg No: 1
C1 Pkg NO Failed: 1
Cont1 Pkg Mnfctr: FRUEHAUF CORP
Cont1 Pkg Mnfct Dt: 0-00-00 00:00:00
Cont1 Pkg Serial NO:
C1 Pkg Last Test Dt: 1989-12-08 00:00:00
C1 Test Const Mat:
C1 Pkg Dsign Pres.: 0
C1 Dsign Press UOM:
C1 Pkg Shell Thick: 0
C1 Shell Thick UOM:

Fed DOT Agency Nm:
Fed DOT Report No:
Report Submit Src: Paper
Inc Multiple Rows: No
Inc Non US State:
Mode Transport: Highway
Transport Phase: Unloading
Incident Occrrnce:
Mat Ship Approval?: No
Mat Ship Approv No:
Undecl Hazmat Ship?: No
Packaging Type: Cargo Tank Motor Vehicle (CTMV)
Packing Group:
Carrier Reporter: INDIANHEAD TRUCK LINE INC
CR Street Name: PO BOX 64355
CR City: ST PAUL
CR State: MN
CR Postal Code: 55164
CR Non US State:
CR Fed DOT ID: 107910
CR Hazmat Reg ID:
CR Country: US
Shipper Name: CONTINENTAL SERVICE CO
Shipper Street Name: RR #2 BOX 31
Shipper City: GRAND FORKS
Shipper State: ND
Shipper Postal: 58201
Shipper Non US St:
Shipper Country: US
Shipper Waybill: GF 10005
Ship Hazmat Reg ID:
Origin City: GRAND FORKS
Origin State: ND
Origin Postal:
Origin Non US St:
Origin Country: US
Destination City: DULUTH
Destination State: MINNESOTA
Destination Postal:
Destination Non US:
Destination Country: US

C1 Head Thickness:	0	***Cont2 Package Type:***	
C1 Head Thick UOM:		***Cont2 Const Mat:***	
C1 Pkg Srvc Pres.:	0	***Cont2 Pkg Capacity:***	0
C1 Srvc Press UOM:		***Cont2 Capacity UOM:***	
C1 Valve/Device Fail?:	No	***Cont2 Pkg Amount:***	0
C1 Device Type:		***Cont2 Pkg Amt UOM:***	
C1 Device Mnfctr:		***Cont2 Pkg No:***	0
C1 Device Model:		***Cont2 Pkg No Failed:***	0
NRC No:			

RAM Pkg Category:		***Haz NonHosp Public:***	0
RAM Pkg Cert.:	FALSE	***Haz NonHosp Old:***	
RAM Pkg Cert. NBR:		***Tot Haz Non Hosp Inj:***	
RAM Nuclide S:		***Total Hazmat Injuries:***	0
RAM Transport Index:		***Evacuation Indicator:***	No
RAM UOM:		***Public Evacuated:***	0
RAM Activity Rpted:	0	***Employees Evac:***	0
RAM UOM Rpted:		***Total Evacuated:***	0
RAM Activity:	0	***Total Evacuation Hrs:***	0
RAM Activity UOM:		***Major Artery Closed:***	No
RAM Mat Safety:		***Mjr Artery Hrs Closed:***	0
Spillage Result:	Yes	***Material Involved:***	No
Fire Result:	No	***Estimated Speed:***	0
Explosion Result:	No	***Weather Conditions:***	
Water Sewer Result:	No	***Vehicle Overturn:***	No
Gas Dispersion:	No	***Vehicle Left Roadway:***	No
Environment Damage:	No	***Passenger Aircraft:***	No
No Release Result:	No	***Cargo Baggage:***	
Fire EMS Report:	No	***Ship Non Transport:***	No
Fire EMS EMS Report:		***Ship Air First Flight:***	No
Police Report:	No	***Ship Air Subflight:***	No
Police Report No:		***Ship Init Transport:***	No
In House Cleanup:	No	***Ship Phase Transfer:***	No
Other Cleanup:	No	***Contact Name:***	LESTER A WILSEY III
Damage > 500:	No	***Contact Title:***	VICE PRESIDENT
Material Loss:	25	***Contact Business:***	
Carrier Damage:	0	***Contact Street:***	
Property Damage:	0	***Contact City:***	
Response Cost:	0	***Contact State:***	
Remediation Cost:	100	***Contact Postal:***	
Damage Old Form:	0	***Contact Non US St:***	
Total Damages Amt:	125	***Contact Country:***	US
Hazmat Fatality:	No	***Inc. Report Prepared:***	
Haz Fatal Employees:	0	***HMIS Serious Incidnt:***	No
Haz Fatal Respndrs:	0	***HMIS Serious Fatality:***	No
Haz Fatal Gen Public:	0	***HMIS Serious Injury:***	No
Tot Hazmat Fatalities:	0	***HMIS Flight Plan:***	No
Non Hazmat Fatality:	No	***HMIS Serious Evacs:***	No
Non Hazmat Fatals:	0	***HMIS Major Artery:***	No
Hazmat Injury:	No	***HMIS Bulk Release:***	No
Haz Hospital Empl:	0	***HMIS Marine Pollutnt:***	No
Haz Hospital Resp:	0	***HMIS Radioactive:***	No
Haz Hosp Gen Public:	0	***HMIS Gen Pkg Type:***	TANK
Haz Hosp Old Form:	0	***HMIS Container Code:***	MC306
Total Haz Hosp Inj:	0	***HMIS Container Desc:***	Cargo tanks
Haz Non Hosp Empl:	0	***HMIS Bulk Incident:***	Yes
Haz Non Hosp Resp:	0	***Undeclared Shipment:***	No

Description of Events: PRODUCT IS BOTTOM LOADED AND DRIVER WAS UNAWARE THAT THE EXTERNAL VALVE WAS NOT SEATED PROPERLY UNTIL THE UNLOADING LINE CAP WAS REMOVED AT THE TIME O F DELIVERY. WET LINE LEAKED OUT, APPROX 25 GALLONS, UNLOADING HOSE WAS HOOK ED UP AND THEN PROCEEDED TO COMPLETE UNLOADING. AIRBASE PERSONNEL ASSISTED DRIVER IN CLEAN-UP WITH ABSORBENT MATERIAL. THE SPILL WAS CONTAINED ON A CO NCRETE SLAB UNTIL CLEANUP WAS COMPLETED. TEMPERATURE AT THE TIME OF THIS SH IPMENT WAS APPROX. -20 DEGREES F. MOISTURE GOT INTO VALVE THROUGH CONDENSA TION AND FROZE NOT PERMITTING A TIGHT SEAT ON PREVIOUS LOAD TRANSPORTED.

Recommend Actions Taken:

Site: ***Federal Express Corp***
5431 To 33 Airpark Blvd Duluth MN 55811

MPCA AI

Agency Interest ID:	39798
Name (Map):	Federal Express Corp
Address (Map):	5431 To 33 Airpark Blvd
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.83837374
Longitude (Map):	-92.21965346
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Federal Express Corp
Address (Site):	5431 To 33 Airpark Blvd
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.83837374
Longitude (Site):	-92.21965346
County (Site):	St. Louis
Name (Req):	Federal Express Corp
Address (Req):	5431 To 33 Airpark Blvd
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.83837374
Longitude (Req):	-92.21965346
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	39798-AISI0000039798	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	1999-06-15 00:00:00	***SI Cat:***	AISI
Program:	Hazardous Waste	***SI ID:***	39798
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	3B
Quarters:		***Senate Dist:***	3
Collection Date:	6/30/2016	***TRDSQQ:***	
Tmsp Created:	7/29/1999	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	6/30/2016	***Verified:***	No
Spatial ID:	44444	***User Updt:***	geo_nc
Name:	Federal Express Corp		
Program List:	HW		
HUC 8:	04010201		
HUC 8 Name:	St. Louis River		
HUC 10:	0401020116		
HUC 12:	040102011604		
HUC 12 Name:	Saint Louis River		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010201
MPCA ID:	MND985684430	***Cong Distr:***	8
Program Co:	HW	***Senate Dis:***	3
Program Name:	Hazardous Waste	***House Dist:***	3B
Address:	MN	***IC Flag:***	No

Addr ZIP:	55811	***Coord Coll:***	Q2
City:	Hermantown	***Latitude:***	46.83837374
County:	St. Louis	***Longitude:***	-92.21965346
Activity:	Hazardous Waste		
Addr St:	5431 To 33 Airpark Blvd		
Addr City:	Duluth		
MPCA ID List:	MND985684430		
Program 1:	Hazardous Waste		
Name:	Federal Express Corp		
Watershed :	St. Louis River		
Coord Co 1:	Public Land Survey-Two Quarter		
Activity L:	Hazardous Waste		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/39798		

Agency Interests: File Request Details

Item ID:	39798-AISI0000039798	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	6/15/1999	***SI Cat:***	AISI
Program:	Hazardous Waste	***SI ID:***	39798
CTU Code:	239436	***SI Cat Desc:***	Agency Interest
CTU Name:	Hermantown	***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	8
Range Dir:		***House Dist:***	3B
Section:		***Senate Dist:***	3
Quarters:		***TRDSQQ:***	
Collection Date:	6/30/2016	***Ref Code:***	GEN
Tmsp Created:	7/29/1999	***Ref Desc:***	General Location
User Created:	DELTA_M_R1	***Verified:***	No
Tmsp Updt:	6/30/2016	***User Updt:***	geo_nc
Spatial ID:	44444		
Name:	Federal Express Corp		
Program List:	HW		
HUC 8:	4010201		
HUC 8 Name:	St. Louis River		
HUC 10:	401020116		
HUC 10 Name:	Saint Louis River		
HUC 12:	40102011604		
HUC 12 Name:	Saint Louis River		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	Q2		
Method Desc:	Public Land Survey-Two Quarter		

Site: ***Unknown - abandoned drum***
Haines Road Duluth MN

MPCA AI

Agency Interest ID:	210619
Name (Map):	
Address (Map):	
City (Map):	
State (Map):	
ZIP (Map):	
Latitude (Map):	
Longitude (Map):	
County (Map):	
County Code (Map):	
Loc Desc (Map):	
Name (Site):	
Address (Site):	
City (Site):	
State (Site):	
ZIP (Site):	
Latitude (Site):	
Longitude (Site):	
County (Site):	

Name (Req): Unknown - abandoned drum
Address (Req): Haines Road
City (Req): Duluth
State (Req): MN
ZIP (Req):
Loc Desc (Req):
Latitude (Req):
Longitude (Req):
County (Req):
County Code (Req):
Data Source: MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026)

Agency Interests: File Request Details

Item ID:	210619-AISI0000210619	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:		***SI ID:***	210619
CTU Code:		***SI Cat Desc:***	Agency Interest
CTU Name:		***Description:***	
PLS Twsp:		***SI Designation:***	
Range :		***Cong Dist:***	
Range Dir:		***House Dist:***	
Section:		***Senate Dist:***	
Quarters:		***TRDSQQ:***	
Collection Date:		***Ref Code:***	
Tmsp Created:	3/21/1996	***Ref Desc:***	
User Created:	DELTA_M_R2	***Verified:***	No
Tmsp Updt:	3/12/2009	***User Updt:***	KJULIEN

Spatial ID:
Name: Unknown - abandoned drum
Program List:
HUC 8:
HUC 8 Name:
HUC 10:
HUC 10 Name:
HUC 12:
HUC 12 Name:
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code:
Method Desc:

Site: ***Unknown - abandoned drum***
HAINES ROAD MN DULUTH MN

SPILLS

Incident ID:	19261	***AI ID Source:***	210619
Incident Status:	Closed or Completed	***Source Address:***	Haines Road
Incident Type:	Spill or Release	***Source City:***	Duluth
Incident Date:	4/4/1994	***Source State:***	MN
Program:	Emergency Response	***Source Zip:***	
Closure Type:		***Latitude:***	
County:	St. Louis	***Longitude:***	
Coord Method:			

Location: HAINES ROAD
MN

Lead Investigator and Duty Officer

Substances: 0 gallons Other substance
Duty Officer No:
Lead Investigator: Orbbie Webber
Linked Incidents:
Source List: Unknown - abandoned drum (Duluth, MN)
Address:
Ai ID Location:
State:

Zip:

Site:
Duluth Intl Airport MN 55811 Duluth MN

SPILLS

Incident ID:	29597	***AI ID Source:***	
Incident Status:	Closed or Completed	***Source Address:***	
Incident Type:	Transportation Accident - Saddle Tank	***Source City:***	
Incident Date:	12/19/1998	***Source State:***	
Program:	Emergency Response	***Source Zip:***	
Closure Type:	Response/Action Completed	***Latitude:***	
County:	St. Louis	***Longitude:***	
Coord Method:			
Location:	Duluth Intl Airport MN 55811		

Lead Investigator and Duty Officer

Substances:	30 square feet Aviation Gas
Duty Officer No:	
Lead Investigator:	Steve Leppala
Linked Incidents:	
Source List:	
Address:	
Ai ID Location:	
State:	
Zip:	

Site:
Airport Rd and Venture Duluth MN

SPILLS

Incident ID:	209882	***AI ID Source:***	
Incident Status:	Closed or Completed	***Source Address:***	
Incident Type:	Modified DO Report, Spill or Release	***Source City:***	
Incident Date:	8/11/2023	***Source State:***	
Program:	Emergency Response	***Source Zip:***	
Closure Type:	No Action Necessary	***Latitude:***	
County:	St. Louis	***Longitude:***	
Coord Method:			
Location:	Airport Rd and Venture		

Lead Investigator and Duty Officer

Substances:	
Duty Officer No:	215666
Lead Investigator:	Kayla Hovde
Linked Incidents:	209866
Source List:	
Address:	Airport Rd and Venture
Ai ID Location:	
State:	
Zip:	

Site: ***Ulland Bros. Inc. - Cloquet***
Venture Avenue and Airport Road Hermantown MN

SPILLS

Incident ID:	209871	***AI ID Source:***	
Incident Status:	Closed or Completed	***Source Address:***	
Incident Type:	Spill or Release	***Source City:***	
Incident Date:	8/11/2023	***Source State:***	
Program:	Emergency Response	***Source Zip:***	
Closure Type:	No Action Necessary	***Latitude:***	
County:	St. Louis	***Longitude:***	
Coord Method:			
Location:	Venture Avenue and Airport Road		

Lead Investigator and Duty Officer

Substances:
Duty Officer No: 215671
Lead Investigator: Kayla Hovde
Linked Incidents:
Source List: Ulland Bros. Inc. - Cloquet
Address: Venture Avenue and Airport Road
Ai ID Location:
State:
Zip:

Site: ***Minnesota Air National Guard***
Building # 500 on Site # 26 MN Duluth MN 55811

SPILLS

Incident ID: 62339
Incident Status: Closed or Completed
Incident Type: Spill or Release
Incident Date: 10/7/2004
Program: Emergency Response
Closure Type: Response/Action Completed
County: St. Louis
Coord Method:
Location: Building # 500 on Site # 26 MN

AI ID Source:
Source Address: 148 Fighter Wing Duluth Int. Airport Vip
Source City: Duluth
Source State: MN
Source Zip: 55811
Latitude:
Longitude:

Lead Investigator and Duty Officer

Substances: unknown units Jet Fuel A
Duty Officer No: 66341
Lead Investigator: Steve Leppala
Linked Incidents:
Source List: Minnesota Air National Guard (Duluth, MN)
Address:
Ai ID Location:
State:
Zip:

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ERIS updates databases as set out in ASTM Standard E1527-13 and E1527-21, Section 8.1.8 Sources of Standard Source Information:

"Government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public."

Standard Environmental Record Sources

Federal

National Priority List: NPL

The U.S. Environmental Protection Agency (EPA)'s National Priorities List (NPL) includes the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program, based primarily on the score a site receives from EPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action. This data includes NPL sites represented as polygons, where available, that can be sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS), and is limited to those sites where the NPL Status reflects the site is 'Currently on the Final NPL (F)' and/or the 'Site is Part of NPL Site (A)'. These site boundaries represent the footprint of a whole site, the sum of all the Operable Units (OUs) and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. As site investigation and remediation progress, OUs may be added, modified or refined. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Jan 18, 2026

National Priority List - Proposed: PROPOSED NPL

Sites proposed by the U.S. Environmental Protection Agency (EPA), the state agency, or concerned citizens for addition to the National Priorities List (NPL) due to contamination by hazardous waste and identified by the EPA as a candidate for cleanup because it poses a risk to human health and/or the environment. Sites represented as polygons, where available, can be sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS). These site boundaries represent the footprint of a whole site, the sum of all the Operable Units (OUs) and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Jan 18, 2026

Deleted NPL: DELETED NPL

Sites deleted from the U.S. Environmental Protection Agency (EPA)'s National Priorities List (NPL). The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate. Sites represented as polygons, where available, can be sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS). These site boundaries represent the footprint of a whole site, the sum of all the Operable Units (OUs) and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Jan 18, 2026

SEMS List 8R Active Site Inventory: SEMS

The U.S. Environmental Protection Agency's (EPA) Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted. This data includes SEMS sites from the List 8R Active file as well as applicable sites from the EPA's Facility Registry Service map tool. This data may also include applicable sites represented as polygons sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS), and is limited to those sites where the NPL Status reflects the site is 'Not on the NPL (N)' , 'Removed from Proposed (R)', and/or 'Pre-Proposal Site (S)'. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Dec 26, 2025

Inventory of Open Dumps, June 1985: ODI

The Resource Conservation and Recovery Act (RCRA) provides for publication of an inventory of open dumps. The Act defines "open dumps" as facilities which do not comply with EPA's "Criteria for Classification of Solid Waste Disposal Facilities and Practices" (40 CFR 257).

Government Publication Date: Jun 1985

SEMS List 8R Archive Sites: SEMS ARCHIVE

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. This data includes sites from the List 8R Archived site file. This data may also include applicable sites represented as polygons sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS), and is limited to those sites where the NPL Status reflects the site is 'Not on the NPL (N)' , 'Removed from Proposed (R)', and/or 'Pre-Proposal Site (S)'. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Dec 26, 2025

Comprehensive Environmental Response, Compensation and Liability Information System - CERCLIS: CERCLIS

Superfund is a program administered by the United States Environmental Protection Agency (EPA) to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The EPA administers the Superfund program in cooperation with individual states and tribal governments; this database is made available by the EPA.

Government Publication Date: Oct 25, 2013

EPA Report on the Status of Open Dumps on Indian Lands: IODI

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified congressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

Government Publication Date: Dec 31, 1998

CERCLIS - No Further Remedial Action Planned: CERCLIS NFRAP

An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. The Archive designation means that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Government Publication Date: Oct 25, 2013

CERCLIS Liens: CERCLIS LIENS

A Federal Superfund lien exists at any property where EPA has incurred Superfund costs to address contamination ("Superfund site") and has provided notice of liability to the property owner. A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. This database is made available by the United States Environmental Protection Agency (EPA). This database was provided by the United States Environmental Protection Agency (EPA). Refer to SEMS LIEN as the current data source for Superfund Liens.

Government Publication Date: Jan 30, 2014

RCRA CORRACTS-Corrective Action: RCRA CORRACTS

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. At these sites, the Corrective Action Program ensures that cleanups occur. EPA and state regulators work with facilities and communities to design remedies based on the contamination, geology, and anticipated use unique to each site.

Government Publication Date: Nov 30, 2025

RCRA non-CORRACTS TSD Facilities: RCRA TSD

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. This database includes Non-Corrective Action sites that have indicated engagement in the treatment, storage, or disposal of hazardous waste which requires a RCRA hazardous waste permit.

Government Publication Date: Nov 30, 2025

RCRA Generator List: RCRA LQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste. This list also includes RCRAInfo sites that have notified as LQGs that do not have a registered Site Manager or Certifier in RCRAInfo.

Government Publication Date: Nov 30, 2025

RCRA Small Quantity Generators List: RCRA SQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month. This list also includes RCRAInfo sites that have notified as SQGs that do not have a registered Site Manager or Certifier in RCRAInfo.

Government Publication Date: Nov 30, 2025

RCRA Very Small Quantity Generators List: RCRA VSQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Very Small Quantity Generators (VSQG) generate 100 kilograms or less per month of hazardous waste, or one kilogram or less per month of acutely hazardous waste. Additionally, VSQG may not accumulate more than 1,000 kilograms of hazardous waste at any time.

Government Publication Date: Nov 30, 2025

RCRA Non-Generators: RCRA NON GEN

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Non-Generators do not presently generate hazardous waste.

Government Publication Date: Nov 30, 2025

RCRA Sites with Controls: RCRA CONTROLS

List of Resource Conservation and Recovery Act (RCRA) facilities with institutional controls in place. RCRA gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

Government Publication Date: Nov 30, 2025

Federal Engineering Controls-ECs: FED ENG

List of Engineering controls (ECs) made available by the United States Environmental Protection Agency (EPA). ECs encompass a variety of engineered and constructed physical barriers (e.g., soil capping, sub-surface venting systems, mitigation barriers, fences) to contain and/or prevent exposure to contamination on a property. The EC listing includes remedy component data from Superfund decision documents for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Jan 30, 2026

Federal Institutional Controls- ICs: FED INST

List of Institutional controls (ICs) made available by the United States Environmental Protection Agency (EPA). ICs are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site. The IC listing includes remedy component data from Superfund decision documents for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Jan 30, 2026

Land Use Controls Information System: LUCIS

The Land Use Controls Information System (LUCIS) database is sourced from the U.S. Department of the Navy (DON). This data contains information for former Base Realignment and Closure (BRAC) properties across the United States. DON's BRAC office was tasked with tracking certain base closures while requiring the prevention of risks to human health and the environment of those properties with LUCs in place. Regarding currently available LUC Sites data, the sites listing is limited to centroid point locations for the overall installation property boundaries. Formerly obtained LUC Sites data may reflect site details that applied previously for a BRAC property.

Government Publication Date: Jun 13, 2024

Institutional Control Boundaries at NPL sites: NPL IC

These boundaries of Institutional Control areas at sites on the U.S. Environmental Protection Agency's (EPA) National Priorities List (NPL), or as Proposed or Deleted, are sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS). The EPA's NPL includes the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. Institutional controls are non-engineered instruments such as administrative and legal controls that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes.

Government Publication Date: Jan 18, 2026

Emergency Response Notification System: ERNS 1982 TO 1986

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1982-1986

Emergency Response Notification System: ERNS 1987 TO 1989

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1987-1989

Emergency Response Notification System: ERNS

Database of oil and hazardous substances spill reports made available by the United States Coast Guard National Response Center (NRC). The NRC fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. These data contain initial incident data that has not been validated or investigated by a federal/state response agency.

Government Publication Date: Feb 8, 2026

The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database: FED BROWNFIELDS

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. This data is provided by the United States Environmental Protection Agency (EPA) and includes Brownfield sites from the Cleanups in My Community (CIMC) web application.

Government Publication Date: Sep 8, 2025

FEMA Underground Storage Tank Listing: FEMA UST

The Federal Emergency Management Agency (FEMA) of the Department of Homeland Security maintains a list of FEMA owned underground storage tanks.

Government Publication Date: Dec 31, 2017

Facility Response Plan: FRP

This listing contains facilities that have submitted Facility Response Plans (FRPs) to the U.S. Environmental Protection Agency (EPA). Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit FRPs. Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments. The list includes FRP facilities sourced from the EPA FOIA office and from previously available Homeland Infrastructure Foundation-Level Data (HIFLD) file/s. Disclaimer: Per the EPA FOIA Office, the verification process for current requested FRP data is undergoing review and revision, and any similar reporting will be made public in Fiscal Year 2026. For this reason, the latest available FOIA file may be incomplete.

Government Publication Date: Jun 1, 2025

Delisted Facility Response Plans: DELISTED FRP

Facilities that once appeared in - and have since been removed from - the list of facilities that have submitted Facility Response Plans (FRP) to EPA. Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit Facility Response Plans (FRPs). Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments.

Government Publication Date: Jun 1, 2025

Historical Gas Stations: HIST GAS STATIONS

This historic directory of service stations is provided by the Cities Service Company. The directory includes Cities Service filling stations that were located throughout the United States in 1930.

Government Publication Date: Jul 1, 1930

Petroleum Refineries: REFN

This list of petroleum refineries is sourced from the U.S. Energy Information Administration (EIA), Refinery Capacity Report. The listing includes operating and idle petroleum refineries (including new refineries under construction) and refineries shut down during the previous year. The geographic area the report covers is the 50 States, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, Guam, and other U.S. possessions. Per the EIA, the facility location data represents the approximate location based on research of publicly available information from sources such as Federal agencies, company websites, and satellite images on public websites.

Government Publication Date: Oct 31, 2024

Petroleum Product and Crude Oil Rail Terminals: BULK TERMINAL

A list of petroleum product and crude oil rail terminals from the U.S. Energy Information Administration (EIA), as well as petroleum terminals sourced from Oak Ridge National Laboratory hosted by the Homeland Infrastructure Foundation-Level Database. Data includes operable bulk petroleum product terminals with a total bulk shell storage capacity of 50,000 barrels or more, and/or the ability to receive volumes from tanker, barge, or pipeline; also rail terminals handling the loading and unloading of crude oil with activity between 2017 and 2018. EIA petroleum product terminal data comes from the EIA-815 Bulk Terminal and Blender Report, which includes working, shell in operation, and shell idle for several major product groupings.

Government Publication Date: Jun 5, 2025

LIEN on Property: SEMS LIEN

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) provides Lien details on applicable properties, such as the Superfund lien on property activity, the lien property information, and the parties associated with the lien.

Government Publication Date: Dec 26, 2025

Superfund Decision Documents: SUPERFUND ROD

This database contains a list of decision documents for Superfund sites. Decision documents serve to provide the reasoning for the choice of (or) changes to a Superfund Site cleanup plan. The decision documents include completed Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD) for active and archived sites stored in the Superfund Enterprise Management System (SEMS), along with other associated memos and files. This information is maintained and made available by the U.S. Environmental Protection Agency.

Government Publication Date: Jan 30, 2026

State

Minnesota Permanent List of Priorities: PLP

The state Superfund sites in Minnesota are listed on the Minnesota Permanent List of Priorities (PLP). The hazardous waste sites on the PLP are in various stages of remediation. At these sites investigation and cleanup are needed, cleanup is underway, or cleanup has been completed and long-term monitoring or maintenance continues. This data is made available by the Minnesota Pollution Control Agency (MPCA). This database serves a purpose similar to that of the federal NPL, functioning as a state-level counterpart for prioritizing cleanup efforts at hazardous substance release sites.

Government Publication Date: Feb 26, 2026

Delisted Permanent List of Priorities (PLP): DEL PLP

This list contains sites that were previously included - and have since been removed from - the Permanent List of Priorities (PLP) maintained by Minnesota's Pollution Control Agency (MPCA) but have now been delisted.

Government Publication Date: Feb 26, 2026

Minnesota Site Remediation Section Database: SHWS

The Site Remediation Section identifies, investigates, and determines appropriate cleanup plans for abandoned or uncontrolled hazardous waste sites where a release or potential release of a hazardous substance poses a risk to human health or the environment. This data is made available by the Minnesota Pollution Control Agency (MPCA)'s Site Remediation Section. This database serves a purpose similar to that of the federal Superfund Enterprise Management System (SEMS), functioning as a state-level counterpart for tracking potential hazardous substance release sites.

Government Publication Date: Feb 26, 2026

MPCA Site Assessment and Emergency Response Sites: SITE ASSESSMENT

List of active and closed sites that are currently under site assessment by Minnesota Pollution Control Agency (MPCA) and are a part of MPCA Remediation Sites list, and Emergency Management Sites where a chemical spill or some other environmental incident occurred that required immediate action to protect human health and the environment (includes only Emergency Management Sites that require significant staff involvement).

Government Publication Date: Feb 26, 2026

Permitted Solid Waste Facilities: SWF/LF

A list of permitted solid waste and landfill facilities made available by the Minnesota Pollution Control Agency (MPCA).

Government Publication Date: Mar 3, 2026

Closed Landfills Priority List: LCP

The Minnesota Legislature enacted the Landfill Cleanup Act (LCA) in 1994 to ensure the proper closure and post-closure care at up to 112 closed, permitted municipal sanitary landfills located throughout the state. Based on this legislation, the Minnesota Pollution Control Agency (MPCA) created the Closed Landfill Program (CLP) to administer the LCA mandates. This data made available by The Minnesota Pollution Control Agency (MPCA).

Government Publication Date: Jan 16, 2025

Unpermitted Dump Sites: UNPERMITTED LF

The Minnesota Pollution Control Agency (MPCA) defines "dumps" as those landfills that never held a valid permit from the MPCA. Generally, dumps existed prior to the permitting program established with the creation of the MPCA in 1967. This database is made available by MPCA.

Government Publication Date: Feb 26, 2026

Recycling Markets Directory: RECYCLING

The Recycling Markets Directory is provided by the Minnesota Pollution Control Agency (MPCA). The markets in this database accept large (commercial) quantities of materials.

Government Publication Date: Mar 4, 2026

Historical Leaking Underground Storage Tanks: HIST LUST

A list of leaking underground storage tanks (LUSTs) in the tanks database maintained by the Minnesota Pollution Control Agency (MPCA) up until Nov 01, 2016.

Government Publication Date: Nov 1, 2016

Deleted Leaking Underground Storage Tanks: DEL LUST

A list of leaking underground storage tanks that are often deleted for various reasons. Deletion occurs primarily due to a duplication, or that the source was determined to not be from a tank. This list was provided by Minnesota Pollution Control Agency.

Government Publication Date: Jan 5, 2016

Historical Leaking Aboveground Storage Tanks: HIST LAST

A list of leaking aboveground storage tanks (LASTs) in the tanks database maintained by the Minnesota Pollution Control Agency (MPCA) up until Nov 01, 2016.

Government Publication Date: Nov 1, 2016

Historical Leak Sites: HIST LEAKSITES

A list of leak sites that were neither determined as aboveground nor underground in the tanks database maintained by the Minnesota Pollution Control Agency (MPCA) up until Nov 01, 2016.

Government Publication Date: Nov 1, 2016

MPCA Remediation Leak Sites: LST REM SITE

This is list of leak sites in which the Minnesota Pollution Control Agency (MPCA) is involved in remediation activities. The MPCA publishes this listing.

Government Publication Date: Feb 26, 2026

MPCA Tank Incidents: LST INCIDENT

A list of leaking and registered tank sites in Minnesota that includes locations, details of tank installation and construction, and installed safety measures. This list is provided by Minnesota Pollution Control Agency (MPCA).

Government Publication Date: Feb 23, 2026

Delisted Leaking Storage Tanks: DELISTED LST

This database contains a list of closed leaking storage tank sites that were removed from the Minnesota Pollution Control Agency (MPCA).

Government Publication Date: Feb 26, 2026

Underground Storage Tanks: UST

In Minnesota, there are about 18,000 regulated underground storage tanks (USTs) currently in use. The Underground Storage Tank Program in the Minnesota Pollution Control Agency (MPCA) was created to help prevent contamination caused by leaking tanks. This is a list that contains all regulated USTs. Some types of USTs are exempt from state regulations, such as: tanks with capacity of 110 gallons or less; farm and residential tanks with a 1,100-gallon capacity or less, storing motor fuel for non-commercial purposes, or heating oil for on-site consumption; tanks that contain a minimum concentration of regulated substances; flow-through process tanks; oil-water separators. This data is made available by MPCA.

Government Publication Date: Feb 25, 2026

Minnesota Above Ground Storage Tanks: AST

There are more than 20,000 regulated above-ground storage tanks (ASTs) currently in use across Minnesota. Most tanks located above ground containing liquid substances (i.e., not gaseous or solid at ambient temperature and pressure) are subject to the Minnesota Pollution Control Agency's (MPCA) rules for design and operation of ASTs. This list contains ASTs regulated by MPCA. Some types of ASTs are exempt from the regulations, such as but not limited to the following: ASTs with a capacity of 500 gallons or less; Farm ASTs; Residential ASTs storing 1,100 gallons or less of motor fuel used for noncommercial purposes; ASTs containing hazardous wastes subject to a treatment or storage permit or containing agricultural chemicals regulated under MN Statutes 18B, 18C, 18D; Stormwater collection systems and septic systems. This data is made available by the MPCA.

Government Publication Date: Feb 23, 2026

Tank Sites: HIST TANK

A list of tank sites not included in AST or UST, this list maintained by the Minnesota Pollution Control Agency (MPCA) up until Dec 30, 2016.

Government Publication Date: Dec 30, 2016

Delisted Storage Tanks: DELISTED TANK

This database contains a list of storage tank sites that were removed from the Minnesota Pollution Control Agency (MPCA).

Government Publication Date: Feb 26, 2026

Sites with Institutional Control Events: INST

A list made available by the Minnesota Pollution Control Agency (MPCA) consisting of remediation sites that have various institutional controls in place.

Government Publication Date: Feb 27, 2026

Agricultural Contingency Sites Boundaries: AG CONTINGENCY

The Minnesota Department of Agriculture (MDA) Incident Response Unit (IRU) is the state lead agency for the investigation and remediation of incidents involving agricultural chemicals (pesticides and fertilizer). This MDA IRU database includes sites with a soil or ground water contingency, deed restriction, local ordinance, restrictive covenant or deed affidavit in place. The accuracy of the boundaries of these sites can be variable - in most cases, the site boundaries should be considered as only representing the vicinity of the soil or ground water contingency area or plume.

Government Publication Date: Nov 27, 2025

Petroleum Brownfields Program Sites: BROWNFIELDS

The Minnesota Pollution Control Agency (MPCA)'s Petroleum Brownfields Program handles petroleum contamination under the Petroleum Tank Release Cleanup Act (Minnesota Statutes § 115C). This data is made available by MPCA.

Government Publication Date: Feb 26, 2026

Voluntary Investigation and Cleanup Program List: VIC

The Minnesota Pollution Control Agency's (MPCA) Brownfield Program consists of an integrated program called the Voluntary Investigation and Cleanup (VIC) Program. This program handles hazardous substance contamination under Minnesota's Environmental Response and Liability Act (Minnesota Statutes § 115B). This database is made available by MPCA.

Government Publication Date: Feb 26, 2026

Potential Voluntary Investigation and Cleanup Program Sites: POTENTIAL VIC

This listing of Potential Voluntary Investigation and Cleanup Program sites is provided by the Minnesota Pollution Control Agency (MPCA). These potential sites have not yet entered into the VIC Program until an application has been received at the MPCA.

Government Publication Date: Apr 22, 2016

MPCA Agency Interests: MPCA AI

Facility, site and project locations from the Minnesota Pollution Control Agency's enterprise database, representing locations associated with waste water, storm water, hazardous waste, feedlot, solid waste, tanks, remediation, and other agency programs. Includes records from "What's In My Neighborhood Sites".

Government Publication Date: Jan 27, 2026

Tribal

Leaking Underground Storage Tanks on Tribal/Indian Lands: INDIAN LUST

This list of leaking underground storage tanks (LUSTs) on Tribal/Indian Lands in Region 5, which includes Minnesota, is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Nov 21, 2025

Underground Storage Tanks on Tribal/Indian Lands: INDIAN UST

This list of underground storage tanks (USTs) on Tribal/Indian Lands in Region 5, which includes Minnesota, is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Nov 21, 2025

Delisted Tribal Leaking Storage Tanks: DELISTED INDIAN LST

Leaking Underground Storage Tank (LUST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian LUST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Nov 21, 2025

Delisted Tribal Underground Storage Tanks: DELISTED INDIAN UST

Underground Storage Tank (UST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian UST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Nov 21, 2025

County

No County standard environmental record sources available for this State.

Additional Environmental Record Sources

Federal

PFAS Greenhouse Gas Emissions Data: PFAS GHG

The U.S. Environmental Protection Agency's (EPA) Greenhouse Gas Reporting Program (GHGRP) collects Greenhouse Gas (GHG) data from large emitting facilities (25,000 metric tons of carbon dioxide equivalent (CO2e) per year), and suppliers of fossil fuels and industrial gases that results in GHG emissions when used. This dataset is sourced from the EPA's PFAS Analytic Tools, and it includes GHG emissions data for facilities that emit or have emitted since 2010 chemicals identified as PFAS based on EPA's CompTox Chemicals Dashboard lists of PFAS with defined and undefined structures. PFAS emissions data has been identified for facilities engaged in the following industrial processes: Aluminum Production (GHGRP Subpart F), HCFC-22 Production and HFC-23 Destruction (Subpart O), Electronics Manufacturing (Subpart I), Fluorinated Gas Production (Subpart L), Magnesium Production (Subpart T), Electrical Transmission and Distribution Equipment Use (Subpart DD), and Manufacture of Electric Transmission and Distribution Equipment (Subpart SS). Over time, other industrial processes with required GHGRP reporting may include PFAS emissions data and the list of reportable gases may change over time. Note that some regulatory programs have specified chemical structure requirements that define PFAS differently than the lists in EPA's CompTox Chemicals Dashboard.

Government Publication Date: Mar 2, 2026

On-Scene Coordinator Response Sites: OSC RESPONSE

This list of On-Scene Coordinator (OSC) Response Sites is provided by the U.S. Environmental Protection Agency (EPA). OSCs are the federal officials responsible for monitoring or directing responses to all oil spills and hazardous substance releases reported to the federal government. OSCs coordinate all federal efforts with, and provide support and information to local, state, and regional response communities. An OSC is an agent of either EPA or the U.S. Coast Guard (USCG), depending on where the incident occurs. EPA's OSCs have primary responsibility for spills and releases to inland areas and waters. USCG OSCs have responsibility for coastal waters and the Great Lakes. In general, an OSC has the following key responsibilities during and after a response: Assessment, Monitoring, Response Assistance, and Evaluation.

Government Publication Date: Oct 8, 2025

Facility Registry Service/Facility Index: FINDS/FRS

The Facility Registry Service (FRS) is a centrally managed database that identifies facilities, sites, or places subject to environmental regulations or of environmental interest. FRS creates high-quality, accurate, and authoritative facility identification records through rigorous verification and management procedures that incorporate information from program national systems, state master facility records, and data collected from EPA's Central Data Exchange registrations and data management personnel. This list is made available by the U.S. Environmental Protection Agency (EPA).

Government Publication Date: Jan 1, 2026

Toxics Release Inventory (TRI) Program: TRIS

The U.S. Environmental Protection Agency's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of toxic chemicals from U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. There are currently 770 individually listed chemicals and 33 chemical categories covered by the TRI Program. Facilities that manufacture, process or otherwise use these chemicals in amounts above established levels must submit annual reporting forms for each chemical. Note that the TRI chemical list does not include all toxic chemicals used in the U.S. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment. This database includes TRI Reporting Data for calendar years 1987 through 2021 and Preliminary Data for 2022.

Government Publication Date: Sep 20, 2023

PFOA/PFOS Contaminated Sites: PFAS NPL

This list of Superfund Sites with Per- and Polyfluoroalkyl Substances (PFAS) detections is made available by the U.S. Environmental Protection Agency (EPA) in their PFAS Analytic Tools data, previously the list was obtained by EPA FOIA requests. EPA's Office of Land and Emergency Management and EPA Regional Offices maintain what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment. Limitations: Detections of PFAS at National Priorities List (NPL) sites do not mean that people are at risk from PFAS, are exposed to PFAS, or that the site is the source of the PFAS. The information in the Superfund NPL and Superfund Alternative Agreement (SAA) PFAS detection site list is years old and may not be accurate today. Site information such as site name, site ID, and location has been confirmed for accuracy; however, PFAS-related information such as media sampled, drinking water being above the health advisory, or mitigation efforts has not been verified. For Federal Facilities data, the other Federal agencies (OFA) are the lead agency for their data and provided them to EPA.

Government Publication Date: Dec 29, 2025

Federal Agency Locations with Known or Suspected PFAS Detections: PFAS FED SITES

This list of federal agency locations with known or suspected detections of Per- and Polyfluoroalkyl Substances (PFAS) is made available by the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools data. The EPA outlines that these data are gathered from several federal entities, such as the federal Superfund program, Department of Defense (DOD), National Aeronautics and Space Administration (NASA), Department of Transportation (DOT), and Department of Energy (DOE). The dates this data was extracted for the PFAS Analytic Tools range from 2022 to 2025 per agency entity dataset. Sites on this list do not necessarily reflect the source/s of PFAS contamination and detections do not indicate level of risk or human exposure at the site. Agricultural notifications in this data are limited to DOD sites only. At this time, the EPA is aware that this list is not comprehensive of all Federal agencies.

Government Publication Date: May 30, 2025

SSEHRI PFAS Contamination Sites: PFAS SSEHRI

This PFAS Contamination Site Tracker database is compiled by the PFAS Project Lab, part of the Social Science Environmental Health Research Institute (SSEHRI) at Northeastern University. According to the SSEHRI, the database records qualitative and quantitative data from each known site of PFAS contamination, including timeline of discovery, sources, levels, health impacts, community response, and government response. The goal of this database is to compile information and support public understanding of the rapidly unfolding issue of PFAS contamination. All data presented was extracted from government websites, news articles, or publicly available documents. Locations for the Known PFAS Contamination Sites are sourced from the PFAS Sites and Community Resources Map by the PFAS-REACH team, credited to PFAS Project Lab, Silent Spring Institute, and PFAS Exchange. Disclaimer: The source conveys the data undergoes regular updates as new information becomes available, some sites may be missing and/or contain information that is incorrect or outdated, as well as their information represents all contamination sites SSEHRI is aware of, not all possible contamination sites. This data is not intended to be used for legal purposes. Access the following source link for the most current information: https://pfasproject.com/pfas-sites-and-community-resources/

Government Publication Date: Aug 1, 2025

National Response Center PFAS Spills: PFAS ERNS

This Per- and Poly-Fluoroalkyl Substances (PFAS) Spills dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The National Response Center (NRC), operated by the U.S. Coast Guard, is the designated federal point of contact for reporting all oil, chemical, and other discharges into the environment, for the United States and its territories. This dataset contains NRC spill information from 1990 to the present that is restricted to records associated with PFAS and PFAS-containing materials. Incidents are filtered to include only records with a "Material Involved" or "Incident Description" related to Aqueous Film Forming Foam (AFFF). The keywords used to filter the data included "AFFF," "Fire Fighting Foam," "Aqueous Film Forming Foam," "Fire Suppressant Foam, "PFAS," "PERFL," "PFOA," "PFOS," and "Genx." Limitations: The data from the NRC website contains initial incident data that has not been validated or investigated by a federal/state response agency. Keyword searches may misidentify some incident reports that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS spills/release incidents.

Government Publication Date: Feb 16, 2026

PFAS NPDES Discharge Monitoring: PFAS NPDES

This list of National Pollutant Discharge Elimination System (NPDES) permitted facilities with required monitoring for Per- and Polyfluoroalkyl (PFAS) Substances is made available via the U.S. Environmental Protection Agency (EPA)'s PFAS Analytic Tools. Any point-source wastewater discharger to waters of the United States must have a NPDES permit, which defines a set of parameters for pollutants and monitoring to ensure that the discharge does not degrade water quality or impair human health. This list includes NPDES permitted facilities associated with permits that monitor for Per- and Polyfluoroalkyl Substances (PFAS), limited to the years 2007 - present. EPA further advises the following regarding these data: currently, fewer than half of states have required PFAS monitoring for at least one of their permittees, and fewer states have established PFAS effluent limits for permittees. For states that may have required monitoring, some reporting and data transfer issues may exist on a state-by-state basis.

Government Publication Date: Dec 16, 2024

Perfluorinated Alkyl Substances (PFAS) from Toxic Release Inventory: PFAS TRI

List of Toxics Release Inventory (TRI) facilities at which the reported chemical is a per- or polyfluoroalkyl (PFAS) substance included in the U.S. Environmental Protection Agency's (EPA) consolidated PFAS Master List of PFAS Substances. Encompasses Toxics Release Inventory records included in the EPA PFAS Analytic Tools. The EPA's TRI database currently tracks information on disposal or releases of 770 individually listed toxic chemicals and 33 chemical categories from thousands of U.S. facilities and details about how facilities manage those chemicals through recycling, energy recovery, and treatment. This listing includes TRI Reporting Data for calendar years 1987 through 2021 and Preliminary Data for 2022.

Government Publication Date: Sep 20, 2023

PFAS Water Quality Portal Sampling Data: PFAS WATER

This Per- and Poly-Fluoroalkyl Substances (PFAS) Environmental Media Sampling Data is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The Water Quality Portal (WQP), as a cooperative service sponsored by the United States Geological Survey, the EPA, and the National Water Quality Monitoring Council, is part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations, and individuals submit project details and sampling results to this public repository. Limitations: EPA did not carry out the sampling or testing of a majority of the data in the WQP PFAS dataset. EPA can only speak to the accuracy and completeness of the data from projects like the National Aquatic Resource Surveys for which EPA is the data owner/organization. Data may exist within the file on Quality Assurance Project Plans (QAPPs) and the approving agency of the QAPP, if a QAPP is entered.

Government Publication Date: Feb 2, 2026

PFAS TSCA Manufacture and Import Facilities: PFAS TSCA

The U.S. Environmental Protection Agency (EPA) issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. This list is specific only to TSCA Manufacture and Import Facilities with reported per- and poly-fluoroalkyl (PFAS) substances. Data file is sourced from EPA's PFAS Analytic Tools TSCA dataset which includes CDR/Inventory Update Reporting data from 1998 up to 2020. Disclaimer: This data file includes production and importation data for chemicals identified in EPA's CompTox Chemicals Dashboard list of PFAS without explicit structures and list of PFAS structures in DSSTox. Note that some regulations have specific chemical structure requirements that define PFAS differently than the lists in EPA's CompTox Chemicals Dashboard. Reporting information on manufactured or imported chemical substance amounts should not be compared between facilities, as some companies claim Chemical Data Reporting Rule data fields for PFAS information as Confidential Business Information.

Government Publication Date: Jan 5, 2023

PFAS Waste Transfers from RCRA e-Manifest: PFAS E-MANIFEST

This Per- and Poly-Fluoroalkyl Substances (PFAS) Waste Transfers dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. Every shipment of hazardous waste in the U.S. must be accompanied by a shipment manifest, which is a critical component of the cradle-to-grave tracking of wastes mandated by the Resource Conservation and Recovery Act (RCRA). According to the EPA, currently no Federal Waste Code exists for any PFAS compounds. To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: • PFAS • PFOA • PFOS • PERFL • AFFF • GENX • GEN-X (plus the Vermont state-specific waste codes). Limitations: Amount or concentration of PFAS being transferred cannot be determined from the manifest information. Keyword searches may misidentify some manifest records that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS waste transfers.

Government Publication Date: Feb 14, 2026

PFAS Industry Sectors: PFAS IND

This Per- and Poly-Fluoroalkyl Substances (PFAS) Industry Sectors dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The dataset was developed from various sources that show which industries may be handling PFAS including: EPA's Enforcement and Compliance History Online (ECHO) records restricted to potential PFAS-handling industry sectors, based on the North American Industry Classification System (NAICS) Codes and Standard Industrial Classification (SIC) Codes associated federal regulatory programs (e.g., Clean Water Act, Clean Air Act, and Resource Conservation and Recovery Act) at the facility level; ECHO records for Fire Training Sites identified where fire-fighting foam may have been used in training exercises; and 14 CFR Part 139 Airports compiled from historic and current records from the FAA Airport Data and Information Portal. Since July 2006, all certificated Part 139 Airports are required to have fire-fighting foam onsite that meet certain military specifications, which to date have been fluorinated (Aqueous Film Forming Foam). Limitations: Inclusion in this dataset does not indicate that PFAS are being manufactured, processed, used, or released by the facility. Listed facilities potentially handle PFAS based on their industrial profile but are unconfirmed by the EPA. Keyword searches in ECHO for Fire Training sites may misidentify some facilities and should not be considered to be an exhaustive list of fire training facilities in the U.S.

Government Publication Date: Feb 16, 2026

Hazardous Materials Information Reporting System: HMIRS

The Hazardous Materials Incident Reporting System (HMIRS) database contains unintentional hazardous materials release information reported to the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.

Government Publication Date: Jan 29, 2026

National Clandestine Drug Labs: NCDL

The U.S. Department of Justice ("the Department"), Drug Enforcement Administration (DEA), provides this data as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy.

Government Publication Date: Nov 30, 2023

Toxic Substances Control Act: TSCA

The U.S. Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule. The CDR enables EPA to collect and publish information on the manufacturing, processing, and use of commercial chemical substances and mixtures (referred to hereafter as chemical substances) on the TSCA Chemical Substance Inventory (TSCA Inventory). This includes current information on chemical substance production volumes, manufacturing sites, and how the chemical substances are used. This information helps the Agency determine whether people or the environment are potentially exposed to reported chemical substances. EPA publishes submitted CDR data that is not Confidential Business Information (CBI). EPA CDR collections occur approximately every four years and reporting requirements change per collection.

Government Publication Date: May 12, 2022

Hist TSCA: HIST TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.
The 2006 IUR data summary report includes information about chemicals manufactured or imported in quantities of 25,000 pounds or more at a single site during calendar year 2005. In addition to the basic manufacturing information collected in previous reporting cycles, the 2006 cycle is the first time EPA collected information to characterize exposure during manufacturing, processing and use of organic chemicals. The 2006 cycle also is the first time manufacturers of inorganic chemicals were required to report basic manufacturing information.
Government Publication Date: Dec 31, 2006

FTTS Administrative Case Listing: FTTS ADMIN
An administrative case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.
Government Publication Date: Jan 19, 2007

FTTS Inspection Case Listing: FTTS INSP
An inspection case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.
Government Publication Date: Jan 19, 2007

Potentially Responsible Parties List: PRP
Early in the site cleanup process, the U.S. Environmental Protection Agency (EPA) conducts a search to find the Potentially Responsible Parties (PRPs). The EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site. This listing contains PRPs, Noticed Parties, at sites in the EPA's Superfund Enterprise Management System (SEMS).
Government Publication Date: Dec 26, 2025

State Coalition for Remediation of Drycleaners Listing: SCRD DRYCLEANER
The State Coalition for Remediation of Drycleaners (SCRD) was established in 1998, with support from the U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation. Coalition members are states with mandated programs and funding for drycleaner site remediation. Current members are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin. Since 2017, the SCRD no longer maintains this data, refer to applicable state source data where available.
Government Publication Date: Nov 08, 2017

Integrated Compliance Information System (ICIS): ICIS
The Integrated Compliance Information System (ICIS) database contains integrated enforcement and compliance information across most of U.S. Environmental Protection Agency's (EPA) programs. The vision for ICIS is to replace EPA's independent databases that contain enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions and a subset of the Permit Compliance System (PCS), which supports the National Pollutant Discharge Elimination System (NPDES). This information is maintained by the EPA Headquarters and at the Regional offices. A future release of ICIS will completely replace PCS and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities that support compliance and enforcement programs, including incident tracking, compliance assistance, and compliance monitoring.
Government Publication Date: Oct 18, 2025

Drycleaner Facilities: FED DRYCLEANERS
A list of drycleaner facilities from Enforcement and Compliance History Online (ECHO) data as made available by the U.S. Environmental Protection Agency (EPA), sourced from the ECHO Exporter file. This EPA source file tracks facilities that possess NAICS and SIC codes that classify businesses as drycleaner establishments.
Government Publication Date: Jan 24, 2026

Delisted Drycleaner Facilities: DELISTED FED DRY
List of sites which once appeared on - and have since been removed from - the list of drycleaner facilities included in Enforcement and Compliance History Online (ECHO) data as made available by the U.S. Environmental Protection Agency (EPA), sourced from the ECHO Exporter file. This EPA source file tracks facilities that possess NAICS and SIC codes that classify businesses as drycleaner establishments.
Government Publication Date: Jan 24, 2026

Formerly Used Defense Sites: FUDS

Formerly Used Defense Sites (FUDS) are properties that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DOD) is responsible for an environmental restoration. The FUDS Annual Report to Congress (ARC) is published by the U.S. Army Corps of Engineers (USACE). This data is compiled from the USACE's Geospatial FUDS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) FUDS dataset which applies to the Fiscal Year 2021 FUDS Inventory.

Government Publication Date: May 15, 2023

FUDS Munitions Response Sites: FUDS MRS

Boundaries of Munitions Response Sites (MRS), published with the Formerly Used Defense Sites (FUDS) Annual Report to Congress (ARC) by the U.S. Army Corps of Engineers (USACE). An MRS is a discrete location within a Munitions response area (MRA) that is known to require a munitions response. An MRA means any area on a defense site that is known or suspected to contain unexploded ordnance (UXO), discarded military munitions (DMM), or munitions constituents (MC). This data is compiled from the USACE's Geospatial MRS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) MRS dataset.

Government Publication Date: May 15, 2023

Former Military Nike Missile Sites: FORMER NIKE

This information was taken from report DRXTH-AS-IA-83A016 (Historical Overview of the Nike Missile System, 12/1984) which was performed by Environmental Science and Engineering, Inc. for the U.S. Army Toxic and Hazardous Materials Agency Assessment Division. The Nike system was deployed between 1954 and the mid-1970's. Among the substances used or stored on Nike sites were liquid missile fuel (JP-4); starter fluids (UDKH, aniline, and furfuryl alcohol); oxidizer (IRFNA); hydrocarbons (motor oil, hydraulic fluid, diesel fuel, gasoline, heating oil); solvents (carbon tetrachloride, trichloroethylene, trichloroethane, stoddard solvent); and battery electrolyte. The quantities of material a disposed of and procedures for disposal are not documented in published reports. Virtually all information concerning the potential for contamination at Nike sites is confined to personnel who were assigned to Nike sites. During deactivation most hardware was shipped to depot-level supply points. There were reportedly instances where excess materials were disposed of on or near the site itself at closure. There was reportedly no routine site decontamination.

Government Publication Date: Dec 2, 1984

PHMSA Pipeline Safety Flagged Incidents: PIPELINE INCIDENT

This list of flagged pipeline incidents is made available by the U.S. Department of Transportation (US DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA regulations require incident and accident reports for five different pipeline system types. Accidents reported on hazardous liquid gravity lines (§195.13) and reporting-regulated-only hazardous liquid gathering lines (§195.15) and incidents reported on Type R gas gathering (§192.8(c)) are not included in the flagged incident file data.

Government Publication Date: Jul 10, 2025

Material Licensing Tracking System (MLTS): MLTS

A list of sites that store radioactive material subject to the Nuclear Regulatory Commission (NRC) licensing requirements. This list is maintained by the NRC. As of September 2016, the NRC no longer releases location information for sites. Site locations were last received in July 2016.

Government Publication Date: May 11, 2021

Historic Material Licensing Tracking System (MLTS) sites: HIST MLTS

A historic list of sites that have inactive licenses and/or removed from the Material Licensing Tracking System (MLTS). In some cases, a site is removed from the MLTS when the state becomes an "Agreement State". An Agreement State is a State that has signed an agreement with the Nuclear Regulatory Commission (NRC) authorizing the State to regulate certain uses of radioactive materials within the State.

Government Publication Date: Jan 31, 2010

Mines Master Index File: MINES

The Master Index File (MIF) is provided by the United States Department of Labor, Mine Safety and Health Administration (MSHA). This file, which was originally created in the 1970's, contained many Mine-IDs that were invalid. MSHA removes invalid IDs from the MIF upon discovery. MSHA applicable data includes the following: all Coal and Metal/Non-Metal mines under MSHA's jurisdiction since 1/1/1970; mine addresses for all mines in the database except for Abandoned mines prior to 1998 from MSHA's legacy system (addresses may or may not correspond with the physical location of the mine itself); violations that have been assessed penalties as a result of MSHA inspections beginning on 1/1/2000; and violations issued as a result of MSHA inspections conducted beginning on 1/1/2000.

Government Publication Date: Aug 8, 2025

Surface Mining Control and Reclamation Act Sites: SMCRA

This inventory of land and water impacted by past mining (primarily legacy coal mining operations) is maintained by the U.S. Department of the Interior's Office of Surface Mining Reclamation and Enforcement (OSMRE), as it provides information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). This inventory contains information on the type and extent of Abandoned Mine Land (AML) Problems, as well as information on the cost associated with the reclamation of those problems. The data is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed. Disclaimer: Per the OSMRE, States and tribes who enter their data into e-AMLIS (AML Inventory System) may truncate their latitude and longitude so the precise location of usually dangerous AMLs is not revealed in an effort to protect the public from searching for these AMLs, most of which are on private property. If more precise location information is needed, please contact the applicable state/tribe of interest.

Government Publication Date: Oct 30, 2025

Mineral Resource Data System: MRDS

The Mineral Resource Data System (MRDS) is a collection of reports describing metallic and nonmetallic mineral resources throughout the world. Included are deposit name, location, commodity, deposit description, geologic characteristics, production, reserves, resources, and references. This database contains the records previously provided in the Mineral Resource Data System (MRDS) of USGS and the Mineral Availability System/Mineral Industry Locator System (MAS/MILS) originated in the U.S. Bureau of Mines, which is now part of USGS. The USGS has ceased systematic updates of the MRDS database with their focus more recently on deposits of critical minerals while providing a well-documented baseline of historical mine locations from USGS topographic maps.

Government Publication Date: Mar 15, 2016

DOE Legacy Management Sites: LM SITES

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) currently manages radioactive and chemical waste, environmental contamination, and hazardous material at over 100 sites across the U.S. The LM manages sites with diverse regulatory drivers (statutes or programs that direct cleanup and management requirements at DOE sites) or as part of internal DOE or congressionally-recognized programs, such as but not limited to: Formerly Utilized Sites Remedial Action Program (FUSRAP), Uranium Mill Tailings Radiation Control Act (UMTRCA Title I, Tile II), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), Decontamination and Decommissioning (D&D), Nuclear Waste Policy Act (NWPA). The intent of the site location is to provide a general reference point to the site on a national scale. The coordinates of each site point can be the location of a site monument, the centroid of the site boundary, or a general location of the site. This site listing includes data exported from the DOE Office of LM's Geospatial Environmental Mapping System (GEMS). GEMS Data disclaimer: The DOE Office of LM makes no representation or warranty, expressed or implied, regarding the use, accuracy, availability, or completeness of the data presented herein.

Government Publication Date: Nov 6, 2025

Alternative Fueling Stations: ALT FUELS

This list of alternative fueling stations is sourced from the U.S. Department of Energy's (DOE) Alternative Fuels Data Center (AFDC) and National Renewable Energy Laboratory (NREL). The DOE's Office of Energy Efficiency & Renewable Energy launched the AFDC in 1991 as a repository for alternative fuel vehicle performance data, which provides a wealth of information and data on alternative and renewable fuels, advanced vehicles, fuel-saving strategies, and emerging transportation technologies. The data includes Biodiesel (B20 and above), Compressed Natural Gas (CNG), Electric, Ethanol (E85), Hydrogen, Liquefied Natural Gas (LNG), Propane (LPG), and Renewable Diesel (R20 and above) fuel type locations.

Government Publication Date: Mar 11, 2026

Superfunds Consent Decrees: CONSENT DECREES

This list of Superfund consent decrees is provided by the Department of Justice, Environment & Natural Resources Division (ENRD) through a Freedom of Information Act (FOIA) applicable file. This listing includes Cases filed since 2010 limited to the following: Consent Decrees for CERCLA or Superfund Sites filed and/or as proposed within the ENRD's Case Management System (CMS); and applicable ENRD's Environmental Defense Section (EDS) CERCLA Cases with "Consent" in History Note. CMS may not reflect the latest developments in a case, nor can the agency guarantee the accuracy of the data. ENRD Disclaimer: Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA; response is limited to those records that are subject to the requirements of the FOIA; however, this should not be taken as an indication that excluded records do, or do not, exist.

Government Publication Date: Dec 30, 2025

Air Facility System: AFS

This EPA retired Air Facility System (AFS) dataset contains emissions, compliance, and enforcement data on stationary sources of air pollution. Regulated sources cover a wide spectrum; from large industrial facilities to relatively small operations such as dry cleaners. AFS does not contain data on facilities that are solely asbestos demolition and/or renovation contractors, or landfills. ECHO Clean Air Act data from AFS are frozen and reflect data as of October 17, 2014; the EPA retired this system for Clean Air Act stationary sources and transitioned to ICIS-Air.

Government Publication Date: Oct 17, 2014

Registered Pesticide Establishments: SSTS

This national list of active EPA-registered foreign and domestic pesticide and/or device-producing establishments is based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that each producing establishment must place its EPA establishment number on the label or immediate container of each pesticide, active ingredient or device produced. An EPA establishment number on a pesticide product label identifies the EPA registered location where the product was produced. The list of establishments is made available by the U.S. Environmental Protection Agency (EPA).

Government Publication Date: Sep 26, 2025

Polychlorinated Biphenyl (PCB) Transformers: PCBT

Locations of Transformers Containing Polychlorinated Biphenyls (PCBs) registered with the United States Environmental Protection Agency. PCB transformer owners must register their transformer(s) with EPA. Although not required, PCB transformer owners who have removed and properly disposed of a registered PCB transformer may notify EPA to have their PCB transformer de-registered. Data made available by EPA.

Government Publication Date: Oct 15, 2019

Polychlorinated Biphenyl (PCB) Notifiers: PCB

Facilities included in the national list of facilities that have notified the United States Environmental Protection Agency (EPA) of Polychlorinated Biphenyl (PCB) activities. Any company or person storing, transporting or disposing of PCBs or conducting PCB research and development must notify the EPA and receive an identification number.

Government Publication Date: Aug 12, 2025

Power Plants: POWER PLANTS

This list of power plants is provided by the U.S. Energy Information Administration (EIA). The listing includes operable electric generating plants in the United States by energy source, originating from the EIA-860, Annual Electric Generator Report; EIA-860M, Monthly Update to the Annual Electric Generator Report; and EIA-923, Power Plant Operations Report. It includes all operable plants by energy source with a combined nameplate capacity of 1 megawatt or more that are operating, are on standby, or out of service for short- or long-term.

Government Publication Date: Jun 5, 2025

Historical Business Activity Risk: HIST RISK

Proprietary list of sites identified as potentially having engaged in business activity that poses a higher-than-normal risk of contamination. Records originate from historical city directories, and are included in this list based on broad business categories Potentially Hazardous Chemical Users and Fuel and Automotive, including but not limited to Dry Cleaners and Fuel Stations, Garages, etc. Inclusion in this listing does not indicate that there is or ever has been contamination; rather, sites are included in this list due to their potential for having engaged in a business activity presenting an elevated risk of contamination. The list was compiled from various city directories including Polks, Millers, Mullin Kille, Interstate Directory, and State Directory Co; spanning roughly 1920s through 1960 depending on information available by city.

Government Publication Date: Jan 1, 1960

NPDES Biosolids Program Permit Holders: NPDES BIOSOLIDS

This Water National Pollutant Discharge Elimination System (NPDES) Biosolids Permits list is sourced from the U.S. Environmental Protection Agency's (EPA) Enforcement and Compliance History Online data. EPA's Integrated Compliance Information System (ICIS) for NPDES includes facility and compliance information for NPDES permits in the ECHO Biosolids facility universe. Per the EPA, when sewage from households and businesses (and sometimes wastewater from industrial dischargers) is sent to a wastewater treatment plant, the liquids are separated from the solids, producing a semi-solid, nutrient-rich product known as "sewage sludge" or "biosolids". The EPA typically uses the term "biosolids" to mean sewage sludge that has been treated to meet the agency's regulatory requirements and is intended to be land applied as a soil conditioner or fertilizer.

Government Publication Date: Feb 7, 2026

State

Spills reported to the Pollution Control Agency: SPILLS

This listing of reported spills is maintained by the Minnesota Pollution Control Agency (MPCA). The Minn. Stat. §115.061, which has been in effect since 1969, describes the duty of people to notify the MPCA when spills occur.

Government Publication Date: Feb 23, 2026

Department of Agriculture Spills: AG SPILLS

The Minnesota Department of Agriculture Incident Response Unit is the regulatory authority of Agricultural Chemical (Ag-Chem) Incidents in Minnesota. This list contains pesticide and fertilizer incidents reported to the Response Unit. This data made available by The Minnesota Department of Agriculture, Incident Response Unit.

Government Publication Date: Nov 27, 2025

Historic spills reported to the Pollution Control Agency: HIST SPL

The Minn. Stat. §115.061, which has been in effect since 1969, describes the duty of people to notify the Minnesota Pollution Control Agency (MPCA) when spills occur. This is the list of spills reported to MPCA, and maintained by The Minnesota Pollution Control Agency (MPCA). This list was maintained till 1 Nov 2016.

Government Publication Date: Nov 1, 2016

Registered Dry Cleaning Facilities: DRYCLEANERS

The Minnesota Pollution Control Agency (MPCA) maintains this listing of registered dry cleaning facilities.

Government Publication Date: Sep 11, 2024

Delisted Drycleaners: DELISTED DRYCLEANERS

List of sites that once appeared on - and have since been removed from - the list of registered dry cleaning facilities made available by the Minnesota Pollution Control Agency (MPCA).

Government Publication Date: Sep 11, 2024

PFAS in Groundwater Samples: PFAS GW

A list of sites from the Minnesota Groundwater Contamination Atlas where Per- and Polyfluoroalkyl Substances (PFAS) were found in groundwater samples. This list is made available by the Minnesota Pollution Control Agency.

Government Publication Date: Nov 12, 2021

PFAS in Landfills: PFAS LANDFILL

A list of sites in the Closed Landfill Program where Per- or polyfluorinated alkyl substances (PFAS) have been detected. This list is made available by the Minnesota Pollution Control Agency (MPCA).

Government Publication Date: Jan 3, 2024

Clandestine Drug Labs: CDL

The Methamphetamine Laboratory Program at the Minnesota Department of Health (MDH) works to protect human health by providing technical advice on the remediation of clandestine methamphetamine production laboratories (meth labs) and decontamination of property exposed to meth lab activities.

Government Publication Date: Aug 23, 2021

Animal Feedlots: FEEDLOTS

The Minnesota Pollution Control Agency (MPCA) tracks locations of animal feedlot facilities. The locations of animal feedlots provide information and context to support decisions on animal health, land use, and maintaining environmental quality.

Government Publication Date: Aug 27, 2025

Tier 2 Report: TIER 2

A list of Tier 2 Facilities in Minnesota. This list is provided by Minnesota Department of Public Safety overseen by the Division of Homeland Security and Emergency Management.

Government Publication Date: Sep 14, 2022

Bulk Storage Permits: BULK STORAGE

The Minnesota Department of Agriculture's Licensing Information System (LIS) lists individuals or companies who hold licenses, certificates and/or permits required by state law and regulated by the Department. This database only contains those LIS licenses related to anhydrous ammonia storage facilities and bulk pesticide/ fertilizer storage facilities.

Government Publication Date: Nov 6, 2025

Tribal

No Tribal additional environmental record sources available for this State.

County

No County additional environmental record sources available for this State.

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

DATABASE REPORT

Project Property:	*Taxiway A Reconstruction Phase 7* *Northern Parcel* *Duluth MN*
Project No:	*2097200*
Report Type:	*Database Report*
Order No:	*26040200805*
Requested by:	*Historical Information Gatherers*
Date Completed:	*April 6, 2026*

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

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Reliance on information in Report: This report DOES NOT replace a full Phase I Environmental Site Assessment but is solely intended to be used as database review of environmental records.

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Executive Summary

Property Information:

Project Property: *Taxiway A Reconstruction Phase 7 Northern Parcel Duluth MN*

Project No: *2097200*

Coordinates:

Latitude:	*46.85227115*
Longitude:	*-92.20542204*
UTM Northing:	*5,189,054.21*
UTM Easting:	*560,574.43*
UTM Zone:	*15T*

Elevation: *1,405 FT*

Order Information:

Order No:	*26040200805*
Date Requested:	*April 2, 2026*
Requested by:	*Historical Information Gatherers*
Report Type:	*Database Report*

Historicals/Products:

Executive Summary: Report Summary

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
Standard Environmental Records								
Federal								
NPL	Y	1	0	0	0	0	0	0
PROPOSED NPL	Y	1	0	0	0	0	0	0
DELETED NPL	Y	0.5	0	0	0	0	-	0
SEMS	Y	0.5	0	0	0	0	-	0
ODI	Y	0.5	0	0	0	0	-	0
SEMS ARCHIVE	Y	0.5	0	0	0	0	-	0
CERCLIS	Y	0.5	0	0	0	0	-	0
IODI	Y	0.5	0	0	0	0	-	0
CERCLIS NFRAP	Y	0.5	0	0	0	0	-	0
CERCLIS LIENS	Y	PO	0	-	-	-	-	0
RCRA CORRACTS	Y	1	0	0	0	0	0	0
RCRA TSD	Y	0.5	0	0	0	0	-	0
RCRA LQG	Y	0.25	0	0	0	-	-	0
RCRA SQG	Y	0.25	0	0	0	-	-	0
RCRA VSQG	Y	0.25	0	0	0	-	-	0
RCRA NON GEN	Y	0.25	0	0	**2**	-	-	**2**
RCRA CONTROLS	Y	0.5	0	0	0	0	-	0
FED ENG	Y	0.5	0	0	0	0	-	0
FED INST	Y	0.5	0	0	0	0	-	0
LUCIS	Y	0.5	0	0	0	0	-	0
NPL IC	Y	0.5	0	0	0	0	-	0
ERNS 1982 TO 1986	Y	PO	0	-	-	-	-	0
ERNS 1987 TO 1989	Y	PO	0	-	-	-	-	0
ERNS	Y	PO	0	-	-	-	-	0
FED BROWNFIELDS	Y	0.5	0	0	0	0	-	0
FEMA UST	Y	0.25	0	0	0	-	-	0
FRP	Y	0.25	0	0	0	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
DELISTED FRP	Y	0.25	0	0	0	-	-	0
HIST GAS STATIONS	Y	0.25	0	0	0	-	-	0
REFN	Y	0.25	0	0	0	-	-	0
BULK TERMINAL	Y	0.25	0	0	0	-	-	0
SEMS LIEN	Y	PO	0	-	-	-	-	0
SUPERFUND ROD	Y	1	0	0	0	0	0	0
State								
PLP	Y	1	0	0	0	0	0	0
DEL PLP	Y	1	0	0	0	0	**1**	**1**
SHWS	Y	0.5	0	0	0	0	-	0
SITE ASSESSMENT	Y	0.25	0	0	0	-	-	0
SWF/LF	Y	0.5	0	0	0	0	-	0
LCP	Y	0.5	0	0	0	0	-	0
UNPERMITTED LF	Y	0.5	0	0	0	0	-	0
RECYCLING	Y	0.5	0	0	0	0	-	0
HIST LUST	Y	0.5	0	0	0	0	-	0
DEL LUST	Y	0.5	0	0	0	0	-	0
HIST LAST	Y	0.5	0	0	0	0	-	0
HIST LEAKSITES	Y	0.5	0	**1**	**2**	0	-	**3**
LST REM SITE	Y	0.5	0	**1**	0	0	-	**1**
LST INCIDENT	Y	0.5	0	0	0	0	-	0
DELISTED LST	Y	0.5	0	0	0	0	-	0
UST	Y	0.25	0	0	0	-	-	0
AST	Y	0.25	0	0	0	-	-	0
HIST TANK	Y	0.25	0	0	0	-	-	0
DELISTED TANK	Y	0.5	0	0	0	0	-	0
INST	Y	0.5	0	0	0	0	-	0
AG CONTINGENCY	Y	0.125	0	0	-	-	-	0
BROWNFIELDS	Y	0.5	0	0	**1**	0	-	**1**
VIC	Y	0.5	0	0	**1**	0	-	**1**
POTENTIAL VIC	Y	0.5	0	0	0	0	-	0
MPCA AI	Y	0.5	0	**1**	**5**	0	-	**6**
Tribal								
INDIAN LUST	Y	0.5	0	0	0	0	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
INDIAN UST	Y	0.25	0	0	0	-	-	0
DELISTED INDIAN LST	Y	0.5	0	0	0	0	-	0
DELISTED INDIAN UST	Y	0.25	0	0	0	-	-	0

County ***No County standard environmental record sources available for this State.***

Additional Environmental Records

Federal

PFAS GHG	Y	0.5	0	0	0	0	-	0
OSC RESPONSE	Y	0.125	0	0	-	-	-	0
FINDS/FRS	Y	PO	0	**1**	-	-	-	**1**
TRIS	Y	PO	0	-	-	-	-	0
PFAS NPL	Y	0.5	0	0	0	0	-	0
PFAS FED SITES	Y	0.5	0	0	0	0	-	0
PFAS SSEHRI	Y	0.5	0	0	0	0	-	0
PFAS ERNS	Y	0.5	0	0	0	0	-	0
PFAS NPDES	Y	0.5	0	0	0	0	-	0
PFAS TRI	Y	0.5	0	0	0	0	-	0
PFAS WATER	Y	0.5	0	0	0	0	-	0
PFAS TSCA	Y	0.5	0	0	0	0	-	0
PFAS E-MANIFEST	Y	0.5	0	0	0	0	-	0
PFAS IND	Y	0.5	0	0	0	0	-	0
HMIRS	Y	0.125	0	0	-	-	-	0
NCDL	Y	0.125	0	0	-	-	-	0
TSCA	Y	0.125	0	0	-	-	-	0
HIST TSCA	Y	0.125	0	0	-	-	-	0
FTTS ADMIN	Y	PO	0	-	-	-	-	0
FTTS INSP	Y	PO	0	-	-	-	-	0
PRP	Y	PO	0	-	-	-	-	0
SCRD DRYCLEANER	Y	0.5	0	0	0	0	-	0
ICIS	Y	PO	0	-	-	-	-	0
FED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED FED DRY	Y	0.25	0	0	0	-	-	0
FUDS	Y	1	**1**	0	0	0	0	**1**
FUDS MRS	Y	1	0	0	0	0	0	0
FORMER NIKE	Y	1	0	0	0	0	0	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
PIPELINE INCIDENT	Y	PO	0	-	-	-	-	0
MLTS	Y	PO	0	-	-	-	-	0
HIST MLTS	Y	PO	0	-	-	-	-	0
MINES	Y	0.25	0	0	0	-	-	0
SMCRA	Y	1	0	0	0	0	0	0
MRDS	Y	1	0	0	0	0	0	0
LM SITES	Y	1	0	0	0	0	0	0
ALT FUELS	Y	0.25	0	0	0	-	-	0
CONSENT DECREES	Y	0.25	0	0	0	-	-	0
AFS	Y	PO	0	-	-	-	-	0
SSTS	Y	0.25	0	0	0	-	-	0
PCBT	Y	0.5	0	0	0	0	-	0
PCB	Y	0.5	0	0	0	0	-	0
POWER PLANTS	Y	0.125	0	0	-	-	-	0
HIST RISK	Y	0.125	0	0	-	-	-	0
NPDES BIOSOLIDS	Y	PO	0	-	-	-	-	0
State								
SPILLS	Y	0.125	0	0	-	-	-	0
AG SPILLS	Y	0.125	0	0	-	-	-	0
HIST SPL	Y	0.125	0	0	-	-	-	0
DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
PFAS GW	Y	0.5	0	0	0	0	-	0
PFAS LANDFILL	Y	0.5	0	0	0	0	-	0
CDL	Y	PO	0	-	-	-	-	0
FEEDLOTS	Y	0.5	0	0	0	0	-	0
TIER 2	Y	0.125	0	0	-	-	-	0
BULK STORAGE	Y	0.25	0	0	0	-	-	0
Tribal	***No Tribal additional environmental record sources available for this State.***							
County	***No County additional environmental record sources available for this State.***							
Total:			***1***	***4***	***11***	*0*	***1***	***17***

**** PO – Property Only***
**** 'Property and adjoining properties' database search radii are set at 0.25 miles.***

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
1	FUDS	DULUTH INTERNATIONAL AIRPORT	DULUTH MN ***FUDS Property No:*** *E05MN0033*	NNE	0.00 / 0.00	0	19

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
2	FINDS/FRS	MN AIR NATIONAL GUARD BLDG 520	4619 WARHAWK DR HERMANTOWN MN 55811 ***Registry ID:*** 110068991461	SW	0.02 / 100.85	3	20
2	HIST LEAKSITES	MN Air National Guard Bldg 520	4619 Warhawk Dr Duluth MN 55811 ***Complete Site Closure Date	Leaksite Type Desc:*** 07/30/1996 00:00:00 | Leak Site	SW	0.02 / 100.85	3	20
2	LST REM SITE	MN Air National Guard Bldg 520	4619 Warhawk Dr Duluth MN 55811	SW	0.02 / 100.85	3	22
2	MPCA AI	MN Air National Guard Bldg 520	4619 Warhawk Dr Duluth MN 55811	SW	0.02 / 100.85	3	23
3	RCRA NON GEN	GREAT LAKE AIRLINES	AIRPORT RD BLDG 104 HANGAR 11 DULUTH MN 55811 ***Handler ID | Recycler Activity?:*** MND985771757 | NO	ESE	0.16 / 870.26	2	25
3	RCRA NON GEN	FAA DMS SMO DULUTH MN ASR	DULUTH AIRPORT PROPERTY DULUTH MN 55811 ***Handler ID | Recycler Activity?:*** MNR000017426 | NO	ESE	0.16 / 870.26	2	27
4	HIST LEAKSITES	Duluth Air Force Base	Duluth International Airport Duluth MN 55811 ***Complete Site Closure Date	Leaksite Type Desc:*** 03/15/1996 00:00:00 | Leak Site	ESE	0.17 / 872.19	2	29
4	HIST LEAKSITES	Airport Maintenance Garage	Duluth International Airport Duluth MN 55811 ***Complete Site Closure Date	Leaksite Type Desc:*** 09/27/1994 00:00:00 | Leak Site	ESE	0.17 / 872.19	2	31
5	BROWNFIELDS	Duluth International Airport - AOC C	Duluth International Airport Duluth MN 55811	ESE	0.17 / 872.76	2	33
5	MPCA AI	Great Lake Airlines	Airport Rd Bldg 104 Hangar 11 Duluth MN 55811	ESE	0.17 / 872.76	2	34
5	MPCA AI	Residential Services 3	PO Box 3008 Duluth MN 55803	ESE	0.17 / 872.76	2	36
5	MPCA AI	Duluth International Airport - Site 102	Duluth International Airport Duluth MN 55811	ESE	0.17 / 872.76	2	37

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
5	MPCA AI	FAA DMS SMO Duluth MN ASR	Duluth Airport Property Duluth MN 55811	ESE	0.17 / 872.76	2	39
5	MPCA AI	ISD 704	General Delivery Duluth MN 55806	ESE	0.17 / 872.76	2	41
5	VIC	Duluth International Airport - AOC C	Duluth International Airport Duluth MN 55811	ESE	0.17 / 872.76	2	43
6	DEL PLP	DULUTH AIR FORCE BASE Site 29 - (FUDS)Site 102 TCE	Lots 2 and 3 Block 4 and 5 of the Airport Division Duluth MN 55811	ESE	0.87 / 4,584.85	19	44

Executive Summary: Summary by Data Source

Standard

Federal

RCRA NON GEN - RCRA Non-Generators

A search of the RCRA NON GEN database, dated Nov 30, 2025 has found that there are 2 RCRA NON GEN site(s) within approximately 0.25miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
GREAT LAKE AIRLINES	AIRPORT RD BLDG 104 HANGAR 11 DULUTH MN 55811	ESE	0.16 / 870.26	3
	***Handler ID | Recycler Activity?**: MND985771757 | NO*			
FAA DMS SMO DULUTH MN ASR	DULUTH AIRPORT PROPERTY DULUTH MN 55811	ESE	0.16 / 870.26	3
	***Handler ID | Recycler Activity?**: MNR000017426 | NO*			

State

DEL PLP - Delisted Permanent List of Priorities (PLP)

A search of the DEL PLP database, dated Feb 26, 2026 has found that there are 1 DEL PLP site(s) within approximately 1.00miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
DULUTH AIR FORCE BASE Site 29 - (FUDS)Site 102 TCE	Lots 2 and 3 Block 4 and 5 of the Airport Division Duluth MN 55811	ESE	0.87 / 4,584.85	6

HIST LEAKSITES - Historical Leak Sites

A search of the HIST LEAKSITES database, dated Nov 1, 2016 has found that there are 3 HIST LEAKSITES site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
MN Air National Guard Bldg 520	4619 Warhawk Dr Duluth MN 55811	SW	0.02 / 100.85	2
	***Complete Site Closure Date | Leaksite Type Desc**: 07/30/1996 00:00:00 | Leak Site*			
Airport Maintenance Garage	Duluth International Airport Duluth MN 55811	ESE	0.17 / 872.19	4
	***Complete Site Closure Date | Leaksite Type Desc**: 09/27/1994 00:00:00 | Leak Site*			
Duluth Air Force Base	Duluth International Airport Duluth MN 55811	ESE	0.17 / 872.19	4
	***Complete Site Closure Date | Leaksite Type Desc**: 03/15/1996 00:00:00 | Leak Site*			

LST REM SITE - MPCA Remediation Leak Sites

A search of the LST REM SITE database, dated Feb 26, 2026 has found that there are 1 LST REM SITE site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
MN Air National Guard Bldg 520	4619 Warhawk Dr Duluth MN 55811	SW	0.02 / 100.85	2

BROWNFIELDS - Petroleum Brownfields Program Sites

A search of the BROWNFIELDS database, dated Feb 26, 2026 has found that there are 1 BROWNFIELDS site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Duluth International Airport - AOC C	Duluth International Airport Duluth MN 55811	ESE	0.17 / 872.76	5

VIC - Voluntary Investigation and Cleanup Program List

A search of the VIC database, dated Feb 26, 2026 has found that there are 1 VIC site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Duluth International Airport - AOC C	Duluth International Airport Duluth MN 55811	ESE	0.17 / 872.76	5

MPCA AI - MPCA Agency Interests

A search of the MPCA AI database, dated Jan 27, 2026 has found that there are 6 MPCA AI site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
MN Air National Guard Bldg 520	4619 Warhawk Dr Duluth MN 55811	SW	0.02 / 100.85	2
Great Lake Airlines	Airport Rd Bldg 104 Hangar 11 Duluth MN 55811	ESE	0.17 / 872.76	5
Residential Services 3	PO Box 3008 Duluth MN 55803	ESE	0.17 / 872.76	5
Duluth International Airport - Site 102	Duluth International Airport Duluth MN 55811	ESE	0.17 / 872.76	5

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
FAA DMS SMO Duluth MN ASR	Duluth Airport Property Duluth MN 55811	ESE	0.17 / 872.76	5
ISD 704	General Delivery Duluth MN 55806	ESE	0.17 / 872.76	5

Non Standard

Federal

FINDS/FRS - Facility Registry Service/Facility Index

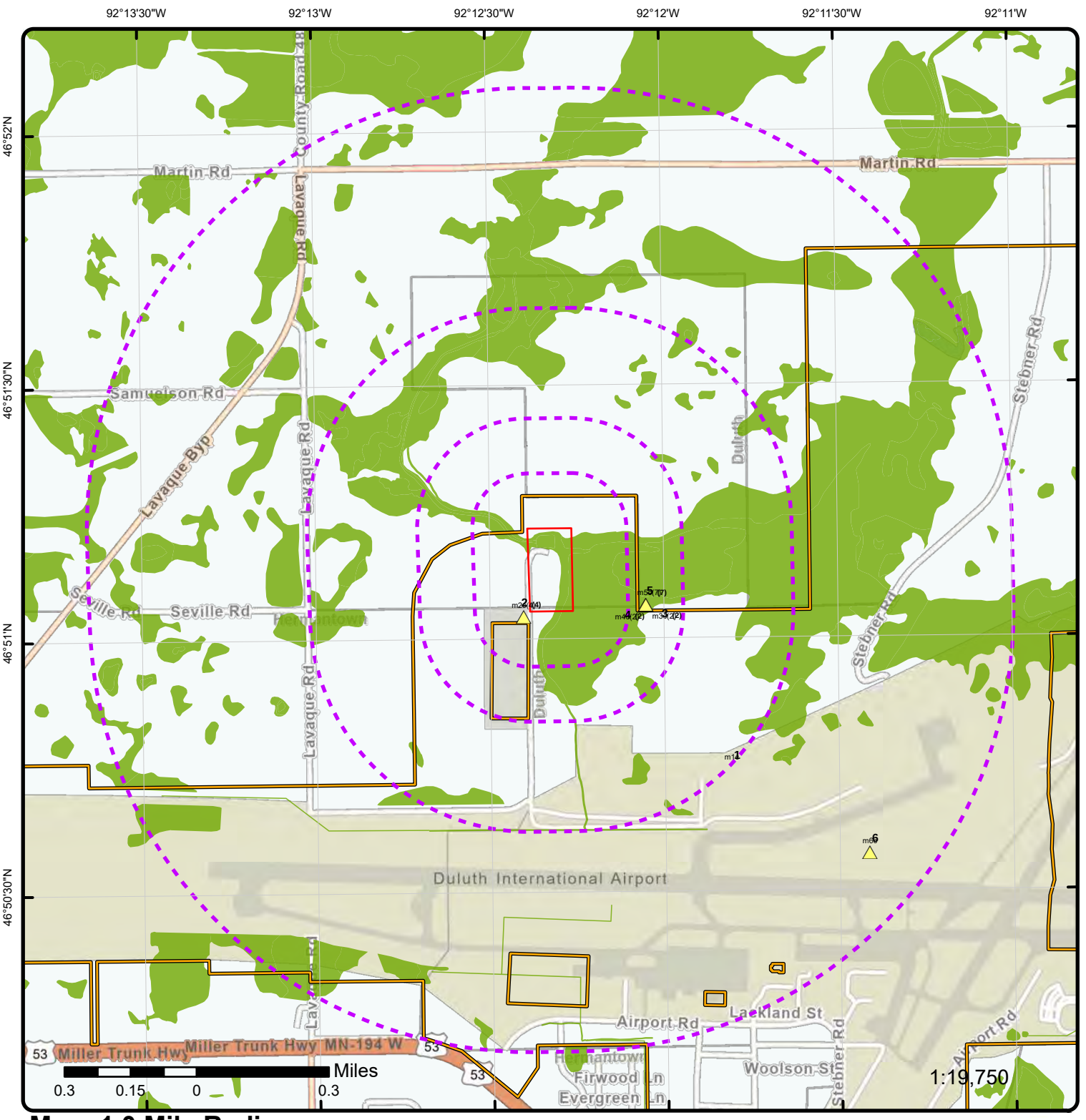
A search of the FINDS/FRS database, dated Jan 1, 2026 has found that there are 1 FINDS/FRS site(s) within approximately 0.02miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
MN AIR NATIONAL GUARD BLDG 520	4619 WARHAWK DR HERMANTOWN MN 55811 ***Registry ID**: 110068991461*	SW	0.02 / 100.85	2

FUDS - Formerly Used Defense Sites

A search of the FUDS database, dated May 15, 2023 has found that there are 1 FUDS site(s) within approximately 1.00miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
DULUTH INTERNATIONAL AIRPORT	DULUTH MN ***FUDS Property No**: E05MN0033*	NNE	0.00 / 0.00	1



Map: 1.0 Mile Radius

Order Number: 26040200805

Address: Northern Parcel, Duluth, MN

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

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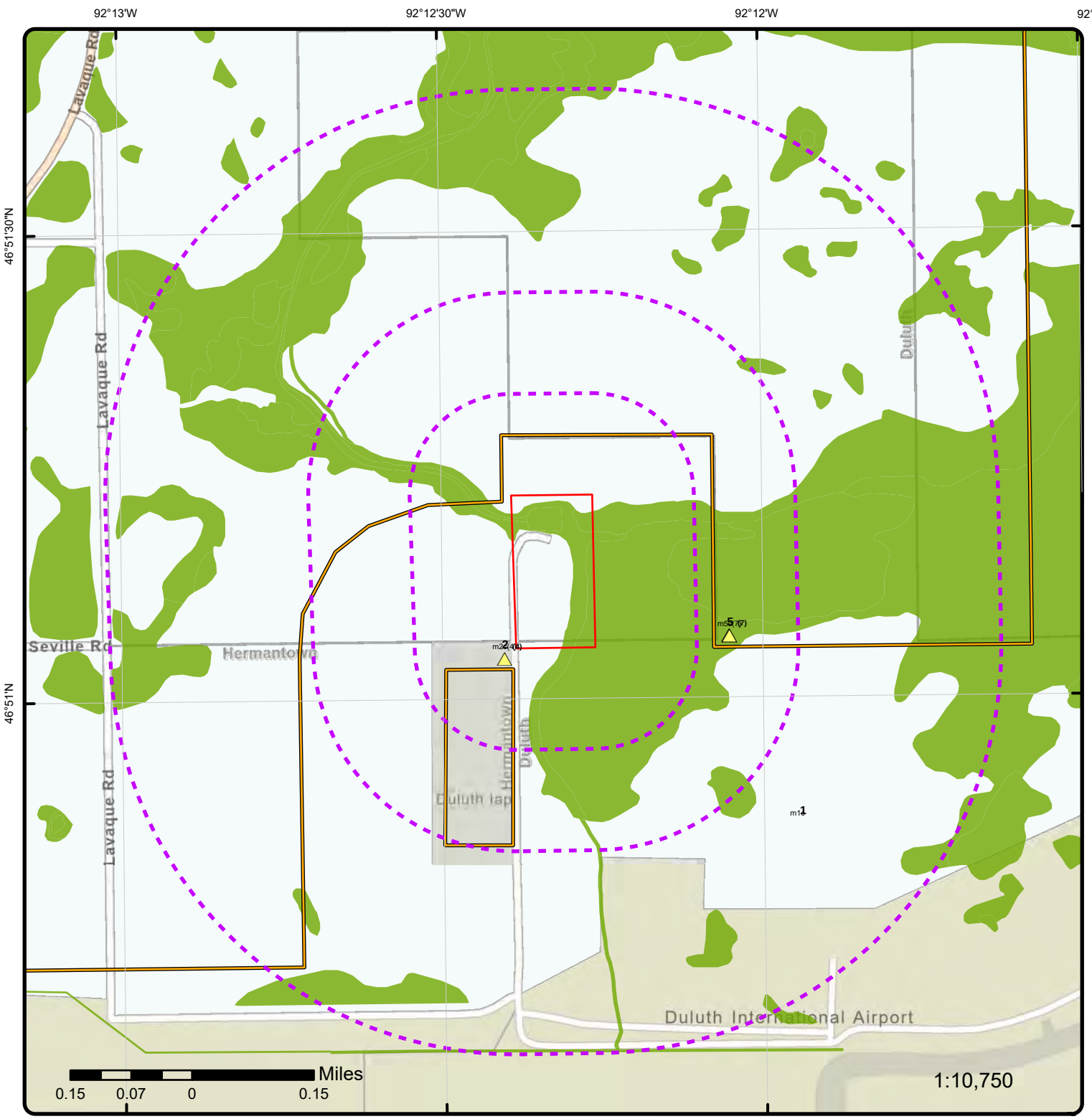


Map: 0.5 Mile Radius

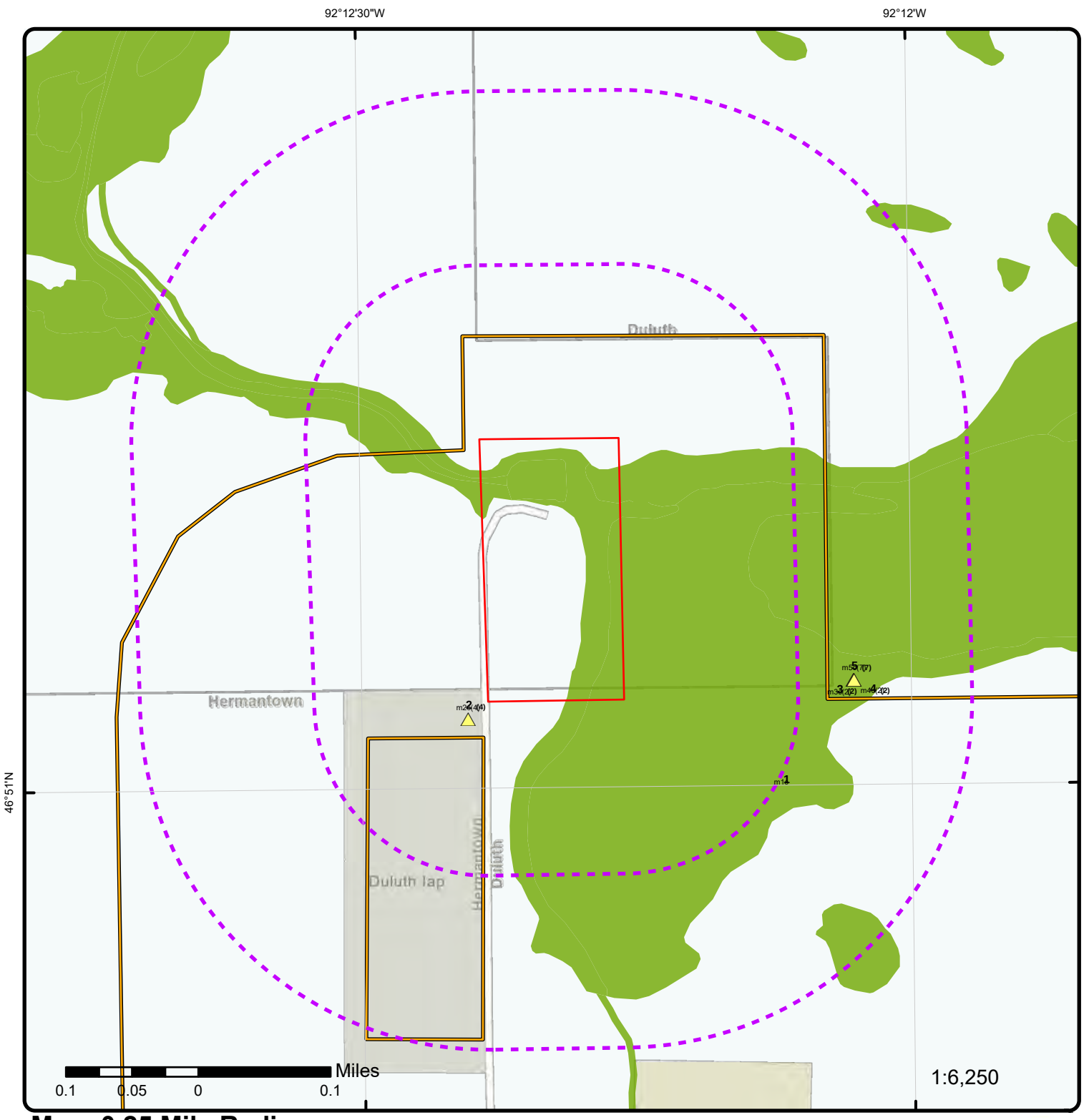
Order Number: 26040200805

Address: Northern Parcel, Duluth, MN

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

© ERIS Information Inc.



Map: 0.25 Mile Radius

Order Number: 26040200805

Address: Northern Parcel, Duluth, MN

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

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Aerial

Year: 2025

Address: Northern Parcel, Duluth, MN

Source: ESRI World Imagery

Order Number: 26040200805

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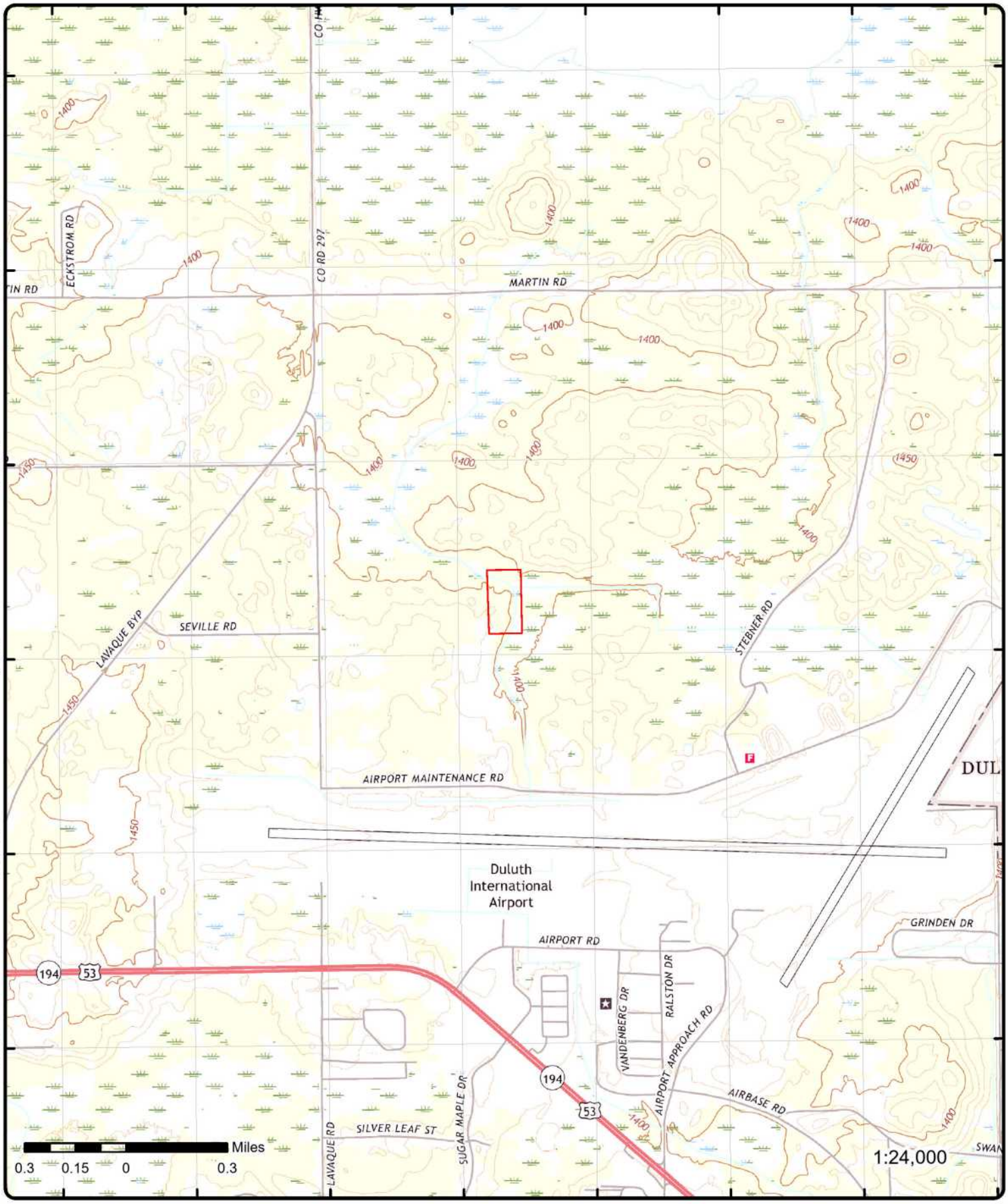

Topographic Map

Year: 2022

Order Number: 26040200805

Address: Northern Parcel, MN

Quadrangle(s): Duluth Heights MN, Fredenberg MN

Source: USGS Topographic Map

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Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	1 of 1	NNE	0.00 / 0.00	1,405.69 / 0	DULUTH INTERNATIONAL AIRPORT DULUTH MN	FUDS

FUDS Property No: E05MN0033
EMS Map Link: https://fudsportal.usace.army.mil/ems/inventory/map?id=55056
FUDS INST ID: MN59799F237400
Status: Properties with projects
SDS ID:
NPL Status Code: Not Listed
Eligibility: Eligible
Site Eligib: Eligible
Current Owner: Local Government
Has Project: Yes
DOD FUDS Pro:
Project Required:
No Further Action:
Congressional District: 08
Congressional Dist 117: 08
Media ID:
Metadata ID:
Feature Desc:
EPA Region: 05
County: ST LOUIS
Latitude: 46.84194444
Longitude: -92.19361111
Fiscal year: 2020
USACE Division: nwd
USACE District: nwo
Centroid Lat:
Centroid Long:
Se Anno Cad Data:
Shape Length: 0.274871256485517
Shape Area: 0.00096364444575224
Shape Len: .27487126
X:
Y:
Data Source: U.S. Army Corps of Engineers Geospatial Open Data
Property History:

The former Duluth Air Force Base was established in the early 1950's during the Korean War era. The site closed in 1982. Some of the major functions of the base included the operation and maintenance of Bomarc anti-aircraft missiles, Goose Decoy missiles, fighter aircraft, interceptors, and SAFE radar/communications. The base served to support the Duluth Missile Site near the French River, Minnesota, and the Finland Air Force Radar Station in Finland, Minnesota. The property was conveyed to the City, the Airport Authority, and to the National Guard. It is being used as an airport, for commercial and industrial purposes, and for National Guard training. Tanks, petroleum and building demolition are the subjects of the FUDS Program involvement.

Feature Description:

The former Duluth Air Force Base was established in the early 1950's during the Korean War era. The site closed in 1982. Some of the major functions of the base included the operation and maintenance of Bomarc anti-aircraft missiles, Goose Decoy missiles, fighter aircraft, interceptors, and SAFE radar/communications. The base served to support the Duluth Missile Site near the French River, Minnesota, and the Finland Air Force Radar Station in Finland, Minnesota. The property was conveyed to the City, the Airport Authority, and to the National Guard. It is being used as an airport, for commercial and industrial purposes, and for National Guard training. Tanks, petroleum and building demolition are the subjects of the FUDS Program involvement.

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	1 of4	SW	0.02 / 100.85	1,408.54 / 3	MN AIR NATIONAL GUARD BLDG 520 4619 WARHAWK DR HERMANTOWN MN 55811	FINDS/FRS

Registry ID: 110068991461
FIPS Code: 27137
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 03-JUN-16
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: ST. LOUIS
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Frs Facility Detail Report URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110068991461
Program Acronyms:

MN-TEMPO:191442

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	2 of4	SW	0.02 / 100.85	1,408.54 / 3	MN Air National Guard Bldg 520 4619 Warhawk Dr Duluth MN 55811	HIST LEAKSITES

Prog Int ID: 220539
Site ID: 59556350
State County Code: 69
Country: USA
Interest Type Cd: LS
ADDR ID: 59556344
Tank Site: 7944
Interest Phone: NO CORE PI PH.
Interest Start Dt: 07/01/1999 10:46:31
Interest End Dt: 03/10/2011 14:17:40
Active?: No
Timestamp Added: 11/21/2006 08:01:30
Timestamp Updt: 11/10/2014 08:17:06
Staff ID Updt: RGAGLE
Source: CORE
Coord Src Type:
Coord Src Desc:
Foreign State:
FIPS County Cd1: 137
Addr Timestmp Add: 03/10/2011 14:08:10
Addr Timestamp Lst Updt: 03/10/2011 14:08:10
Addr Updater Staff ID: SFRYE

Address Source: CORE
Township Name:
County Name: St. Louis
Lat/Long ID: 193877
Interest Type Dsc: Leak Site
Lat Degrees: 46
Lat Minutes: 50
Lat Seconds: 51.64
Long Degrees: -92
Long Minutes: 12
Long Seconds: 25.5
Lat/Long Source: CORE
Lat/Long Site ID: 59556350
Lat/Long Spatial ID: 51821033
Collection Date: 04/28/2011 09:05:19
Map Scale Code:
Org Name Source:
Foreign Zone:

Lat/Long Timestamp Added:	03/10/2011 14:18:35
Lat/Long Tmstmp Last Upd:	04/28/2011 09:05:20
Lat/Long Updater Staff ID:	MAPTOOL
Lat/Long Desc:	
Coord Coll Method Desc:	Digitized - Map Tool
Coord Coll Method Code:	DM
Comments:	

Leak Site

Complete Site Closure Date:	07/30/1996 00:00:00
Cond Closure Date:	
Release Discovered Date:	10/12/1994 00:00:00
Leaksite Type Code:	1
Leaksite Type Desc:	Leak Site
Leak Report Date:	10/12/1994 00:00:00
Tank Reg Status Code:	F
TMSP Added:	12/04/1999 14:03:49
TMSP Last Updt:	03/10/2011 14:13:49
CU Yds Excavated Qty:	0
ENF Action Begin Date:	
Residence Type Code:	
File Archive Box:	53
File Archive Lot:	98/223
Soil Digout Date:	
Staff ID Last Updt:	SFRYE
Std Letter Response Date:	11/10/1994 00:00:00
VPIC Acres:	
VPIC Application Date:	
Contam Soils Remaining Flag:	U
Indoor Air Collected Flag:	
LUST Trust Eligible Flag:	Yes
Offsite Contam Flag:	U
REIMB Awarded Flag:	No
Release From AST Flag:	No
Release From UST Flag:	No
Soil Gas Action Level Flag:	
Soil Gas Data Collected Flag:	
Sub Slab Sample Collected Flag:	
Surface Water Impact Flag:	U
Utility Project Flag:	No
Vapor Intrusion Action Flag:	
Vapor Intrusion Checked Flag:	
Leaksite Type Defn:	Leak site (tank and petroleum contamination).
Soil Gas Data Comments:	
Vapor Intrusion Comments:	

Leak Product Rls

Product Rls Seq ID:	322471
Leak Product Desc:	Fuel Oil 1 & 2
Leak Product Defn:	The product is fuel oil 1 & 2.

Leak GW Info

Well Type Code:	
Affected Non Res Props:	
Affected Residential Props:	
Staff ID Last Updt:	RSUCHAN
Staff ID Wellhead Area Assess:	
TMSP Added:	12/04/1999 14:07:32
TMSP Last Updt:	11/04/2003 12:57:07
Water Supply Exceeds Ral Flag:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Cleanup Goal Achieved Flag:
DW Supply Contam Flag:
Free Product at Close Flag:
Free Product Observed Flag:
Free Product Thickness:
Ground Water Contam Flag: S
GW Cleanup Goal: 0
GW Exceeds Cleanup Goal Flag:
Impacted Aquifer Code:
MTBE High Level Date:
MTBE High Ug Per Liter Char:
MTBE High Ug Per Liter Numb:
MTBE Present Historically Flag:
MTBE Present Now Flag:
Protected Area Flag:
PWS Well Impacted Flag:
Sensitive Area Flag:

2	3 of4	SW	0.02 / 100.85	1,408.54 / 3	**MN Air National Guard Bldg 520** **4619 Warhawk Dr** **Duluth MN 55811**	LST REM SITE

Item ID: 191442-AREA0000000001
Project ID: LS0007944
Project Type: Leak Site
Project ID (RAP):
Project Type (RAP):
Site Status: Closed
Perm List of Prio?:
Petrol Brownfield?:
VIC Site?:
Sf Voluntary:
Inst Controls?:
SEMS?:
Project Name: MN Air National Guard Bldg 520
Project Managers: Steve Leppala (no longer at MPCA)
Site Address 1: 4619 Warhawk Dr
Site Address 2:
Site City: Duluth
Site State: MN
Site ZIP: 55811
Project Name(RAP):
Address1 (RAP):
Address2 (RAP):
City (RAP):
State (RAP):
ZIP (RAP):
Data Source: MPCA Remediation Sites

Unpermitted Dump?:
State Reg:
Federal Reg: Yes
Fed State Reg:
Non Reg:
NPL:
Site County: St. Louis
County (RAP):
Latitude: 46.84767942
Longitude: -92.2070835
Latitude (RAP):
Longitude (RAP):

Remediation Sites Details

Activity ID: 191442
SI ID: 1
Si Cat: AREA
SI Type: LEAK
Site Type: CON
Acreage:
HRS Score:
Score Year:
DWSMA Code:
AI Name: MN Air National Guard Bldg 520
DWSMA Name:
Hydrologists:
Huc 8 Name: Cloquet River
Huc12 Name: Wild Rice Lake Reservoir
Method Desc: Digitized - MPCA internal map

Object ID: 2843
Cong Dist: 8
House Dist: 3B
Senate Dis: 3
HUC 8: 04010202
HUC 10: 0401020205
HUC 12: 040102020501
Gdb Geomattr Data:
MNTBA:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Loc Desc:
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/191442

Spatial Remediation Activity

AI ID:	191442	**Object ID:**	28563
Site ID:	LS0007944	**Remedy Imp:**	
SI ID:	1	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	
Site Start:	1994-10-12 00:00:00	**NPL List:**	
Site Close:	1996-07-30 00:00:00	**NPL Delete:**	
Leak Discovered:	1994-10-12 00:00:00	**PLP List:**	
Leak Reported:	1994-10-12 00:00:00	**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	
Activity No:	1	**FF Aproved:**	
Activity ID:	SIW19940001	**FF Closed:**	
Activity Type:	Leak Site Investigation	**Inv Comple:**	
Activity Code:	SIW	**App Comple:**	
Activity Year:	1994	**Er Site Ev:**	
Discovered:			

2	4 of4	SW	0.02 / 100.85	1,408.54 / 3	**MN Air National Guard Bldg 520** **4619 Warhawk Dr** **Duluth MN 55811**	MPCA AI

Agency Interest ID:	191442
Name (Map):	MN Air National Guard Bldg 520
Address (Map):	4619 Warhawk Dr
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.8476794
Longitude (Map):	-92.2070835
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	MN Air National Guard Bldg 520
Address (Site):	4619 Warhawk Dr
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.8476794
Longitude (Site):	-92.2070835
County (Site):	St. Louis
Name (Req):	MN Air National Guard Bldg 520
Address (Req):	4619 Warhawk Dr
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.8476794
Longitude (Req):	-92.2070835
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	191442-AISI0000191442	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	PetroleumRemediation	**SI ID:**	191442
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**SI Type Desc:**	Conventional Site

PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	3B
Quarters:		**Senate Dist:**	3
Collection Date:	4/25/2016	**TRDSQQ:**	
Tmsp Created:	11/21/2006	**Ref Code:**	GEN
User Created:	DELTA_M_R2	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	59556351	**User Updt:**	spatial_
Name:	MN Air National Guard Bldg 520		
Program List:	PR		
HUC 8:	04010202		
HUC 8 Name:	Cloquet River		
HUC 10:	0401020205		
HUC 12:	040102020501		
HUC 12 Name:	Wild Rice Lake Reservoir		
DWSMA Code:			
DWSMA Name:			
Method Code:	DM		
Method Desc:	Digitized - MPCA internal map		

My Neighborhood Site Details

Active FLA:	Yes	**HUC 8:**	04010202
MPCA ID:	LS0007944	**Cong Distr:**	8
Program Co:	SR	**Senate Dis:**	3
Program Name:	Investigation and Cleanup	**House Dist:**	3B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	DM
City:	Hermantown	**Latitude:**	46.8476794
County:	St. Louis	**Longitude:**	-92.2070835
Activity:	Petroleum Remediation, Leak Site		
Addr St:	4619 Warhawk Dr		
Addr City:	Duluth		
MPCA ID List:	LS0007944		
Program 1:	Investigation and Cleanup		
Name:	MN Air National Guard Bldg 520		
Watershed :	Cloquet River		
Coord Co 1:	Digitized - MPCA internal map		
Activity L:	Petroleum Remediation, Leak Site		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/191442		

Agency Interests: File Request Details

Item ID:	191442-AISI0000191442	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	PetroleumRemediation	**SI ID:**	191442
CTU Code:	239436	**SI Cat Desc:**	Agency Interest
CTU Name:	Hermantown	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	3B
Section:		**Senate Dist:**	3
Quarters:		**TRDSQQ:**	
Collection Date:	4/25/2016	**Ref Code:**	GEN
Tmsp Created:	11/21/2006	**Ref Desc:**	General Location
User Created:	DELTA_M_R2	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	59556351		
Name:	MN Air National Guard Bldg 520		
Program List:	PR		
HUC 8:	4010202		
HUC 8 Name:	Cloquet River		
HUC 10:	401020205		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 10 Name: Fish Lake Reservoir-Beaver River
HUC 12: 40102020501
HUC 12 Name: Wild Rice Lake Reservoir
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: DM
Method Desc: Digitized - MPCA internal map

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	1 of2	ESE	0.16 / 870.26	1,407.22 / 2	GREAT LAKE AIRLINES AIRPORT RD BLDG 104 HANGAR 11 DULUTH MN 55811	RCRA NON GEN

Handler ID: MND985771757
Generator Status: N
Recycler Activity?: NO
Recycler Activity Note: This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note: NO RECORDS: As of Nov 2025, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer:	No	**Used Oil Transpor:**	No
Mixed Waste Gen:	No	**Used Oil Trans Fac:**	No
Transporter:	No	**Used Oil Processor:**	No
Transfer Facility:	No	**Used Oil Refiner:**	No
Recycler:	No	**Used Oil Burner:**	No
Onsite Burner Exem:	No	**Commercial TSD:**	No
Furnace Exemption:	No	**Recycl Nonstorage:**	No
Underground Injec:	No		

Used Oil Market Burner: No
Used Oil Spec Marketer: No

Additional Handler Summary Details

Source Type:	N	**NAIC 1:**	
Seq No:	1	**NAIC 2:**	
Non Notifier:		**NAIC 3:**	
Receive Date:	19930913	**NAIC 4:**	
Active Site:	-----	**State:**	MN
Land Type:	P	**Location Latitude:**	46.851088
In Handler Univ:	N	**Location Longitude:**	-92.200875
In A Universe:	N	**Loc GIS Primary:**	N
Gen Status:	N	**Loc GIS Origin:**	UC
Report Cycle:		**State District Owner:**	
Accessibility:		**State District:**	
Region:	05		

Fed Waste Gen Owner: HQ
State Waste Generator Owner: MN
State Waste Generator: N
Short Term Generator: N
Uni Waste: N
Universal Waste Dest Facility: N
Federal Universal Waste: N
As Federally Regulated Tsdf: ------
As Converter Tsdf: ------
As State Regulated Tsdf: ------
As State Regulated Handler: ---
Federal Indicator: ---
Hsm: N

Subpart K:	----
GPRA Permit:	N
GPRA Renewal:	N
Permit Renewal Wrkld:	------
Permwrk ID:	------
Perm Prog:	------
Pcwrkld:	------
Closwrkld:	------
GPRA Ca:	N
Cawrkld:	N
Subjca Tsd Discretion:	N
NCAPS:	N
EC Indicator:	N
Ca725 Indicator:	N
Ca750 Indicator:	N
Operating Tsdf:	------
Full Enforcement:	------
Snc:	N
Unaddressed Snc:	N
Addressed Snc:	N
Snc With Comp Sched:	N
Fa Required:	-----
Hhandler Last Change:	20070620
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	
Handler Name:	GREAT LAKE AIRLINES
Location Street No:	
Location Street1:	AIRPORT RD BLDG 104 HANGAR 11
Location Street2:	
Location City:	DULUTH
Location State:	MN
Location Zip:	55811
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	US
Contact Name:	
Contact Street No:	
Contact Street1:	
Contact Street2:	
Contact City:	
Contact State:	
Contact Zip:	
Contact Country:	US
Contact Phone & Ext:	
Contact Fax:	
Contact Email Address:	
Contact Title:	
Owner Name:	GREAT LAKE AIRLINES
Owner Type:	P
Owner Seq:	1
Operator Name:	
Operator Type:	
Operator Seq:	
Public Notes:	

Hazardous Waste Handler Details

Seq No:	1
Receive Date:	19930913
Handler Name:	GREAT LAKE AIRLINES
Fed Waste Generator:	N
Generator Code Description:	Not a Generator, Verified

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Source Type: Notification
TSD Activity: N

Waste Code Details

Waste Code: D000
Waste Code Desc: DESCRIPTION

Waste Code: D001
Waste Code Desc: IGNITABLE WASTE

Waste Code: D018
Waste Code Desc: BENZENE

Waste Code: D039
Waste Code Desc: TETRACHLOROETHYLENE

Owner/Operator Details

Owner/Operator Ind: Current Owner
Type: Private
Name: GREAT LAKE AIRLINES
Dt Became Current: 19990726
Dt Ended Current: 19990514
Phone:
Source Type: Notification
Street No:
Street1: AIRPORT RD BLDG 104 HANGAR 11
Street2:
City: DULUTH
State: MN
Country: US
Zip: 55811

3	2 of2	ESE	0.16 / 870.26	1,407.22 / 2	FAA DMS SMO DULUTH MN ASR DULUTH AIRPORT PROPERTY DULUTH MN 55811	RCRA NON GEN

Handler ID: MNR000017426
Generator Status: N
Recycler Activity?: NO
Recycler Activity Note: This facility has not been identified as a Recycler Facility from both the RCRA Handler and Biennial Report Modules.

Violation/Evaluation Summary

Note: NO RECORDS: As of Nov 2025, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer: No
Mixed Waste Gen: No
Transporter: No
Transfer Facility: No
Recycler: No
Onsite Burner Exem: No
Furnace Exemption: No
Underground Injec: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No
Used Oil Transpor: No
Used Oil Trans Fac: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Commercial TSD: No
Recycl Nonstorage: No

Additional Handler Summary Details

Source Type: N
Seq No: 1
Non Notifier:
Receive Date: 19960111
Active Site: -----
NAIC 1: 488111
NAIC 2:
NAIC 3:
NAIC 4:
State: MN

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Land Type:	F	**Location Latitude:**	46.851088
In Handler Univ:	N	**Location Longitude:**	-92.200875
In A Universe:	N	**Loc GIS Primary:**	N
Gen Status:	N	**Loc GIS Origin:**	UC
Report Cycle:		**State District Owner:**	
Accessibility:		**State District:**	
Region:	05		

Fed Waste Gen Owner:	HQ
State Waste Generator Owner:	MN
State Waste Generator:	N
Short Term Generator:	N
Uni Waste:	N
Universal Waste Dest Facility:	N
Federal Universal Waste:	N
As Federally Regulated Tsdf:	------
As Converter Tsdf:	------
As State Regulated Tsdf:	------
As State Regulated Handler:	---
Federal Indicator:	L-P
Hsm:	N
Subpart K:	----
GPRA Permit:	N
GPRA Renewal:	N
Permit Renewal Wrkld:	------
Permwrk ID:	------
Perm Prog:	------
Pcwrkld:	------
Closwrkld:	------
GPRA Ca:	N
Cawrkld:	N
Subjca Tsd Discretion:	N
NCAPS:	N
EC Indicator:	N
Ca725 Indicator:	N
Ca750 Indicator:	N
Operating Tsdf:	------
Full Enforcement:	------
Snc:	N
Unaddressed Snc:	N
Addressed Snc:	N
Snc With Comp Sched:	N
Fa Required:	-----
Hhandler Last Change:	20091019
Recognized Trader Importer:	N
Recognized Trader Exporter:	N
Slab Importer:	N
Slab Exporter:	N
Manifest Broker:	N
Subpart P:	N
Contact Language:	EN
Handler Name:	FAA DMS SMO DULUTH MN ASR
Location Street No:	
Location Street1:	DULUTH AIRPORT PROPERTY
Location Street2:	
Location City:	DULUTH
Location State:	MN
Location Zip:	55811
Location County Code:	MN137
Location County Name:	ST LOUIS
Location Country:	US
Contact Name:	ALEX D GINTNER
Contact Street No:	
Contact Street1:	14800 GALAXIE AVE S STE 300
Contact Street2:	
Contact City:	APPLE VALLEY
Contact State:	MN
Contact Zip:	55124
Contact Country:	US
Contact Phone & Ext:	952-997-9240

Contact Fax:
Contact Email Address:
Contact Title:
Owner Name:
Owner Type:
Owner Seq:
Operator Name: FEDERAL AVIATION ADMINISTRATION
Operator Type: F
Operator Seq: 1
Public Notes:

Hazardous Waste Handler Details

Seq No: 1
Receive Date: 19960111
Handler Name: FAA DMS SMO DULUTH MN ASR
Fed Waste Generator: N
Generator Code Description: Not a Generator, Verified
Source Type: Notification
TSD Activity: N

Waste Code Details

Waste Code: D002
Waste Code Desc: CORROSIVE WASTE

Waste Code: X001
Waste Code Desc: DESCRIPTION

Waste Code: X002
Waste Code Desc: DESCRIPTION

Owner/Operator Details

Owner/Operator Ind: Current Operator
Type: Federal
Name: FEDERAL AVIATION ADMINISTRATION
Dt Became Current: 19990726
Dt Ended Current:
Phone: 952-997-9240
Source Type: Notification

Street No:
Street1: 14800 GALAXIE AVE S STE 300
Street2:
City: APPLE VALLEY
State: MN
Country: US
Zip: 55124

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	1 of2	ESE	0.17 / 872.19	1,407.22 / 2	Duluth Air Force Base Duluth International Airport Duluth MN 55811	HIST LEAKSITES

Prog Int ID: 219281
Site ID: 57853
State County Code: 69
Country: USA
Interest Type Cd: LS
ADDR ID: 22405
Tank Site: 6647
Interest Phone: NO CORE PI PH.
Interest Start Dt: 10/16/1997 00:00:00
Interest End Dt: 03/24/2006 13:05:42
Active?: No
Timestamp Added: 03/24/2006 13:05:42
Timestamp Updt: 11/10/2014 08:17:05
Staff ID Updt: RGAGLE
Source: CORE
Coord Src Type: 2
Coord Src Desc:
Foreign State:

Address Source: CORE
Township Name:
County Name: St. Louis
Lat/Long ID: 48239
Interest Type Dsc: Leak Site
Lat Degrees: 46
Lat Minutes: 51
Lat Seconds: 3.91
Long Degrees: -92
Long Minutes: 12
Long Seconds: 3.14
Lat/Long Source: CORE
Lat/Long Site ID: 57853
Lat/Long Spatial ID: 51070266
Collection Date: 08/08/2000 00:00:00
Map Scale Code: E
Org Name Source: MPCA
Foreign Zone:

FIPS County Cd1:	137
Addr Timestmp Add:	01/14/1999 10:46:18
Addr Timestamp Lst Updt:	08/01/2007 21:43:49
Addr Updater Staff ID:	SYSTEM
Lat/Long Timestamp Added:	08/28/2000 10:32:40
Lat/Long Tmstmp Last Upd:	07/14/2004 22:02:45
Lat/Long Updater Staff ID:	jbeauma
Lat/Long Desc:	
Coord Coll Method Desc:	Address Matching House Number
Coord Coll Method Code:	A1
Comments:	

Leak Site

Complete Site Closure Date:	03/15/1996 00:00:00
Cond Closure Date:	11/30/1994 00:00:00
Release Discovered Date:	08/11/1993 00:00:00
Leaksite Type Code:	1
Leaksite Type Desc:	Leak Site
Leak Report Date:	08/11/1993 00:00:00
Tank Reg Status Code:	F
TMSP Added:	12/04/1999 14:03:48
TMSP Last Updt:	04/16/2014 12:03:06
CU Yds Excavated Qty:	4120
ENF Action Begin Date:	08/20/1993 00:00:00
Residence Type Code:	
File Archive Box:	30
File Archive Lot:	98/206
Soil Digout Date:	08/17/1993 00:00:00
Staff ID Last Updt:	CMCLAIN
Std Letter Response Date:	
VPIC Acres:	
VPIC Application Date:	
Contam Soils Remaining Flag:	Y
Indoor Air Collected Flag:	
LUST Trust Eligible Flag:	Yes
Offsite Contam Flag:	N
REIMB Awarded Flag:	No
Release From AST Flag:	No
Release From UST Flag:	No
Soil Gas Action Level Flag:	
Soil Gas Data Collected Flag:	
Sub Slab Sample Collected Flag:	
Surface Water Impact Flag:	N
Utility Project Flag:	No
Vapor Intrusion Action Flag:	
Vapor Intrusion Checked Flag:	
Leaksite Type Defn:	Leak site (tank and petroleum contamination).
Soil Gas Data Comments:	
Vapor Intrusion Comments:	

Leak Product Rls

Product Rls Seq ID:	324820
Leak Product Desc:	Gasoline Leaded
Leak Product Defn:	The product is leaded gasoline.
Product Rls Seq ID:	321652
Leak Product Desc:	Aviation Gas
Leak Product Defn:	The product is aviation gas.

Leak GW Info

Well Type Code:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Affected Non Res Props:
Affected Residential Props:
Staff ID Last Updt: RSUCHAN
Staff ID Wellhead Area Assess:
TMSP Added: 12/04/1999 14:07:31
TMSP Last Updt: 11/04/2003 12:57:07
Water Supply Exceeds Ral Flag:
Cleanup Goal Achieved Flag:
DW Supply Contam Flag:
Free Product at Close Flag:
Free Product Observed Flag: Y
Free Product Thickness:
Ground Water Contam Flag: Y
GW Cleanup Goal: 0
GW Exceeds Cleanup Goal Flag:
Impacted Aquifer Code:
MTBE High Level Date:
MTBE High Ug Per Liter Char:
MTBE High Ug Per Liter Numb:
MTBE Present Historically Flag:
MTBE Present Now Flag:
Protected Area Flag:
PWS Well Impacted Flag:
Sensitive Area Flag:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	2 of2	ESE	0.17 / 872.19	1,407.22 / 2	Airport Maintenance Garage Duluth International Airport Duluth MN 55811	HIST LEAKSITES

Prog Int ID: 216819
Site ID: 57853
State County Code: 69
Country: USA
Interest Type Cd: LS
ADDR ID: 22405
Tank Site: 4092
Interest Phone: NO CORE PI PH.
Interest Start Dt: 08/09/1996 00:00:00
Interest End Dt: 04/14/2011 14:50:29
Active?: No
Timestamp Added: 03/23/2006 13:20:57
Timestamp Updt: 11/10/2014 08:17:05
Staff ID Updt: RGAGLE
Source: CORE
Coord Src Type: 2
Coord Src Desc:
Foreign State:
FIPS County Cd1: 137
Addr Timestmp Add: 01/14/1999 10:46:18
Addr Timestamp Lst Updt: 08/01/2007 21:43:49
Addr Updater Staff ID: SYSTEM
Lat/Long Timestamp Added: 08/28/2000 10:32:40
Lat/Long Tmstmp Last Upd: 07/14/2004 22:02:45
Lat/Long Updater Staff ID: jbeauma
Lat/Long Desc:
Coord Coll Method Desc: Address Matching House Number
Coord Coll Method Code: A1
Comments:

Address Source: CORE
Township Name:
County Name: St. Louis
Lat/Long ID: 48239
Interest Type Dsc: Leak Site
Lat Degrees: 46
Lat Minutes: 51
Lat Seconds: 3.91
Long Degrees: -92
Long Minutes: 12
Long Seconds: 3.14
Lat/Long Source: CORE
Lat/Long Site ID: 57853
Lat/Long Spatial ID: 51063877
Collection Date: 08/08/2000 00:00:00
Map Scale Code: E
Org Name Source: MPCA
Foreign Zone:

Leak Site

Complete Site Closure Date: 09/27/1994 00:00:00
Cond Closure Date:
Release Discovered Date: 06/04/1991 00:00:00
Leaksite Type Code: 1

Leaksite Type Desc: Leak Site
Leak Report Date: 06/05/1991 00:00:00
Tank Reg Status Code: F
TMSP Added: 12/04/1999 14:03:46
TMSP Last Updt: 08/21/2012 14:23:00
CU Yds Excavated Qty: 250
ENF Action Begin Date: 06/12/1991 00:00:00
Residence Type Code:
File Archive Box: 18
File Archive Lot: 97/11
Soil Digout Date: 06/04/1991 00:00:00
Staff ID Last Updt: JDIETZ
Std Letter Response Date:
VPIC Acres:
VPIC Application Date:
Contam Soils Remaining Flag: S
Indoor Air Collected Flag:
LUST Trust Eligible Flag: Yes
Offsite Contam Flag: U
REIMB Awarded Flag: No
Release From AST Flag: No
Release From UST Flag: No
Soil Gas Action Level Flag:
Soil Gas Data Collected Flag:
Sub Slab Sample Collected Flag:
Surface Water Impact Flag: U
Utility Project Flag: No
Vapor Intrusion Action Flag:
Vapor Intrusion Checked Flag:
Leaksite Type Defn: Leak site (tank and petroleum contamination).
Soil Gas Data Comments:
Vapor Intrusion Comments:

Leak Product Rls

Product Rls Seq ID: 324613
Leak Product Desc: Diesel
Leak Product Defn: The product is diesel oil.

Product Rls Seq ID: 320767
Leak Product Desc: Gasoline Leaded
Leak Product Defn: The product is leaded gasoline.

Leak GW Info

Well Type Code:
Affected Non Res Props:
Affected Residential Props:
Staff ID Last Updt: RSUCHAN
Staff ID Wellhead Area Assess:
TMSP Added: 12/04/1999 14:07:29
TMSP Last Updt: 11/04/2003 12:57:07
Water Supply Exceeds Ral Flag:
Cleanup Goal Achieved Flag:
DW Supply Contam Flag:
Free Product at Close Flag:
Free Product Observed Flag:
Free Product Thickness:
Ground Water Contam Flag:
GW Cleanup Goal: 0
GW Exceeds Cleanup Goal Flag:
Impacted Aquifer Code:
MTBE High Level Date:
MTBE High Ug Per Liter Char:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

MTBE High Ug Per Liter Numb:
MTBE Present Historically Flag:
MTBE Present Now Flag:
Protected Area Flag:
PWS Well Impacted Flag:
Sensitive Area Flag:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
5	1 of7	ESE	0.17 / 872.76	1,407.22 / 2	Duluth International Airport - AOC C Duluth International Airport Duluth MN 55811	BROWNFIELDS

Item ID: 11034-AREA0000000001
Project ID: VP21050
Project Type: Brownfield Site
Project ID (RAP): VP21050
Project Type (RAP): Brownfield Site
Site Status: Inactive / Retired
Perm List of Prior?:
Petrol Brownfield?:
VIC Site?: Yes
Sf Voluntary:
Inst Controls?:
State Reg: Yes
Federal Reg:
Fed State Reg:
Non Reg:
SEMS?:
NPL:
Unpermitted Dump?:
Latitude: 46.85108948
Longitude: -92.20087433
County (RAP): St. Louis
Latitude (RAP): 46.85108948
Longitude (RAP): -92.20087433
Project Name: Duluth International Airport - AOC C
Site Address 1: Duluth International Airport
Site Address 2:
Site City: Duluth
Site State: MN
Site Zip: 55811
Site County: St. Louis
Project Name(RAP): Duluth International Airport - AOC C
Address1 (RAP): Duluth International Airport
Address2(RAP):
City (RAP): Duluth
State (RAP): MN
Zip (RAP): 55811
Project Managers: Jane Mosel (no longer at MPCA)
Data Source: MPCA Remediation Sites; MPCA Remediation Sites with RAP approvals

Remediation Sites Details

Activity ID: 11034
AI Name: Duluth International Airport - Site 102
SI ID: 1
SI Cat: AREA
SI Type: BROW
Site Type: CON
Acreage: 2.00
HRS Score:
Score Year:
MNTBA:
Loc Desc: none
HUC 8 Name: Cloquet River
HUC 12 Name: Wild Rice Lake Reservoir
Hydrologist: Mark Elliott (former)
WIMN Url: https://webapp.pca.state.mn.us/wimn/site/11034
DWSMA Name:
Cong Dist: 8
House Dist: 8B
Senate Dis: 8
HUC 8: 04010202
HUC 10: 0401020205
HUC 12: 040102020501
DWSMA Code:
Method Des: Address Matching House Number

Remediation Sites with RAP Approval

Activity ID: 11034
No Assoc Date: 38756
No Assoc Letter: Yes - owner
Has Rp: No
Coord Collect Methd: Address Matching House Number
Parcels:
Rap Date:
Site Start: 8/12/2005
Rap Approved: 38596
Rap Completed:
Site Closed: 6/28/2008

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

WIMN: https://webapp.pca.state.mn.us/wimn/site/11034
AI Name: Duluth International Airport - Site 102
Rp Names:

Spatial Remediation Activity

AI ID:	11034	**Site Start:**	2005-08-12 00:00:00
Site ID:	VP21050	**Remedy Imp:**	
SI ID:	1	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	2005-09-12 00:00:00
Site Close:	2008-06-28 00:00:00	**NPL List:**	
Leak Discovered:		**NPL Delete:**	
Leak Reported:		**PLP List:**	
Leak Reopened:		**PLP Delist:**	
Activity No:	1	**Staff Assi:**	2005-08-12 00:00:00
Activity ID:	SIW20050001	**FF Aproved:**	
Activity Type:	Brownfield Site	**FF Closed:**	
Activity Code:	SIW	**Inv Comple:**	
Activity Year:	2005	**App Comple:**	2005-08-12 00:00:00
Discovered:		**Er Site Ev:**	

5	2 of7	ESE	0.17 / 872.76	1,407.22 / 2	Great Lake Airlines Airport Rd Bldg 104 Hangar 11 Duluth MN 55811	MPCA AI

Agency Interest ID: 24709
Name (Map): Great Lake Airlines
Address (Map): Airport Rd Bldg 104 Hangar 11
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.851088
Longitude (Map): -92.2008745
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): Great Lake Airlines
Address (Site): Airport Rd Bldg 104 Hangar 11
City (Site): Duluth
State (Site): MN
ZIP (Site): 55811
Latitude (Site): 46.851088
Longitude (Site): -92.2008745
County (Site): St. Louis
Name (Req): Great Lake Airlines
Address (Req): Airport Rd Bldg 104 Hangar 11
City (Req): Duluth
State (Req): MN
ZIP (Req): 55811
Loc Desc (Req):
Latitude (Req): 46.851088
Longitude (Req): -92.2008745
County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	24709-AISI0000024709	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	1999-07-27 18:24:16	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	24709
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site

PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	9/28/2015	**TRDSQQ:**	
Tmsp Created:	7/26/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	19560	**User Updt:**	spatial_
Name:	Great Lake Airlines		
Program List:	HW		
HUC 8:	04010202		
HUC 8 Name:	Cloquet River		
HUC 10:	0401020205		
HUC 12:	040102020501		
HUC 12 Name:	Wild Rice Lake Reservoir		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	No	**HUC 8:**	04010202
MPCA ID:	MND985771757	**Cong Distr:**	8
Program Co:	HW	**Senate Dis:**	8
Program Name:	Hazardous Waste	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Duluth	**Latitude:**	46.851088
County:	St. Louis	**Longitude:**	-92.2008745
Activity:	Hazardous Waste		
Addr St:	Airport Rd Bldg 104 Hangar 11		
Addr City:	Duluth		
MPCA ID List:	MND985771757		
Program 1:	Hazardous Waste		
Name:	Great Lake Airlines		
Watershed :	Cloquet River		
Coord Co 1:	Address Matching House Number		
Activity L:	Hazardous Waste		
Industrial:			
Site URL:	https://webapp.pca.state.mn.us/wimn/site/24709		

Agency Interests: File Request Details

Item ID:	24709-AISI0000024709	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	7/27/1999	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	24709
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	9/28/2015	**Ref Code:**	GEN
Tmsp Created:	7/26/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	19560		
Name:	Great Lake Airlines		
Program List:	HW		
HUC 8:	4010202		
HUC 8 Name:	Cloquet River		
HUC 10:	401020205		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 10 Name:	Fish Lake Reservoir-Beaver River
HUC 12:	40102020501
HUC 12 Name:	Wild Rice Lake Reservoir
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	A1
Method Desc:	Address Matching House Number

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
5	3 of7	ESE	0.17 / 872.76	1,407.22 / 2	Residential Services 3 PO Box 3008 Duluth MN 55803	MPCA AI

Agency Interest ID:	12602
Name (Map):	Residential Services 3
Address (Map):	PO Box 3008
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55803
Latitude (Map):	46.85108808
Longitude (Map):	-92.2008745
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Residential Services 3
Address (Site):	PO Box 3008
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55803-3008
Latitude (Site):	46.85108808
Longitude (Site):	-92.2008745
County (Site):	St. Louis
Name (Req):	Residential Services 3
Address (Req):	PO Box 3008
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55803
Loc Desc (Req):	
Latitude (Req):	46.85108808
Longitude (Req):	-92.2008745
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	12602-AISI0000012602	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	1999-07-27 18:24:16	**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	12602
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**SI Type Desc:**	Conventional Site
PLS Twsp:		**Description:**	
Range :		**SI Designation:**	
Range Dir:		**Cong Dist:**	8
Section:		**House Dist:**	8B
Quarters:		**Senate Dist:**	8
Collection Date:	9/27/2015	**TRDSQQ:**	
Tmsp Created:	7/26/1999	**Ref Code:**	GEN
User Created:	DELTA_M_R1	**Ref Desc:**	General Location
Tmsp Updt:	4/26/2016	**Verified:**	No
Spatial ID:	18453	**User Updt:**	spatial_
Name:	Residential Services 3		
Program List:	HW		
HUC 8:	04010202		
HUC 8 Name:	Cloquet River		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

HUC 10: 0401020205
HUC 12: 040102020501
HUC 12 Name: Wild Rice Lake Reservoir
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

My Neighborhood Site Details

Active FLA: No
MPCA ID: HWLIC1002665
Program Co: HW
Program Name: Hazardous Waste
Address: MN
Addr ZIP: 55803-3008
City: Duluth
County: St. Louis
HUC 8: 04010202
Cong Distr: 8
Senate Dis: 8
House Dist: 8B
IC Flag: No
Coord Coll: A1
Latitude: 46.85108808
Longitude: -92.2008745
Activity: Hazardous Waste
Addr St: PO Box 3008
Addr City: Duluth
MPCA ID List: HWLIC1002665
Program 1: Hazardous Waste
Name: Residential Services 3
Watershed : Cloquet River
Coord Co 1: Address Matching House Number
Activity L: Hazardous Waste
Industrial: Health Services
Site URL: https://webapp.pca.state.mn.us/wimn/site/12602

Agency Interests: File Request Details

Item ID: 12602-AISI0000012602
Status: Inactive
Status Date: 7/27/1999
Program: Hazardous Waste
CTU Code: 239456
CTU Name: Duluth
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 9/27/2015
Tmsp Created: 7/26/1999
User Created: DELTA_M_R1
Tmsp Updt: 4/26/2016
Spatial ID: 18453
Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 12602
SI Cat Desc: Agency Interest
Description:
SI Designation:
Cong Dist: 8
House Dist: 8B
Senate Dist: 8
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: spatial_
Name: Residential Services 3
Program List: HW
HUC 8: 4010202
HUC 8 Name: Cloquet River
HUC 10: 401020205
HUC 10 Name: Fish Lake Reservoir-Beaver River
HUC 12: 40102020501
HUC 12 Name: Wild Rice Lake Reservoir
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

5	4 of7	ESE	0.17 / 872.76	1,407.22 / 2	Duluth International Airport - Site 102 Duluth International Airport Duluth MN 55811	MPCA AI

Agency Interest ID:	11034
Name (Map):	Duluth International Airport - Site 102
Address (Map):	Duluth International Airport
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55811
Latitude (Map):	46.85108808
Longitude (Map):	-92.2008745
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	Duluth International Airport - Site 102
Address (Site):	Duluth International Airport
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.85108808
Longitude (Site):	-92.2008745
County (Site):	St. Louis
Name (Req):	Duluth International Airport - Site 102
Address (Req):	Duluth International Airport
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.85108808
Longitude (Req):	-92.2008745
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	11034-AISI0000011034	***Int Doc ID:***	0
Status:	Inactive	***SI Type:***	CON
Status Date:	2012-02-01 20:49:45	***SI Cat:***	AISI
Program:	Multiple Programs	***SI ID:***	11034
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	8B
Quarters:		***Senate Dist:***	8
Collection Date:	11/20/2017	***TRDSQQ:***	
Tmsp Created:	1/14/1999	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	4/24/2023	***Verified:***	No
Spatial ID:	6839	***User Updt:***	WO_2132805
Name:	Duluth International Airport - Site 102		
Program List:	BV, CS, SA		
HUC 8:	04010202		
HUC 8 Name:	Cloquet River		
HUC 10:	0401020205		
HUC 12:	040102020501		
HUC 12 Name:	Wild Rice Lake Reservoir		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	No	***HUC 8:***	04010202
MPCA ID:	Multiple IDs	***Cong Distr:***	8

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program Co:	SR; ST	**Senate Dis:**	8
Program Name:	Multiple Programs	**House Dist:**	8B
Address:	MN	**IC Flag:**	No
Addr ZIP:	55811	**Coord Coll:**	A1
City:	Duluth	**Latitude:**	46.85108808
County:	St. Louis	**Longitude:**	-92.2008745

Activity: Multiple Activities
Addr St: Duluth International Airport
Addr City: Duluth
MPCA ID List: C00001983; SA0001665; SA0020197; VP14730; VP14731; VP21050
Program 1: Investigation and Cleanup; Stormwater
Name: Duluth International Airport - Site 102
Watershed : Cloquet River
Coord Co 1: Address Matching House Number
Activity L: Brownfields, Voluntary Investigation and Cleanup; Construction Stormwater; Site Assessment
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/11034

Agency Interests: File Request Details

Item ID:	11034-AISI0000011034	**Int Doc ID:**	0
Status:	Inactive	**SI Type:**	CON
Status Date:	2/1/2012	**SI Cat:**	AISI
Program:	Multiple Programs	**SI ID:**	11034
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	11/20/2017	**Ref Code:**	GEN
Tmsp Created:	1/14/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/24/2023	**User Updt:**	WO_2132805
Spatial ID:	6839		

Name: Duluth International Airport - Site 102
Program List: BV, CS, SA
HUC 8: 4010202
HUC 8 Name: Cloquet River
HUC 10: 401020205
HUC 10 Name: Fish Lake Reservoir-Beaver River
HUC 12: 40102020501
HUC 12 Name: Wild Rice Lake Reservoir
SI Type Desc: Conventional Site
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

5	***5 of7***	***ESE***	***0.17 / 872.76***	***1,407.22 / 2***	***FAA DMS SMO Duluth MN ASR Duluth Airport Property Duluth MN 55811***	***MPCA AI***

Agency Interest ID: 23555
Name (Map): FAA DMS SMO Duluth MN ASR
Address (Map): Duluth Airport Property
City (Map): Duluth
State (Map): MN
ZIP (Map): 55811
Latitude (Map): 46.85108808
Longitude (Map): -92.2008745
County (Map): St. Louis
County Code (Map): 137
Loc Desc (Map):
Name (Site): FAA DMS SMO Duluth MN ASR
Address (Site): Duluth Airport Property

City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55811
Latitude (Site):	46.85108808
Longitude (Site):	-92.2008745
County (Site):	St. Louis
Name (Req):	FAA DMS SMO Duluth MN ASR
Address (Req):	Duluth Airport Property
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55811
Loc Desc (Req):	
Latitude (Req):	46.85108808
Longitude (Req):	-92.2008745
County (Req):	St. Louis
County Code (Req):	137
Data Source:	MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID:	23555-AISI0000023555	***Int Doc ID:***	0
Status:	Active	***SI Type:***	CON
Status Date:		***SI Cat:***	AISI
Program:	Hazardous Waste	***SI ID:***	23555
CTU Code:	239456	***SI Cat Desc:***	Agency Interest
CTU Name:	Duluth	***SI Type Desc:***	Conventional Site
PLS Twsp:		***Description:***	
Range :		***SI Designation:***	
Range Dir:		***Cong Dist:***	8
Section:		***House Dist:***	8B
Quarters:		***Senate Dist:***	8
Collection Date:	9/28/2015	***TRDSQQ:***	
Tmsp Created:	7/26/1999	***Ref Code:***	GEN
User Created:	DELTA_M_R1	***Ref Desc:***	General Location
Tmsp Updt:	4/26/2016	***Verified:***	No
Spatial ID:	19725	***User Updt:***	spatial_
Name:	FAA DMS SMO Duluth MN ASR		
Program List:	HW		
HUC 8:	04010202		
HUC 8 Name:	Cloquet River		
HUC 10:	0401020205		
HUC 12:	040102020501		
HUC 12 Name:	Wild Rice Lake Reservoir		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

My Neighborhood Site Details

Active FLA:	Yes	***HUC 8:***	04010202
MPCA ID:	MNR000017426	***Cong Distr:***	8
Program Co:	HW	***Senate Dis:***	8
Program Name:	Hazardous Waste	***House Dist:***	8B
Address:	MN	***IC Flag:***	No
Addr ZIP:	55811	***Coord Coll:***	A1
City:	Duluth	***Latitude:***	46.85108808
County:	St. Louis	***Longitude:***	-92.2008745
Activity:	Hazardous Waste		
Addr St:	Duluth Airport Property		
Addr City:	Duluth		
MPCA ID List:	MNR000017426		
Program 1:	Hazardous Waste		
Name:	FAA DMS SMO Duluth MN ASR		
Watershed :	Cloquet River		
Coord Co 1:	Address Matching House Number		

Activity L:	Hazardous Waste
Industrial:	Air Traffic Control
Site URL:	https://webapp.pca.state.mn.us/wimn/site/23555

Agency Interests: File Request Details

Item ID:	23555-AISI0000023555	**Int Doc ID:**	0
Status:	Active	**SI Type:**	CON
Status Date:		**SI Cat:**	AISI
Program:	Hazardous Waste	**SI ID:**	23555
CTU Code:	239456	**SI Cat Desc:**	Agency Interest
CTU Name:	Duluth	**Description:**	
PLS Twsp:		**SI Designation:**	
Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	9/28/2015	**Ref Code:**	GEN
Tmsp Created:	7/26/1999	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	19725		

Name:	FAA DMS SMO Duluth MN ASR
Program List:	HW
HUC 8:	4010202
HUC 8 Name:	Cloquet River
HUC 10:	401020205
HUC 10 Name:	Fish Lake Reservoir-Beaver River
HUC 12:	40102020501
HUC 12 Name:	Wild Rice Lake Reservoir
SI Type Desc:	Conventional Site
DWSMA Code:	
DWSMA Name:	
Method Code:	A1
Method Desc:	Address Matching House Number

5	***6 of7***	***ESE***	***0.17 / 872.76***	***1,407.22 / 2***	***ISD 704 General Delivery Duluth MN 55806***	***MPCA AI***

Agency Interest ID:	1004
Name (Map):	ISD 704
Address (Map):	General Delivery
City (Map):	Duluth
State (Map):	MN
ZIP (Map):	55806
Latitude (Map):	46.85108808
Longitude (Map):	-92.2008745
County (Map):	St. Louis
County Code (Map):	137
Loc Desc (Map):	
Name (Site):	ISD 704
Address (Site):	General Delivery
City (Site):	Duluth
State (Site):	MN
ZIP (Site):	55806-9999
Latitude (Site):	46.85108808
Longitude (Site):	-92.2008745
County (Site):	St. Louis
Name (Req):	ISD 704
Address (Req):	General Delivery
City (Req):	Duluth
State (Req):	MN
ZIP (Req):	55806
Loc Desc (Req):	
Latitude (Req):	46.85108808
Longitude (Req):	-92.2008745

County (Req): St. Louis
County Code (Req): 137
Data Source: MPCA Agency Interests: Map (Map) (as of 27 Jan 2026); MPCA Agency Interests: File Request (Req) (as of 14 Jan 2026); My Neighborhood Sites (Site) (as of 27 Jan 2026)

Agency Interests: Map Details

Item ID: 1004-AISI0000001004
Status: Inactive
Status Date: 2000-03-06 00:00:00
Program: Wastewater
CTU Code: 239456
CTU Name: Duluth
PLS Twsp:
Range :
Range Dir:
Section:
Quarters:
Collection Date: 9/27/2015
Tmsp Created: 5/9/1997
User Created: DELTA_M_R1
Tmsp Updt: 4/26/2016
Spatial ID: 3938
Name: ISD 704
Program List: WW
HUC 8: 04010202
HUC 8 Name: Cloquet River
HUC 10: 0401020205
HUC 12: 040102020501
HUC 12 Name: Wild Rice Lake Reservoir
DWSMA Code:
DWSMA Name:
Method Code: A1
Method Desc: Address Matching House Number

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 1004
SI Cat Desc: Agency Interest
SI Type Desc: Conventional Site
Description:
SI Designation:
Cong Dist: 8
House Dist: 8B
Senate Dist: 8
TRDSQQ:
Ref Code: GEN
Ref Desc: General Location
Verified: No
User Updt: spatial_

My Neighborhood Site Details

Active FLA: No
MPCA ID: MN0045161
Program Co: WW
Program Name: Water Quality
Address: MN
Addr ZIP: 55806-9999
City: Duluth
County: St. Louis
Activity: Wastewater, Municipal NPDES/SDS Permit
Addr St: General Delivery
Addr City: Duluth
MPCA ID List: MN0045161
Program 1: Water Quality
Name: ISD 704
Watershed : Cloquet River
Coord Co 1: Address Matching House Number
Activity L: Wastewater, Municipal NPDES/SDS Permit
Industrial:
Site URL: https://webapp.pca.state.mn.us/wimn/site/1004

HUC 8: 04010202
Cong Distr: 8
Senate Dis: 8
House Dist: 8B
IC Flag: No
Coord Coll: A1
Latitude: 46.85108808
Longitude: -92.2008745

Agency Interests: File Request Details

Item ID: 1004-AISI0000001004
Status: Inactive
Status Date: 3/6/2000
Program: Wastewater
CTU Code: 239456
CTU Name: Duluth
PLS Twsp:

Int Doc ID: 0
SI Type: CON
SI Cat: AISI
SI ID: 1004
SI Cat Desc: Agency Interest
Description:
SI Designation:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Range :		**Cong Dist:**	8
Range Dir:		**House Dist:**	8B
Section:		**Senate Dist:**	8
Quarters:		**TRDSQQ:**	
Collection Date:	9/27/2015	**Ref Code:**	GEN
Tmsp Created:	5/9/1997	**Ref Desc:**	General Location
User Created:	DELTA_M_R1	**Verified:**	No
Tmsp Updt:	4/26/2016	**User Updt:**	spatial_
Spatial ID:	3938		
Name:	ISD 704		
Program List:	WW		
HUC 8:	4010202		
HUC 8 Name:	Cloquet River		
HUC 10:	401020205		
HUC 10 Name:	Fish Lake Reservoir-Beaver River		
HUC 12:	40102020501		
HUC 12 Name:	Wild Rice Lake Reservoir		
SI Type Desc:	Conventional Site		
DWSMA Code:			
DWSMA Name:			
Method Code:	A1		
Method Desc:	Address Matching House Number		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
5	7 of7	ESE	0.17 / 872.76	1,407.22 / 2	**Duluth International Airport - AOC C** **Duluth International Airport** **Duluth MN 55811**	VIC

Item ID:	11034-AREA0000000001	**Unpermitted Dump?:**	
Project ID:	VP21050	**State Reg:**	Yes
Project Type:	Brownfield Site	**Federal Reg:**	
Project ID (RAP):	VP21050	**Fed State Reg:**	
Project Type (RAP):	Brownfield Site	**Non Reg:**	
Site Status:	Inactive / Retired	**NPL:**	
Perm List of Prio?:		**Site County:**	St. Louis
Petrol Brownfield?:		**County (RAP):**	St. Louis
VIC Site?:	Yes	**Latitude:**	46.85108948
Sf Voluntary:		**Longitude:**	-92.20087433
Inst Controls?:		**Latitude (RAP):**	46.85108948
SEMS?:		**Longitude (RAP):**	-92.20087433
Project Name:	Duluth International Airport - AOC C		
Project Managers:	Jane Mosel (no longer at MPCA)		
Site Address 1:	Duluth International Airport		
Site Address 2:			
Site City:	Duluth		
Site State:	MN		
Site Zip:	55811		
Project Name(RAP):	Duluth International Airport - AOC C		
Address1 (RAP):	Duluth International Airport		
Address2(RAP):			
City (RAP):	Duluth		
State (RAP):	MN		
Zip (RAP):	55811		
Data Source:	MPCA Remediation Sites; MPCA Remediation Sites with RAP approvals		

Remediation Sites Details

Activity ID:	11034	**Object ID:**	1805
SI ID:	1	**Cong Dist:**	8
SI Cat:	AREA	**House Dist:**	8B
SI Type:	BROW	**Senate Dis:**	8
Site Type:	CON	**HUC 8:**	04010202
Acreage:	2.00	**HUC 10:**	0401020205
HRS Score:		**HUC 12:**	040102020501
Score Year:		**Gdb Geomattr Data:**	
DWSMA Code:		**MNTBA:**	
AI Name:	Duluth International Airport - Site 102		

Hydrologists:	Mark Elliott (former)
DWSMA Name:	
HUC 8 Name:	Cloquet River
HUC 12 Name:	Wild Rice Lake Reservoir
Method Desc:	Address Matching House Number
Loc Desc:	none
WIMN Url:	https://webapp.pca.state.mn.us/wimn/site/11034

Remediation Sites with RAP Approval

Activity ID:	11034	**Rap Approved:**	
No Association Dt:		**Rap Completed:**	
No Associatn Lettr:	Yes - owner	**Site Start:**	
Rap Date:		**Site Closed:**	
Has RP:	No		
RP Names:			
AI Name:	Duluth International Airport - Site 102		
Parcels:			
Coord Collection Method:	Address Matching House Number		
WIMN:	https://webapp.pca.state.mn.us/wimn/site/11034		

Spatial Remediation Activity

AI ID:	11034	**Object ID:**	3336
Site ID:	VP21050	**Remedy Imp:**	
SI ID:	1	**Remedy Sel:**	
SI Cat:	AREA	**ASMT Compl:**	
NFA Decisi:		**Received:**	2005-09-12 00:00:00
Site Start:	2005-08-12 00:00:00	**NPL List:**	
Site Close:	2008-06-28 00:00:00	**NPL Delete:**	
Leak Discovered:		**PLP List:**	
Leak Reported:		**PLP Delist:**	
Leak Reopened:		**Staff Assi:**	2005-08-12 00:00:00
Activity No:	1	**FF Aproved:**	
Activity ID:	SIW20050001	**FF Closed:**	
Activity Type:	Brownfield Site	**Inv Comple:**	
Activity Code:	SIW	**App Comple:**	2005-08-12 00:00:00
Activity Year:	2005	**Er Site Ev:**	
Discovered:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
6	1 of1	ESE	0.87 / 4,584.85	1,424.41 / 19	**DULUTH AIR FORCE BASE Site 29 - (FUDS)Site 102 TCE** **Lots 2 and 3 Block 4 and 5 of the Airport Division** **Duluth MN 55811**	DEL PLP

Delisted Permanent List of Priorities (PLP)

Project ID:	SR355	**Created By:**	Mark Elliott
Site ID2:		**Created Date:**	5/31/2006
Core Prgm Int ID:	55132344	**Last Update:**	2/19/2016
Item ID:		**Site City:**	272
Link ID:	455	**Site County:**	69
Active:	FALSE	**Legal District:**	06B
Remed Site Type:	Military Base	**PLS Method:**	M
Agency Interest ID:		**Pls Scal:**	A
AI Name:		**Township:**	50
EPA ID:		**Range:**	15
Site Type:		**Range E W:**	W
MPCA Region:	Duluth	**Section:**	2
EPA HRS Score:		**Qtr 160:**	SE
NPL:	FALSE	**Qtr 40:**	SE
Perm List of Prior?:	TRUE	**Qtr 10:**	NW
PLP Listed Dt:		**Qtr 2 5:**	

PLP Delisted Dt:		***Quad:***	771
NPL Listed Dt:		***NAD No:***	83
NPL Deleted Dt:		***Coord Pt Desc:***	
Site Closed Dt:		***Coord Src Type:***	
Agency Interest Own:		***Coord Src Org:***	
Leak Discovered Dt:		***Meth Col:***	
Leak Reported Dt:		***Coldate:***	
Application Received:		***Hydrogeol/Hydrol:***	
District:	North	***Project Manager:***	
Pgm Ref from:	Other	***File Location:***	Regional Office
Pgm Int:	SF	***Congression Dist:***	8
Reservation:	FALSE	***VIC App GIS:***	FALSE
Reservation Name:		***Latitude:***	
MPCA Wells:	FALSE	***Longitude:***	
Federal Facility:	TRUE	***UTM Source:***	2
Primary Fund:	4	***UTM Method:***	I1
Basin Code:	1	***UTM Scale:***	A
Major Watershed:	3	***UTM East:***	561741.33001
Minor Watershed:	3001	***UTM North:***	5188021.6282
PBP:	FALSE	***UTM Zone:***	15
ENF Lead Agency:	MPCA	***Site Size:***	3
Fed Def Pilot:	FALSE	***Pay Complete:***	TRUE
Site Class A:	FALSE	***Owner Address:***	
Site Class B:	FALSE	***Owner City:***	
Site Class C:	TRUE	***Owner State:***	
Site Class D:	TRUE	***Owner ZIP:***	
NATRESDMG:	FALSE	***County Name:***	St. Louis
Fund Fin:	FALSE		
Migrated from Old Database:			
Coord Collection Method:			
What's in My Neighborhood:			
Physical Location:	OU29 is also known as the Lot 3 Project Area (LP3) or the Building 102 Site. It is located in the southwest part of the DAB. This area is owned by the DAA and currently occupied by two lease holders, Cirrus Design Corp. and the Commorative Air Force.		
Source Orig:	PLP		
Record Date:	04-AUG-2016		

Unplottable Summary

Total: 1 Unplottable sites

DB	Company Name/Site Name	Address	City	Zip	ERIS ID
FINDS/FRS	2021 TAXIWAY A RECONSTRUCTION	DULUTH AIRPORT ***Registry ID:*** 110071494411	DULUTH MN	55811	921909125

Unplottable Report

Site: ***2021 TAXIWAY A RECONSTRUCTION***
DULUTH AIRPORT DULUTH MN 55811

FINDS/FRS

Registry ID:	110071494411
FIPS Code:	27137
HUC Code:	
Site Type Name:	
Location Description:	
Supplemental Location:	
Create Date:	04-OCT-23
Update Date:	
Interest Types:	STATE MASTER
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	
Census Block Code:	
EPA Region Code:	05
County Name:	ST. LOUIS
US/Mexico Border Ind:	
Latitude:	
Longitude:	
Reference Point:	
Coord Collection Method:	
Accuracy Value:	
Datum:	NAD83
Source:	
Frs Facility Detail Report URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110071494411
Program Acronyms:	

MN-TEMPO:251251

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ERIS updates databases as set out in ASTM Standard E1527-13 and E1527-21, Section 8.1.8 Sources of Standard Source Information:

"Government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public."

Standard Environmental Record Sources

Federal

National Priority List: NPL

The U.S. Environmental Protection Agency (EPA)'s National Priorities List (NPL) includes the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program, based primarily on the score a site receives from EPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action. This data includes NPL sites represented as polygons, where available, that can be sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS), and is limited to those sites where the NPL Status reflects the site is 'Currently on the Final NPL (F)' and/or the 'Site is Part of NPL Site (A)'. These site boundaries represent the footprint of a whole site, the sum of all the Operable Units (OUs) and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. As site investigation and remediation progress, OUs may be added, modified or refined. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Jan 18, 2026

National Priority List - Proposed: PROPOSED NPL

Sites proposed by the U.S. Environmental Protection Agency (EPA), the state agency, or concerned citizens for addition to the National Priorities List (NPL) due to contamination by hazardous waste and identified by the EPA as a candidate for cleanup because it poses a risk to human health and/or the environment. Sites represented as polygons, where available, can be sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS). These site boundaries represent the footprint of a whole site, the sum of all the Operable Units (OUs) and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Jan 18, 2026

Deleted NPL: DELETED NPL

Sites deleted from the U.S. Environmental Protection Agency (EPA)'s National Priorities List (NPL). The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate. Sites represented as polygons, where available, can be sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS). These site boundaries represent the footprint of a whole site, the sum of all the Operable Units (OUs) and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Jan 18, 2026

SEMS List 8R Active Site Inventory: SEMS

The U.S. Environmental Protection Agency's (EPA) Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted. This data includes SEMS sites from the List 8R Active file as well as applicable sites from the EPA's Facility Registry Service map tool. This data may also include applicable sites represented as polygons sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS), and is limited to those sites where the NPL Status reflects the site is 'Not on the NPL (N)' , 'Removed from Proposed (R)', and/or 'Pre-Proposal Site (S)'. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Dec 26, 2025

Inventory of Open Dumps, June 1985: ODI

The Resource Conservation and Recovery Act (RCRA) provides for publication of an inventory of open dumps. The Act defines "open dumps" as facilities which do not comply with EPA's "Criteria for Classification of Solid Waste Disposal Facilities and Practices" (40 CFR 257).

Government Publication Date: Jun 1985

SEMS List 8R Archive Sites: SEMS ARCHIVE

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. This data includes sites from the List 8R Archived site file. This data may also include applicable sites represented as polygons sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS), and is limited to those sites where the NPL Status reflects the site is 'Not on the NPL (N)' , 'Removed from Proposed (R)', and/or 'Pre-Proposal Site (S)'. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Dec 26, 2025

Comprehensive Environmental Response, Compensation and Liability Information System - CERCLIS: CERCLIS

Superfund is a program administered by the United States Environmental Protection Agency (EPA) to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The EPA administers the Superfund program in cooperation with individual states and tribal governments; this database is made available by the EPA.

Government Publication Date: Oct 25, 2013

EPA Report on the Status of Open Dumps on Indian Lands: IODI

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified congressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

Government Publication Date: Dec 31, 1998

CERCLIS - No Further Remedial Action Planned: CERCLIS NFRAP

An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. The Archive designation means that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Government Publication Date: Oct 25, 2013

CERCLIS Liens: CERCLIS LIENS

A Federal Superfund lien exists at any property where EPA has incurred Superfund costs to address contamination ("Superfund site") and has provided notice of liability to the property owner. A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. This database is made available by the United States Environmental Protection Agency (EPA). This database was provided by the United States Environmental Protection Agency (EPA). Refer to SEMS LIEN as the current data source for Superfund Liens.

Government Publication Date: Jan 30, 2014

RCRA CORRACTS-Corrective Action: RCRA CORRACTS

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. At these sites, the Corrective Action Program ensures that cleanups occur. EPA and state regulators work with facilities and communities to design remedies based on the contamination, geology, and anticipated use unique to each site.

Government Publication Date: Nov 30, 2025

RCRA non-CORRACTS TSD Facilities: RCRA TSD

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. This database includes Non-Corrective Action sites that have indicated engagement in the treatment, storage, or disposal of hazardous waste which requires a RCRA hazardous waste permit.

Government Publication Date: Nov 30, 2025

RCRA Generator List: RCRA LQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste. This list also includes RCRAInfo sites that have notified as LQGs that do not have a registered Site Manager or Certifier in RCRAInfo.

Government Publication Date: Nov 30, 2025

RCRA Small Quantity Generators List: RCRA SQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month. This list also includes RCRAInfo sites that have notified as SQGs that do not have a registered Site Manager or Certifier in RCRAInfo.

Government Publication Date: Nov 30, 2025

RCRA Very Small Quantity Generators List: RCRA VSQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Very Small Quantity Generators (VSQG) generate 100 kilograms or less per month of hazardous waste, or one kilogram or less per month of acutely hazardous waste. Additionally, VSQG may not accumulate more than 1,000 kilograms of hazardous waste at any time.

Government Publication Date: Nov 30, 2025

RCRA Non-Generators: RCRA NON GEN

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Non-Generators do not presently generate hazardous waste.

Government Publication Date: Nov 30, 2025

RCRA Sites with Controls: RCRA CONTROLS

List of Resource Conservation and Recovery Act (RCRA) facilities with institutional controls in place. RCRA gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

Government Publication Date: Nov 30, 2025

Federal Engineering Controls-ECs: FED ENG

List of Engineering controls (ECs) made available by the United States Environmental Protection Agency (EPA). ECs encompass a variety of engineered and constructed physical barriers (e.g., soil capping, sub-surface venting systems, mitigation barriers, fences) to contain and/or prevent exposure to contamination on a property. The EC listing includes remedy component data from Superfund decision documents for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Jan 30, 2026

Federal Institutional Controls- ICs: FED INST

List of Institutional controls (ICs) made available by the United States Environmental Protection Agency (EPA). ICs are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site. The IC listing includes remedy component data from Superfund decision documents for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Jan 30, 2026

Land Use Controls Information System: LUCIS

The Land Use Controls Information System (LUCIS) database is sourced from the U.S. Department of the Navy (DON). This data contains information for former Base Realignment and Closure (BRAC) properties across the United States. DON's BRAC office was tasked with tracking certain base closures while requiring the prevention of risks to human health and the environment of those properties with LUCs in place. Regarding currently available LUC Sites data, the sites listing is limited to centroid point locations for the overall installation property boundaries. Formerly obtained LUC Sites data may reflect site details that applied previously for a BRAC property.

Government Publication Date: Jun 13, 2024

Institutional Control Boundaries at NPL sites: NPL IC

These boundaries of Institutional Control areas at sites on the U.S. Environmental Protection Agency's (EPA) National Priorities List (NPL), or as Proposed or Deleted, are sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS). The EPA's NPL includes the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. Institutional controls are non-engineered instruments such as administrative and legal controls that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes.

Government Publication Date: Jan 18, 2026

Emergency Response Notification System: ERNS 1982 TO 1986

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1982-1986

Emergency Response Notification System: ERNS 1987 TO 1989

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1987-1989

Emergency Response Notification System: ERNS

Database of oil and hazardous substances spill reports made available by the United States Coast Guard National Response Center (NRC). The NRC fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. These data contain initial incident data that has not been validated or investigated by a federal/state response agency.

Government Publication Date: Feb 8, 2026

The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database: FED BROWNFIELDS

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. This data is provided by the United States Environmental Protection Agency (EPA) and includes Brownfield sites from the Cleanups in My Community (CIMC) web application.

Government Publication Date: Sep 8, 2025

FEMA Underground Storage Tank Listing: FEMA UST

The Federal Emergency Management Agency (FEMA) of the Department of Homeland Security maintains a list of FEMA owned underground storage tanks.

Government Publication Date: Dec 31, 2017

Facility Response Plan: FRP

This listing contains facilities that have submitted Facility Response Plans (FRPs) to the U.S. Environmental Protection Agency (EPA). Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit FRPs. Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments. The list includes FRP facilities sourced from the EPA FOIA office and from previously available Homeland Infrastructure Foundation-Level Data (HIFLD) file/s. Disclaimer: Per the EPA FOIA Office, the verification process for current requested FRP data is undergoing review and revision, and any similar reporting will be made public in Fiscal Year 2026. For this reason, the latest available FOIA file may be incomplete.

Government Publication Date: Jun 1, 2025

Delisted Facility Response Plans: DELISTED FRP

Facilities that once appeared in - and have since been removed from - the list of facilities that have submitted Facility Response Plans (FRP) to EPA. Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit Facility Response Plans (FRPs). Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments.

Government Publication Date: Jun 1, 2025

Historical Gas Stations: HIST GAS STATIONS

This historic directory of service stations is provided by the Cities Service Company. The directory includes Cities Service filling stations that were located throughout the United States in 1930.

Government Publication Date: Jul 1, 1930

Petroleum Refineries: REFN

This list of petroleum refineries is sourced from the U.S. Energy Information Administration (EIA), Refinery Capacity Report. The listing includes operating and idle petroleum refineries (including new refineries under construction) and refineries shut down during the previous year. The geographic area the report covers is the 50 States, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, Guam, and other U.S. possessions. Per the EIA, the facility location data represents the approximate location based on research of publicly available information from sources such as Federal agencies, company websites, and satellite images on public websites.

Government Publication Date: Oct 31, 2024

Petroleum Product and Crude Oil Rail Terminals: BULK TERMINAL

A list of petroleum product and crude oil rail terminals from the U.S. Energy Information Administration (EIA), as well as petroleum terminals sourced from Oak Ridge National Laboratory hosted by the Homeland Infrastructure Foundation-Level Database. Data includes operable bulk petroleum product terminals with a total bulk shell storage capacity of 50,000 barrels or more, and/or the ability to receive volumes from tanker, barge, or pipeline; also rail terminals handling the loading and unloading of crude oil with activity between 2017 and 2018. EIA petroleum product terminal data comes from the EIA-815 Bulk Terminal and Blender Report, which includes working, shell in operation, and shell idle for several major product groupings.

Government Publication Date: Jun 5, 2025

LIEN on Property: SEMS LIEN

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) provides Lien details on applicable properties, such as the Superfund lien on property activity, the lien property information, and the parties associated with the lien.

Government Publication Date: Dec 26, 2025

Superfund Decision Documents: SUPERFUND ROD

This database contains a list of decision documents for Superfund sites. Decision documents serve to provide the reasoning for the choice of (or) changes to a Superfund Site cleanup plan. The decision documents include completed Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD) for active and archived sites stored in the Superfund Enterprise Management System (SEMS), along with other associated memos and files. This information is maintained and made available by the U.S. Environmental Protection Agency.

Government Publication Date: Jan 30, 2026

State

Minnesota Permanent List of Priorities: PLP

The state Superfund sites in Minnesota are listed on the Minnesota Permanent List of Priorities (PLP). The hazardous waste sites on the PLP are in various stages of remediation. At these sites investigation and cleanup are needed, cleanup is underway, or cleanup has been completed and long-term monitoring or maintenance continues. This data is made available by the Minnesota Pollution Control Agency (MPCA). This database serves a purpose similar to that of the federal NPL, functioning as a state-level counterpart for prioritizing cleanup efforts at hazardous substance release sites.

Government Publication Date: Feb 26, 2026

Delisted Permanent List of Priorities (PLP): DEL PLP

This list contains sites that were previously included - and have since been removed from - the Permanent List of Priorities (PLP) maintained by Minnesota's Pollution Control Agency (MPCA) but have now been delisted.

Government Publication Date: Feb 26, 2026

Minnesota Site Remediation Section Database: SHWS

The Site Remediation Section identifies, investigates, and determines appropriate cleanup plans for abandoned or uncontrolled hazardous waste sites where a release or potential release of a hazardous substance poses a risk to human health or the environment. This data is made available by the Minnesota Pollution Control Agency (MPCA)'s Site Remediation Section. This database serves a purpose similar to that of the federal Superfund Enterprise Management System (SEMS), functioning as a state-level counterpart for tracking potential hazardous substance release sites.

Government Publication Date: Feb 26, 2026

MPCA Site Assessment and Emergency Response Sites: SITE ASSESSMENT

List of active and closed sites that are currently under site assessment by Minnesota Pollution Control Agency (MPCA) and are a part of MPCA Remediation Sites list, and Emergency Management Sites where a chemical spill or some other environmental incident occurred that required immediate action to protect human health and the environment (includes only Emergency Management Sites that require significant staff involvement).

Government Publication Date: Feb 26, 2026

Permitted Solid Waste Facilities: SWF/LF

A list of permitted solid waste and landfill facilities made available by the Minnesota Pollution Control Agency (MPCA).

Government Publication Date: Mar 3, 2026

Closed Landfills Priority List: LCP

The Minnesota Legislature enacted the Landfill Cleanup Act (LCA) in 1994 to ensure the proper closure and post-closure care at up to 112 closed, permitted municipal sanitary landfills located throughout the state. Based on this legislation, the Minnesota Pollution Control Agency (MPCA) created the Closed Landfill Program (CLP) to administer the LCA mandates. This data made available by The Minnesota Pollution Control Agency (MPCA).

Government Publication Date: Jan 16, 2025

Unpermitted Dump Sites: UNPERMITTED LF

The Minnesota Pollution Control Agency (MPCA) defines "dumps" as those landfills that never held a valid permit from the MPCA. Generally, dumps existed prior to the permitting program established with the creation of the MPCA in 1967. This database is made available by MPCA.

Government Publication Date: Feb 26, 2026

Recycling Markets Directory: RECYCLING

The Recycling Markets Directory is provided by the Minnesota Pollution Control Agency (MPCA). The markets in this database accept large (commercial) quantities of materials.

Government Publication Date: Mar 4, 2026

Historical Leaking Underground Storage Tanks: HIST LUST

A list of leaking underground storage tanks (LUSTs) in the tanks database maintained by the Minnesota Pollution Control Agency (MPCA) up until Nov 01, 2016.

Government Publication Date: Nov 1, 2016

Deleted Leaking Underground Storage Tanks: DEL LUST

A list of leaking underground storage tanks that are often deleted for various reasons. Deletion occurs primarily due to a duplication, or that the source was determined to not be from a tank. This list was provided by Minnesota Pollution Control Agency.

Government Publication Date: Jan 5, 2016

Historical Leaking Aboveground Storage Tanks: HIST LAST

A list of leaking aboveground storage tanks (LASTs) in the tanks database maintained by the Minnesota Pollution Control Agency (MPCA) up until Nov 01, 2016.

Government Publication Date: Nov 1, 2016

Historical Leak Sites: HIST LEAKSITES

A list of leak sites that were neither determined as aboveground nor underground in the tanks database maintained by the Minnesota Pollution Control Agency (MPCA) up until Nov 01, 2016.

Government Publication Date: Nov 1, 2016

MPCA Remediation Leak Sites: LST REM SITE

This is list of leak sites in which the Minnesota Pollution Control Agency (MPCA) is involved in remediation activities. The MPCA publishes this listing.

Government Publication Date: Feb 26, 2026

MPCA Tank Incidents: LST INCIDENT

A list of leaking and registered tank sites in Minnesota that includes locations, details of tank installation and construction, and installed safety measures. This list is provided by Minnesota Pollution Control Agency (MPCA).

Government Publication Date: Feb 23, 2026

Delisted Leaking Storage Tanks: DELISTED LST

This database contains a list of closed leaking storage tank sites that were removed from the Minnesota Pollution Control Agency (MPCA).

Government Publication Date: Feb 26, 2026

Underground Storage Tanks: UST

In Minnesota, there are about 18,000 regulated underground storage tanks (USTs) currently in use. The Underground Storage Tank Program in the Minnesota Pollution Control Agency (MPCA) was created to help prevent contamination caused by leaking tanks. This is a list that contains all regulated USTs. Some types of USTs are exempt from state regulations, such as: tanks with capacity of 110 gallons or less; farm and residential tanks with a 1,100-gallon capacity or less, storing motor fuel for non-commercial purposes, or heating oil for on-site consumption; tanks that contain a minimum concentration of regulated substances; flow-through process tanks; oil-water separators. This data is made available by MPCA.

Government Publication Date: Feb 25, 2026

Minnesota Above Ground Storage Tanks: AST

There are more than 20,000 regulated above-ground storage tanks (ASTs) currently in use across Minnesota. Most tanks located above ground containing liquid substances (i.e., not gaseous or solid at ambient temperature and pressure) are subject to the Minnesota Pollution Control Agency's (MPCA) rules for design and operation of ASTs. This list contains ASTs regulated by MPCA. Some types of ASTs are exempt from the regulations, such as but not limited to the following: ASTs with a capacity of 500 gallons or less; Farm ASTs; Residential ASTs storing 1,100 gallons or less of motor fuel used for noncommercial purposes; ASTs containing hazardous wastes subject to a treatment or storage permit or containing agricultural chemicals regulated under MN Statutes 18B, 18C, 18D; Stormwater collection systems and septic systems. This data is made available by the MPCA.

Government Publication Date: Feb 23, 2026

Tank Sites: HIST TANK

A list of tank sites not included in AST or UST, this list maintained by the Minnesota Pollution Control Agency (MPCA) up until Dec 30, 2016.

Government Publication Date: Dec 30, 2016

Delisted Storage Tanks: DELISTED TANK

This database contains a list of storage tank sites that were removed from the Minnesota Pollution Control Agency (MPCA).

Government Publication Date: Feb 26, 2026

Sites with Institutional Control Events: INST

A list made available by the Minnesota Pollution Control Agency (MPCA) consisting of remediation sites that have various institutional controls in place.

Government Publication Date: Feb 27, 2026

Agricultural Contingency Sites Boundaries: AG CONTINGENCY

The Minnesota Department of Agriculture (MDA) Incident Response Unit (IRU) is the state lead agency for the investigation and remediation of incidents involving agricultural chemicals (pesticides and fertilizer). This MDA IRU database includes sites with a soil or ground water contingency, deed restriction, local ordinance, restrictive covenant or deed affidavit in place. The accuracy of the boundaries of these sites can be variable - in most cases, the site boundaries should be considered as only representing the vicinity of the soil or ground water contingency area or plume.

Government Publication Date: Nov 27, 2025

Petroleum Brownfields Program Sites: BROWNFIELDS

The Minnesota Pollution Control Agency (MPCA)'s Petroleum Brownfields Program handles petroleum contamination under the Petroleum Tank Release Cleanup Act (Minnesota Statutes § 115C). This data is made available by MPCA.

Government Publication Date: Feb 26, 2026

Voluntary Investigation and Cleanup Program List: VIC

The Minnesota Pollution Control Agency's (MPCA) Brownfield Program consists of an integrated program called the Voluntary Investigation and Cleanup (VIC) Program. This program handles hazardous substance contamination under Minnesota's Environmental Response and Liability Act (Minnesota Statutes § 115B). This database is made available by MPCA.

Government Publication Date: Feb 26, 2026

Potential Voluntary Investigation and Cleanup Program Sites: POTENTIAL VIC

This listing of Potential Voluntary Investigation and Cleanup Program sites is provided by the Minnesota Pollution Control Agency (MPCA). These potential sites have not yet entered into the VIC Program until an application has been received at the MPCA.

Government Publication Date: Apr 22, 2016

MPCA Agency Interests: MPCA AI

Facility, site and project locations from the Minnesota Pollution Control Agency's enterprise database, representing locations associated with waste water, storm water, hazardous waste, feedlot, solid waste, tanks, remediation, and other agency programs. Includes records from "What's In My Neighborhood Sites".

Government Publication Date: Jan 27, 2026

Tribal

Leaking Underground Storage Tanks on Tribal/Indian Lands: INDIAN LUST

This list of leaking underground storage tanks (LUSTs) on Tribal/Indian Lands in Region 5, which includes Minnesota, is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Nov 21, 2025

Underground Storage Tanks on Tribal/Indian Lands: INDIAN UST

This list of underground storage tanks (USTs) on Tribal/Indian Lands in Region 5, which includes Minnesota, is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Nov 21, 2025

Delisted Tribal Leaking Storage Tanks: DELISTED INDIAN LST

Leaking Underground Storage Tank (LUST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian LUST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Nov 21, 2025

Delisted Tribal Underground Storage Tanks: DELISTED INDIAN UST

Underground Storage Tank (UST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian UST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Nov 21, 2025

County

No County standard environmental record sources available for this State.

Additional Environmental Record Sources

Federal

PFAS Greenhouse Gas Emissions Data: PFAS GHG

The U.S. Environmental Protection Agency's (EPA) Greenhouse Gas Reporting Program (GHGRP) collects Greenhouse Gas (GHG) data from large emitting facilities (25,000 metric tons of carbon dioxide equivalent (CO2e) per year), and suppliers of fossil fuels and industrial gases that results in GHG emissions when used. This dataset is sourced from the EPA's PFAS Analytic Tools, and it includes GHG emissions data for facilities that emit or have emitted since 2010 chemicals identified as PFAS based on EPA's CompTox Chemicals Dashboard lists of PFAS with defined and undefined structures. PFAS emissions data has been identified for facilities engaged in the following industrial processes: Aluminum Production (GHGRP Subpart F), HCFC-22 Production and HFC-23 Destruction (Subpart O), Electronics Manufacturing (Subpart I), Fluorinated Gas Production (Subpart L), Magnesium Production (Subpart T), Electrical Transmission and Distribution Equipment Use (Subpart DD), and Manufacture of Electric Transmission and Distribution Equipment (Subpart SS). Over time, other industrial processes with required GHGRP reporting may include PFAS emissions data and the list of reportable gases may change over time. Note that some regulatory programs have specified chemical structure requirements that define PFAS differently than the lists in EPA's CompTox Chemicals Dashboard.

Government Publication Date: Mar 2, 2026

On-Scene Coordinator Response Sites: OSC RESPONSE

This list of On-Scene Coordinator (OSC) Response Sites is provided by the U.S. Environmental Protection Agency (EPA). OSCs are the federal officials responsible for monitoring or directing responses to all oil spills and hazardous substance releases reported to the federal government. OSCs coordinate all federal efforts with, and provide support and information to local, state, and regional response communities. An OSC is an agent of either EPA or the U.S. Coast Guard (USCG), depending on where the incident occurs. EPA's OSCs have primary responsibility for spills and releases to inland areas and waters. USCG OSCs have responsibility for coastal waters and the Great Lakes. In general, an OSC has the following key responsibilities during and after a response: Assessment, Monitoring, Response Assistance, and Evaluation.

Government Publication Date: Oct 8, 2025

Facility Registry Service/Facility Index: FINDS/FRS

The Facility Registry Service (FRS) is a centrally managed database that identifies facilities, sites, or places subject to environmental regulations or of environmental interest. FRS creates high-quality, accurate, and authoritative facility identification records through rigorous verification and management procedures that incorporate information from program national systems, state master facility records, and data collected from EPA's Central Data Exchange registrations and data management personnel. This list is made available by the U.S. Environmental Protection Agency (EPA).

Government Publication Date: Jan 1, 2026

Toxics Release Inventory (TRI) Program: TRIS

The U.S. Environmental Protection Agency's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of toxic chemicals from U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. There are currently 770 individually listed chemicals and 33 chemical categories covered by the TRI Program. Facilities that manufacture, process or otherwise use these chemicals in amounts above established levels must submit annual reporting forms for each chemical. Note that the TRI chemical list does not include all toxic chemicals used in the U.S. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment. This database includes TRI Reporting Data for calendar years 1987 through 2021 and Preliminary Data for 2022.

Government Publication Date: Sep 20, 2023

PFOA/PFOS Contaminated Sites: PFAS NPL

This list of Superfund Sites with Per- and Polyfluoroalkyl Substances (PFAS) detections is made available by the U.S. Environmental Protection Agency (EPA) in their PFAS Analytic Tools data, previously the list was obtained by EPA FOIA requests. EPA's Office of Land and Emergency Management and EPA Regional Offices maintain what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment. Limitations: Detections of PFAS at National Priorities List (NPL) sites do not mean that people are at risk from PFAS, are exposed to PFAS, or that the site is the source of the PFAS. The information in the Superfund NPL and Superfund Alternative Agreement (SAA) PFAS detection site list is years old and may not be accurate today. Site information such as site name, site ID, and location has been confirmed for accuracy; however, PFAS-related information such as media sampled, drinking water being above the health advisory, or mitigation efforts has not been verified. For Federal Facilities data, the other Federal agencies (OFA) are the lead agency for their data and provided them to EPA.

Government Publication Date: Dec 29, 2025

Federal Agency Locations with Known or Suspected PFAS Detections: PFAS FED SITES

This list of federal agency locations with known or suspected detections of Per- and Polyfluoroalkyl Substances (PFAS) is made available by the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools data. The EPA outlines that these data are gathered from several federal entities, such as the federal Superfund program, Department of Defense (DOD), National Aeronautics and Space Administration (NASA), Department of Transportation (DOT), and Department of Energy (DOE). The dates this data was extracted for the PFAS Analytic Tools range from 2022 to 2025 per agency entity dataset. Sites on this list do not necessarily reflect the source/s of PFAS contamination and detections do not indicate level of risk or human exposure at the site. Agricultural notifications in this data are limited to DOD sites only. At this time, the EPA is aware that this list is not comprehensive of all Federal agencies.

Government Publication Date: May 30, 2025

SSEHRI PFAS Contamination Sites: PFAS SSEHRI

This PFAS Contamination Site Tracker database is compiled by the PFAS Project Lab, part of the Social Science Environmental Health Research Institute (SSEHRI) at Northeastern University. According to the SSEHRI, the database records qualitative and quantitative data from each known site of PFAS contamination, including timeline of discovery, sources, levels, health impacts, community response, and government response. The goal of this database is to compile information and support public understanding of the rapidly unfolding issue of PFAS contamination. All data presented was extracted from government websites, news articles, or publicly available documents. Locations for the Known PFAS Contamination Sites are sourced from the PFAS Sites and Community Resources Map by the PFAS-REACH team, credited to PFAS Project Lab, Silent Spring Institute, and PFAS Exchange. Disclaimer: The source conveys the data undergoes regular updates as new information becomes available, some sites may be missing and/or contain information that is incorrect or outdated, as well as their information represents all contamination sites SSEHRI is aware of, not all possible contamination sites. This data is not intended to be used for legal purposes. Access the following source link for the most current information: https://pfasproject.com/pfas-sites-and-community-resources/

Government Publication Date: Aug 1, 2025

National Response Center PFAS Spills: PFAS ERNS

This Per- and Poly-Fluoroalkyl Substances (PFAS) Spills dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The National Response Center (NRC), operated by the U.S. Coast Guard, is the designated federal point of contact for reporting all oil, chemical, and other discharges into the environment, for the United States and its territories. This dataset contains NRC spill information from 1990 to the present that is restricted to records associated with PFAS and PFAS-containing materials. Incidents are filtered to include only records with a "Material Involved" or "Incident Description" related to Aqueous Film Forming Foam (AFFF). The keywords used to filter the data included "AFFF," "Fire Fighting Foam," "Aqueous Film Forming Foam," "Fire Suppressant Foam, "PFAS," "PERFL," "PFOA," "PFOS," and "Genx." Limitations: The data from the NRC website contains initial incident data that has not been validated or investigated by a federal/state response agency. Keyword searches may misidentify some incident reports that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS spills/release incidents.

Government Publication Date: Feb 16, 2026

PFAS NPDES Discharge Monitoring: PFAS NPDES

This list of National Pollutant Discharge Elimination System (NPDES) permitted facilities with required monitoring for Per- and Polyfluoroalkyl (PFAS) Substances is made available via the U.S. Environmental Protection Agency (EPA)'s PFAS Analytic Tools. Any point-source wastewater discharger to waters of the United States must have a NPDES permit, which defines a set of parameters for pollutants and monitoring to ensure that the discharge does not degrade water quality or impair human health. This list includes NPDES permitted facilities associated with permits that monitor for Per- and Polyfluoroalkyl Substances (PFAS), limited to the years 2007 - present. EPA further advises the following regarding these data: currently, fewer than half of states have required PFAS monitoring for at least one of their permittees, and fewer states have established PFAS effluent limits for permittees. For states that may have required monitoring, some reporting and data transfer issues may exist on a state-by-state basis.

Government Publication Date: Dec 16, 2024

Perfluorinated Alkyl Substances (PFAS) from Toxic Release Inventory: PFAS TRI

List of Toxics Release Inventory (TRI) facilities at which the reported chemical is a per- or polyfluoroalkyl (PFAS) substance included in the U.S. Environmental Protection Agency's (EPA) consolidated PFAS Master List of PFAS Substances. Encompasses Toxics Release Inventory records included in the EPA PFAS Analytic Tools. The EPA's TRI database currently tracks information on disposal or releases of 770 individually listed toxic chemicals and 33 chemical categories from thousands of U.S. facilities and details about how facilities manage those chemicals through recycling, energy recovery, and treatment. This listing includes TRI Reporting Data for calendar years 1987 through 2021 and Preliminary Data for 2022.

Government Publication Date: Sep 20, 2023

PFAS Water Quality Portal Sampling Data: PFAS WATER

This Per- and Poly-Fluoroalkyl Substances (PFAS) Environmental Media Sampling Data is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The Water Quality Portal (WQP), as a cooperative service sponsored by the United States Geological Survey, the EPA, and the National Water Quality Monitoring Council, is part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations, and individuals submit project details and sampling results to this public repository. Limitations: EPA did not carry out the sampling or testing of a majority of the data in the WQP PFAS dataset. EPA can only speak to the accuracy and completeness of the data from projects like the National Aquatic Resource Surveys for which EPA is the data owner/organization. Data may exist within the file on Quality Assurance Project Plans (QAPPs) and the approving agency of the QAPP, if a QAPP is entered.

Government Publication Date: Feb 2, 2026

PFAS TSCA Manufacture and Import Facilities: PFAS TSCA

The U.S. Environmental Protection Agency (EPA) issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. This list is specific only to TSCA Manufacture and Import Facilities with reported per- and poly-fluoroalkyl (PFAS) substances. Data file is sourced from EPA's PFAS Analytic Tools TSCA dataset which includes CDR/Inventory Update Reporting data from 1998 up to 2020. Disclaimer: This data file includes production and importation data for chemicals identified in EPA's CompTox Chemicals Dashboard list of PFAS without explicit structures and list of PFAS structures in DSSTox. Note that some regulations have specific chemical structure requirements that define PFAS differently than the lists in EPA's CompTox Chemicals Dashboard. Reporting information on manufactured or imported chemical substance amounts should not be compared between facilities, as some companies claim Chemical Data Reporting Rule data fields for PFAS information as Confidential Business Information.

Government Publication Date: Jan 5, 2023

PFAS Waste Transfers from RCRA e-Manifest: PFAS E-MANIFEST

This Per- and Poly-Fluoroalkyl Substances (PFAS) Waste Transfers dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. Every shipment of hazardous waste in the U.S. must be accompanied by a shipment manifest, which is a critical component of the cradle-to-grave tracking of wastes mandated by the Resource Conservation and Recovery Act (RCRA). According to the EPA, currently no Federal Waste Code exists for any PFAS compounds. To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: • PFAS • PFOA • PFOS • PERFL • AFFF • GENX • GEN-X (plus the Vermont state-specific waste codes). Limitations: Amount or concentration of PFAS being transferred cannot be determined from the manifest information. Keyword searches may misidentify some manifest records that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS waste transfers.

Government Publication Date: Feb 14, 2026

PFAS Industry Sectors: PFAS IND

This Per- and Poly-Fluoroalkyl Substances (PFAS) Industry Sectors dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The dataset was developed from various sources that show which industries may be handling PFAS including: EPA's Enforcement and Compliance History Online (ECHO) records restricted to potential PFAS-handling industry sectors, based on the North American Industry Classification System (NAICS) Codes and Standard Industrial Classification (SIC) Codes associated federal regulatory programs (e.g., Clean Water Act, Clean Air Act, and Resource Conservation and Recovery Act) at the facility level; ECHO records for Fire Training Sites identified where fire-fighting foam may have been used in training exercises; and 14 CFR Part 139 Airports compiled from historic and current records from the FAA Airport Data and Information Portal. Since July 2006, all certificated Part 139 Airports are required to have fire-fighting foam onsite that meet certain military specifications, which to date have been fluorinated (Aqueous Film Forming Foam). Limitations: Inclusion in this dataset does not indicate that PFAS are being manufactured, processed, used, or released by the facility. Listed facilities potentially handle PFAS based on their industrial profile but are unconfirmed by the EPA. Keyword searches in ECHO for Fire Training sites may misidentify some facilities and should not be considered to be an exhaustive list of fire training facilities in the U.S.

Government Publication Date: Feb 16, 2026

Hazardous Materials Information Reporting System: HMIRS

The Hazardous Materials Incident Reporting System (HMIRS) database contains unintentional hazardous materials release information reported to the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.

Government Publication Date: Jan 29, 2026

National Clandestine Drug Labs: NCDL

The U.S. Department of Justice ("the Department"), Drug Enforcement Administration (DEA), provides this data as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy.

Government Publication Date: Nov 30, 2023

Toxic Substances Control Act: TSCA

The U.S. Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule. The CDR enables EPA to collect and publish information on the manufacturing, processing, and use of commercial chemical substances and mixtures (referred to hereafter as chemical substances) on the TSCA Chemical Substance Inventory (TSCA Inventory). This includes current information on chemical substance production volumes, manufacturing sites, and how the chemical substances are used. This information helps the Agency determine whether people or the environment are potentially exposed to reported chemical substances. EPA publishes submitted CDR data that is not Confidential Business Information (CBI). EPA CDR collections occur approximately every four years and reporting requirements change per collection.

Government Publication Date: May 12, 2022

Hist TSCA: HIST TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.
The 2006 IUR data summary report includes information about chemicals manufactured or imported in quantities of 25,000 pounds or more at a single site during calendar year 2005. In addition to the basic manufacturing information collected in previous reporting cycles, the 2006 cycle is the first time EPA collected information to characterize exposure during manufacturing, processing and use of organic chemicals. The 2006 cycle also is the first time manufacturers of inorganic chemicals were required to report basic manufacturing information.
Government Publication Date: Dec 31, 2006

FTTS Administrative Case Listing: FTTS ADMIN
An administrative case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.
Government Publication Date: Jan 19, 2007

FTTS Inspection Case Listing: FTTS INSP
An inspection case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.
Government Publication Date: Jan 19, 2007

Potentially Responsible Parties List: PRP
Early in the site cleanup process, the U.S. Environmental Protection Agency (EPA) conducts a search to find the Potentially Responsible Parties (PRPs). The EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site. This listing contains PRPs, Noticed Parties, at sites in the EPA's Superfund Enterprise Management System (SEMS).
Government Publication Date: Dec 26, 2025

State Coalition for Remediation of Drycleaners Listing: SCRD DRYCLEANER
The State Coalition for Remediation of Drycleaners (SCRD) was established in 1998, with support from the U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation. Coalition members are states with mandated programs and funding for drycleaner site remediation. Current members are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin. Since 2017, the SCRD no longer maintains this data, refer to applicable state source data where available.
Government Publication Date: Nov 08, 2017

Integrated Compliance Information System (ICIS): ICIS
The Integrated Compliance Information System (ICIS) database contains integrated enforcement and compliance information across most of U.S. Environmental Protection Agency's (EPA) programs. The vision for ICIS is to replace EPA's independent databases that contain enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions and a subset of the Permit Compliance System (PCS), which supports the National Pollutant Discharge Elimination System (NPDES). This information is maintained by the EPA Headquarters and at the Regional offices. A future release of ICIS will completely replace PCS and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities that support compliance and enforcement programs, including incident tracking, compliance assistance, and compliance monitoring.
Government Publication Date: Oct 18, 2025

Drycleaner Facilities: FED DRYCLEANERS
A list of drycleaner facilities from Enforcement and Compliance History Online (ECHO) data as made available by the U.S. Environmental Protection Agency (EPA), sourced from the ECHO Exporter file. This EPA source file tracks facilities that possess NAICS and SIC codes that classify businesses as drycleaner establishments.
Government Publication Date: Jan 24, 2026

Delisted Drycleaner Facilities: DELISTED FED DRY
List of sites which once appeared on - and have since been removed from - the list of drycleaner facilities included in Enforcement and Compliance History Online (ECHO) data as made available by the U.S. Environmental Protection Agency (EPA), sourced from the ECHO Exporter file. This EPA source file tracks facilities that possess NAICS and SIC codes that classify businesses as drycleaner establishments.
Government Publication Date: Jan 24, 2026

Formerly Used Defense Sites: FUDS

Formerly Used Defense Sites (FUDS) are properties that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DOD) is responsible for an environmental restoration. The FUDS Annual Report to Congress (ARC) is published by the U.S. Army Corps of Engineers (USACE). This data is compiled from the USACE's Geospatial FUDS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) FUDS dataset which applies to the Fiscal Year 2021 FUDS Inventory.

Government Publication Date: May 15, 2023

FUDS Munitions Response Sites: FUDS MRS

Boundaries of Munitions Response Sites (MRS), published with the Formerly Used Defense Sites (FUDS) Annual Report to Congress (ARC) by the U.S. Army Corps of Engineers (USACE). An MRS is a discrete location within a Munitions response area (MRA) that is known to require a munitions response. An MRA means any area on a defense site that is known or suspected to contain unexploded ordnance (UXO), discarded military munitions (DMM), or munitions constituents (MC). This data is compiled from the USACE's Geospatial MRS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) MRS dataset.

Government Publication Date: May 15, 2023

Former Military Nike Missile Sites: FORMER NIKE

This information was taken from report DRXTH-AS-IA-83A016 (Historical Overview of the Nike Missile System, 12/1984) which was performed by Environmental Science and Engineering, Inc. for the U.S. Army Toxic and Hazardous Materials Agency Assessment Division. The Nike system was deployed between 1954 and the mid-1970's. Among the substances used or stored on Nike sites were liquid missile fuel (JP-4); starter fluids (UDKH, aniline, and furfuryl alcohol); oxidizer (IRFNA); hydrocarbons (motor oil, hydraulic fluid, diesel fuel, gasoline, heating oil); solvents (carbon tetrachloride, trichloroethylene, trichloroethane, stoddard solvent); and battery electrolyte. The quantities of material a disposed of and procedures for disposal are not documented in published reports. Virtually all information concerning the potential for contamination at Nike sites is confined to personnel who were assigned to Nike sites. During deactivation most hardware was shipped to depot-level supply points. There were reportedly instances where excess materials were disposed of on or near the site itself at closure. There was reportedly no routine site decontamination.

Government Publication Date: Dec 2, 1984

PHMSA Pipeline Safety Flagged Incidents: PIPELINE INCIDENT

This list of flagged pipeline incidents is made available by the U.S. Department of Transportation (US DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA regulations require incident and accident reports for five different pipeline system types. Accidents reported on hazardous liquid gravity lines (§195.13) and reporting-regulated-only hazardous liquid gathering lines (§195.15) and incidents reported on Type R gas gathering (§192.8(c)) are not included in the flagged incident file data.

Government Publication Date: Jul 10, 2025

Material Licensing Tracking System (MLTS): MLTS

A list of sites that store radioactive material subject to the Nuclear Regulatory Commission (NRC) licensing requirements. This list is maintained by the NRC. As of September 2016, the NRC no longer releases location information for sites. Site locations were last received in July 2016.

Government Publication Date: May 11, 2021

Historic Material Licensing Tracking System (MLTS) sites: HIST MLTS

A historic list of sites that have inactive licenses and/or removed from the Material Licensing Tracking System (MLTS). In some cases, a site is removed from the MLTS when the state becomes an "Agreement State". An Agreement State is a State that has signed an agreement with the Nuclear Regulatory Commission (NRC) authorizing the State to regulate certain uses of radioactive materials within the State.

Government Publication Date: Jan 31, 2010

Mines Master Index File: MINES

The Master Index File (MIF) is provided by the United States Department of Labor, Mine Safety and Health Administration (MSHA). This file, which was originally created in the 1970's, contained many Mine-IDs that were invalid. MSHA removes invalid IDs from the MIF upon discovery. MSHA applicable data includes the following: all Coal and Metal/Non-Metal mines under MSHA's jurisdiction since 1/1/1970; mine addresses for all mines in the database except for Abandoned mines prior to 1998 from MSHA's legacy system (addresses may or may not correspond with the physical location of the mine itself); violations that have been assessed penalties as a result of MSHA inspections beginning on 1/1/2000; and violations issued as a result of MSHA inspections conducted beginning on 1/1/2000.

Government Publication Date: Aug 8, 2025

Surface Mining Control and Reclamation Act Sites: SMCRA

This inventory of land and water impacted by past mining (primarily legacy coal mining operations) is maintained by the U.S. Department of the Interior's Office of Surface Mining Reclamation and Enforcement (OSMRE), as it provides information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). This inventory contains information on the type and extent of Abandoned Mine Land (AML) Problems, as well as information on the cost associated with the reclamation of those problems. The data is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed. Disclaimer: Per the OSMRE, States and tribes who enter their data into e-AMLIS (AML Inventory System) may truncate their latitude and longitude so the precise location of usually dangerous AMLs is not revealed in an effort to protect the public from searching for these AMLs, most of which are on private property. If more precise location information is needed, please contact the applicable state/tribe of interest.

Government Publication Date: Oct 30, 2025

Mineral Resource Data System: MRDS

The Mineral Resource Data System (MRDS) is a collection of reports describing metallic and nonmetallic mineral resources throughout the world. Included are deposit name, location, commodity, deposit description, geologic characteristics, production, reserves, resources, and references. This database contains the records previously provided in the Mineral Resource Data System (MRDS) of USGS and the Mineral Availability System/Mineral Industry Locator System (MAS/MILS) originated in the U.S. Bureau of Mines, which is now part of USGS. The USGS has ceased systematic updates of the MRDS database with their focus more recently on deposits of critical minerals while providing a well-documented baseline of historical mine locations from USGS topographic maps.

Government Publication Date: Mar 15, 2016

DOE Legacy Management Sites: LM SITES

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) currently manages radioactive and chemical waste, environmental contamination, and hazardous material at over 100 sites across the U.S. The LM manages sites with diverse regulatory drivers (statutes or programs that direct cleanup and management requirements at DOE sites) or as part of internal DOE or congressionally-recognized programs, such as but not limited to: Formerly Utilized Sites Remedial Action Program (FUSRAP), Uranium Mill Tailings Radiation Control Act (UMTRCA Title I, Tile II), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), Decontamination and Decommissioning (D&D), Nuclear Waste Policy Act (NWPA). The intent of the site location is to provide a general reference point to the site on a national scale. The coordinates of each site point can be the location of a site monument, the centroid of the site boundary, or a general location of the site. This site listing includes data exported from the DOE Office of LM's Geospatial Environmental Mapping System (GEMS). GEMS Data disclaimer: The DOE Office of LM makes no representation or warranty, expressed or implied, regarding the use, accuracy, availability, or completeness of the data presented herein.

Government Publication Date: Nov 6, 2025

Alternative Fueling Stations: ALT FUELS

This list of alternative fueling stations is sourced from the U.S. Department of Energy's (DOE) Alternative Fuels Data Center (AFDC) and National Renewable Energy Laboratory (NREL). The DOE's Office of Energy Efficiency & Renewable Energy launched the AFDC in 1991 as a repository for alternative fuel vehicle performance data, which provides a wealth of information and data on alternative and renewable fuels, advanced vehicles, fuel-saving strategies, and emerging transportation technologies. The data includes Biodiesel (B20 and above), Compressed Natural Gas (CNG), Electric, Ethanol (E85), Hydrogen, Liquefied Natural Gas (LNG), Propane (LPG), and Renewable Diesel (R20 and above) fuel type locations.

Government Publication Date: Mar 11, 2026

Superfunds Consent Decrees: CONSENT DECREES

This list of Superfund consent decrees is provided by the Department of Justice, Environment & Natural Resources Division (ENRD) through a Freedom of Information Act (FOIA) applicable file. This listing includes Cases filed since 2010 limited to the following: Consent Decrees for CERCLA or Superfund Sites filed and/or as proposed within the ENRD's Case Management System (CMS); and applicable ENRD's Environmental Defense Section (EDS) CERCLA Cases with "Consent" in History Note. CMS may not reflect the latest developments in a case, nor can the agency guarantee the accuracy of the data. ENRD Disclaimer: Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA; response is limited to those records that are subject to the requirements of the FOIA; however, this should not be taken as an indication that excluded records do, or do not, exist.

Government Publication Date: Dec 30, 2025

Air Facility System: AFS

This EPA retired Air Facility System (AFS) dataset contains emissions, compliance, and enforcement data on stationary sources of air pollution. Regulated sources cover a wide spectrum; from large industrial facilities to relatively small operations such as dry cleaners. AFS does not contain data on facilities that are solely asbestos demolition and/or renovation contractors, or landfills. ECHO Clean Air Act data from AFS are frozen and reflect data as of October 17, 2014; the EPA retired this system for Clean Air Act stationary sources and transitioned to ICIS-Air.

Government Publication Date: Oct 17, 2014

Registered Pesticide Establishments: SSTS

This national list of active EPA-registered foreign and domestic pesticide and/or device-producing establishments is based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that each producing establishment must place its EPA establishment number on the label or immediate container of each pesticide, active ingredient or device produced. An EPA establishment number on a pesticide product label identifies the EPA registered location where the product was produced. The list of establishments is made available by the U.S. Environmental Protection Agency (EPA).

Government Publication Date: Sep 26, 2025

Polychlorinated Biphenyl (PCB) Transformers: PCBT

Locations of Transformers Containing Polychlorinated Biphenyls (PCBs) registered with the United States Environmental Protection Agency. PCB transformer owners must register their transformer(s) with EPA. Although not required, PCB transformer owners who have removed and properly disposed of a registered PCB transformer may notify EPA to have their PCB transformer de-registered. Data made available by EPA.

Government Publication Date: Oct 15, 2019

Polychlorinated Biphenyl (PCB) Notifiers: PCB

Facilities included in the national list of facilities that have notified the United States Environmental Protection Agency (EPA) of Polychlorinated Biphenyl (PCB) activities. Any company or person storing, transporting or disposing of PCBs or conducting PCB research and development must notify the EPA and receive an identification number.

Government Publication Date: Aug 12, 2025

Power Plants: POWER PLANTS

This list of power plants is provided by the U.S. Energy Information Administration (EIA). The listing includes operable electric generating plants in the United States by energy source, originating from the EIA-860, Annual Electric Generator Report; EIA-860M, Monthly Update to the Annual Electric Generator Report; and EIA-923, Power Plant Operations Report. It includes all operable plants by energy source with a combined nameplate capacity of 1 megawatt or more that are operating, are on standby, or out of service for short- or long-term.

Government Publication Date: Jun 5, 2025

Historical Business Activity Risk: HIST RISK

Proprietary list of sites identified as potentially having engaged in business activity that poses a higher-than-normal risk of contamination. Records originate from historical city directories, and are included in this list based on broad business categories Potentially Hazardous Chemical Users and Fuel and Automotive, including but not limited to Dry Cleaners and Fuel Stations, Garages, etc. Inclusion in this listing does not indicate that there is or ever has been contamination; rather, sites are included in this list due to their potential for having engaged in a business activity presenting an elevated risk of contamination. The list was compiled from various city directories including Polks, Millers, Mullin Kille, Interstate Directory, and State Directory Co; spanning roughly 1920s through 1960 depending on information available by city.

Government Publication Date: Jan 1, 1960

NPDES Biosolids Program Permit Holders: NPDES BIOSOLIDS

This Water National Pollutant Discharge Elimination System (NPDES) Biosolids Permits list is sourced from the U.S. Environmental Protection Agency's (EPA) Enforcement and Compliance History Online data. EPA's Integrated Compliance Information System (ICIS) for NPDES includes facility and compliance information for NPDES permits in the ECHO Biosolids facility universe. Per the EPA, when sewage from households and businesses (and sometimes wastewater from industrial dischargers) is sent to a wastewater treatment plant, the liquids are separated from the solids, producing a semi-solid, nutrient-rich product known as "sewage sludge" or "biosolids". The EPA typically uses the term "biosolids" to mean sewage sludge that has been treated to meet the agency's regulatory requirements and is intended to be land applied as a soil conditioner or fertilizer.

Government Publication Date: Feb 7, 2026

State

Spills reported to the Pollution Control Agency: SPILLS

This listing of reported spills is maintained by the Minnesota Pollution Control Agency (MPCA). The Minn. Stat. §115.061, which has been in effect since 1969, describes the duty of people to notify the MPCA when spills occur.

Government Publication Date: Feb 23, 2026

Department of Agriculture Spills: AG SPILLS

The Minnesota Department of Agriculture Incident Response Unit is the regulatory authority of Agricultural Chemical (Ag-Chem) Incidents in Minnesota. This list contains pesticide and fertilizer incidents reported to the Response Unit. This data made available by The Minnesota Department of Agriculture, Incident Response Unit.

Government Publication Date: Nov 27, 2025

Historic spills reported to the Pollution Control Agency: HIST SPL

The Minn. Stat. §115.061, which has been in effect since 1969, describes the duty of people to notify the Minnesota Pollution Control Agency (MPCA) when spills occur. This is the list of spills reported to MPCA, and maintained by The Minnesota Pollution Control Agency (MPCA). This list was maintained till 1 Nov 2016.

Government Publication Date: Nov 1, 2016

Registered Dry Cleaning Facilities: DRYCLEANERS

The Minnesota Pollution Control Agency (MPCA) maintains this listing of registered dry cleaning facilities.

Government Publication Date: Sep 11, 2024

Delisted Drycleaners: DELISTED DRYCLEANERS

List of sites that once appeared on - and have since been removed from - the list of registered dry cleaning facilities made available by the Minnesota Pollution Control Agency (MPCA).

Government Publication Date: Sep 11, 2024

PFAS in Groundwater Samples: PFAS GW

A list of sites from the Minnesota Groundwater Contamination Atlas where Per- and Polyfluoroalkyl Substances (PFAS) were found in groundwater samples. This list is made available by the Minnesota Pollution Control Agency.

Government Publication Date: Nov 12, 2021

PFAS in Landfills: PFAS LANDFILL

A list of sites in the Closed Landfill Program where Per- or polyfluorinated alkyl substances (PFAS) have been detected. This list is made available by the Minnesota Pollution Control Agency (MPCA).

Government Publication Date: Jan 3, 2024

Clandestine Drug Labs: CDL

The Methamphetamine Laboratory Program at the Minnesota Department of Health (MDH) works to protect human health by providing technical advice on the remediation of clandestine methamphetamine production laboratories (meth labs) and decontamination of property exposed to meth lab activities.

Government Publication Date: Aug 23, 2021

Animal Feedlots: FEEDLOTS

The Minnesota Pollution Control Agency (MPCA) tracks locations of animal feedlot facilities. The locations of animal feedlots provide information and context to support decisions on animal health, land use, and maintaining environmental quality.

Government Publication Date: Aug 27, 2025

Tier 2 Report: TIER 2

A list of Tier 2 Facilities in Minnesota. This list is provided by Minnesota Department of Public Safety overseen by the Division of Homeland Security and Emergency Management.

Government Publication Date: Sep 14, 2022

Bulk Storage Permits: BULK STORAGE

The Minnesota Department of Agriculture's Licensing Information System (LIS) lists individuals or companies who hold licenses, certificates and/or permits required by state law and regulated by the Department. This database only contains those LIS licenses related to anhydrous ammonia storage facilities and bulk pesticide/ fertilizer storage facilities.

Government Publication Date: Nov 6, 2025

Tribal

No Tribal additional environmental record sources available for this State.

County

No County additional environmental record sources available for this State.

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

Appendix C

File Review Documents

SITE RESEARCH REPORT

DULUTH INTERNATIONAL AIRPORT
FUDS E05MN0033
DACA45-03-C-0018
DULUTH, MINNESOTA

Prepared For

United States Army Corps of Engineers
Omaha District

Prepared By

EMR Inc.
Duluth, Minnesota

May 20, 2004

May 20, 2004

[redacted]

RE: Duluth IAP – Site Research Report
FUDS E05MN033
DACA45-03-C-0018
Duluth, Minnesota
EMR Project 6610

[redacted]

Enclosed are two copies of the final Site Research Report for the Duluth International Airport (Duluth IAP) FUDS Project, located in Duluth, Minnesota. The report summarizes the project background, former and current environmental sites, geologic and hydrogeologic setting, potential sources within the Cirrus Project Area, potential sources within the Lot 3 Project Area, and recommendations.

Five additional proposed Areas of Concern (AOC) were identified within, or immediately adjacent to, the two current project areas. EMR has proposed additional borings and wells to investigate these new AOCs when work progresses in the Cirrus and Lot 3 Project Areas this spring.

Twenty additional proposed AOCs were identified outside the current project areas and within the property boundary of the Duluth IAP. EMR has recommended that these additional AOCs undergo a FUDS Preliminary Assessment of Eligibility.

We appreciate the opportunity to work with the United States Corps of Engineers. Please contact Scott Carney or me at (218) 625-2332 if you have any questions. Thank you.

Sincerely,
EMR, Inc.

David J. Winter, P.G.
Geologist VI

Scott Carney, CHMM
Geologist V

Enc.

c: J. Mosel – MPCA (2 copies)
S. Wabrowetz – MNANG (1 copy)
J. Holley – ACC (1 copy)
S. Thompson – DAA (2copies)
J. Dillion – Cirrus (1 copy)
E. Evans (Hydrogeologic) (1 copy)

11 East Superior St., Suite 541 ▼ Duluth, MN 55802-2007 ▼ (218) 625-2332 ▼ FAX (218) 625-2201 ▼ dwinter@emr-inc.com

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LIST OF ABREVATIONS

ACC	Air Combat Command
AOC	Area of Concern
AST	Aboveground Storage Tank
BGS	Below Ground Surface
BTEX	Benzene, Toluene, Ethylbenzene and Xylene
CPA	Cirrus Project Area
COC	Constituents of Concern
CWI	County Well Index
DAA	Duluth Airport Authority
DCE	Dichloroethylene
DDT	Dichlorodiphenyltrichloroethane (Chlorinated Organic Insecticide)
DOD	Department of Defense
DRO	Diesel Range Organics
DPDO	Defense Property and Disposal Office
DRMO	Defense Reutilization and Marketing Office
Duluth IAP	Duluth International Airport
ERP	Environmental Restoration Program (formerly IRP)
FS	Feasibility Study
FUDS	Formerly Used Defense Sites
GRO	Gasoline Range Organics
HBV	Health Based Value
HRL	Health Risk Limit
IRA	Interim Remedial Action
IRP	Installation Restoration Program (now ERP)
JP-4	Jet Propulsion Fuel #4
L3PA	Lot 3 Project Area
LUST	Leaking Underground Storage Tank
MDH	Minnesota Department of Health
MN ANG	Minnesota Air National Guard
MPCA	Minnesota Pollution Control Agency
MSL	Mean Sea Level
NRCS	National Resource Conservation Service
NRRI	Natural Resource Research Institute
NWA	Northwest Airlines
PAE	Preliminary Assessment of Eligibility
PCB	Polychlorinated Biphenyls
PCE	Tetrachloroethylene
POL	Petroleum, Oil and Lubricants
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
RFI	RCRA Facility Investigation
SI	Site Investigation
SI	Site Investigation
SR	Site Research

LIST OF ABREVATIONS (Continued)

SRV	Soil Reference Value
SLV	Soil Leaching Value
SVOCs	Semi-Volatile Organic Compounds
TPH	Total Petroleum Hydrocarbons
USACE	United States Army Corps of Engineers
USAF	United State Air Force
USGS	United States Geological Survey
UST	Underground Storage Tank
VOCs	Volatile Organic Compounds

1.0 INTRODUCTION

1.1 Project Overview

The United States Army Corps of Engineers (USACE) Office in Omaha, Nebraska has contracted EMR, Inc. (EMR) of Duluth, Minnesota to complete a Site Investigation of two project areas located at the Duluth International Airport (Duluth IAP). The work is contracted under the Formerly Used Defense Sites (FUDS) Program contract DACA45-03-C-0018. The Duluth IAP FUDS Site Number is E05MN0033.

Two FUDS project areas have been identified at locations formerly used by the United States Air Force (USAF) and have been named the Cirrus Project Area (CPA) and the Lot 3 Project Area (L3PA). The CPA is the location of two areas of interest. Lot 17 is suspected of containing petroleum, solvents, pesticides and Polychlorinated Biphenyls (PCBs). The west border of Lot 21, near former Site S-1, is suspected of containing solvents. The L3PA is suspected of containing solvents and hydrocarbons. Hanger 101, the first hanger built by the USAF in Duluth, is located in the L3PA.

The contracted work will result in the preparation of a Site Research (SR) Report and a Site Investigation (SI) Report. The primary objective of the SR/SI is to determine the presence or absence of chemical contamination based on historical information and biased environmental sampling. A secondary objective of the SR will be to ascertain if the project areas in the scope of services are the only remaining uninvestigated sites eligible under the FUDS program.

1.2 Property Location

1.2.1 Duluth International Airport

The Duluth IAP is a 1,995-acre facility operated by the Duluth Airport Authority (DAA) (Figures 1 and 3). The DAA is run by a board of directors and is a self-sufficient entity under the auspices of the City of Duluth.

The DAA has leased and sold various properties within the Duluth IAP to various commercial enterprises and federal military organizations. The Minnesota Air National Guard (MN ANG) is currently under lease until 2013 for use of 300 acres at the Duluth IAP. The MN ANG leases land at the Duluth IAP to support the 148th Fighter Wing, a reserve component of the USAF whose mission is tactical reconnaissance utilizing F-16A Fighter Jets. Historically, the Duluth IAP was jointly operated by the United States Air Force (USAF), MN ANG, and the City of Duluth. However, the USAF ceased operations at the Duluth IAP on March 31, 1982. Since their departure the USAF has retained the responsibility for managing the restoration of an estimated 20 former USAF Air Combat Command (ACC) sites.

1.2.2 Cirrus Project Area

The CPA encompasses property currently owned by the Cirrus Design Corporation (Cirrus) or Aileron, LLC (Aileron), but was formerly leased by the USAF from the City of Duluth (Figure 2). The address of Cirrus is 4515 Taylor Circle, Duluth, Minnesota 55811. The Cirrus Project Area includes all of Lots 17 through 21 of Block 4 and Lot 1 of Block 5 of the Airport Division in the City of Duluth (Figure 4). Cirrus owns all lots other than Lots 18 and 19, owned by Aileron. The Cirrus Project Area occupies the SW ¼ of the SE ¼ of Section 2, Township 50 North and Range 15 West. The CPA borders, depicted in Figures 1 and 4, generally measure 795 feet east-west by 620 feet north-south. Current improvements within the CPA consist of the Cirrus Production Building and the Customer Service/Paint Shop Building (Figure 2).

1.2.3 Lot 3 Project Area

The L3PA consists of Lots 2, 3, and 4 of Block 4 of the Airport Division of the City of Duluth (Figure 4). All lots are owned by the City of Duluth. Lot 2 is leased by the Commemorative Air Force (CAF) – Lake Superior Squadron 101 and is the location of Building 101 (Figure 2). The address of the CAF is 4931 Airport Road, Duluth, Minnesota 55811. Lot 3 has no current lessee and was the former location of Building 102. The MN ANG currently leases Lot 4. The L3PA occupies the SE ¼ of the SE ¼ of Section 2, Township 50 North and Range 15 West and measures 936 feet (east-west) by 402 feet (north-south) (Figure 4). The project area begins at the northeast corner of Lot 2, traverses 402 feet south, then traverses 936 feet west following borders of Lots 2, 3, and 4; turns north 345 feet, bends east 75 feet then north 57 feet; then traverses 861 feet to the east to the point of origin.

1.3 Project Purpose

The primary objective of the SR Report process is to research site history, identify and locate potential activities that may have resulted in releases into the environment, and determine the presence or absence of contamination based on historical information and previous environmental investigation.

1.3.1 Project Objectives

The following are listed as objectives of the Site Research (SR) in the Scope of Services for Duluth IAP – FUDS Sites received from the US ACE and dated September 23, 2003:

1) Document and cite research to ascertain that the sites prescribed in the scope of services are the only remaining uninvestigated FUDS sites at the Duluth IAP.
2) Gather and document the full background of the known sites.

1.3.2 Scope of Services

The following list identifies the scope of services to achieve the project objectives:

1) Review all pertinent historical information, including aerial photos, engineering drawings, site reports, and interviews with knowledgeable personnel.
2) Document findings of the review. The report shall include a list of all references utilized, a list of all personnel interviewed, a summary of reviews and interviews, pertinent aerial photos, a United States Geological Survey (USGS) topographic map showing site locations, and a preliminary site map.
3) Construct a preliminary site map with distance scale to help plan the next phase of work.
4) Revise the draft SR Report to incorporate USACE and regulatory agency review comments and be resubmitted as a final in the SR/SI Report.

1.4 Project Involvement

1.4.1 Project Management

The Duluth IAP FUDS Contract DACA45-03-C-0018 for FUDS Site E05MN0033 is managed by the United States Army Corps of Engineers – Omaha District. The Project Manager is Marvin Taylor (402) 221-7181. The contract is with EMR, headquartered out of Lawrence, Kansas. The EMR Duluth, Minnesota office is the managing contractor; David Winter, P.G., is the Project Manager (218) 625-2332. Points of contact are listed in Table 1.

1.4.2 Agency Oversight

Agency oversight of work at FUDS Site E05MN0033 is by the Minnesota Pollution Control Agency (MPCA). Two Project Managers will review project work, Jane Mosel (218) 529-6250 and Mark Elliot (218) 529-6269. Soil analytical results will be compared with MPCA risk based Soil Reference Values (SRVs) and Soil Leaching Values (SLVs). Groundwater analytical results will be compared with Minnesota Department of Health (MDH) Health Based Values (HBVs) and Health Risk Limits (HRLs).

The USACE project management team will review data and reporting throughout the project. The project management team is anticipated to include a Project Chemist, Project Geologist, Project Quality Control, and Contracts personnel.

No agency oversight other than the MPCA and USACE is anticipated.

1.4.3 Points of Contact

Several current leaseholders at the CPA and L3PA have interest in the SR and SI work at FUDS Site E05MN0033. They include the MN ANG (Col. Steve Wabrowetz), the DAA (Brian Rykes), and Cirrus Design Corporation (Jason Dillon). Contact information for these and other potentially interested parties are included in Table 1.

2.0 FACILITY OVERVIEW

2.1 Facility Description

The Duluth IAP is located in St. Louis County in northeastern Minnesota (Figure 1). The Duluth IAP is located approximately 7 miles northeast of downtown Duluth at the western end of Lake Superior. The Duluth IAP covers approximately 1,995 acres and is operated by the DAA. The main east-west runway measures 10,150 feet by 150 feet and is utilized by MN ANG, commercial and civilian aircraft (Figure 3). A secondary northeast-southwest trending runway trends northeast-southwest and measures 5,650 feet by 150 feet. MN ANG facilities are concentrated in the northeast corner of the Duluth IAP, while the majority of southern portion of the facility is utilized by civilian entities including the Duluth IAP terminal, which is located in the southeast corner of the property. The northern portions of the Duluth IAP property are largely undeveloped with the exception of the Northwest Airlines Maintenance Base and the FAA radar installation (Figure 3).

2.2 Current Land Use

2.2.1 City of Duluth

The Duluth IAP is owned by the City of Duluth and operated by the DAA. The Duluth IAP currently encompasses roughly 2,000 acres. Portions of the Duluth IAP are leased to the organizations discussed below while the remainder of the property is utilized by various entities of the DAA. Northwest Airlines, American Airlines, and Fed Ex all currently fly out of the Duluth IAP. Northwest Airlines also operates an aircraft maintenance facility located north of the main runways (Figure 3).

2.2.2 Minnesota Air National Guard

The 148th Fighter Wing of the MN ANG operates on property leased in a variety of locations within the Duluth IAP boundaries. The largest parcel of land occupied by the MN ANG covers approximately 137.60 acres and is located in the northeast corner of the airport (Figure 3). The MN ANG leases roughly a total of 300 acres (including the main base) from the City of Duluth. The leases expire June 30, 2013. MN ANG environmental cleanup sites are discussed further in Section 3.2.

2.2.3 Air Combat Command

The United States Air Force Air Combat Command, which conducted activities within the airport boundaries from the late 1950's until 1981, no longer operates facilities in this area at this time. However, they are still responsible for several Environmental Restoration Program (ERP) (formerly the Installation Restoration Program – IRP) sites within airport boundaries. ACC environmental sites are discussed further in Section 3.2.

2.2.4 Additional Lessees

The Majority of the leased Duluth IAP land is referenced above. However, numerous small lessees are present on the southern half of the property. Lessees include the United States Navy and the Bureau of Prisons that each lease parcels totaling less than 20 acres. These leases also expire June 30, 2013.

2.3 Property History

The Duluth IAP originally began with the acquisition of 640 acres by the City of Duluth from St. Louis County in 1929. The airport was constructed and dedicated in 1930 as the Williamson-Johnson Municipal Airport. The name remained until 1963 when the airport was renamed the Duluth International Airport. Following WWII the USAF constructed facilities south of the main east-west runway on land leased from the City of Duluth. The MN ANG, a part of the USAF, began to build facilities on the northeast corner of the airfield in 1948 and the 179th Fighter Squadron was formed. The initial phase of MN ANG construction included a hanger (Building 101), an operations center (Building 102), a fire and rescue station and a motor pool. In 1949 the 179th Fighter Squadron moved its operations from the Duluth Armory to their current location on the northeast corner of the airport. Building 103 was constructed in 1955. In 1960 the 179th Fighter Squadron was renamed the 148th Fighter Group. This name lasted until the mid-1990's when the name changed to the 148th Fighter Wing. In 1999 the 148th Fighter Wing began renovations of the base to go from air-to-air missions to air-to-ground missions. The USAF no longer maintains a presence at the airport; however the MN ANG continues its operations.

Cirrus Design Corporation (Cirrus) located their world headquarters at the Duluth IAP in 1994 and began the design, manufacture, and sale of their light aircraft. A few years later Cirrus underwent a major production facilities expansion and later opened the Customer Service and Paint Facility (Figure 2). In 1996 Northwest Airlines opened the maintenance facility on the north side of the airfield. The most recent addition to the Duluth IAP is the DAA "Hand W. Storms" Snow Removal and Equipment Maintenance Facility, which opened in 2003.

A time line of major Duluth IAP events can be found in Table 2.

3.0 RECORDS REVIEW OF PREVIOUS WORK

3.1 Air National Guard Sites

EMR personnel contacted Lt. Col. Steve Wabrowetz, Environmental Manager with the 148th Fighter Wing to access and review documents related to the history of MN ANG environmental site at the Duluth IAP. The file search revealed four categories of sites: Storage Sites, Radiation Sites, Disposal Sites, and Miscellaneous Sites. As of 2001 there were 7 active MN ANG sites within the Duluth IAP. Additional details regarding the MN ANG sites are found in Tables 3, 4, 5, and 6 and the site locations are found on Figures 3 and 4. Much of the information discussed below was summarized from the *IRP Management Action Plan* (Montgomery Watson, 2001).

3.1.1 Storage Sites

- Site 3 – Defense Property and Disposal Office (DPDO Storage Area C). Site 3 is located in the southwest portion of the Duluth IAP or west of the CPA. The area covers approximately 5 acres and was used from 1965 until 1980 to store waste petroleum, oil and lubricants; solvents; and chemicals. A maximum of 80 to 100 55-gallon drums were stored at the site at any one time (Montgomery Watson, 2001). The site is zoned industrial and is undergoing long term groundwater monitoring. Contaminated soil was removed in July 1996 to minimize the potential for residual hydrocarbon contamination. The area was utilized as a storage area for waste petroleum, oil, lubricants, solvents, and transformers containing PCBs. Some Constituents of Concern (COCs) for this site include Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), chromium, pesticides, Total Petroleum Hydrocarbons (TPH), metals, and Benzene, Toluene, Ethylbenzene and Xylenes (BTEX).

- Site 4 – Fuel Storage Area. Site 4, also known as the MN ANG Petroleum, Oil and Lubricants (POL) Area, encompasses approximately 15 acres and is located immediately west of the CPA. Site 4 also includes the former ACC SP-1 site. The site includes two 420,000-gallon and one 210,000-gallon ASTs and is zoned industrial. An additional 210,000-gallon AST was removed in 1982. Long term groundwater monitoring continues at the site. In July 2000 contaminated soil was removed from drainage ditches and berms in order to minimize the potential for residual hydrocarbon contamination. The area was utilized as a storage area for JP-4. COCs for this site include VOCs, TPH, metals, benzene, and BTEX.

- Site 8 – Old DPDO Storage area. Site 8 was formerly located on Lots 19, 20, and 21 and covers approximately 15 acres. Site 8 includes the former ACC S-1 site, both of which are encompassed by the CPA. The area was utilized from 1950 to 1964 as a storage area for pesticides, waste fuel oil,

solvents, and transformers containing PCBs. The area is zoned for industrial purposes. A Remedial Investigation (RI) was completed on the site in 1990 and a Feasibility Study (FS) was completed in 1992. The FS recommended No Further Action for the Site, which was granted by the MPCA (1993). COCs for this site included barium, chromium, pesticides, PCBs, TPH, and metals.

- Site 17 – Base Supply Storage Area. Site 17 covered approximately 0.2 acres and was located in the southwest corner of the Duluth IAP or west of the CPA. Site 17 contained a 120-foot by 80-foot, diked and paved area that was used by the USAF from 1977 until 1981 to store fuels, lubricants, hydraulic fluids and antifreeze. The site was used by the DRMO from 1981 until 1990 to store hazardous materials and wastes. Site 17 includes the former ACC Site S-3. The area is zoned for industrial use and is a closed site (Montgomery Watson, 2001). COCs for this site included VOCs, SVOCs, pesticides, TPH, and metals.

- Site 18 – Hazardous Waste Storage Area. Site 18 is located due north of the current project areas and north of the main east-west runway and includes former ACC site S-4. Site 18 was used to store transformers containing PCBs, paints, solvents, adhesives, sealants, pesticides, fuels, DDT, oils, lubricants, and antifreeze. The area is zoned for industrial use and is a closed site (Montgomery Watson, 2001). In October of 1996 contaminated soil was removed in order to minimize the potential for residual hydrocarbon contamination. DPDO personnel removed DDT in November 1981. COCs for these sites included toluene, metals, radiation, TPH, and VOCs.

- Site 19 - PCB Storage Facility. Site 19 is located adjacent to Site 18 and was used for the storage of PCBs, paints, solvents adhesives, sealants, pesticides, fuels, oils and antifreeze. The site featured an enclosed 6-inch high containment dike. As of 1982, no evidence or record of spillage existed. The site includes former ACC Site S-5.

3.1.2 Radiation Sites

- Site 10 – Low Level Radioactive Waste Disposal. Site 10 is located due north of the current project areas on the north side of the main east-west runway. The area was formerly used as a disposal site for Low Level Radioactive Waste Materials, Cathode Ray Tubes, oscilloscopes, and radio luminous dials. The area is zoned for industrial purposes and is a closed site (Montgomery Watson, 2001). COCs for this site included chromium, radium 226, radium 228 strontium 90, tritium, uranium, PCBs, and pesticides. Site RD-1 is located north of the main east-west runway and west of the FAA radar site. This site was in operation in the 1950's and was a disposal site for materials including cathode ray tubes, scopes

and watch dials. The materials were disposed of in a 15 foot deep by approximately 40 foot long trench, and covered with garbage, general refuse, and soil.

3.1.3 Disposal Sites

- Site 20 – Runway Joint Sealing Tar Drum Disposal Site. Site 20 is located south of the Northwest Airlines Maintenance Facility building. The area was formerly used as a disposal site for runway joint sealing tar. Drums containing runway joint sealing tar were removed in November of 1988 in order to eliminate a source of potential contamination. The area is zoned for industrial use and is a closed site (Montgomery Watson, 2001).

- Site 26 – Ramp Disposal Area. Site 26 is located in the western portion of the current ANG base. JP-4 contaminated materials were identified during an SI conducted in 1995. The site has subsequently been closed (Montgomery Watson, 2001). COCs for this site included SVOCs, BTEX and phenol.

3.1.4 Miscellaneous Sites

Site 2 – Fire Training Area. Site 2 consist of two former fire training areas and is located southeast of the Northwest Airlines Maintenance Facility building. FT-1 was in operation from 1951 to the early 1960's while FT-2 was in operation from early 1960's until 1987 (Montgomery Watson, 2001). Materials disposed at Site #2 include JP-4, paint thinners and solvents. The area is zoned for industrial use and is undergoing long term groundwater monitoring. In July of 1994, contaminated soil was removed to minimize the potential for residual petroleum contamination. JP-4, paint thinners, and solvents have been documented at the site. COCs for this site included VOCs, SVOCs. TPH, metals, BTEX, trans- 1, 2-Dichloroethene, Trichloroethene, and barium.

- Site 21 – Imhoff Tank Treatment System. Site 21 is located on the east central side of the current ANG base and was in operation from 1949 to 1969. A RCRA Facility Investigation (RFI) was completed at the site. The site is zoned for industrial use and contains a system to treat sewage from industrial and administrative areas. COCs for the site included VOCs, metals, SVOCs, and TPH.

- Site 22 – B/125 and NDI Septic System. Site 22 is near buiding 125 in the southwest corner of the Duluth IAP or west of the CPA. The site has two septic system to contain and treat sanitary waste water. The B/125 system was installed in 1972 and abandoned in 1991. The NDI system was installed in 1960 and is still in use. COCs for the site include metals, TPH, and toluene. During a Risk Assessment it was determined that no investigation was required for groundwater or surface water, however soil

samples were collected. The area is zoned for industrial use and was closed by the MPCA (Montgomery Watson, 2001).

- Site 23 – Aircraft Parking Ramp. Site 23 is located on the western side of the current MN ANG base. The area serves as a direct mission area. JP-4 has been found at the site. In September of 1993 contaminated soils were removed to minimize the potential for residual petroleum contamination. Long term groundwater monitoring was completed in 2000. COCs include TPH and BTEX in the soil.

- Site 24 – Engine Run up and Test Pad. Site 24 is located west of the current MN ANG base. The site is partially covered with tarmac and is a direct mission area. Contaminated soils were removed in September 1993 to minimize the potential for residual petroleum contamination. The site has been subsequently closed (Montgomery Watson, 2001). TPH and BTEX were the primary COCs in the soil.

- Site 25 – MN ANG Motor Pool Area. Site 25 is east of Site 21 within the current MN ANG base. Contaminated soils were excavated in December 1999 to remove free product. An Interim Remedial Action (IRA) for Groundwater was recommended, and long term groundwater monitoring continues at the site. Oils, fuels, and solvents have been found on the site. COCs for this site include BTEX, SVOCs, and VOCs.

- Site 27 – Former Building 102 Area. Site 27 is located along Airport Rd. between Building 101 and Building 103. Work at the site began with the removal of a fuel oil tank and fuel oil impacted soils adjacent to Building 103 in 1998. A Limited Site Investigation (LSI) was conducted and resulted in the detection of petroleum and chlorinated compounds in the groundwater. A SI was conducted in 2001 and chlorinated compounds were detected in the former location of Building 102. COCs for this site include TCE, vinyl chloride, cis-1, 2-DCE, and other VOCs.

3.2 Air Combat Command Sites

EMR Personnel contacted Jim Holley with the Air Combat Command (ACC) at Langley Air Force base in Virginia and Marvin Taylor with the U.S. Army Corp of Engineers, Omaha District for information related to ACC sites (Table 1). Review of the available files provided historical and current information regarding ACC Sites and revealed two site categories; Leaking Underground Storage Tank Sites and Disposal Sites. Currently, there is only one active ACC project site (LF-08). Information for the sites discussed below was primarily taken from the Phase I Records Search (Engineering-Science, 1982) and the Environmental Restoration Program (ERP) Management Action Plan (US ACE, 2003). ACC site information is summarized in Tables 7 and 8. Site locations are illustrated on Figures 3 and 4.

3.2.1 Leaking Underground Storage Tank Sites

- ST-12 RAPCON. The RAPCON site is located north of the main east-west runway and southeast of the FAA radar site. Two 500-gallon USTs were discovered and removed in 1993. During the removal of the USTs approximately 45 cubic yards of contaminated soil were removed and thermally treated. Samples collected at the excavation boundaries were below MPCA action levels. The MPCA approved a no further action request in 2000.

3.2.5 Disposal Sites

- LF01 (formerly Site #1/D-1) Goose Missile Site Dump #1. Site LF01 is located on the north side of the Duluth IAP and has been covered by the new Northwest Airlines Maintenance Base access road (Stebner Road). The approximate size of the LF01 site is 100 feet by 75 feet. Approximately 15 55-gallon drums of pesticides were found at the site and were removed in 1992. Documented contaminants include DDT, DDD, DDE (detected in trace amounts), total organic carbon, pH, and total organic halogen. Site investigation consisted of a Phase I Environmental Site Assessment (ESA), Phase II, Stage 2 investigation and a Stage 3 RI/FS. Sampling conducted during these investigations resulted in the detection of generally low concentrations of metals and VOCs in soil, groundwater and sediments. The site was closed by the MPCA in 2000 and the monitoring wells were abandoned.

- LF06 (formerly Site #5/D-4) South Goose Missile Site Dump. Site LF06 is located on the north side of the Duluth IAP and east of Stebner Road. The LF06 site was a surface dump that measured approximately 5 feet by 35 feet. Drums of unknown material were found at the site in 1982 and were removed prior to 1988. Investigation conducted at the site consists of a Phase I ESA, Phase II, Stage 2 and Stage 3 RI/FS. Chemicals found to exceed standards or criteria consist of zinc, copper and nickel, all of which were in sediment samples. Arsenic was also found in soil samples at concentrations that slightly exceeded the SRV. No other COCs were identified during additional sampling conducted during and after the Phase 3 RI/FS and the site was subsequently closed by the MPCA in 2000. The monitoring wells were abandoned in 2001.

- LF07 (formerly Site #6/D-2) Goose Missile Site Dump #2. Site LF07 is located in the extreme northern portions of the Duluth IAP and west of Stebner Road. The dump was approximately 50 feet by 50 feet and contained approximately 10 55-gallon drums of deicing agent. The drums were removed in 1992. Investigations conducted at the site consist of a

Phase I ESA, Phase II, Stage 2, and a Phase 3 RI/FS. Sampling conducted during the investigations indicated one groundwater COC (minor concentrations of oil and grease). Elevated concentrations of cadmium, chromium copper, lead and nickel were detected in sediment samples. However, chromium, lead and nickel were also detected in upgradient sediment samples suggesting that they are not related to operations at LF07. The site was closed by the MPCA in 2000 and the monitoring wells were abandoned in 2001.

- LF08 (formerly Site #7/D-6) Runway 13 NE Disposal Area. Site LF08 is located north of the main runway at the terminus of Stebner Road on the north side of the Northwest Airlines (NWA) Maintenance Facility. The LF08 Site was utilized from 1950 to the 1970's for the disposal of general refuse, aircraft parts, empty and full drums, and construction materials. An interim remedial measure was conducted in 1991-1992 that consisted of the removal, decontamination and recycling of all metallic debris and the removal 1,925 cubic yards of contaminated soil. Soil COCs consisted of mercury and oil and grease. Groundwater COCs included TCE, benzene, trans-1,2-dichloroethene and dichlorobenzene. Low concentrations of halogentated organic compounds were detected in surface water samples. Subsequent investigations have defined the limits of the TCE impacted groundwater. A Hydrogen Releasing Compound (HRC) pilot study was conducted in 2000 and an extended HRC pilot study was conducted in 2002-2003. A focused Feasibility Study for the remediation of impacted groundwater is underway. Long term monitoring is currently scheduled through 2007.

- LF10 (formerly Site #9/D-9) Disposal Pit. Site LF10 is located on the south side of the Duluth IAP along Stebner Road. The site consisted of a 7 foot by 8 foot pit that was utilized in the mid 1960's as a disposal area for general refuse, percuric acid and acetone from the medic's clinic. A Phase II, Stage 2 investigation, consisting of a magnetometer survey was conducted and did not definitively define the location of the pit. A Stage 3 RI/FS was conducted and resulted in the discovery of groundwater COCs consisting of barium, TCE and TPH. The site was closed by the MPCA in 2000 and the monitoring wells were abandoned in 2001.

3.3 Former Used Defense Sites

FUDS are properties that were previously owned, leased, possessed, or otherwise operated by the Department of Defense (DOD) or any of its components. The FUDS program is an important part of DOD's ERP and was officially established in 1983. The U.S. Army is the executive agent in charge of carrying out the program with the USACE assuming the primary role. The program's mission is to complete environmental restoration at any former DOD sites, regardless of which sector of the military controlled the property or was responsible for the suspected contamination.

EMR Personnel contacted Marvin Taylor of the USACE Omaha District (Table 1) to inquire about previously investigated FUDS. A review of the supplied information revealed four sites; Building 112, Natural Resources Research Institute (NRRI) USTs, Steam Line Removal, and Building 102 and are discussed below. Reviewed FUDS information is summarized in Table 9 and the site locations are shown on Figures 3 and 4.

3.3.1 Building 112

- Building 112 was located on the Lot 17 of Block 5 within the CPA and north of the current Cirrus Customer Service/Paint Shop Building. The project consisted of the demolition Building 112 (pumphouse) and the removal of two 55,000-gallons aviation fuel USTs and an additional UST (Lot #1 UST) located to the east (Figures 3 and 4).

3.3.2 NRRI tanks

- The Natural Resources Research Institute (NRRI) Site is located along Airport Road in the southwest corner of the Duluth IAP (Figure 2). One 15,000-gallon #5 Fuel Oil UST and three 30,000-gallon #2 fuel oil USTs and associated underground piping were removed from the Site in 1992. All USTs were in good condition and soil contamination was assumed to be related to spills and overfills (TPT, 1993). Approximately 690 cubic yards of contaminated soils were placed in the north end of the UST basin and encapsulated in plastic. Clean soils were returned to the UST basin to return it to grade. Soil sampling of the excavation sidewalls and base indicated that Total Hydrocarbons as Fuel Oil concentrations ranged from 1,760 ppm to 4,200 ppm. The USACE conducted a RI that was documented in a RI Report Form (USACE, 1997). The RI Report Form concluded that the remaining soil contamination did not pose a significant risk and that no groundwater plume exists. The site was apparently closed and no further action was required (Sharon Lehn, personnal communication, 2004).

3.3.3 Steam Line Removal

- The Steam Line Removal project involved the removal of asbestos-insulated overhead steam lines from portions of both the CPA and L3PA and other areas south of Airport Road. The project was completed in 1997 according to the remedial design.

3.3.4 Building 102

- The Building 102 project consisted of the demolition of Building 102, which was completed in 1999. The site is located along Airport Road between Buildings 101 and 103. Building 102 was constructed by the USAF in the 1950s and was used until 1984 primarily as office space.

4.0 Proposed Additional FUDS Sites

The review of historical documents, historical aerial photos and interviews with former base personnel (Appendix D), identified several sites with the potential for environmental impacts. The rationale used to define a potential FUDS AOC include: incomplete site investigation data; sites or facilities with known or implied activities or material usage that may impact the environment and/or a lack of available environmental investigation information.

4.1 Proposed Additional FUDS AOCs Inside the Project Areas

The following is a listing of five additional FUDS AOCs that were identified through this SR phase and are either wholly or partially within the current project areas. These newly identified, additional FUDS AOCs are identified on Figure 5a and listed in Table 10. All chronological references were determined from reviewed documents or aerials photos (Figures 9 –20).

1) Former Paint Storage Building (Building s114). The Former Paint Storage Building was located in Lot 20 of the CPA. The building apparently was used for painting and paint storage and was constructed between 1953 and 1964 and was removed between 1995 and 2002. In later years, Building s114 was listed as a parachute shop. Following closure of the Air Force Base, Building s114 was used as a metal plating facility by Plating Specialties Inc. Based on phone book records Plating Specialties Inc., occupied Building s114 from 1985 until 1995. Potential materials used at this AOC include paints, solvents, metals, bases and acids.

2) Lot 19 Salvage Yard. According to former USAF personnel the unknown grouping of objects visible in Lot 19 in the 1964 aerial photo may have been a salvage yard (Figure 11). Potential materials include diesel fuel, gasoline, oil, grease and metals.

3) Building 139 Fuel Oil Tanks. Building 139 was located in Lot 1 formerly featured three (3) 265-gallon fuel oil tanks (Appendix E). It is assumed that the fuel oil tanks supplied fuel to backup heating or electrical systems. It is not known whether the tanks were ASTs or USTs. Building 139 was constructed between 1953 and 1964 and was removed between 1988 and 1995. Potential materials consist of fuel oil.

4) Building 113 Solvent Storage. Building 113 was located on lot 17 of the CPA. Based on a 1961 US Army utility maps (Appendix E) Building 113 supplied the aircraft washrack (discussed below) with water, hot water, compressed air, and solvents. According to the 1961 US Army map, solvents were transferred from Building 113 to the washrack through a 1-inch diameter underground line. It is assumed that solvents were stored

within the building but containers type and capacity is unknown. Building 113 was constructed between 1953 and 1961 and remained in place until after 1998. Chlorinated solvents, including vinyl chloride, were detected in the groundwater in the vicinity of Building 113 during an investigation conducted by Cirrus in 2001. Potential materials consist of solvents.

5) Lot 4 Hazardous Storage Area. A 1973 U.S. Air Force Facilities reference map (Appendix E) shows a "Hazardous Storage" area southwest of Building 103 on Lot 4 of the L3PA. No other information was found referencing this Hazardous Storage area. Potential materials include pesticides, waste/used fuel, oil and solvents, PCB containing transformers and metals.

4.2 Proposed Additional FUDS AOCs Outside of the Project Areas

The following are 19 proposed additional FUDS AOCs that were identified and are outside the current project areas. These newly proposed, additional FUDS AOCs are identified in Figures 5a and 5b and listed in Table 10.

1) Lot 16 Aircraft Washrack. The aircraft washrack was located on Lot 16 and adjacent to the CPA. The washrack apparently consisted of a concrete tarmac area measuring 85 feet by 85 feet with two wash stations equipped with water, air and solvent services that were supplied by underground piping from Building 113 (Appendix E). The washrack tarmac apparently was drained by a catch basin, which in turn flowed northeast to an undetermined discharge point. Potential material usage includes jet fuel, solvents and metals.

2) Building s307 Fuel Oil Tank (Building s307). Building s307 was located on the corner of Stebner Road and Jefferson Street, east of the L3PA (Appendix E). The building was constructed between 1953 and 1964 and was removed between 1998 and 2003. The 1961 Army utility map shows a 265-gallon fuel oil tank on the east side of the building. Potential material usage consists of fuel oil.

3) Lot 1 UST. The Lot 1 UST was located approximately 30 feet south of Cleveland Avenue in Lot 1, east of the L3PA. The UST was apparently removed in conjunction with the Building 112 FUDs project. However, there was no information available for review to determine the UST contents or capacity or whether contamination was discovered during the removal. Potential material usage includes gasoline, diesel fuel, aviation fuel and kerosene.

4) B E Laboratory and Fuel Oil Tanks (Building 306). Building 306 is referenced to as the "B E Laboratory" on a 1973 Air Force Facilities map (Appendix E). Building 306 was constructed after 1953 and remains

today. The function of the laboratory and potential material usage is not known but material usage included two fuel oil tanks of unknown capacity.

5) Rocket Check/Assembly/Storage Building (Building 305). Building 305 was located east of the L3PA served as a rocket check, assembly and storage area. Building 305 was constructed prior to 1953 and remains standing today. However it is not known how long the building was used in a rocket related capacity. Potential material usage includes rocket fuel.

6) Crash and Rescue Building (Building 303). Building 303 was located northeast of the L3PA and was apparently constructed in 1951-1952 and removed between 1998 and 2002. The building housed fire fighting vehicles, equipment and personnel. Potential material usage includes diesel fuel, gasoline, and fire fighting chemicals.

7) Jet Fueling Vaults. The Jet Fueling Vaults consisted of two below grade vaults that served as aviation fuel access points and were located on the north edge of the tarmac, north of the L3PA. Utility maps show that fuel was delivered to the vaults from the two 55,000-gallon USTs located near Building 112. The fueling vaults were constructed in 1954 and were removed between 1998 and 2002. Potential material usage consists of aviation fuel.

8) PME Laboratory (Building 304). Building 304 is referred to as the "PME Laboratory" on a 1973 Air Force Facilities map (Appendix E). The function of the laboratory and potential material usage is not known.

9) Steam Generation Plant. The steam generation plant was located one block south of Building 101. The plant was converted from coal to fuel oil in the 1970's and presumably had fuel oil storage. Potential material usage includes coal and fuel oil.

10) Building 302 Fuel Oil Tank. Building 302 was a water pumping station that featured a 250-gallon fuel oil tank that likely supplied a back up generator. It is not known if the tank was an AST or UST. The building was constructed after 1953 and remains today. Potential material usage consists of fuel oil.

11) Building 301 Fuel Oil Tank. Building 301 served an unknown purpose but did feature a 550-gallon fuel oil tank. The first available reference to the building and associated tank was on a 1961 Army utility map (Appendix E). Building 301 was removed between 1998 and 2003. Potential material usage consists of fuel oil.

12) CAP Hanger Fuel Storage Area. The CAP Hanger Fuel Storage Area was constructed after 1953 and remains today (Appendix E). The fuel storage area consists of three ASTs and has a total capacity of 66,000-gallons. Potential material usage includes aviation fuel and gasoline.

13) USAF Motor Pool Area. The Motor Pool Area located southwest of the L3PA and was the maintenance base for Air Force motor vehicles. Potential material usage includes diesel fuel, gasoline, virgin and waste oil, grease and metals.

14) Base Gas Station. The Base Gas Station was located southeast of the L3PA and was constructed in 1953. Potential material usage includes gasoline and diesel fuel. The exact location of the Base Gas Station is not known at this time, and is not located exactly on Figure 5a.

15) D-3 Goose Missile Dump Site. D-3 is located approximately 750 feet west of Stebner Road on the north side of the Duluth IAP. Empty petroleum product barrels observed in a wooded ravine area at D-3 (Engineering-Science, 1982). No other site information was found.

16) D-5 East Goose Missile Site. Site D-5 is east of Stebner Road in the northern portion of the Duluth IAP. Wastes such as oil cans, general refuse and diesel engines filters were observed at the site in 1981 (Engineering-Science, 1982).

17) D-7 C-ration Disposal Area. Site D-7 is located northeast of the NWA Maintenance Facility and was used for burial of old C-rations and materials such as fencing and construction rubble during the 1950's (Engineering-Science, 1982). The Phase I Records Search report states "No potential for contamination exists at this site due to the nature of the wastes disposed of" (Engineering-Science, 1982).

18) D-8 Hardfill Burn Area. Site D-8 is located north of the main east-west runway east of the FAA radar site. This site was utilized from 1956 to 1957 and materials including scrap metal, construction rubble, and burnt refuse have been located at the site. Some non-hazardous materials were burned here. The site was apparently covered with native soil after dumping ceased (Engineering-Science, 1982).

19) MD-1 and MD-2 Munitions Disposal Sites. Sites MD-1 and MD-2 are located in the northern part of the Duluth IAP in the vicinity of D-1. These munitions disposal sites were used during the 1950's to 1972. Explosives disposed at these sites ranged from small arms ammunition to aircraft catapults (Engineering-Science, 1982).

Sites 15 through 19 were identified in the Phase I Records Search conducted by Engineering-Science (1982). These sites were not ranked as a priority in the Phase 1 Records Search, and at the time, were within the fenced and secure airport perimeter. Sites 15 through 19 are currently in a non-secure portion of the Duluth IAP. According to available information the sites have not been investigated beyond the Records Search conducted in 1982.

5.0 PRELIMINARY REGIONAL CONCEPTUAL MODEL

5.1 Geographic Description

5.1.1 Topography

The City of Duluth is situated along a northeast to southwest trending hillside that forms the northwestern rim of the Superior Basin. The hillside rises steeply from the Lake Superior shore (602 feet above mean sea level (MSL)) to elevations ranging from approximately 1,300 feet to 1,350 feet MSL along the hill crest. Several moderately incised, narrow stream valleys are found along the hillside with relief ranging from 30 feet to 50 feet. As would be expected, the stream valleys are fairly straight, due to the steep gradient and are generally oriented perpendicular to the topographic slope, or northwest to southeast. An average topographic gradient of the hillside is 0.077 ft/ft, as measured along 21st Avenue east.

The hillside crests approximately 1 mile to 1.75 miles from the shoreline. From the crest, the ground surface plateaus and elevations increase more gradually and increase to the north-northwest. The topography of the plateau is characterized by numerous gently to moderately sloping hills and depressions with elevations ranging from 1,180 feet to 1,400 feet MSL. Topographic lows are generally marshy and wet due to high water table elevations. There is no apparent directional alignment to the topography. Streams found in the plateau meander greatly following the variable topography. Stream valleys are only gently incised with relief generally less than 10 feet.

In the vicinity of the Duluth IAP the topography becomes more subdued due to the presence of a thicker blanket of glacial sediments (Figure 1). The area is characterized by low rolling hills punctuated by expansive, flat, marshy topographic lows. Topographic relief in the vicinity of the Duluth IAP ranges from a low of 1,375 feet MSL at the southwest corner to 1,490 feet MSL at the west end of the Duluth IAP.

5.1.2 Surface Cover and Drainage

Surface water drainage at the Duluth IAP is generally split by the main east-west trending runway into northern and southern components. The majority of surface water along the north side of the runway is collected by an east-west trending drainage ditch, which empties into Beaver Creek (Figure 1). Surface water north of Airport Road and west of Taylor Circle flows westward through swales and established ditches past the POL (Figure 6). Immediately west of the POL the drainage ditch turns to the north, flows under the main east-west runway, joining the surface water from the north side of the east-west runway. Beaver Creek flows north, away from the Duluth IAP, and terminates in a marsh adjacent to the Wild Rice Lake Reservoir approximately 1.8 miles north of the east-west runway.

Surface water on the south side of the runway (South of Airport Road and east of Stebner Road) is also collected into drainage ditches that discharge into Miller Creek that flows into Lake Superior at a point 6.3 miles south-southeast of the Duluth IAP. All the drainage ditches within the Duluth IAP are labeled with an intermittent stream symbol suggesting that the ditches are not deep enough to have a base flow component.

The tarmac area within, and north of the L3PA is collected by a storm water system the flows west and then northwest. The discharge point for the storm water system is not known but is speculated to be a tributary of Beaver Creek, north of the main east-west runway (Figure 6).

5.1.3 Soil Types and Distribution

The southern St. Louis County soil survey information was obtained from the United States Department of Agriculture Natural Resource Conservation Service (NRCS). The NRCS is currently updating soils information and the data obtained was in draft form and was completed in November 2002. Complete soil descriptions for the corresponding soil units have not been fully developed. Appendix B includes the preliminary NRCS map and associated soil descriptions.

The soils throughout the improved portions of the Duluth IAP are classified as the urban-modified, Normanna-Canosia-Hermantown complex (UR-5B). The unimproved areas of the Duluth IAP property are described below.

The northern half of the Duluth IAP is dominated by marshy lowlands with slightly elevated highlands in the extreme northeast corner and the northern-most portion of the property near Martin Road. The lowlands are primarily classified as either Hermantown-Canosia-Giese complex (30-2A), Normanna-Canosia-Hermantown complex (30-4B) or Tacoosh mucky peat (1314) (NRCS, 2002). The highlands in the northern portion of the property are primarily composed of the Ahmeek-Normanna-Cathro complex (30-4D).

The majority of the southern half of the property has been improved and soils are classified as urban-modified, Normanna-Canosia-Hermantown complex. The unimproved portions of the site are generally low and marshy and are classified as Rifle peat (541), Tacoosh mucky peat (1314), or the Hermantown-Canosia-Giese complex (30-2A).

5.2 Geological Description

5.2.1 Unconsolidated Deposits

Based on the varied topography and geologic history near the Duluth IAP it is not unexpected that a variety of unconsolidated geologic units are present. According

to Hobbs (1982) and Matsch and Ojakangas (1982), the unconsolidated sediments around Duluth IAP are associated with the Mille Lacs-Highland Moraine that was formed during the Automba phase glaciation of the Superior lobe. The Automba phase consisted of a minor surge in glacial activity during the overall Late Wisconsinian retreat of the Superior Lobe. The minor advance was enough to overflow the crest of the Lake Superior basin forming the Mille Lacs-Highland moraine. The remnants of the end moraine are found along the highlands adjacent to Lake Superior and lie just west of the Duluth IAP and form a minor, discontinuous topographic high. The Duluth IAP lies in a narrow northeast-southwest trending outwash deposit that appears to have been formed during the retreat of the Superior lobe since the Mille Lacs-Highland moraine forms the western edge of the outwash deposits. Hobbs characterized the sediments along the eastern edge of the outwash as ground moraine sediments or a thin veiling of glacial till over the existing bedrock surface. The boundary between the outwash and the ground moraine sediments likely corresponds to the distinct change in topography east of the Duluth IAP as discussed in Section 5.1.1.

5.2.2 Bedrock

Consolidated bedrock units underlying the Quaternary sediments consist primarily of Middle Proterozoic (Upper Precambrian) intrusive gabbros assigned to the Duluth Gabbro Complex. The Duluth Complex in the vicinity of the Duluth IAP is subdivided into two groups: the coarse-grained, anorthositic gabbro and medium-grained troctolite and olivine gabbros. Depth to bedrock is estimated to be between 10 feet and 60 feet (Engineering-Science, 1982).

5.3 Hydrogeological Setting

The following section describes the occurrence and usage of the primary water resource aquifers near the Duluth IAP. Sources of regional hydrology information consisting of Olcott and others, 1978 and Lindholm and other, 1979 and Engineering-Science, 1982 were reviewed to develop the following section.

5.3.1 Hydrogeologic Units

Groundwater in the Duluth area is primarily derived from either unconsolidated glacial sediments or from bedrock of the Duluth Gabbro Complex. A discussion of both water sources is as follows:

5.3.1.1 Unconsolidated glacial sediments

The glacial sediments in the vicinity of the Duluth IAP consist primarily of ice-contact deposits that consist of clay with highly variable amounts of sand, silt, gravel and boulders. Recoverable amounts of water are largely dependant on the occurrence and thickness of coarser sediment layers within the clay-based matrix.

Water use within unconsolidated glacial sediments is only slightly developed and used primarily for domestic use in areas where the sediments are sufficiently thick to allow for well installation. Water yields are typically less than 10 gallons per minute (Olcott and others, 1978). The mean well depth is 45 feet and the depth to water was less than 30 feet in 93% of the wells.

5.3.1.2 Consolidated bedrock

Water use within the Duluth Gabbro has been only slightly developed due to relatively poor yielding wells (< 10 gallons per minute) (Olcott and others, 1978). The median depth of wells completed within the Duluth Gabbro was 145 ft (Olcott and others, 1978).

5.3.2 Surface Water

Surface water occupies the numerous lowlands surrounding the Site forming a network of moderate to large wetlands (Figure 1). Wetlands in the northern half of the Site drain into the Beaver River while wetlands in the southern half drain to Miller Creek. Surface water from the Site flows into two watersheds. Surface water from the northern portion of the Site flows north into Beaver Creek, which discharges into the Wild Rice Reservoir. The Wild Rice Reservoir eventually discharges into the Cloquet River, which in-turn discharges into the St. Louis River that drains into Lake Superior. Surface water from the southern portion of the Duluth IAP drains into Miller Creek, which discharges into Lake Superior. The numerous lowlands surrounding the Site form a network of moderate to large wetlands that likely contribute base flow to both the Beaver River and Miller Creek.

According to Engineering-Science (1982), five surface water monitoring stations (Stations 5, 6, 7, 8 and 9) were maintained at the Duluth IAP by Air Force personnel. Stations 5, 6 and 7 were located along the south side of the Site and monitor water quality in drainage ditches that discharge to Miller Creek. Stations 8 and 9 were located along the north side drainage ditches that discharge to Beaver Creek. Samples were periodically collected at each station beginning in 1975. The following is a discussion of water quality data (Engineering-Science, 1982):

- Ammonia, manganese, iron, copper and color levels at stations 8 and 9 typically exceed water quality standards. However, these parameters typically exceed water quality standards;
- Ammonia, manganese, iron, copper and color levels at stations 6 and 7 typically exceed water quality standards. Both stations are situated on a tributary of Miller Creek. Station 6 is located where the tributary enters the Site and Station 7 is located where the tributary exits the Site, indicating that the Site is not the cause of the exceedences;

- Slightly elevated phenol concentrations have been observed at stations 6, 7 and 9;
- Elevated oil and grease concentrations have been observed at stations 7 and 9.

According to Lt. Col Steve Wabrowetz the surface water monitoring program was discontinued when Air Force operations ceased. The only surface water monitoring being currently conducted is related to the Storm Water Pollution Prevention Plan.

5.3.3 Groundwater Flow Patterns

An illustration of regional groundwater flow was depicted in the Phase I – Records Search (Engineering-Science, 1982) and shows the Duluth IAP within a groundwater mound. Groundwater is depicted flowing primarily to the north on the northern half of the Duluth IAP and to the south on the southern half.

Site specific groundwater flow for Site 3, 4 and 8 was illustrated in a Remedial Investigation Report completed by Montgomery Watson, (1990). Groundwater flow with the CPA characterized by a groundwater mound centered over Site 8, with groundwater flowing to the south, west and northwest. The general flow direction for all the sites was to the south. The 1990 interpretation also indicates that the drainage ditches had a significant influence on groundwater. It is likely that groundwater flow, primarily in Site 8, has been significantly altered by the improvements completed by Cirrus. More recent groundwater flow data is not available since the Site 8 monitoring wells have been abandoned.

Groundwater flow information was obtained from the Annual Groundwater Sampling and Analysis Report for Sites 3 and 4 (Montgomery Watson, 2001). Groundwater is shown to flow uniformly towards the northeast across Sites 3 and 4, which is a direct contradiction of the 1990 data. The 2001 groundwater flow information is depicted on Figure 7.

5.3.4 Groundwater Receptor Survey

Well records were requested from the Minnesota Geological Survey for a one-mile radius around the Duluth IAP. An additional record search was conducted through a Digitized Well Location Points database obtained from the Minnesota Geological Survey's County Well Index (CWI) and last updated in July 2003. The MGS search resulted in two potable water wells and 104 monitoring wells. The CWI search indicated a total of 6 potable water wells. The potable water well, closest to the project areas is located approximately 11,000 feet to the north. The locations of all known potable water wells are shown on Figure 8.

5.3.5 State and Federal Database Search

5.3.5.1 General Findings

An EDR Report was obtained by EMR for site address 4973 Airport Rd. Duluth, MN 55811 (Target Property). The address is for Cirrus and corresponds to the CPA. EDR conducted an ASTM standard search of state and federal databases that are listed on pages 1-5 of the EDR report (Appendix A). The database search indicated the following types of sites and associated quantities within the search radius:

- The RCRIS database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous wastes as defined by RCRA. One RCRIS site was listed in this category. The responsible party is listed as Cirrus Design Corporation and 8 violations have been recorded. A compliance date for half of the violations was indicated.
- MPCA AST contains a listing of registered ASTs. Cirrus, MN ANG and Curtis Oil and Tire were the only AST owners listed.
- The MPCA UST database contains registered USTs. Two UST owners were listed; MN ANG and the Bureau of Prisons/Dept of Justice.
- The Minnesota List of Sites (MN LS) contains multiple databases including Solid Waste Facilities, Superfund Sites, No Further Action Planned sites and Voluntary Investigation and Cleanup sites. The Duluth IAP was the only party listed in MN LS. The Duluth IAP site was classified as voluntary clean up site. Further information can be found on page 44 of Appendix A.
- The MPCA LUST database contains an inventory of reported Leaking Underground Storage Tank (LUST) sites. Twenty LUST sites are listed in this database. A more extensive list with addresses can be found on page 3 of the executive summary in Appendix A.

Numerous databases were searched that did not reveal any mapped sites within the search radius (Page 1 and 2, Appendix A).

5.3.5.2 Site Specific Findings

The MN ANG was listed in the AST, UST and LUST databases and all sites were listed with an address of 4680 Viper Street. According to Lt. Colonel Steve Wabrowetz of the MNANG, all MNANG UST, AST and LUST sites are within the current base boundaries.

MN ANG was listed with a total of 29 USTs of which four are active. According to Lt. Colonel Steve Wabrowetz there are no active USTs within the MNANG boundaries, but there are active oil/water separators. The remaining 25 USTs have been either removed or abandoned. The AST database listed the MN ANG as the owner of 23 ASTs, 19 of which are active while 4 tanks have been removed. The LUST database listed 2 MN ANG sites both of which have been closed. Four additional closed sites were also listed on the LUST database. Further information regarding these sites can be found in Appendix A.

Cirrus, the current CPA tenant, was listed in the following databases:

- MN Enforcement Log listed Cirrus as having three Forgivable Adminstrative Penalty Orders, all of which had effective end dates no later than 2002.
- MN Spills listed Cirrus as having a release of some type. No details were given about the release date, released material or quantity.
- MN AST listed Cirrus as having one aviation gas AST.

There were no database listings for sites within the L3PA.

5.3.5.3 Orphaned Sites

There were 22 orphaned sites that were not mapped due to inadequate address information. Since the Duluth IAP, MN ANG or USAF are listed as responsible parties there is a potential that the sites are related to, or near, the Project Areas.

Responsible Party Listing	Database(s) Finds
Federal Prison	LUST
Duluth Airport Maintenance Shop	AST
FAA DMS SMO Duluth MBN ASR	RCRIS-SQG. FINDS
US Air Force Duluth ANG	TRIS
Duluth International Airport – BLO	MN VIC
Duluth International Airport – SIT	MN VIC

5.3.6 Potential Pathways

The following is a preliminary discussion of pathways and their potential for completion as an exposure route. This discussion focuses on the current project areas and takes into account current site conditions.

5.3.5.1 Air Pathway

The generation of fugitive dust is unlikely since the majority of both project areas are covered with impervious concrete, asphalt or structures. However, construction that would disrupt these surfaces could potentially complete this exposure route.

Exposure to soil vapors generated by contaminated soil and groundwater present at both sites is a potential exposure route. Volatile organic compounds, specifically vinyl chloride, cis-1, 2-dichloroethene, trichloroethene, benzene, trans-1,2 dichloroethene, and toluene have been detected in the soil and groundwater within the project areas. This pathway is largely incomplete since there are no known below grade structures in the contaminated areas. However it is possible that organic vapors could migrate through underground utilities or through higher conductivity utility trenches.

5.3.5.2 Surface Water Pathways

There are no surface water bodies in either of the project areas. The CPA formerly contained a drainage ditch that was apparently filled in during site improvements completed by Cirrus (Figure 6). A drainage ditch lies south of the CPA but the most recently reviewed data suggest that groundwater flows away from the ditch. Surface water sampling conducted in the southern drainage ditch did not detect any significant contamination (Engineering – Science, 1990).

5.3.5.3 Groundwater Pathway

Groundwater is contaminated at both project areas. However, a pathway for the ingestion of contaminated groundwater does not appear to be present since there are no potable water wells within 1 mile of the site (Figure 8). Underground utility and utility trenches pose a potential pathway for off-site migration of impacted groundwater.

5.3.5.4 Soil Pathway

Exposure to surface soil through incidental ingestion is highly unlikely since the majority of the project area surfaces are covered with impervious materials. Additionally, areas without impervious surface cover are generally covered with grass. Future construction in areas of contaminated could complete this pathway.

6.0 PROJECT SPECIFIC FINDINGS

6.1 Cirrus Project Area Findings

6.1.1 Project Overview

Two areas are planned for investigation under this FUDS contract. The first area is a narrow strip of land between the Cirrus Production Building and the POL Quonset hut (Figure 4). This investigation is being conducted in response to the discovery of tetrachloroethylene (PCE) and dichloroethylene (DCE) in a monitoring well adjacent to the POL Quonset hut that was previously believed to be unimpacted (Figure 2). The objective of the investigation is to determine if the chlorinated compounds are emanating from the CPA.

The second investigation area within the CPA is the area surrounding the former Building 112 and associated aviation fuel USTs (Figure 2). The investigation is being conducted in response to the discovery of petroleum and chlorinated compounds in the soil and groundwater near the location of the former USTs (Figure 2). The objective of the investigation is to determine the presence or absence of chemical contamination based on biased environmental sampling.

6.1.1.1 Project Location and Boundaries

The CPA measures approximately 795 feet (east to west) by 620 feet (north to south) and covers approximately 493,000 ft^2. The site is located in the SW ¼ of the SE ¼ of section 2, Township 50 North and Range 15 West. The southern edge of the project area borders Airport Road.

6.1.1.2 Current Site Improvements

The sole tenant of the CPA is Cirrus, who occupies Lot 1 of Block 5 and Lots 17 through 21 of Block 4 or the extents of the CPA (Figure 2). Currently there are two buildings present within the CPA and are as follows:

- Cirrus Production Building (Lots 19 and 21) – approximately 131,500 ft^2
- Cirrus Customer Service/Paint Shop Building (Lots 1 and 17) – approximately 63,500 ft^2

Lots 18, 20, the northern portion of Lot 17 and the southern portion of Lot 19 do not have any known improvements with the exception of asphalt and concrete surface cover. According to City of Duluth aerial photos Site improvements began prior to 1995 when a portion of the Cirrus Production Building was built. Between 1995 and 2002 the Production Building was expanded into Lot 21 and the former Paint Shop/Metal

Plating Building on the southeast corner of Lot 20 was demolished. The Cirrus Customer Service/Paint Shop building was constructed during 2002. All current facilities are connected to city utilities including sanitary sewer, gas and water services.

6.1.1.3 Current Uses of Property

The CPA property is used for the design, production and assembly of aircraft. The Cirrus Production Building houses the design, engineering and production facilities. The Cirrus Customer Service/Paint Shop Building houses customer service staff and airplane painting operations.

Lots 17 and 18 are currently used by Cirrus for temporary plane storage, and initial start-up and system testing operations. The southern portion of Lot 19 and Lot 20 are used for visitor and customer parking. Additional Cirrus employee parking is available off of the CPA property, south of Airport Road.

6.1.1.4 Current Uses of Adjoining Property

The properties on all sides of the CPA are developed to some degree and are discussed below.

The property bordering the north CPA boundary is owned by the City of Duluth and consists of tarmac, taxiways as well as the main east-west Duluth IAP runway. A large portion of the area north of the CPA, are unpaved buffer areas adjacent to the main runway. The property west of the CPA is owned by the City of Duluth and leased to the MN ANG. Improvements include the POL Quonset hut and adjacent concrete slab and a small office building. The POL Quonset hut is currently used for salt and sand storage and the office building houses MN ANG POL personnel. Approximately 700 feet west of the CPA are the two MN ANG aviation fuel ASTs and associated POL offloading and distribution facilities. The land immediately south of Airport Circle is primarily undeveloped but has been cleared and leveled to serve as parking for the Cirrus facility. Farther to the south is a residential housing development. The property east of the CPA is encompassed by the L3PA and is described in Section 6.2.1.

6.1.1.5 Drainage and Cover

The CPA was formerly vegetated with the exception of a few small structures that were historically present within the project area. A drainage ditch was also present in the northern one-third of the CPA. Currently, nearly 100% of the CPA surface is covered with impervious materials consisting of buildings, concrete or asphalt. It is assumed that the drainage ditch was filled in during the construction of the Cirrus improvements. Storm water from the Cirrus property is collected by a series of catch basins, but the discharge point of storm water is unknown.

6.1.2 Environmental Setting

The following is a discussion of the geologic and hydrogeologic conditions that are expected to be encountered within the project area. The following discussion was formed through the review of past work at the conducted at sites within and adjacent to the CPA.

6.1.2.1 Anticipated Geology

The matrix of unconsolidated glacial sediments are predominately clay based, but significant percentages of silt, sand and gravel has been observed within the clay matrix (Engineering-Science, 1990). The glacial sediments also contain distinct sand, silt and gravel horizons. Past investigations have also encountered boulders and bedrock fragments that were incorporated into the glacial sediments. Organic peat deposits were encountered between the ground surface and 10 feet bgs immediately west of the CPA and in borings south of Airport Road. Peat was also encountered in geotechnical borings completed in Lots 17 within the CPA and borings south of Airport Road. Depth to bedrock varies from about from 15 feet to 50 feet with the bedrock surface dipping to the southwest.

It is anticipated that improvements completed since the early 1990's have significantly altered the near surface sediments. It is likely that native soils have been removed and or non-native soils have been added throughout the project area. Site improvements have likely resulted in little or no soil changes below 6 feet bgs.

6.1.2.2 Anticipated Hydrogeology

The primary hydrogeologic unit beneath the CPA is the unconsolidated glacial sediments. The water table has been generally encountered at a depth of 10 feet or less and appears to be continuous with surface water features (Engineering-Science, 1990). Although geologic borings indicate that the aquifer is primarily unconfined, the heterogeneous nature of the unconsolidated glacial sediments suggests that the aquifer may be semi-confined or confined on a local scale. Based on groundwater level information the groundwater flow direction is nearly due south across the site and the gradient was approximately 0.017 with hydraulic conductivities ranging from 1.1 gal/day/ft^2 to 1.5 gal/day/ft^2 (Engineering-Science, 1990). Drainage ditches that lay west, north and south of the CPA, significantly influence local groundwater flow. The existence of the western and northern drainage ditches is not known and may have been altered or removed during project area improvements.

It is likely that CPA improvements (i.e. impervious surfaces) have significantly influenced the groundwater elevation and flow patterns

beneath the CPA. With this in mind the relevance of historical groundwater data needs to be considered.

6.1.3 Records Review

MN ANG, ACC, FUDs and other miscellaneous records were reviewed to evaluate former and active environmental site in the vicinity of the CPA and L3PA. The following discussion summarizes the results of the document review. A listing of all reviewed documents is found in Appendix C. The location of each of the following sites is shown on Figures 3 and 4.

6.1.3.1 MN ANG Sites Proximal to the Cirrus Project Area

The only known MN ANG project area within the CPA was formerly known as Site #8 and is a former DPDO Storage Area. Site #8 was investigated during a Remedial Investigation (RI) conducted by Engineering-Science in 1989. The results of the RI are discussed further in Section 6.1.5.1 and 6.1.5.2.

Site #4 is an active project area that lies immediately west of the CPA. Past and current investigations in Site #4 have focused on soil, groundwater and surface water contamination related to petroleum storage and distribution operations within the project area.

6.1.3.2 ACC Sites Proximal to the Cirrus Project Area

No ACC sites are present within, or adjacent to, the CPA.

6.1.3.3 FUDS Sites Proximal to the Cirrus Project Area

The only known former FUDS project within or adjacent the CPA is the Building 112 FUDS project. The Building 112 project consisted of the removal of two 55,000-gallon JP-4 (aviation fuel) USTs, associated pump house (Building 112) and associated underground piping. Contaminated soils were apparently removed during the UST removal, but the documentation related to the removed soil volume, soil disposition was not located. It is also not known whether clean limits were established during the project.

An additional UST (Lot #1 UST) was apparently removed in conjunction with the LOT 17 FUDS and is discussed in Section 6.2.3.3.

6.1.4 Historical Use Information

The following is a discussion of observations made during the review of aerial photos obtained from the City of Duluth Engineering Department for the years; 1964, 1971, 1979, 1988, 1995 and 2002 and photos from 1938, 1953, 1975, 1981, 1998 and 2003 obtained from Microdot, Inc. The reviewed City of Duluth photos were all scaled at 1 inch = 200 feet while the Microdot photos ranged from 1 inch

= 925 feet to 1 inch = 1,667 feet. Aerial photo interpretations were refined and confirmed through additional sources including historical USAF maps and personal interviews. Changes observed on adjacent land are briefly described with the exception of land to the east, which is described under the Lot 3 discussion (Section 6.2.4).

6.1.4.1 Aerial Photographs of Cirrus Project Area

1938 The earliest available aerial photo shows the CPA area as undeveloped (Figure 9). The extent of the CPA is vegetated with what appears to be agricultural fields. A single, east-west trending rectangular object is present in Lot 21 but its purpose is unknown. The Duluth IAP has not been developed although vegetation patterns indicate that a grass landing strip may be present northeast of the CPA. A building adjacent to the grass air-strip may be an aircraft hanger.

1953 By 1953 many of the current Duluth IAP features are present (Figure 10). However, Building 112 and the aviation fuel USTs (Lot 17) are the only recognizable features. The vegetation is disturbed in Lots 1 and 21 and what appears to be a soil pile is present in the in northeast corner of Lot 21 and the northern half of lot 19. A dark semi-circular object of unknown origin or purpose is present between Lots 1 and 17. One aviation fuel AST and a small structure is present in the POL area, west of the CPA.

1964 Lot 21 appears to have a faint rectangle in the southern portion of the lot (Figure 11). The rectangle may represent a former building slab. The Paint Shop (Building s114) is present in Lot 20 and Building 139 is visible in Lot 1. Building 112 and the associated aviation fuel USTs, a Quonset hut (west of Building 112) and Building 113 (south of the USTs) are also present. Tarmac with parked aircraft occupies the extents of Lot 18. Two rectangular structures are present in Lot 19 with what appears to be a material storage or salvage area. The materials are unidentifiable but are neatly arranged. Off-site changes include the construction of a Quonset hut (herein referred to as the POL Quonset Hut) immediately west of Lot 21. Several ancillary Quonset huts are present north and southwest of the POL Quonset hut (not visible on Figure 11). Beyond the POL Quonset hut are the three POL aviation fuel ASTs with an associated fuel unloading area and what appear to be a pump house. Southwest of the POL ASTs is the DRMO building and associated yard (not visible on Figure 11). Land north of the CPA is largely undeveloped with the exception of a taxiway and the main east-west runway. Land south of the CPA is undeveloped and wooded but an east-west trending drainage ditch is visible south of Airport Road.

1971 The Site appears relatively unchanged from 1964 with the exception of the addition of a second Quonset hut west of Building 112, and the absence of the two rectangular structures and adjacent materials that were visible in Lot 19 in 1964 (Figure 12). Several small rectangular objects (possibly trailers) are present in the southern portion of Lot 21. Notable off-site changes include the addition of an apparent cement slab immediately west of the POL Quonset hut and the removal of one of the three structures southwest of the POL Quonset hut (not visible in Figure 12).

1975 The most significant change to the site since the 1971 photo is the removal of two small Quonset huts that were located approximately 100 feet west of Building 112 (Figure 13). In addition, several rectangular objects of unknown origin are dispersed through the southern half of Lot 21.

1979 No changes were noted in the CPA between 1975 and 1979 (Figure 13). Off-site changes consist of the removal of a north-south trending structure southwest of the POL Quonset hut (not visible in Figure 14).

1981 The site remains relatively unchanged with the exception of the absence of the storage containers present in Lot 21 on the 1979 photo (Figure 15). In addition, three small structures north and south of the POL Quonset hut have been removed. Land south of the CPA now features a housing development.

April 1988 The CPA and adjacent areas is unchanged from the 1981 aerial photo (Figure 16).

April 1995 The most significant change between 1988 and 1995 is the construction of the first Cirrus Production Building on Lot 19 (Figure 17). Other site changes include the removal of Building 112 and associated USTs and the appearance area of a soil pile at the former location of Building 112 in Lot 17. According to Bob Dempsey, the soil pile is likely impacted soil that was excavated during the removal of Building 112 and the two 55,000-gallon USTs. The soil was treated with an ex-situ air sparging system and was later determined to be clean. Building 113 remains and is visible south of the soil pile. In addition, Building 139 has been removed from Lot 1 and has been replaced by an area of disturbed soil.

1998 The most significant change in the 1998 aerial photo is the outline of the Cirrus Production Building expansion into Lot 21 (Figure 18). Other changes include the removal of Building s114 that formerly occupied Lot

20 and the apparent removed of the soil pile near the former Building 112 area in Lot 17.

May 2002 The project area changed significantly between 1995 and 2002. The Cirrus production facility has been expanded to its current size with the addition of a 150,000 ft^2 building on Lot 21 (Figure 19). The 2002 photo also shows the construction of the Cirrus paint shop and office structure in Lot 1. Additionally, Building 113 has been removed. Off-site changes include the removal of one of the aviation fuel ASTs west of the CPA (not visible) and the clearing and leveling of a parking lot on the south side of Airport Drive.

2003 No changes were noted between the 2002 and 2003 aerial photos (Figure 20).

6.1.4.2 Former Sources at Cirrus Project Area

The following is a list of potential sources of environmental impacts. The potential sources consist of both previously identified and documented sources and new potential sources revealed during the development of this document. New potential sources were designated based on the documented or implied presence of petroleum products or chemical and the documented or implied activities or land use, but does not consider current land use. Identified potential former source locations within the CPA include (Figure 5a):

- Former DPDO (MN ANG Site #8, former S-1)
- Former Building 112 and associated aviation fuel USTs
- Former Lot 19 Salvage Yard (Salvage activities and materials)
- Former Building s114 (Paint Storage/Metal Plating Building)
- Former Building 139 (Fuel Oil Tanks)
- Former Building 113 (Solvent Storage)

6.1.4.3 Material Handling and Usage at Cirrus Project Area

Only minor documentation was found in relation to specific materials handled at specific facilities within the CPA. The following is a discussion of materials known or suspected to be in use in each of the potential sources (Figure 5a):

- Former DPDO – waste fuels and solvents, hydraulic fluid, pesticides, PCB containing transformers (known)
- Former Building 112 and associated USTs – aviation fuels (known)
- Former Lot 19 Salvage Yard – waste fuels and oils, metals, PCBs (suspected)

- Former Building s114 (Paint Storage/Metal Plating Building) – paints, solvents, acids, bases (suspected)
- Building 139 – fuel oil (known)
- Building 113 – solvents (known)

6.1.5 Current Conditions

6.1.5.1 Known Areas of Impacted Soil

A RI was conducted for ANG in Site 8 (former DPDO) as part of a larger investigation that also encompassed Sites 2, 3, 4 and 10 (Engineering-Science, 1990). The Site 8 investigation consisted of the collection of groundwater samples from temporary well points and monitoring wells, surface and subsurface soil samples. In addition, sediment and surface water samples were collected from the drainage ditch in the northern portions of the CPA. The Site #8 RI area is shown on Figure 4.

Results of RI concluded with the following soil conditions (Figure 21):

- Total petroleum hydrocarbons concentrations in excess of 100 mg/kg were discovered in two surface soil samples on the west side of Lot 21.
- 4,4'-DDT (1,500 mg/kg), 4,4'-DDD, 4,4'-DDE, dieldrin, and PCB 1254 were detected in the northwest corner of Lot 21.
- Total petroleum hydrocarbon concentrations exceeded 100 mg/kg in one sediment sample collected from a former drainage ditch in Lot 17.
- Barium, cadmium, chromium and lead concentrations in the soil marginally exceeded background levels for the airport

Figure 21 illustrates known areas of soil and groundwater impacted above standards.

A Feasibility Study (FS) conducted by Engineering-Science (1994) summarized the maximum soil contaminant concentrations at Site 8. The maximum concentrations of toluene and xylene at Site 8 were 1,400 mg/kg and 5.6 mg/kg, respectively. No other soil contaminants were listed.

Cirrus conducted an investigation in 2001 prior to construction of the Customer Service/Paint Shop Building during which several soil samples were collected. Fourteen soil samples were collected as part of the investigation analyzed for DRO, GRO, VOCs and PAHs. No analyte concentrations exceeded the applicable Minnesota Pollution Control Agency (MPCA) Tier II Soil Reference Values (SRVs). However, during the excavation of the foundation for the Customer Service/Paint Shop

Building a total of 1,091.13 tons of petroleum contaminated soils were removed and disposed. Two samples of the excavated soil contained DRO concentrations of 240 mg/kg and 660 mg/kg and GRO concentrations of 580 mg/kg and 2,600 mg/kg.

6.1.5.2 Known Areas of Impacted Groundwater

Past investigations conducted for various military organizations have indicated the presence of elevated concentrations of barium and chromium in the groundwater. The maximum concentrations for barium and chromium are 220 ug/L and 2.7 ug/L, respectively.

It should be noted that the majority of the groundwater data, applicable to the CPA, was collected from either the northern quarter of the CPA or south of Airport Road. Only limited groundwater data has been collected near the potential sources identified during this review.

An investigation conducted by Cirrus in 2001 indicated the presence of DRO and GRO concentrations in groundwater above the Minnesota Department of Health – Health Risk Limits (HRL). In addition, vinyl chloride was detected in groundwater samples collected from three borings in Lot 17 and one boring between Lot 1 and Lot 17 at concentrations that exceeded the HRL (Figure 21). The investigation was conducted in advance of the construction of the Cirrus Customer Service/Paint Shop Building.

6.1.5.3 Anticipated Contaminants of Concern

Based on a review of historical information, the following COCs have been identified for soil within the CPA:

- PCBs
- Pesticides
- Total Petroleum Hydrocarbons as Diesel Range Organics
- Total Petroleum Hydrocarbons as Gasoline Range Organics
- Polynuclear Aromatic Hydrocarbons
- RCRA Metals
- VOCs

Groundwater contamination has been identified within the CPA. The following COCs have a documented or potential presence within the CPA:

- VOCs
- Total Petroleum Hydrocarbons as Diesel Range Organics
- Total Petroleum Hydrocarbons as Gasoline Range Organics

- RCRA Metals
- Pesticides
- Anions/Cations
- RCRA Metals
- PCBs

6.2 Lot 3 Project Area Findings

6.2.1 Project Overview

The objectives of the L3PA investigation are to determine the presence or absence of chemical contamination. Chlorinated compounds were first detected in groundwater sampled as part of a LSI completed following the removal of a UST adjacent Building 103. A subsequent SI conducted in 2000 did not determine the source of the contamination or fully define the limits of impacted groundwater. However, the SI indicated that the concentration of chlorinated compounds increases to the east or in the direction of Hanger 101.

6.2.1.1 Project Location and Boundaries

The L3PA consists of Lots 2, 3, and 4 of Block 4 and is located in the SE ¼ of the SE ¼ of section 2, Township 50 North, Range 15 West. The L3PA measures approximately 936 feet (east to west) by 402 feet (north to south) and covers 376,000 square feet. The southern edge of the project area borders the north edge of Airport Road.

6.2.1.2 Current Site Improvements

Current improvements consist of two aircraft hangers and associated tarmac and are discussed below. Currently Lot 3 does not feature any known improvements but was the former location of Building 102, a former Air Force office building.

Building 101 was the first known structure constructed in the L3PA is situated in the southern half of Lot 2. Building 101 measures approximately 235 feet (measured east to west) by 150 feet (measured north to south) and was built as an aircraft hanger.

Building 103 was constructed between 1953 and 1964 and occupies roughly the southern half of Lot 4. The building was constructed as an aircraft hanger and measures approximately 240 feet (measured east to west) by 150 feet (measured north to south).

Site improvements in the northern half of the L3PA consist of concrete cover (tarmac) to facilitate the movement and occasional storage of aircraft.

6.2.1.3 Current Uses of Property

Building 101 is currently occupied by the Lake Superior Squadron 101 of the CAF and is used for storage, display and restoration of vintage aircraft and miscellaneous other military artifacts. A small military museum occupies the eastern portion of the building.

Building 103 is currently used by the MN ANG as an operational hanger. As of February 2004, flight operations were being moved to Building 103 in preparation of demolition of their current hanger. Prior to occupation Building 103 was used periodically by the U.S. Army for cold weather equipment testing.

6.2.1.4 Current Uses of Adjoining Property

Property on each side of the L3PA is developed to some degree. The following is a discussion of land use east, north and south of the L3PA. Land use to the west is encompassed by the Cirrus Project Area and is discussed in Section 6.1.5.

The land north of the L3PA is used primarily for private and corporate aircraft storage and maintenance. Tarmac surfaces are continuous between the L3PA and the northern hangers. Hermantown Hydraulics currently occupies the former Air Force Building s100 in Lot 1, which is due east of the L3PA. Hermantown Hydraulics sells and repairs hydraulic pumps, motors, cylinders, valves and hoses. A new hanger has been constructed north of the Hermantown Hydraulic building on Lot 1. The building had not been completed at the time of this writing but is owned by Jet Duluth. The proposed use of the hanger is unknown. Land use south of the Airport Road remains in use by the Bureau of Corrections and includes baseball diamond and a housing complex.

6.2.1.5 Drainage and Cover

Approximately 75% of the L3PA is covered with an impervious surface consisting of buildings, asphalt or concrete. The majority of the pervious surface cover is found in Lot 3 at the former location of Building 102. Based on a 1961 Air Force utility map, storm water from tarmac areas in L3PA and northward, are collected by a storm water system. In general, the storm water system, flows to the west to a point near Building 112 at which point the system turns to the northwest (Figure 6). The discharge point for the storm system is unknown but may be a tributary to Beaver Creek on the north side of the main runway.

6.2.2 Environmental Setting

The following discussion is based on the review of boring logs from a Site Investigation (SI) conducted by Montgomery Watson (2001) in relation to the discovery of groundwater impacted with chlorinated solvents.

6.2.2.1 Anticipated Lithology

The primary lithology encountered during the SI was a fine to medium grained, brown, silty sand that was typically encountered from the ground surface to depths ranging from 5 feet bgs to 16 feet bgs. The silty sand appears to be very homogenous with only minor variations in composition and texture being reported. It is suggested that this material is likely non-native fill imported during construction or demolition of the various improvements in the project area. No bedrock was encountered in any of the bore holes that ranged from 12 feet to 16 feet in depth.

6.2.2.2 Anticipated Hydrogeology

The only available hydrogeological information is water levels taken from temporary wells installed during the SI. Water levels ranged from 5 feet to 7 feet bgs with the deeper levels generally in the northeast portion of the investigation area. It is likely that the water levels have not been corrected for changes in ground surface elevation. The nearest surface water body is a drainage ditch that lies approximately 300 feet southwest of the southwestern corner of the L3PA boundary. It is possible that the drainage ditch may influence groundwater flow direction in the southwest corner of the L3PA boundary.

6.2.3 Records Review

The following is a discussion of known ANG, ACC, FUDS and LUST projects within, and adjacent to, the L3PA. Information about the former project areas was obtained through review of publicly available documents.

6.2.3.1 ANG Sites Proximal to the Lot 3 Project Area

The only known ANG site within the L3PA is the former Tank 036 site, which was removed under Installation Restoration Program (IRP). Contamination was discovered during the removal of Tank 036 in 1998 and a Limited Site Investigation was conducted. A water sample collected from a temporary well indicated the presence of cis- and trans-1, 2-dichloroethene. A Site Investigation was conducted in 2000 to determine the magnitude and extents of the chlorinated compound impacted groundwater. The limits and sources were not fully defined due to the limits of the project area. However, VOCs including TCE was encountered at concentrations up to 460 ug/L and increased in the direction of Hanger 101 (Montgomery Watson, 2001).

6.2.3.2 ACC Sites Proximal to the Lot 3 Project Area

No ACC sites were discovered during the file review process.

6.2.3.3 FUDS Sites Proximal to the Lot 3 Project Area

Two former FUDS Sites are within the boundaries of the L3PA. The former FUDS sites consist of removal of overhead steam lines and associated asbestos in 1997 and the demolition of Building 102 (Lot 3) in 1999.

A UST (Lot #1 UST on Figure 4) was apparently removed from an area northwest of the L3PA as part of the Building 112 FUDS project. The former UST was located approximately 30 feet south of Cleveland Street and 100 west of Stebner Road, northeast of the L3PA. No details of the UST or its removal were located during the review.

6.2.4 Historical Use Information

The following is a discussion of observations made during the review of aerial photos obtained from the City of Duluth Engineering Department for the years; 1964, 1971, 1979, 1988, 1995 and 2002 and photos from 1938, 1953, 1975, 1981, 1998 and 2003 obtained from Microdot, Inc. The L3PA consists of Lots 2, 3 and 4. Changes observed on adjacent land are briefly described with the exception of land to the west, which is described under the CPA discussion (Section 6.1.4).

6.2.4.1 Aerial Photographs of Lot 3 Project Area

1938 The earliest available aerial photo shows the L3PA area as undeveloped (Figure 9). The extent of the L3PA is vegetated with what appears to be a mixture of woodlands and grasslands. Immediately east of the L3PA is a lightly developed area that features roads but no visible structures.

1953 By 1953 Building 101 and Building 102 are present in the L3PA (Figure 10). No other improvements are visible in the Project Area. The northern half of the L3PA appears to have a mixture of soil cover and tarmac. Lot 4 is undeveloped and appears to be vegetated but two irregular mounds are present and may be soil piles related to construction activities in the area. Off-site structures include the construction of the flight simulator building (Building s100) east of the L3PA in Lot 1. Two rectangular fueling vaults are present immediately north of the flight line and taxiway, north of the L3PA. Numerous structures including barracks and the mess hall are present south of Airport Road.

1964 The most significant change to the L3PA is the addition of an aircraft hanger (Building 103) in Lot 4 (Figure 11). Additional tarmac has been added around Building 103 with some vegetated areas remaining around Building 102. Seven individual aircraft hangers have been constructed immediately north of the L3PA (Lots 9 through 15). An east-west trending Quonset hut has been constructed on Lot 1 north of Building s100.

1971 The general features of the L3PA are unchanged but minor additions have been completed on the west side of Building 103 and the northwest corner of building 102 (Figure 12). Offsite changes include the addition of a slender, north-south trending Quonset hut located west of Building s100.

1975 No changes were noted in the L3PA or adjacent areas between 1971 and 1975 (Figure 13).

1979 The L3PA and adjacent areas appear unchanged from the 1975 aerial photo (Figure 14).

1981 The L3PA and adjacent areas appear unchanged from the 1979 aerial photo (Figure 15).

April 1988 Although the L3PA appears unchanged, several changes were noted off-site (Figure 16). The most notable change is the removal of the barracks south of Building 101. In addition, the three western most hangers north of the L3PA have been removed.

April 1995 The L3PA appears unchanged and the only significant off-site change is the presence of a baseball diamond at the former barrack location south of Building 101 and the removal of a small building in the southwest corner of that block (Figure 17).

1998 The L3PA and adjacent area appear unchanged from the 1995 photo (Figure 18). The most notable off-site change is the apparent removal of the Jet Fueling Vaults at the north edge of the tarmac, north of the L3PA.

May 2002 Building 102 has been removed from Lot 3 and the surface restored (Figure 19). The overhead steam lines that parallel Airport Road have also been removed. Off-site changes include the removal of the north-south trending building in Lot 1 and the removal of the crash and rescue building (Building 303) due east of the northern hangers. The Jet Fueling Vaults are no longer visible and may have been removed.

2003 The site and adjacent area appear unchanged from the 2003 photo (Figure 20).

6.2.4.2 Former Sources at Lot 3 Project Area

The following is a list of potential sources of environmental impacts. The potential sources consist of both previously identified and documented sources and new potential sources revealed during the development of this document. New potential sources were designated based on the documented or implied presence of petroleum products or chemical and documented or implied activities or land use, but does not consider current land use. Additional discussions of these areas are found in Section 7.1 and are summarized in Table 10. Identified potential former source locations within the L3PA include:

- Building 101
- Building 103 Waterfall Paintbooth
- Tank 036 (Building 103)
- Lot 4 Hazardous Storage Area

6.2.4.3 Material Handling and Usage at Lot 3 Project Area

Only minor amounts of documentation were found in relation to specific materials handled at specific facilities within the L3PA. The following is a discussion of materials known or suspected to be in use at each of the potential source locations:

- Building 101 – solvents, virgin/waste/used fuels and oils (suspected).
- Building 103 Waterfall Paintbooth – paints, solvents (suspected)
- Tank 036 (Building 103) – fuel oil (known).
- Lot 4 Hazardous Storage Area – waste/used oil, fuel and solvents, pesticides, PCB containing solvents (suspected).

6.2.5 Current Conditions

6.2.5.1 Known Areas of Impacted Soil at the Lot 3 Project Area

Approximately 80 cubic yards of impacted soil were removed during the decommissioning of Tank 036 (fuel oil UST) and subsequently thermally treated. However, no soil analytical results were available for review from the UST removal or the subsequent Limited Site Investigation (LSI). Soil samples were collected from one boring during the SI and the results were non-detect for VOCs. The presence or limits of contaminated soil is unknown.

6.2.5.2 Known Areas of Impacted Groundwater at the Lot 3 Project Area

Groundwater exceeding HRLs was indicated in two of eleven locations sampled during the SI. The sample locations suggest that groundwater is impacted over an area measuring at least 120 feet (east to west) by 30 feet (Figure 21). However, the highest groundwater concentrations were detected at the eastern limit of the investigation boundary, in the direction of Hanger 101.

6.2.5.3 Anticipated Contaminants of Concern at the Lot 3 Project Area

Based on a review of historical information, the following soil COCs have been identified at the L3PA:

- Total Petroleum Hydrocarbons as Diesel Range Organics
- Total Petroleum Hydrocarbons as Gasoline Range Organics
- VOCs
- RCRA Metals
- Pesticides
- PCBs
- PAHs

Volatile organic compounds including cis-1, 2-dichloroethene, trichloroethene, benzene, trans-1,2 dichloroethene, toluene, vinyl chloride have been detected in the groundwater within the L3PA. Based on this information and the former presence of a water fall paint booth and a fuel oil UST the following groundwater COCs are suggested:

- Total Petroleum Hydrocarbons as Diesel Range Organics
- Volatile Organic Compounds
- RCRA Metals

7.0 RECOMMENDATIONS

7.1 Findings and Conclusion

The review of available documentation, aerial photos and personnel interviews has led to the discovery of several potential AOCs in addition to those proposed in the original scope of work. The additional AOCs are segregated below between AOCs *inside* the Project Areas and AOCs *outside* the Project Areas. Figures 5a and 5b shows the locations of these additional AOCs.

Additional AOCs Inside the Project Areas

- Former Paint Storage Building (Building s114)
- Lot 19 Salvage Yard
- Building 139 Fuel Oil Tanks
- Building 113 Solvent Storage
- Lot 4 Hazardous Storage Area

Additional AOCs Outside the Project Areas

- Southwest ACC Site S-1
- Lot 16 Aircraft Washrack
- Building s307 Fuel Oil Tank (Building s307).
- Lot 1 UST
- B E Maintenance Laboratory and Fuel Oil Tanks (Building 306)
- Rocket Check/Assembly/Storage Building (Building 305)
- Crash and Rescue Building (Building 303)
- Jet Fueling Vaults
- PME Laboratory (Building 304)
- Steam Generation Plant
- Building 302 Fuel Oil Tank
- Building 301 Fuel Oil Tank
- CAP Hanger Fuel Storage Area
- USAF Motor Pool Area
- Base Gas Station
- D-3 Goose Missile Dump Site
- D-5 East Goose Missile Dump Site
- D-7 C-ration Dump Site
- D-8 Hardfill Burn Area
- MD-1 Munitions Dump Site
- MD-2 Munitions Dump Site

The location, assumed chemical usage or storage and assumed activities for each potential site is discussed in Section 4.0 and summarized in Table 10. The location of each site is shown on Figures 5a and 5b.

7.2 Recommendations

The review of available documents related to the Cirrus Project Area and the Lot 3 Project Area indicate that impacted soils and groundwater remain. It is apparent that the impacts documented in both project areas have not been fully investigated or defined. Figure 21 illustrates the known areas of soil and groundwater impacts that exceed their respective soil or groundwater standards.

In addition to the primary project objectives, four additional AOCs were identified within the project areas (Table 10). A fifth AOC, an aircraft washrack, is adjacent to but outside of both project areas. The identified AOCs warrant investigation based on the identified or implied activities or chemical usage and storage. The following actions are recommended in addition to the original scope of work:

1) The CPA should be expanded to include Lots 15 and 16 to allow for complete investigation of the former aircraft washrack. If approved, the incorporation of Lots 15 and 16 into the project areas would require a modification to the scope of services.
2) Additional AOCs identified within the current project areas be investigated for the presence of impacts to soil and groundwater. It is anticipated that a minimum of 17 additional borings and 11 additional monitoring wells would be required to complete the evaluation. If additional sampling is approved a modification to the scope of services would be needed.
3) A total of 20 additional AOCs were identified outside the current project areas (Figures 5a and 5b). The information available for the majority of these AOCs was limited to a map reference or personnel interviews. Based on the lack of information related to these AOCs it is recommended that a FUDS Preliminary Assessment of Eligibility (PAE) be conducted to determine whether the additional AOCs are eligible for FUDS and further investigation.

A summary of AOCs, identified or implied features or functions and the recommended sampling parameters are found in Table 10.

8.0 Limitations

The data generated and conclusions provided are based upon the scope of work performed. All work was conducted in a manner consistent with customary principles in the fields of science and engineering. EMR is not responsible for the independent conclusions, opinions, or recommendations made by others based on the data presented in this report. No other warranty, expressed or implied, is made.

The results reported and any opinions reached by EMR are for the benefit of the client and unless agreed to by EMR in writing, are not to be disclosed to or relied upon by any third party. The results and opinions set forth by EMR in this report will be valid as of the date of the report. EMR assumes no obligation to advise you of any changes that may later be brought to our attention.

EMR, Inc., as environmental consultants, respectfully submits this report.

The preceding report was prepared and reviewed by the following EMR personnel.

Author:

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5/20/04
Date

Reviewed By:

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5/20/04
Date

Tables

Table 1
Points of Contact
Site Research Report
Duluth IAP - FUDS E05MN033
USACE, Omaha District
EMR Project # 6610

Name	Title	Organization	Phone Number	e-mail Address	Street Address
[redacted]	Environmental Manager, 148th Fighter wing	MN ANG	[redacted]	[redacted]	[redacted]
	Program Manager	ACC			
	Project Manager	USACE, Omaha District			
	Project Manager	EMR			
	NA	Commemorative Air Force			
	NA	Commemorative Air Force			
	Planning and Development Director	Duluth Airport Authority, Duluth IAP			
	Executive Director	Duluth Airport Authority, Duluth IAP			
	Facility Director	Cirrus Design Corporation			
	Hydrogeologist	MPCA			
	Project Leader	MPCA			

NA -Not Applicable
MN ANG - Minnesota Air National Guard
USACE - United States Army Corp. of Engineers
ACC - Air Combat Command
EMR - EMR, Inc.
IAP - International Airport
MPCA - Minnesota Pollution Control Agency

Year	Activity
1927	The state legislature passed a bill for the issuance of city bonds to finance a Duluth municipal airport.
1929	The present site, then known as the Work Farm site, was chosen as the location for the airport. 640 acres of land were purchased by the City of Duluth from St. Louis County. Ground for the airport was broke by Mayor S. F. Snively on August 2nd.
1930	In September the airport was dedicated as a public airport and named the Williamson-Johnson Municipal Airport.
1931	A regular airmail route from St. Paul to Duluth was estabished by the U.S. Post Office.
1940	Northwest Airlines began the first regularly scheduled air service to Duluth.
Post WWII	U.S. Air Force constructed permanent and semi-permanent facilities on land leased from the City of Duluth.
1948	Minnesota Air National Guard built permanent facilities on the east end of the field. The 179th Fighter Squadron got governmental recognition in September. (In the future the USAF phased out its operations, but MNANG continued its operations.)
1949	The 179th Fighter Squadron moved its headquarters from the Duluth Armory to its current location on the northeast corner of the Airport.
1951	Duluth got a control tower. U.S. Air Force opened an interceptor base at the Wiliamson-Johnson Municipal Airport.
1954	The original terminal building was built.
1960	The 179th Fighter Squadron was renamed the 148th Fighter Group.
1963	The William-Johnson Municipal Airport was renamed the Duluth International Airport.
1974	A new Terminal Building and U.S. Customs, International Arrivals Building, were completed.
1994	Cirrus Design Corporation located their world headquarters at the Duluth International Airport and began the design, manufacture, and sale of their light aircraft.
1995	The 148th Fighter Group was renamed the 148th Fighter Wing.
1996	Northwest Airlines opened the maintenance facility on the north side of the airfield.
1989	The Terminal building and adjacent structures were connected. The original terminal building was then converted for use as offices for general aviation, the FAA, and the U.S. Weather Bureau.
1999	The 148th Fighter Wing began renovation of the base, to go from air-to-air missions to air-to-ground missions.
2002	Cirrus Design Corporation opened their new Customer Service and Paint Facility at the Duluth International Airport.
2003	The new Duluth Airport Authority "Hand W. Storms" Snow Removal and Equipment Maintenance Facility was opened.

ref: www.duluthairport.com/history/

Table 3
ANG Site List
Site Research Report
Duluth IAP - FUDS E05MN0033
USACE, Omaha District
EMR Project # 6610

Site	Site Name	Source(s)	Status
2	(63/B) Fire Training Areas FT-1, FT-2	Jet propulsion fuel #4; paint thinners, solvents	long term groundwater monitoring
3	DPDO Storage Area "C"	Waste petroleum, oil, lubricants, solvents, chemicals	long term groundwater monitoring
4	Fuel Storage Area	Jet propulsion fuel #4	long term groundwater monitoring
8	Old DPDO Storage Area	Pesticides, waste fuel oil and solvents, transformers containing PCBs	Site Closed
10	Low Level Radioactive Waste Disposal	Low Level Radioactive Waste Materials, Cathode Ray Tubes, oscilloscopes, radioluminous dials	Site Closed
17	Base Supply Storage Area	Fuels, lubricants, hydraulic fluids, antifreeze	Site Closed
18	Hazardous Waste Storage Area	PCBs, paints, solvents, adhesives, sealants, pesticides, fuels, oils, lubricants, antifreeze	Site Closed
19	PCB Storage Facility	PCBs, paints, solvents, adhesives, sealants, pesticides, fuels, oils, lubricants, antifreeze	Site Closed
20	Runway joint sealing tar Drum Disposal Site	runway joint sealing tar	Site Closed
21	Imhoff Tank Treatment System	sewage from industrial and administrative areas	RFI Completed
22	B/125 and NDI Septic System	sanitary waste water	Site Closed
23	Aircraft Parking Ramp	jet propulsion fuel #4	long term groundwater monitoring
24	Engine Run Up and Test Pad	jet propulsion fuel #4	Site Closed
25	Old Motor Pool Area	oils, fuels, solvents	Interim Remedial Action for Groundwater Recommended
26	Ramp Disposal Area	contaminated jet propulsion fuel #4	Site Closed
27	Former Building 102 Area	fuel oil	Remedial Investigation Recommended

Ref: IRP MAP, Montgomery Watson, 2001

Notes:

VOC's - Volatile Organic Compounds

SVOC'c - Semi-Volatile Organic Compounds

TPH - Total Petroleum Hydrocarbon

SI - Site Investigation

PCB's - Polychlorinated Biphenyls

BTEX - Benzene, Toluene, Ethylbenzene, Xylene

Table 3
ANG Site List
Site Research Report
Duluth IAP - FUDS E05MN0033
USACE, Omaha District
EMR Project # 6610

Site	COCs				Current Land Use
	In Groundwater	In Soil	In surface Water	In Sediment	
2	VOCs; SVOCs	VOCs; SVOCs; TPH; metals; BTEX	trans- 1,2- Dichloroethene	Trichloroethene; barium; lead	Industrial
3	VOCs; SVOCs; chromium	VOCs pesticides; TPH; metals; benzene	VOCs; TPH	VOC's pesticides; metals; TPH	Industrial
4	VOCs; TPH; metals, benzene	TPH; metals; benzene	VOCs; TPH	VOC's; TPH; metals; BTEX	Industrial
8	barium; chromium	pesticides; PCBs; TPH; metals	None detected	TPH; barium; chromium	Industrial
10	chromium; radiation; radium 226; radium 228; strontium 90; tritium; uranium	PCBs; pesticides; chromium; radiation; radium 226; radium 228; strontium 90; tritium; uranium	Chromium; radiation	chromium; radiation	Industrial
17	pesticides; metals; TPH	VOCs; SVOCs; pesticides; metals; TPH	pesticides; metals; TPH	SVOCs; TPH; metals	Industrial
18	toluene; metals; radiation; TPH	toluene; metals; radiation	metals; radiation	toluene; metals; radiation; TPH	Industrial
19	metals; radiation	VOCs; metals; TPH; radiation	metals; radiation	metals; radiation; TPH	Industrial
20	no sampling data available	no sampling data available	no sampling data available	no sampling data available	Industrial
21	VOCs; metals; SVOCs; TPH	VOCs; SVOCs; metals; TPH	no sampling required - minimal contamination determined based on results from other media	VOCs; SVOCs; metals; TPH	Industrial
22	No investigation required based on risk assesment	metals; TPH; toluene	no investigation required based on risk assessment	no investigation required based on risk assessment	Industrial
23	no sampling required - contaminant source removed	TPH; BTEX	no sampling required - contaminant source removed	no sampling required - contaminant source removed	Airfield and direct mission area
24	no sampling anticipated at the site - contaminant source removed	TPH; BTEX	no sampling required - contaminant source removed	no sampling required - contaminant source removed	Airfield and direct mission area
25	BTEX; SVOCs	BTEX; VOCs; SVOCs	no surface water sampling performed	no sediment sampling performed	Industrial
26	SVOCs	BTEX; Phenol	no surface water sampling performed	no sediment sampling performed	Open Space
27	TCE, vinyl chloride, cis-1, 2-DCE	VOCs	no surface water sampling performed	no sediment sampling performed	Open Area

Table 4
ANG Compliance Activity
Site Research Report
Duluth IAP - FUDS E05MN0033
USACE, Omaha District
EMR Project # 6610

Activity	Status	Regulatory Program
Underground Storage Tank (UST) Management	The base has 3 sewage lift station USTs remaining in service.	Minnesota and Federal UST Programs
Oil/Water Separator (OWS) Management	9 OWSs are currently in use.	Clean Water Act (CWA)
Aboveground Storage Tank (AST) Management	18 ASTs are currently in use.	Minnesota RCRA Program and Federal Requirements
Hazardous Waste Management	Hazardous wastes are stored at 20 satellite accumulation points, at one 90-day hazardous waste storage area, and at 1 permitted hazardous waste storage facility.	Minnesota and Federal RCRA Programs
Polychlorinated Biphenyl (PCB) Management	The Base has 1 PCB storage area. All PCB transformer were replaced in 1996 with new non-PCB transformers.	Toxic Substances Control Act (TSCA), U.S. Environmental Protection Agency PCB policies, Minnesota PCB Rules
Asbestos Abatement	12 buildings (Buildings 126, 206, 211,214, 217, 218, 231, 243, 250, 303, 500, and 521) at the Base contain asbestos-containing material (ACM).	TSCA
National Pollutant Discharge Elimination System (NPDES) Permits	Semi-annual sampling and reporting are conducted for stormwater disharges from 12 outfalls. The Base has obtained permission from the Western Lake Superior Sanitary District to discharge stromwater from the dike surrounding the 2,500-gallon AST at the Hush House (Building 270 to the sanitary sewer.	NPDES Permit Program, CWA
Air Emissions Permits	The Base currently has no air permits. The Base applied for a State Synthetic Minor Source permit in 1996 and is awaiting MPCA review and approval.	Minnesota Pollution Control Agency guidance, Clean Air Act (CAA)

Ref: IRA MAP, Montgomery Watson, 2001

Table 5
ANG Removal Actions
Site Research Report
Duluth IAP - FUDS E05MN0033
USACE, Omaha District
EMR Project # 6610

Site	Action	Objective	Completion Date
2	Removal of contaminated soil	To minimize the potential for residual petroleum contamination	July-94
3	Removal of contaminated soil	To minimize the potential for residual hydrocarbon contamination	July-96
4	Interim removal of contaminated soil from drainage ditches and berms	To minimize the potential for residual petroleum contamination	July-00
18	Removal of contaminated soil	To minimize the potential for residual hydrocarbon contamination	October-96
19	Removal of contaminated soil	To minimize the potential for residual hydrocarbon contamination	October-96
20	Removal of drums containing runway joint sealing tar.	To remove a source of potential contamination	November-88
23	Removal of contaminated soil	To minimize the potential for residual petroleum contamination	September-93
24	Removal of contaminated soil	To minimize the potential for residual petroleum contamination	September-93
25	Removal of contaminated soil	To remove free product	December-99

Table 6
ANG Document List
Site Research Report
Duluth IAP - FUDS E05MN0033
USACE, Omaha District
EMR Project # 6610

Report Date	Activity	Report Title	Associated Sites	Author
March-82	PA	Phase I - Records Search	2, 3, 4, 8, 10	Engineering Science Inc.
December-82	SI	Phase II - Problem Confirmation and Quantification, Presurvey Report	2, 3, 4	Roy F. Weston, Inc.
October-84	SI	Phase II, Stage I - Problem Confirmation Study, Final Report	2, 3, 4	Roy F. Weston, Inc.
May-88	SI	Phase II, Confirmation Study, Final Report	2, 3, 4, 8, 10	Dames & Moore
May-88	RI	Appendix A - Health and Safety Plan, Appendix B - QA/QC Plan, Remedial Investigation Work Plan	2, 3, 4, 8, 10	Engineering Science Inc.
July-88	RFA	RCRA Facility Assessment Sampling Visit Report	17, 18, 19, 21	Jacobs Engineering Group, Inc.
January-90	RI	Remedial Investigation Report	2, 3, 4, 8, 10	Engineering Science Inc.
August-90	SI	Environmental Exploration Program Report for Apron Improvements	23	GME Consultants, Inc.
April-91	IRA	Preliminary Potential Corrective Action Design For Apron and Taxiway Construction	23	GME Consultants, Inc.
June-91	RI	Remedial Investigation Work Plan	10	Engineering Science Inc.
October-91	IRA	Removal Action Sampling and Analysis Plan, Fire Training Area 2, Site 2	2	Twin Ports Testing, Inc.
October-91	IRA	Removal Action Work Pla, Fire Training Area 2, Site 2	2	Twin Ports Testing, Inc.
October-91	RFI	RCRA Facility Invesigation Work Plan	17, 18, 19, 21, 22	Operational Technologies Corp.
March-92	DD	Decision Document, Site 8, Old DPDO Storage Area	8	Engineering Science Inc.
March-92	IRA	Addendum To Environmental Property Assessment, Jet Run-Up Facility	24	Twin Ports Testing, Inc.
June-92	FS	Feasibility Study Report	2, 3, 4, 8	Engineering Science Inc.
July-92	RI	Internal Draft Remedial Investigation Report	10	Engineering Science Inc.
August-92	RFI	RCRA Facility Investigation Report	17, 18, 19, 21, 22	Operational Technologies Corp.
May-93	IRA	Plan of Action for Site 3, DPDO Storage Area "C", Work Plan	3	Engineering Science Inc.
July-93	IRA	Proposed Land Application Sites, Fire Training Area 2, Site 2, Interim Response Action Report	2	Twin Ports Testing, Inc.
August-93	RD	Draft Pre-Design Study for Site 3, DPDO Storage Area "C"	3	Engineering Science Inc.

Table 6
ANG Document List
Site Research Report
Duluth IAP - FUDS E05MN0033
USACE, Omaha District
EMR Project # 6610

Report Date	Activity	Report Title	Associated Sites	Author
August-93	PA	Preliminary Assessment Report	25, 26	Operational Technologies Corp.
November-93	RFI	Addendum to RCRA Facility Investigation Work Plan	17, 18, 19, 21, 22	Operational Technologies Corp.
November-93	RFI	Addendum to RCRA Faclity Investigation Report	17, 18, 19, 21, 22	Operational Technologies Corp.
February-94	FS	Focused Feasibility Study for Site 3, DPDO Storage Area "C"	3	Engineering Science Inc.
April-94	RFI	Addendum To RCRA RFI Work Plan	17, 18, 21	Operational Technologies Corp.
July-94	RD	Design Report for Site 3 DPDO Storage Area "C"	3	Engineering Science Inc.
August-94	FS	Feasibility Study	2, 3, 4, 8	Engineering Science Inc.
August-94	RI	Remedial Investigation Report	10	Engineering Science Inc.
December-94	IRA	Removal Action Investigation Report, FTA-2	2	Twin Ports Testing, Inc.
August-95	FS	Draft Corrective Measures Study For IRP Sites 17, 18, 21	17, 18, 21	Operational Technologies Corp.
October-95	RFI	Addendum I to FRI for Sites 17, 18, 21	17, 18, 21	Operational Technologies Corp.
November-95	FS	Final Feasibility Study Addendum	2, 3, 4	Montgomery Watson
January-96	SI	Site Investigation Report for IRP Sites No. 25 and No. 26	25, 26	Operational Technologies Corp.
April-97	RA	Sampling Analysis Report Fall 1996 Sampling Event	2, 3, 4, 10	Montgomery Watson
November-97	RA	Sampling Analysis Report Spring 1997 Sampling Event	2, 3, 4, 10	Montgomery Watson
January-98	DD	Decision Document for Sites 2, 3, 4	2, 3, 4	Montgomery Watson
February-98	LTM	Final 1997 Annual Report Groundwater Sampling and Analysis At Sites 2, 3, 4 and 10	2, 3, 4, 10	Montgomery Watson
March-98	DD	Decision Document Site 10, Low-Level Radioactive Waste Disposal Site	10	Montgomery Watson
March-98	DD	Decision Document, Site 20, Runway Joint Sealing Tar Drum Disposal Site	20	Montgomery Watson
May-98	DD	Decision Document, Site 26, Ramp Disposal Area	26	Montgomery Watson
April-99	LTM	Annual Groundwater Monitoring Report	2, 3, 4	Montgomery Watson
October-99	LTM	IRP Final LTM Work Plan Sites 2, 3, 4, 21, 23, and 25	2, 3, 4, 21, 23, 25	Montgomery Watson
July-00	IRA	IRAC Completion Report	25	Montgomery Watson
August-00	LTM	August 2000 Report	2, 3, 4, 21, 23, 25	Montgomery Watson
March-01	RI	Final RI Report	25	Montgomery Watson

Table 6
ANG Document List
Site Research Report
Duluth IAP - FUDS E05MN0033
USACE, Omaha District
EMR Project # 6610

Report Date	Activity	Report Title	Associated Sites	Author
March-01	SI	Final SI Report	27	Montgomery Watson
May-01	FS	Final FS Report	4	Montgomery Watson
June-01	LTM	Groundwater Sampling Report Spring 2001	2, 3, 4, 21, 25	Montgomery Watson
July-01		Well Abandonment Project Report	2, 3, 4, 8	Environmental Trouble Shooters
September-01	LTM	Groundwater Sampling Report Summer 2001	2, 3, 4, 21, 25	Montgomery Watson
December-01	MAP	IRP Management Action Plan	ANG Base	Montgomery Watson
January-02	DD	Decision Document	23	Montgomery Watson
May-02	DD	Decision Document	2	Montgomery Watson
March-03	LTM	Groundwater Sampling Work Plan	21, 25	Montgomery Watson
April-03	DD	RPO Scoping Report	3, 4, 21, 25	Earth Tech
June-03	LTM	Groundwater Sampling Report Spring 2003	21, 25	Montgomery Watson
December-03	LTM	Groundwater Sampling Report Fall 2003	21, 25	Montgomery Watson
December-03		CERCLA Site Assessment Information	2, 3, 4, 8, 21, 25, USTs	148th FW

IRP/RCRA Activity Abbreviations

PA	Preliminary Assessment	RFI	RCRA Facility Investigation
SI	Site Investigation	DD	Decision Document
RI	Remedial Investigation	FS	Feasibility Study
RFA	RCRA Facility Assessment	RD	Remedial Design
IRA	Interim Remedial Action	LTM	Long Term Monitoring
		MAP	Management Action Plan

Table 7
ACC Site List
Site Research Report
Duluth IAP - FUDS E05MN0033
USACE, Omaha District
EMR Project # 6610

Current Site Desgination	Former Site Designation	Site Name	Period of Operation	Suspected Source(s)	Status
LF01	D-1	Goose Missile Site Dump #1	unknown	DDT, DDD, DDE (detected in trace amts), scrap metal, total organic carbon, pH, total organic halogen	Closed, 2000
LF07	D-2	Goose Missile Site Dump #2	unknown	deicing agent	Closed, 2000
LF06	D-4	South Goose Missile Site Dump	unknown	(drums of unknown material found)	Closed, 2000
LF08	D-6	Runway 13 NE Disposal Area	1950 - 1970's	air craft parts, drums partially containing chemicals	Active - PM
LF10	D-9	Disposal Pit	MID - 1960's	percuric acid, acetone dumped from medics clinic	Closed, 2000
ST-12		RAPCON USTs	unknown	fuel oil	Closed, 2000

Ref: IRP Phase I Records Search, Engineering-Science, 1982
Text, Tables 1, 4.4, 4.5, 6.1,
ACC ERP Management Action Plan, USACE, 2003

PM - Process Monitoring

Table 8
ACC Document List
Site Research Report
Duluth IAP - FUDS E05MN0033
USACE, Omaha District
EMR Project # 6610

Report Date	Program	Report Title	Report for	Associated Sites	Author
March-82	IRP	Phase I Records Search	DIA	All	Engineering Science
1984	IRP	Phase II Stage 1, Problem Confirmation Study	DIA	1, 5, 6, 9	Roy F. Weston, Inc.
November-86	IRP	Phase II Confirmation/Quantification Stage 2, Technical Operations Plan	DIA, Minnesota, Tactical Air Command, and ANG	1, 5, 6, 9	Dames & Moore
August-88	IRP	Phase II Confirmation/Quantification Stage 2, Report (28 October 1986 to 13 January 1987)	DIA	1, 5, 6, 9	Dames & Moore
January-90	IRP	Final Report (May 1988 - January 1990), Installation Restoration Program (IRP) Remedial Investigation/Feasibility Study, Stage 3, Volume IA, Remedial Investigation	DIA, Minnesota, Tactical Air Command Environmental Planning Division (HQ TAC/ DEEV)	1, 5, 6, 9	Woodward Clyde Consultants
January-90	IRP	Final Report (May 1988 - January 1990), Installation Restoration Program (IRP) Remedial Investigation/Feasibility Study, Stage 3, Volume II, Appendices A through I	DIA, Minnesota, Tactical Air Command Environmental Planning Division (HQ TAC/ DEEV)	1, 5, 6, 9	Woodward Clyde Consultants
January-90	IRP	Final Report (May 1988 - January 1990), Installation Restoration Program (IRP) Remedial Investigation/Feasibility Study, Stage 3, Volume III, Analytical Data, 1st Round	DIA, Minnesota, Tactical Air Command Environmental Planning Division (HQ TAC/ DEEV)	1, 5, 6, 9	Woodward Clyde Consultants
January-90	IRP	Final Report (May 1988 - January 1990), Installation Restoration Program (IRP) Remedial Investigation/Feasibility Study, Stage 3, Volume IV, Analytical Data, 2nd Round	DIA, Minnesota, Tactical Air Command Environmental Planning Division (HQ TAC/ DEEV)	1, 5, 6, 9	Woodward Clyde Consultants
January-90	IRP	Final Report (May 1988 - January 1990), Installation Restoration Program (IRP) Remedial Investigation/Feasibility Study, Stage 3, Volume V, Analytical Data, 3rd Round	DIA, Minnesota, Tactical Air Command Environmental Planning Division (HQ TAC/ DEEV)	1, 5, 6, 9	Woodward Clyde Consultants

Table 8
ACC Document List
Site Research Report
Duluth IAP - FUDS E05MN0033
USACE, Omaha District
EMR Project # 6610

Report Date	Program	Report Title	Report for	Associated Sites	Author
January-90	IRP	Final Report, Installation Restoration Program (IRP) Remedial Investigation/Feasibility Study, Stage 3, Technical Document To Support no Further Action	DIA	1, 5, 6, 9	Woodward Clyde Consultants
May-91	IRP	Final Report, Health & Safety Plan, IRP - Stage 4 - Site 7	Duluth Air Base, Tactical Air comand	7	O'Brien & Gere Engineers, Inc.
May-91	IRP	Second Draft, Sampling and Analysis Plan, IRP - Stage 4 Site 7	Duluth Air Base, Tactical Air comand	7	O'Brien & Gere Engineers, Inc.
June-91	IRP	Final Report, Work Plan, IRP - Stage 4 - Site 7	Duluth Air Base, Tactical Air comand	7	O'Brien & Gere Engineers, Inc.
July-97	NA	Volume I Project Work Plan, RI/FS and Natural Attenuation Monitoring at Site No. 7	DIA	7	Harza Environmental Services, Inc.
February-99	NA	Focused Feasibility Study For Groundwater Remediation, Duluth International Airport, Site 7 (LF-08)	DIA	7	Harza Environmental Services, Inc.
August-99	NA	Report on Natural Attenuation Monitoring, August 1997 to April 1999, Site N0. 7 (LF-08)	DIA	7	Harza Environmental Services, Inc.
April 24 2000	NA	Hydrogen Release Compound Pilot Study Work Plan, Duluth International Airport Site No. 7 (LF-08)	DIA	7	Harza Environmental Services, Inc.
August-00	NA	Final Health and Safety Plan For Monitoring and Well Abandonment Activities	DIA	7	HydroGeoLogic, Inc.
September-00	NA	Final Work Plan for Long Term Monitoring and Perchlorate Sampling	DIA	7	HydroGeoLogic, Inc.
April-01	NA	Final Work Plan Monitor Well Abandonment, Sites 1, 5, 6, and 9	DIA	1, 5, 6, 9	HydroGeoLogic, Inc.
June-01	NA	Final Work Addendum, Additional Groundwater Characterization and Monitoring Well Installation at Site 7 (LF-08)	DIA	7	HydroGeoLogic, Inc.
January-02	NA	Final, Hydrogen Release Compound Pilot Study Report, Duluth International Airport Site 7 (LF-08)	DIA	7	MWH Americas, Inc.

Table 8
ACC Document List
Site Research Report
Duluth IAP - FUDS E05MN0033
USACE, Omaha District
EMR Project # 6610

Report Date	Program	Report Title	Report for	Associated Sites	Author
October-02	NA	Final Work Plan Addendum for Long-Term Monitoring at Duluth International Airport	DIA	7	HydroGeoLogic, Inc.
October-02	NA	Extended Pilot Study Work Plan, Duluth International Airport Site 7 (LF-08)	DIA	7	MWH Americas, Inc.
November-03	NA	Final Calendar Year 2000 Long-Term Monitoring Report For Duluth International Airport Site 7 (LF-08)	DIA	7	HydroGeoLogic, Inc.
November-03	NA	Final Calendar Year 2001 Long-Term Monitoring Report For Duluth International Airport Site 7 (LF-08)	DIA	7	HydroGeoLogic, Inc.
December-03	ERP	Management Action Plan (Public Version)	ACC	All ACC Sites	USACE

Notes:
ACC - Air Combat Command
ANG - Air National Guard
DIA - Duluth International Airport
IRP - Installation Restoration Program
USACE - United States Army Corps of Engineers
ref:Duluth IAP Administrative Record List - Sites 1,5,6,7, and 9 (updated 1/21/04)
note: many reports were prepared for: Army Corp of Engineers, Omaha District

Table 9
Former FUDS Site List
Site Research Report
Duluth IAP - FUDS E05MN0033
USACE, Omaha District
EMR Project # 6610

No. of Sites	Contract No.	Site Name	Site location	Contract	Activity	Year	Contractor
1	DACA37-94-D-0004, DACA37-92-C-0024 (Bid DACA37-92-B-0008)	Building 112	Former Building 112	Remedial Design and Remedial Action	Remove Seven USTs and Demolish a Pumphouse (building 112)	Project Completed 1994	Short-Elliott-Hendrickson, St. Paul, New Mech Companies, St. Paul
2	DACA37-92-D-0004	NRRI tanks	NRRI Building	Remedial Action	Remove tanks at UM-Duluth NRRI	1992	Earth Burners, Inc.
3	DACA37-94-D-0004, DACA37-96-C-0010 (Bid DACA37-95-B-0003)	Steam Line Removal	Various	Remedial Design and Remedial Action	Removal of overhead steam lines and asbestos	Project Completed 1997	Braun Intertec, LeTourneau & Sons, Inc., Duluth
4	DACA45-99-C-0034 (Request DACA45-99-R-0012)	Building 102	Between Building 103 and Hanger 101	Remedial Action	Demolition of building 102	Project Completed 1999	Frontier Construction

ref: Marvin Taylor, Army Corp of Engineers

Table 10
List of Current and Proposed FUDS AOCs
Site Research Report
Duluth IAP - FUDS E05MN0033
USACE, Omaha District
EMR Project # 6610

Investigation Area	Subdivision	Former Features/Activities	Proposed COCs	Reference
Cirrus Project Area (CPA)	Lots 19, 20, 21	Defense Property an Disposal Office (DPDO)	DRO, Metals, VOCs, Pesticides, PCBs	E-S, 1982
	Lot 17	(2) 55,000-gallon USTs, BLDG 112	DRO, VOCs	S-E-H, 1991
	Lot 20	*Former Paint Shop/Metal Plating*	VOCs, Metals, Acids, Bases	E-S, 1990
	Lot 19	*Salvage Yard*	DRO, GRO, VOCs, Metals, PAHs, PCBs	E-S, 1982
	Lot 1	*Building 139 - (3) 265 gal FO tanks*	DRO, BETX	DOA, 1961
	Lot 17	*Building 113 - Solvent storage and transfer*	VOCs	DOA, 1961
Lot 3 Project Area (L3PA)	Lot 2	BLDG 101 - aircraft maintenance	DRO, GRO, VOC, Metals	E-S, 1982
	Lot 3	BLDG 102 - primarily office space	DRO, GRO, VOC, Metals	E-S, 1982
	Lot 4	BLDG 103 - aircraft maintenance, paint booth, UST	DRO, GRO, VOC, Metals	E-S, 1982
	Lot 4	*Hazardous Storage Area*	VOCs, Pesticides, PCBs, Metals, PAHs	RDS Assoc.
Aircraft Washrack	Lot 16	*Aircraft Washrack - solvents used*	VOCs	DOA, 1961
Base Communications	BLDG s307	*265-gallon FO tank*	DRO, BTEX	DOA, 1961
Lot #1 UST	Lot 1	*Removed UST - Unknown contents/capacity*	DRO, GRO, VOCs	S-E-H, 1991
B E Maintenance Lab	BLDG 306	*Laboratory, (2) FO tanks*	VOCs, DRO, BTEX	DOA, 1961
Rocket Check/Assembly/Storage	BLDG 305	*Rocket propelled ordinance storage*	DRO, VOCs	DOA, 1961
Crash and Rescue Building	BLDG 303	*vehicle storage and chemical storage?*	DRO, GRO, VOCs	Pers. Comm.
Jet Fuel Vaults	North of L3PA	*2 underground aircraft fueling vaults*	DRO, VOCs	Pers. Comm.
PME Laboratory	BLDG 304	*Laboratory*	VOCs	RDS Assoc.
Steam Generation Plant	South of L3PA	*steam generation plant*	DRO, VOCs, PAHs	E-S, 1982
Water Pumping Station	BLGD 302	*250-gallon FO tank*	DRO, BTEX	DOA, 1961
BLDG 301	BLDG 301	*550-gallon FO tank*	DRO, BTEX	DOA, 1961
CAP Hanger Fuel Storage	West of BLDG 305	*(3) 22,000-gallon fuel storage*	DRO, GRO, VOC, RCRA Metals	DOA, 1961
USAF Motor Pool Area	SE of L3PA	*vehicle maintenance*	DRO, GRO, VOCs, Metals, PAHs	Pers. Comm.
Base Gas Station	South of L3PA	*USTs, dispenser lines and equipment*	DRO, GRO, VOCs	Pers. Comm.
Goose Missile Dump Site	Site D-3	*Empty Petroleum product barrels*	DRO, GRO, VOCs, PAH, Metals	E-S, 1982
East Goose Missile Dump Site	Site D-5	*Rubbish, oil cans, diesel engine filters*	DRO, GRO, VOCs, PAH, Metals	E-S, 1982
C-ration Dump Site	Site D-7	*C-ratios and hardfill*	VOCs, Metals	E-S, 1982
Hardfill Burn Area	Site D-8	*Scrap metal, construction debris, burnt refuse*	VOCs, PAH	E-S, 1982
Munitions Disposal Site	Site MD-1	*Disposal of munitions by demolition*	VOCs, PAH	E-S, 1982
Munitions Disposal Site	Site MD-2	*Disposal of munitions by demolition*	VOCs, PAH	E-S, 1982

FO - Fuel Oil
BLDG - Abrevation for Building
Text in *Italics* indicates a proposed FUDS AOC

E-S - Engineering Science
DOA - Department of the Army

RDS - R. Dickson Speas
Pers. Comm. - Personal Communication

Figures

Figure 1

Duluth IAP
Site Location Map

Duluth International Airport
Duluth, Minnesota

Site Research Report
Duluth International Airport
FUDS #DACA45-03-C-0018
Site E05MN0033
United States Army Corps of Engineers
Omaha District

Legend

- Airport boundary
- Lot 3 Project Area (AOI)
- Cirrus Project Area

Scale in Feet

0 2,000

Drawn by:	CAD
Checked By:	DJW
Project No.	6610-001
Date:	4/22/2004
Reference:	USGS Duluth Heights

EMR INCORPORATED

Figure 2

Duluth IAP Map Showing Commonly Referenced Features

Duluth International Airport
Duluth, Minnesota

Site Research Report
Duluth International Airport
FUDS #DACA45-03-C-0018
Site E05MN0033
United States Army Corps of Engineers
Omaha District

Legend

- Airport boundary
- Lot 3 Project Area (AOI)
- Cirrus Project Area
- Existing Site Feature
- Former Site Feature

Scale in Feet

0 500

Drawn by:	CAD
Checked By:	DJW
Project No.	6610-001
Date:	4/22/2004
Reference:	NAIP 2003 Aerial

EMR INCORPORATED

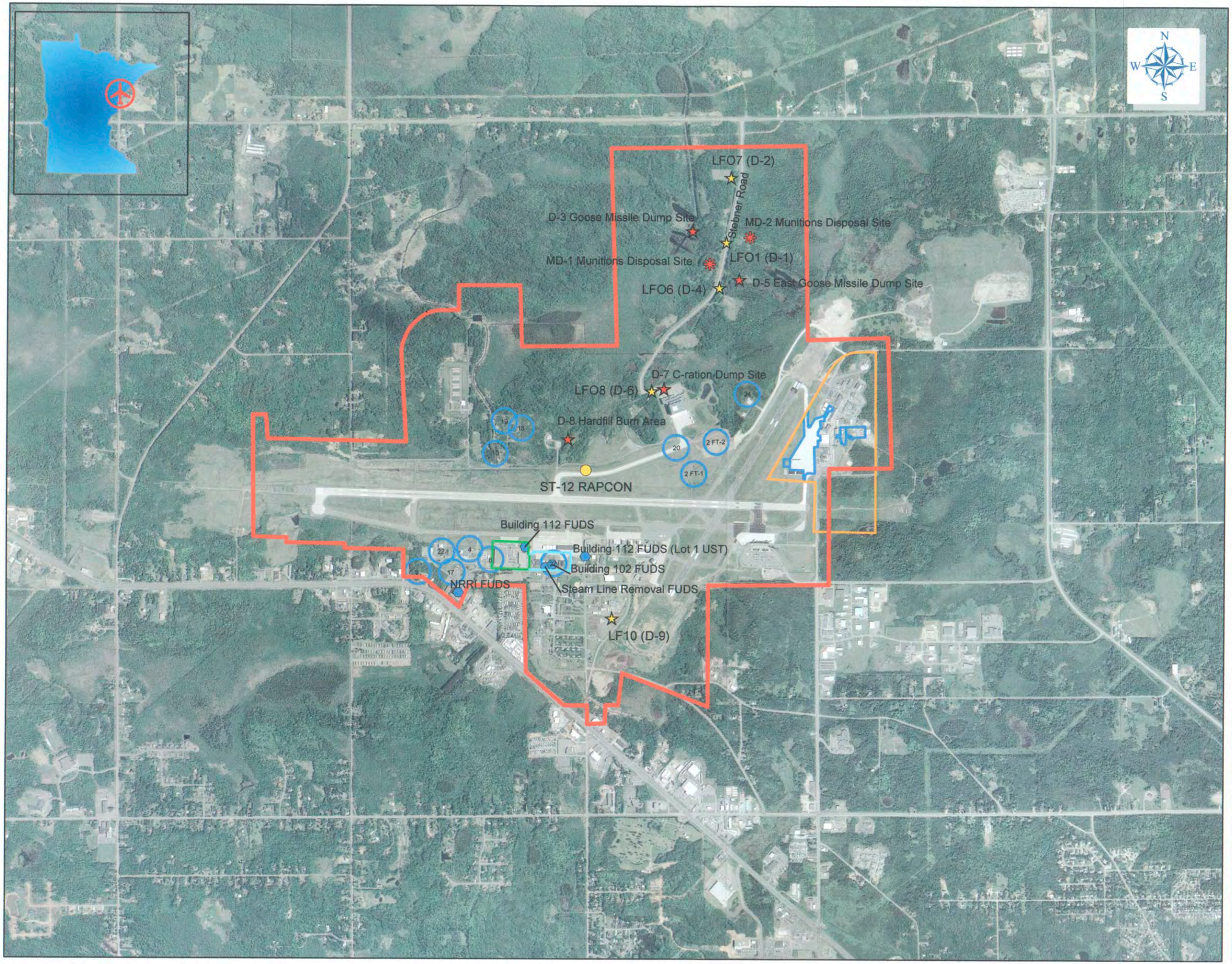

Figure 3

Duluth IAP Map Showing All Known Environmental Site Locations

Duluth International Airport
Duluth, Minnesota

Site Research Report
Duluth International Airport
FUDS #DACA45-03-C-0018
Site E05MN0033
United States Army Corps of Engineers
Omaha District

Legend

- Airport boundary
- Lot 3 Project Area (AOI)
- Cirrus Project Area
- FUDS Sites
- ACC LUST Area
- ACC Disposal Site
- Munition Disposal Areas
- Disposal Site
- ANG Sites
- Current MNANG Base

Scale in Feet

0 2,000

Drawn by:	CAD
Checked By:	DJW
Project No.	6610-001
Date:	4/22/2004
Reference:	NAIP 2003 Aerial

EMR INCORPORATED

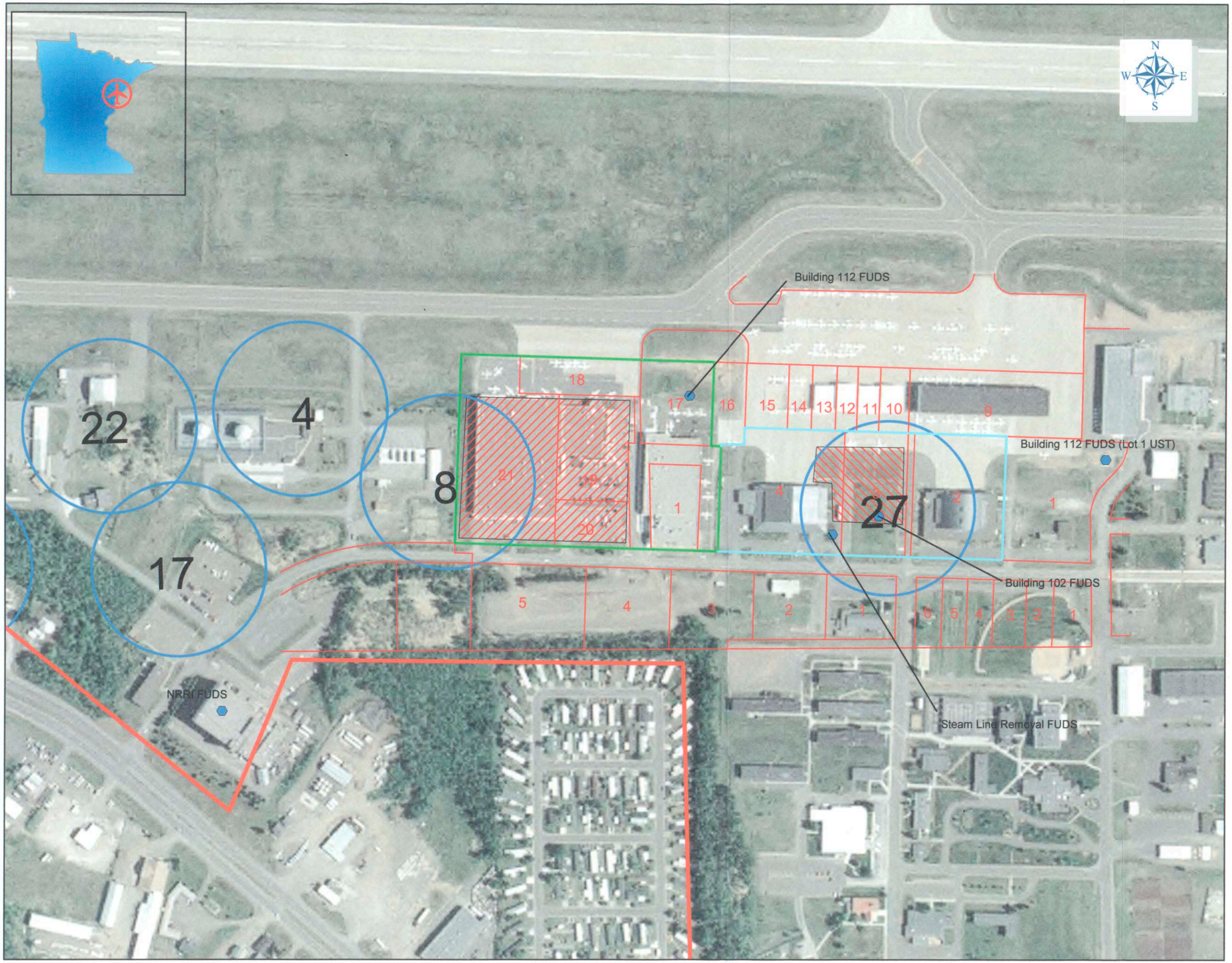

Figure 4

Duluth IAP Map Showing Lot Lines and Existing Environmental Site Locations

Duluth International Airport
Duluth, Minnesota

Site Research Report
Duluth International Airport
FUDS #DACA45-03-C-0018
Site E05MN0033
United States Army Corps of Engineers
Omaha District

Legend

- Airport boundary
- Lot Lines
- Lot 3 Project Area (AOI)
- Cirrus Project Area
- FUDS Sites
- ANG Sites
- AOC B (Site 27) Site Investigation Area
- Site 8 Remedial Investigation Area

Scale in Feet
0 300

Drawn by:	CAD
Checked By:	DJW
Project No.	6610-001
Date:	4/22/2004
Reference:	NAIP 2003 Aerial

EMR INCORPORATED

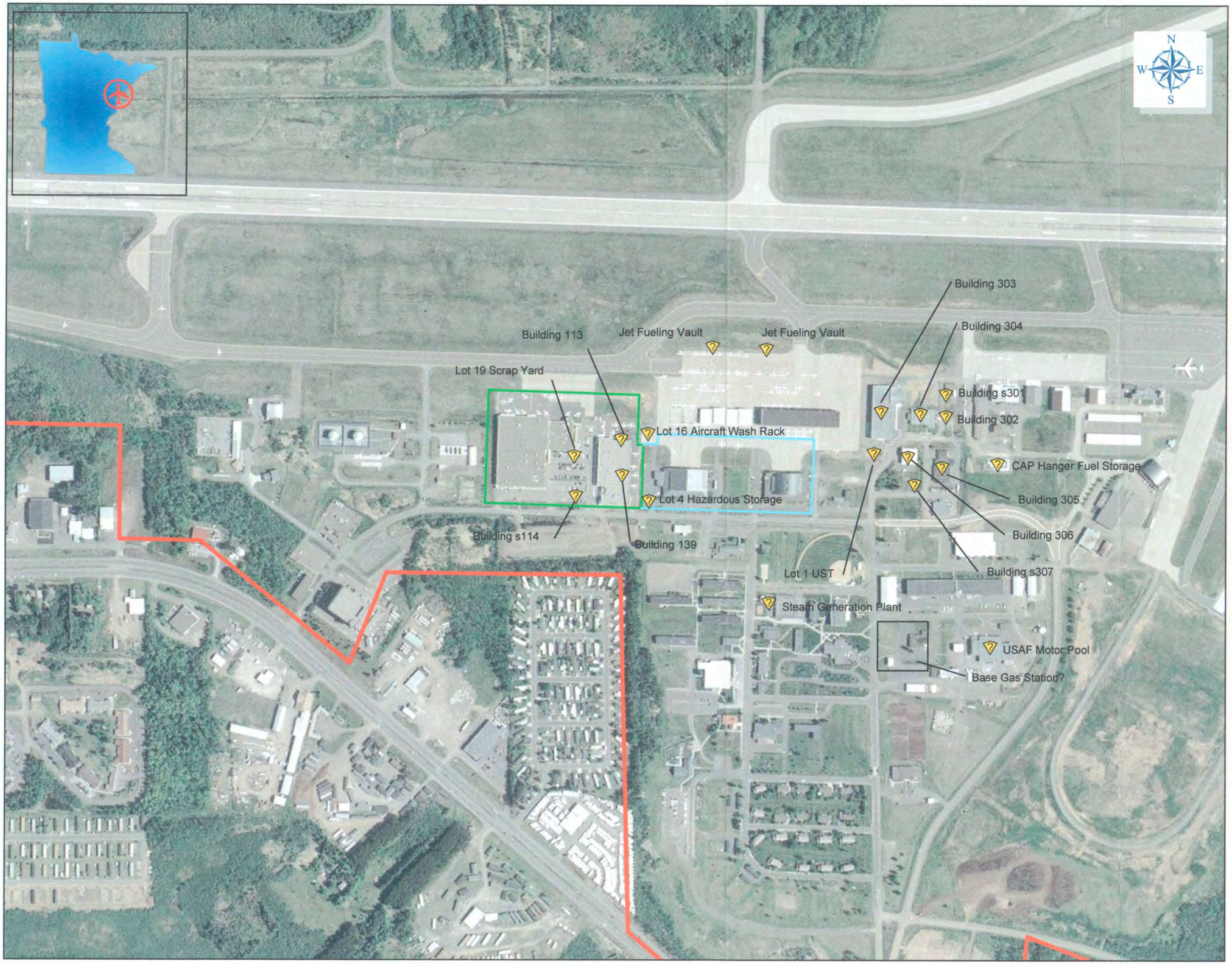

Figure 5A

Duluth IAP Map Showing Southern Proposed Additional FUDS Areas of Concern

Duluth International Airport
Duluth, Minnesota

Site Research Report
Duluth International Airport
FUDS #DACA45-03-C-0018
Site E05MN0033
United States Army Corps of Engineers
Omaha District

Legend

- Airport boundary
- Lot 3 Project Area (AOI)
- Cirrus Project Area
- Proposed Additional FUDS AOC

Scale in Feet

0 500

Drawn by:	CAD
Checked By:	DJW
Project No.	6610-001
Date:	4/22/2004
Reference:	NAIP 2003 Aerial

EMR INCORPORATED

Figure 5B

Duluth IAP Map Showing Northern Proposed Additional FUDS Areas of Concern

Duluth International Airport
Duluth, Minnesota

Site Research Report
Duluth International Airport
FUDS #DACA45-03-C-0018
Site E05MN0033
United States Army Corps of Engineers
Omaha District

Legend

- Airport boundary
- Proposed Additional FUDS AOC

Scale in Feet

0 500

Drawn by: CAD
Checked By: DJW
Project No. 6610-001
Date: 4/22/2004
Reference: NAIP 2003 Aerial

EMR INCORPORATED

Figure 6

Duluth IAP
Project Area Map
Showing Drainage

Duluth International Airport
Duluth, Minnesota

Site Research Report
Duluth International Airport
FUDS #DACA45-03-C-0018
Site E05MN0033
United States Army Corps of Engineers
Omaha District

Legend

- Airport boundary
- Lot 3 Project Area (AOI)
- Cirrus Project Area
- Drainage By Storm Sewer
- Former Drainage Ditch Location
- Drainage By Ditch
- Storm Sewer Collection Area

Scale in Feet

0 300

Drawn by:	CAD
Checked By:	DJW
Project No.	6610-001
Date:	4/22/2004
Reference:	NAIP 2003 Aerial

EMR
INCORPORATED

Figure 7

Duluth IAP
Groundwater Flow
Pattern

Duluth International Airport
Duluth, Minnesota

Site Research Report
Duluth International Airport
FUDS #DACA45-03-C-0018
Site E05MN0033
United States Army Corps of Engineers
Omaha District

Legend

- Airport boundary
- Lot 3 Project Area (AOI)
- Cirrus Project Area
- Groundwater Isopleth
- Site #4 Monitoring Well Location

Scale in Feet

0 300

Drawn by:	CAD
Checked By:	DJW
Project No.	6610-001
Date:	4/22/2004
Reference:	NAIP 2003 Aerial

EMR
INCORPORATED

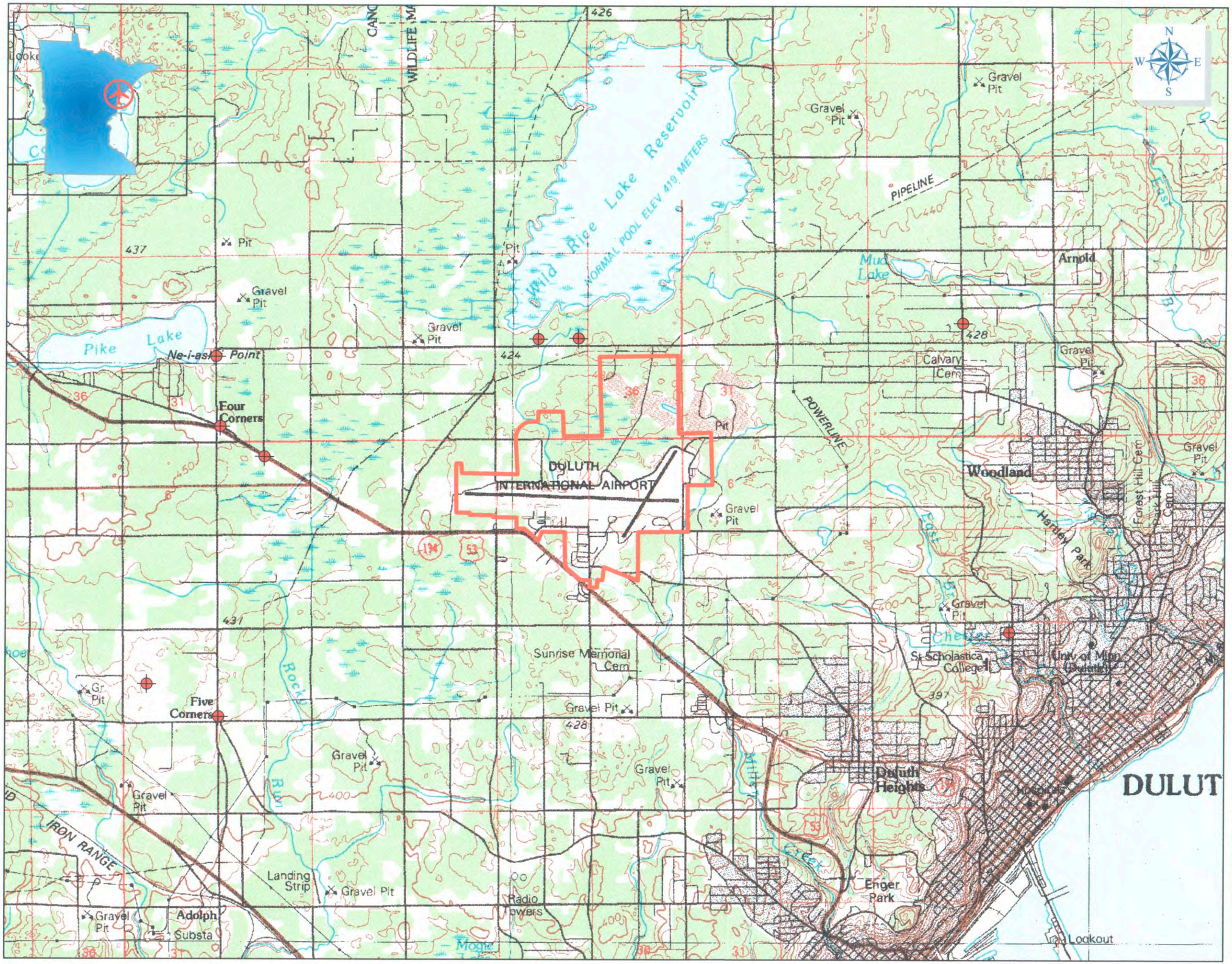

Figure 8

Duluth IAP
Groundwater Receptor
Information

Duluth International Airport
Duluth, Minnesota

Site Research Report
Duluth International Airport
FUDS #DACA45-03-C-0018
Site E05MN0033
United States Army Corps of Engineers
Omaha District

Legend

- Airport boundary
- Known Potable Well Location

Scale in Feet

0 5,000

Drawn by:	CAD
Checked By:	DJW
Project No.	6610-001
Date:	4/22/2004
Reference:	USGS Duluth 250 Topo

EMR
INCORPORATED

Figure 9

Duluth IAP Map Showing
Aerial Photo - 1938

Duluth International Airport
Duluth, Minnesota

Site Research Report
Duluth International Airport
FUDS #DACA45-03-C-0018
Site E05MN0033
United States Army Corps of Engineers
Omaha District

Legend

- Airport boundary
- Lot Lines
- Lot 3 Project Area (AOI)
- Cirrus Project Area

Scale in Feet

0 300

Drawn by:	CAD
Checked By:	DJW
Project No.	6610-001
Date:	4/22/2004
Reference:	Microdot Inc.

EMR
INCORPORATED

Figure 10

Duluth IAP Map Showing
Aerial Photo - 1953

Duluth International Airport
Duluth, Minnesota

Site Research Report
Duluth International Airport
FUDS #DACA45-03-C-0018
Site E05MN0033
United States Army Corps of Engineers
Omaha District

Legend

- Airport boundary
- Lot Lines
- Lot 3 Project Area (AOI)
- Cirrus Project Area

Scale in Feet

0 300

Drawn by:	CAD
Checked By:	DJW
Project No.	6610-001
Date:	4/22/2004
Reference:	Microdot Inc.

EMR
INCORPORATED

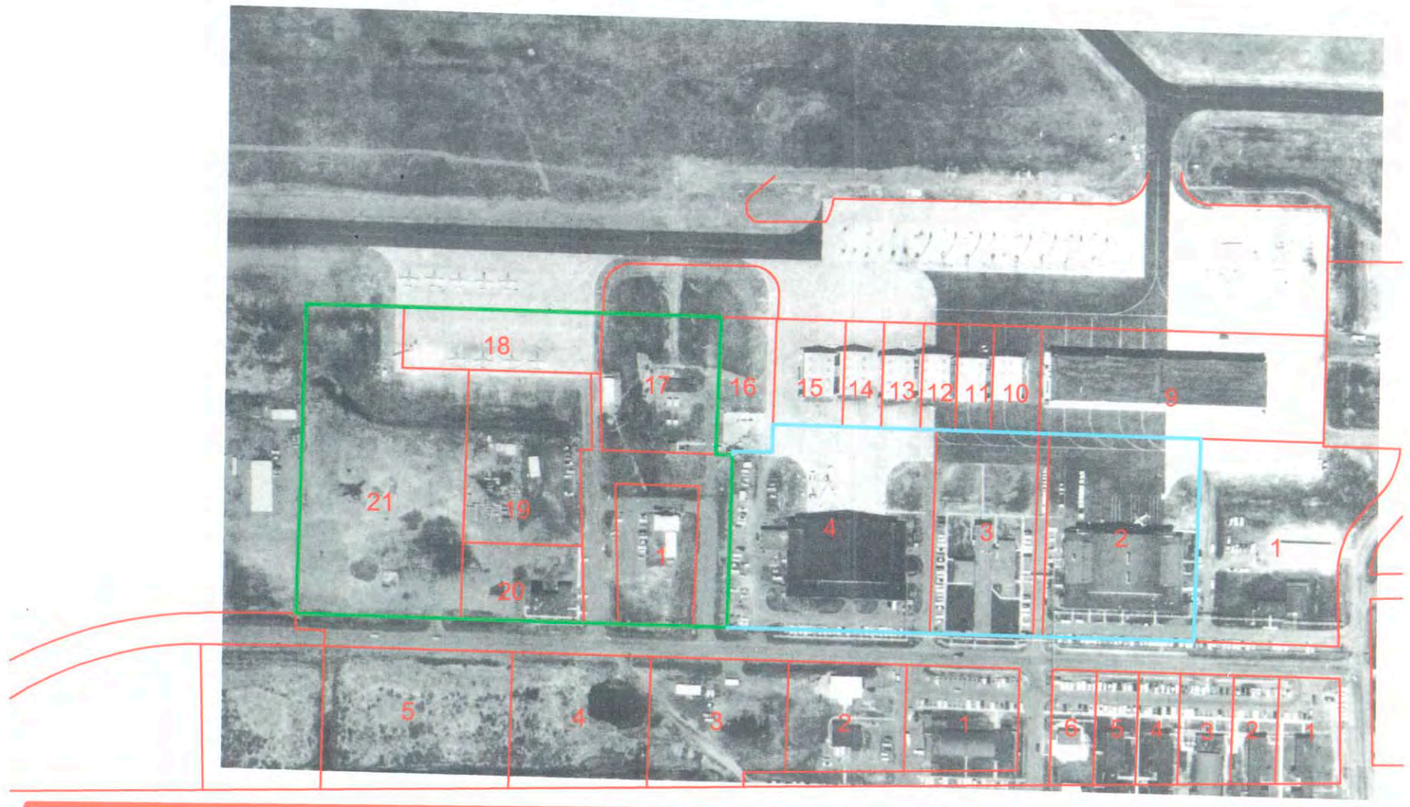

Figure 11

Duluth IAP Map Showing Aerial Photo - 1964

Duluth International Airport
Duluth, Minnesota

Site Research Report
Duluth International Airport
FUDS #DACA45-03-C-0018
Site E05MN0033
United States Army Corps of Engineers
Omaha District

Legend

- Airport boundary
- Lot Lines
- Lot 3 Project Area (AOI)
- Cirrus Project Area

Scale in Feet

0 300

Drawn by: CAD
Checked By: DJW
Project No. 6610-001
Date: 4/22/2004
Reference: City of Duluth

EMR INCORPORATED

Figure 12

Duluth IAP Map Showing
Aerial Photo - 1971

Duluth International Airport
Duluth, Minnesota

Site Research Report
Duluth International Airport
FUDS #DACA45-03-C-0018
Site E05MN0033
United States Army Corps of Engineers
Omaha District

Legend

- Airport boundary
- Lot Lines
- Lot 3 Project Area (AOI)
- Cirrus Project Area

Scale in Feet

0 300

Drawn by: CAD
Checked By: DJW
Project No. 6610-001
Date: 4/22/2004
Reference: City of Duluth

EMR INCORPORATED

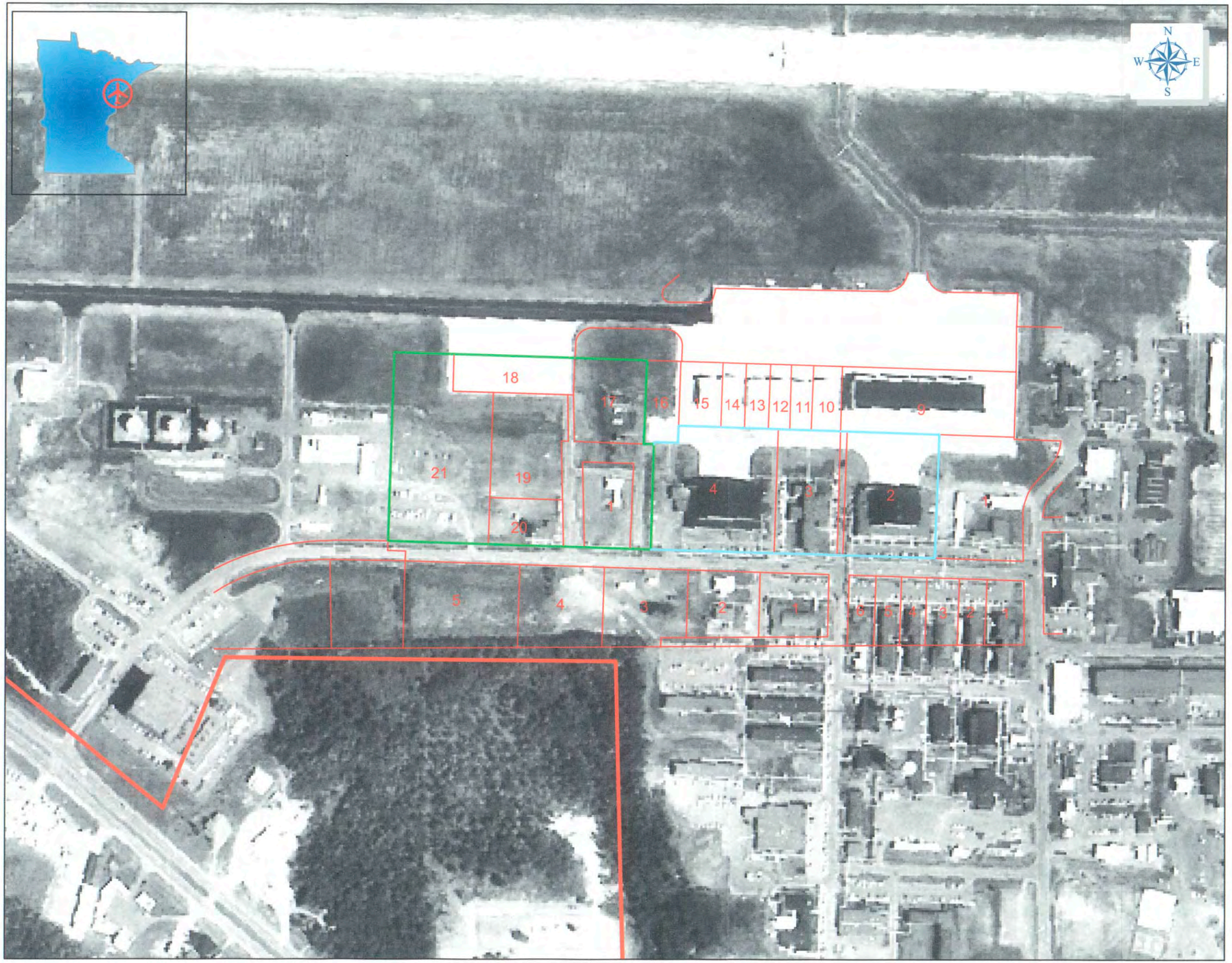

Figure 13

Duluth IAP Map Showing
Aerial Photo - 1975

Duluth International Airport
Duluth, Minnesota

Site Research Report
Duluth International Airport
FUDS #DACA45-03-C-0018
Site E05MN0033
United States Army Corps of Engineers
Omaha District

Legend

- Airport boundary
- Lot Lines
- Lot 3 Project Area (AOI)
- Cirrus Project Area

Scale in Feet

0 300

Drawn by:	CAD
Checked By:	DJW
Project No.	6610-001
Date:	4/22/2004
Reference:	Microdot, Inc.

EMR
INCORPORATED

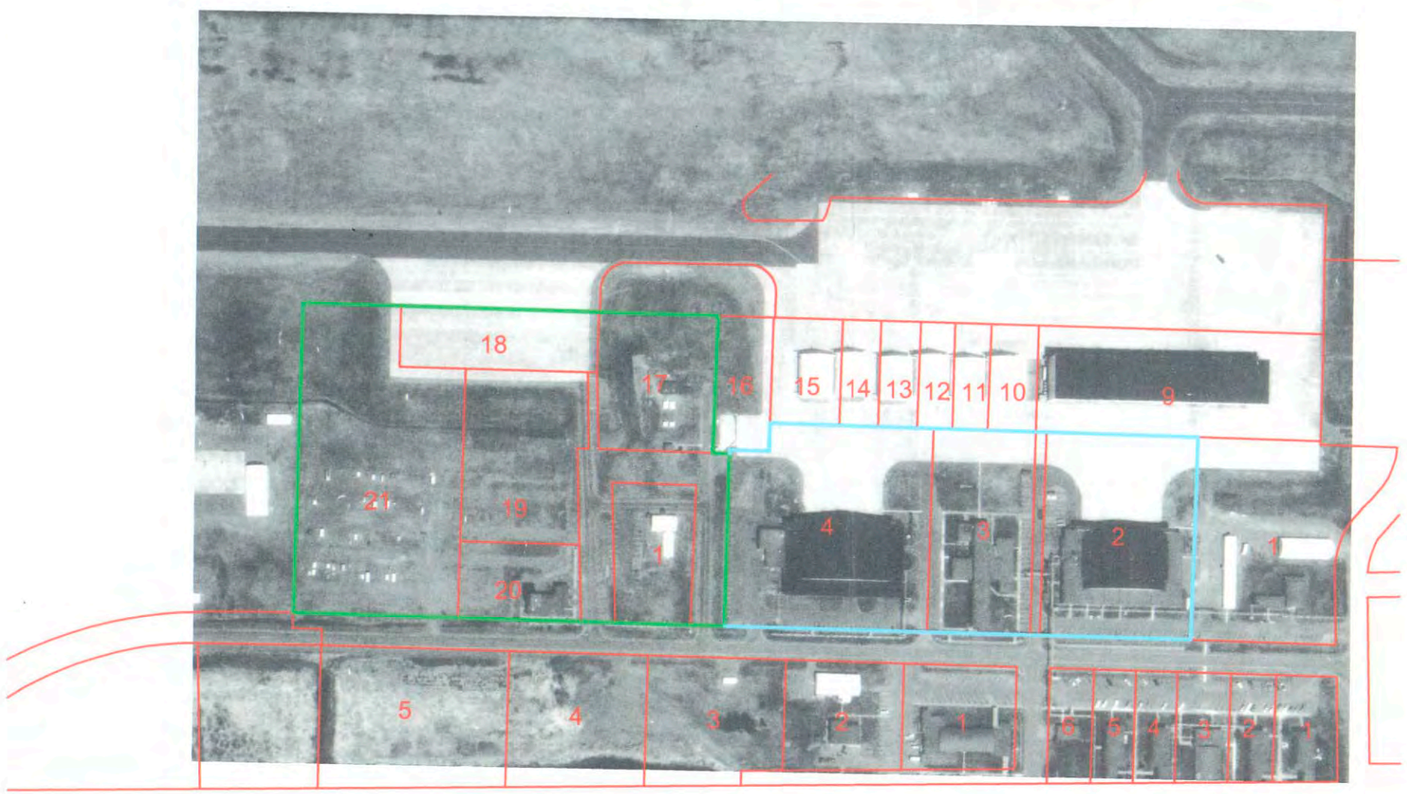

Figure 14

Duluth IAP Map Showing
Aerial Photo - 1979

Duluth International Airport
Duluth, Minnesota

Site Research Report
Duluth International Airport
FUDS #DACA45-03-C-0018
Site E05MN0033
United States Army Corps of Engineers
Omaha District

Legend

- Airport boundary
- Lot Lines
- Lot 3 Project Area (AOI)
- Cirrus Project Area

Scale in Feet

0 300

Drawn by: CAD
Checked By: DJW
Project No. 6610-001
Date: 4/22/2004
Reference: City of Duluth

EMR INCORPORATED

Figure 15

Duluth IAP Map Showing
Aerial Photo - 1981

Duluth International Airport
Duluth, Minnesota

Site Research Report
Duluth International Airport
FUDS #DACA45-03-C-0018
Site E05MN0033
United States Army Corps of Engineers
Omaha District

Legend

- Airport boundary
- Lot Lines
- Lot 3 Project Area (AOI)
- Cirrus Project Area

Scale in Feet

0 300

Drawn by: CAD
Checked By: DJW
Project No. 6610-001
Date: 4/22/2004
Reference: Microdot, Inc.

EMR
INCORPORATED

Figure 16

Duluth IAP Map Showing
Aerial Photo - 1988

Duluth International Airport
Duluth, Minnesota

Site Research Report
Duluth International Airport
FUDS #DACA45-03-C-0018
Site E05MN0033
United States Army Corps of Engineers
Omaha District

Legend

- Airport boundary
- Lot Lines
- Lot 3 Project Area (AOI)
- Cirrus Project Area

Scale in Feet

0 300

Drawn by: CAD
Checked By: DJW
Project No. 6610-001
Date: 4/22/2004
Reference: City of Duluth

EMR INCORPORATED

Figure 17

Duluth IAP Map Showing
Aerial Photo - 1995

Duluth International Airport
Duluth, Minnesota

Site Research Report
Duluth International Airport
FUDS #DACA45-03-C-0018
Site E05MN0033
United States Army Corps of Engineers
Omaha District

Legend

- Airport boundary
- Lot Lines
- Lot 3 Project Area (AOI)
- Cirrus Project Area

Scale in Feet

0 300

Drawn by: CAD
Checked By: DJW
Project No. 6610-001
Date: 4/22/2004
Reference: City of Duluth

EMR INCORPORATED

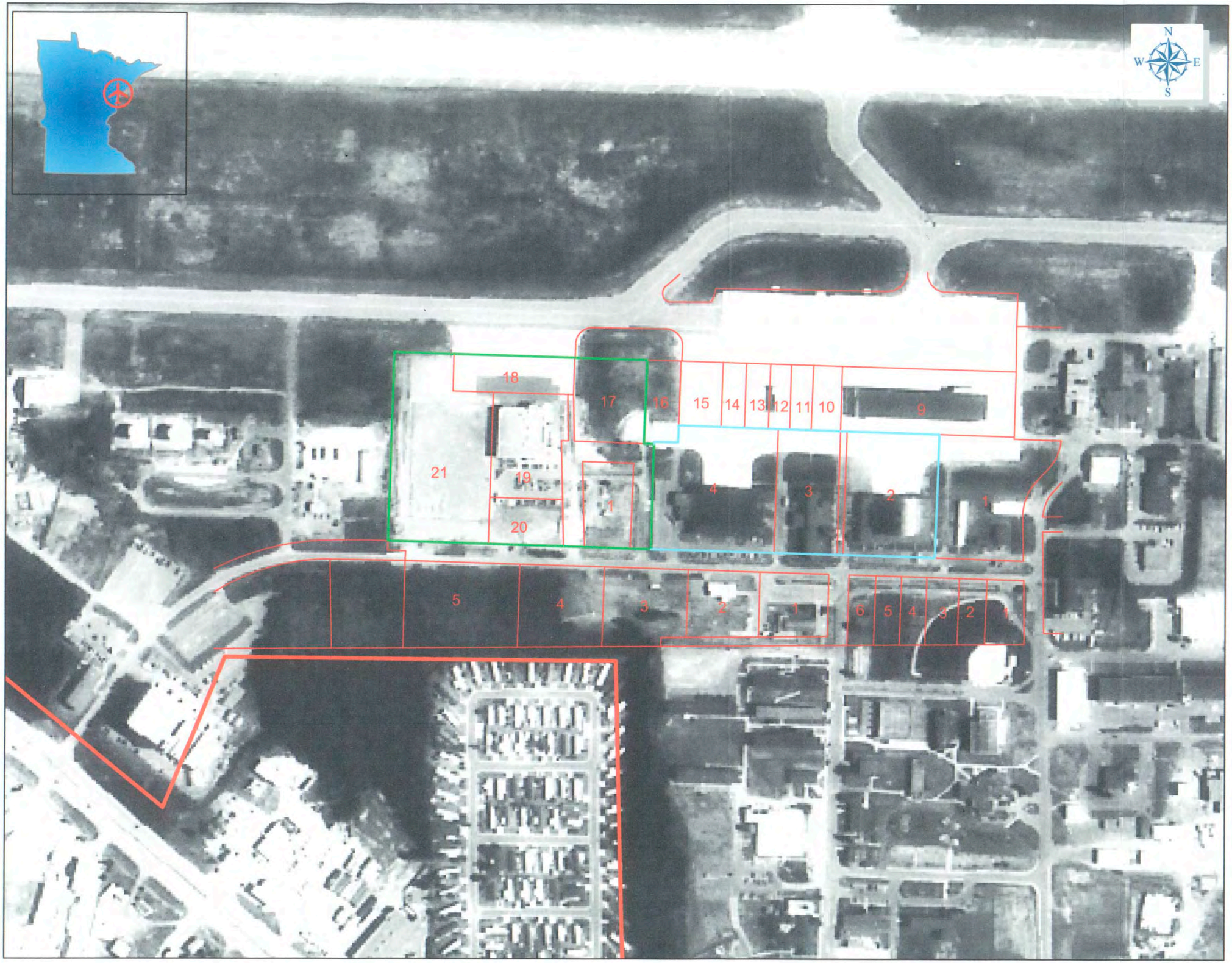

Figure 18

Duluth IAP Map Showing
Aerial Photo - 1998

Duluth International Airport
Duluth, Minnesota

Site Research Report
Duluth International Airport
FUDS #DACA45-03-C-0018
Site E05MN0033
United States Army Corps of Engineers
Omaha District

Legend

- Airport boundary
- Lot Lines
- Lot 3 Project Area (AOI)
- Cirrus Project Area

Scale in Feet

0 300

Drawn by: CAD
Checked By: DJW
Project No. 6610-001
Date: 4/22/2004
Reference: Microdot, Inc.

EMR
INCORPORATED

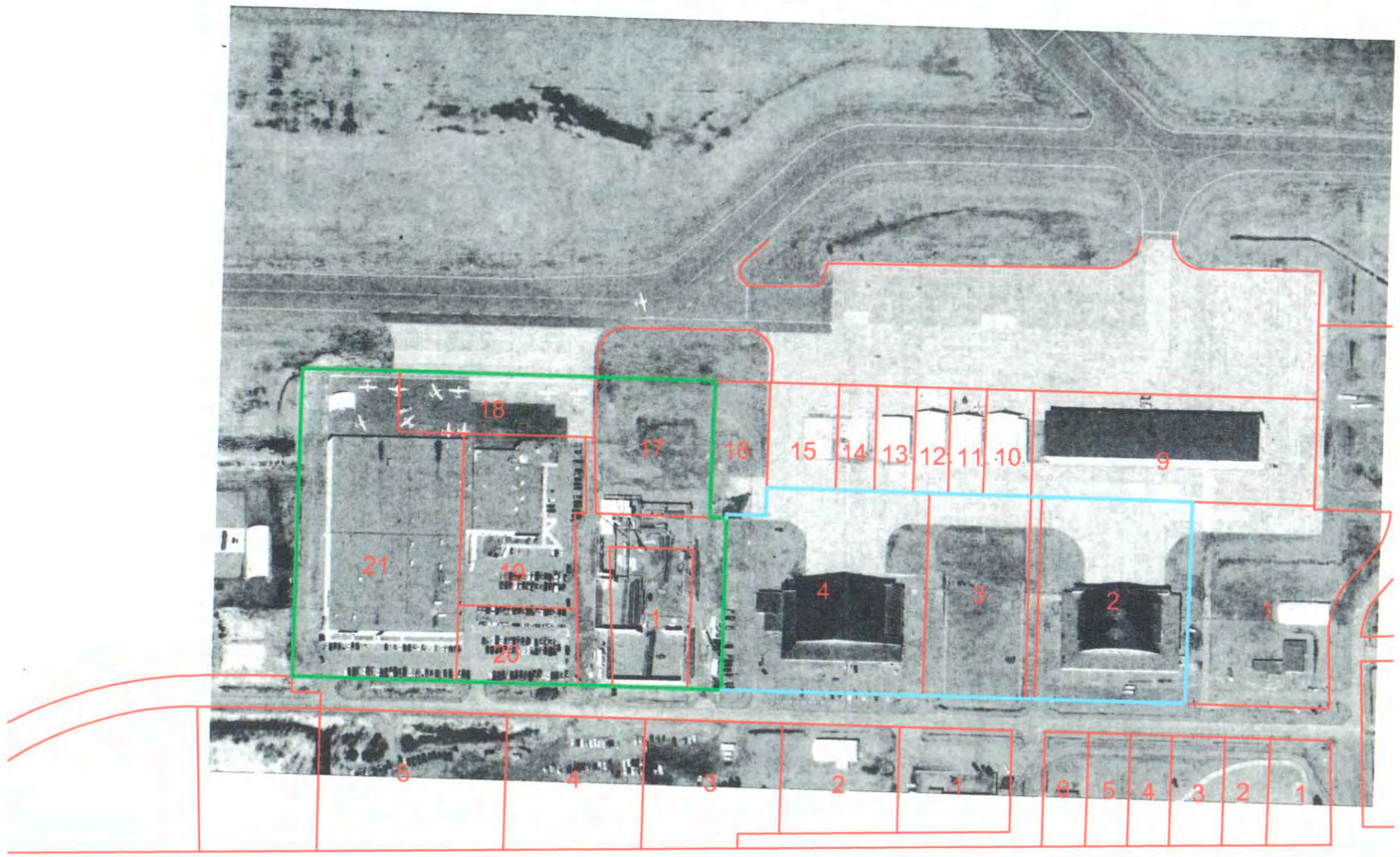

Figure 19

Duluth IAP Map Showing
Aerial Photo - 2002

Duluth International Airport
Duluth, Minnesota

Site Research Report
Duluth International Airport
FUDS #DACA45-03-C-0018
Site E05MN0033
United States Army Corps of Engineers
Omaha District

Legend

- Airport boundary
- Lot Lines
- Lot 3 Project Area (AOI)
- Cirrus Project Area

Scale in Feet

0 300

Drawn by: CAD
Checked By: DJW
Project No. 6610-001
Date: 4/22/2004
Reference: City of Duluth

EMR INCORPORATED

Figure 20

Duluth IAP Map Showing
Aerial Photo - 2003

Duluth International Airport
Duluth, Minnesota

Site Research Report
Duluth International Airport
FUDS #DACA45-03-C-0018
Site E05MN0033
United States Army Corps of Engineers
Omaha District

Legend

- Airport boundary
- Lot Lines
- Lot 3 Project Area (AOI)
- Cirrus Project Area

Scale in Feet

0 300

Drawn by:	CAD
Checked By:	DJW
Project No.	6610-001
Date:	4/22/2004
Reference:	NAIP 2003 Aerial

EMR INCORPORATED

Figure 21

Project Map Showing Known Areas of Impacted Soil and Groundwater

Duluth International Airport
Duluth, Minnesota

Site Research Report
Duluth International Airport
FUDS #DACA45-03-C-0018
Site E05MN0033
United States Army Corps of Engineers
Omaha District

Legend

- Airport boundary
- Lot Lines
- Lot 3 Project Area (AOI)
- Cirrus Project Area
- Known Extents of VOC Impacted GW - Montgomery Watson, 2001
- Known Extents of VOC Impacted GW - Montgomery Watson, 2001
- Known Extents of VOC Impacted GW - TPT, 2001
- Known Extents of DRO Impacted GW - TPT, 2001
- Known Extents of TPH Impacted Soils - ES, 1990
- Known Extents of Pesticide Impacted Soils - ES, 1990

Scale in Feet

0 300

Drawn by: CAD
Checked By: DJW
Project No. 6610-001
Date: 4/22/2004
Reference: NAIP 2003 Aerial

EMR INCORPORATED

Appendix A
EDR Report

The EDR Radius Map
with GeoCheck®

Duluth IAP
4973 Airport Rd
Duluth, MN 55811

Inquiry Number: 1130510.3s

February 18, 2004

Environmental Data Resources, Inc.

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06460

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

FORM-SAM

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Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	6
Orphan Summary	69
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting Source Map	A-10
Physical Setting Source Map Findings	A-11
Physical Setting Source Records Searched	A-123

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc. (EDR). The report meets the government records search requirements of ASTM Standard Practice for Environmental Site Assessments, E 1527-00. Search distances are per ASTM standard or custom distances requested by the user.

TARGET PROPERTY INFORMATION

ADDRESS

4973 AIRPORT RD
DULUTH, MN 55811

COORDINATES

Latitude (North):	46.836900 - 46° 50' 12.8"
Longitude (West):	92.201300 - 92° 12' 4.7"
Universal Tranverse Mercator:	Zone 15
UTM X (Meters):	560907.9
UTM Y (Meters):	5187131.0
Elevation:	1413 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property:	46092-G2 DULUTH HEIGHTS, MN
Source:	USGS 7.5 min quad index

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the ASTM E 1527-00 search radius around the target property for the following databases:

FEDERAL ASTM STANDARD

NPL..... National Priority List
Proposed NPL..... Proposed National Priority List Sites
CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP..... CERCLIS No Further Remedial Action Planned
CORRACTS..... Corrective Action Report
RCRIS-TSD..... Resource Conservation and Recovery Information System
RCRIS-LQG..... Resource Conservation and Recovery Information System
ERNS..... Emergency Response Notification System

STATE ASTM STANDARD

SHWS..... Superfund Permanent List of Priorities

EXECUTIVE SUMMARY

MN VIC..... Voluntary Investigation and Cleanup Program
SWF/LF..... Permitted Solid Waste Disposal Facilities
INDIAN UST..... Underground Storage Tanks on Indian Land

FEDERAL ASTM SUPPLEMENTAL

CONSENT..... Superfund (CERCLA) Consent Decrees
ROD..... Records Of Decision
Delisted NPL..... National Priority List Deletions
FINDS..... Facility Index System/Facility Identification Initiative Program Summary Report
HMIRS..... Hazardous Materials Information Reporting System
MLTS..... Material Licensing Tracking System
MINES..... Mines Master Index File
NPL Liens..... Federal Superfund Liens
PADS..... PCB Activity Database System
US BROWNFIELDS..... A Listing of Brownfields Sites
DOD..... Department of Defense Sites
RAATS..... RCRA Administrative Action Tracking System
TRIS..... Toxic Chemical Release Inventory System
TSCA..... Toxic Substances Control Act
SSTS..... Section 7 Tracking Systems
FTTS INSP..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

STATE OR LOCAL ASTM SUPPLEMENTAL

AST..... Aboveground Storage Tanks
MN Spills..... Spills Database
MN HWS Permit..... Active TSD Facilities
MN Deleted SHWS..... Permanent List of Priority Deletions
MN LCP..... Closed Landfills Priority List
CDL..... Clandestine Drug Labs
MN Enforcement..... Generators Associated with Enforcement Logs
BULK..... Bulk Facilities Database
MN AGSPILLS..... Department of Agriculture Spills

EDR PROPRIETARY HISTORICAL DATABASES

Coal Gas..... Former Manufactured Gas (Coal Gas) Sites

BROWNFIELDS DATABASES

US BROWNFIELDS..... A Listing of Brownfields Sites
MN VIC..... Voluntary Investigation and Cleanup Program
INST CONTROL..... Site Remediation Section Database

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

FEDERAL ASTM STANDARD

RCRIS: Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs): generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs): generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs): generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

A review of the RCRIS-SQG list, as provided by EDR, and dated 01/12/2004 has revealed that there is 1 RCRIS-SQG site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
CIRRUS DESIGN CORP	***4515 TAYLOR CIRCLE***	***1/8 - 1/4W***	***5***	***41***

STATE ASTM STANDARD

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Minnesota Pollution Control Agency's Leak Sites list.

A review of the LUST list, as provided by EDR, and dated 11/17/2003 has revealed that there are 20 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
MN AIR NATIONAL GUARD	***4680 VIPER ST/INTL AIRP***	***1/8 - 1/4E***	***1***	***6***
BUREAU OF PRISONS/DEPT OF JUST	STEBNER RD / WOOLSON	1/4 - 1/2ESE	6	44
AVIS RENT A CAR	***DULUTH INTERNATIONAL AI***	***1/4 - 1/2ESE***	***8***	***45***
FOOD N FUEL	4997 MILLER TRUNK HWY	1/4 - 1/2SW	B9	46
FOOD AND FUEL	4997 MILLER TRUNK HWY	1/4 - 1/2SW	B10	46
CURTIS OIL AND TIRE	***4995 MILLER TRUNK HWY***	***1/4 - 1/2SSW***	***B11***	***46***
MILLER TRUNK FOOD-N-FUEL	***4991 MILLER TRUNK HWY***	***1/4 - 1/2SSW***	***12***	***56***
PELLA WINDOWS AND DOORS	5033 MILLER TRUNK HWY	1/4 - 1/2WSW	C13	64
BILLMAN CONSTRUCTION COMPANY	5010 MILLER TRUNK HWY	1/4 - 1/2WSW	C14	64
KOLAR GARAGE	5020 MILLER TRUNK HIGHW	1/4 - 1/2W	15	64
OLD MUNICIPAL HANGER	4516 AIRPORT APPROACH R	1/4 - 1/2ESE	16	65
NOAA STATION - DULUTH INT'L AI	4525 AIRPORT APPROACH R	1/4 - 1/2ESE	D17	65
OLD TERMINAL	4525 AIRPORT APPROACH R	1/4 - 1/2ESE	D18	65
MN AIR NATIONAL GUARD BASE	DULUTH INTERNATIONAL AI	1/4 - 1/2E	19	65
MINER'S INCORPORATED	***5065 MILLER TRUNK HWY***	***1/4 - 1/2W***	***20***	***66***
DULUTH AIR FORCE BASE	***HWY 53***	***1/4 - 1/2NE***	***E21***	***68***
AIRPORT MAINTENANCE GARAGE	DULUTH INTERNATIONAL AI	1/4 - 1/2NE	E22	68
NORTHSIDE TRUCK SALES	5040 MILLER TRUNK HWY	1/4 - 1/2W	23	68

Lower Elevation	Address	Dist / Dir	Map ID	Page
FEDERAL PRISON CAMP	BLDG 318	1/8 - 1/4SSE	A3	41
DEFENSE REVITILIZATION AND MAR	4997 AIRPORT RD	1/8 - 1/4W	4	41

EXECUTIVE SUMMARY

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Minnesota Pollution Control's Underground Storage Tank File.

A review of the UST list, as provided by EDR, and dated 09/11/2003 has revealed that there are 2 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
MN AIR NATIONAL GUARD	***4680 VIPER ST/INTL AIRP***	***1/8 - 1/4 E***	***1***	***6***
Lower Elevation	**Address**	**Dist / Dir**	**Map ID**	**Page**
BUREAU OF PRISONS/DEPT OF JUST	FEDERAL PRISON CAMP DUL	1/8 - 1/4 SSE	A2	35

STATE OR LOCAL ASTM SUPPLEMENTAL

MN LS: The List of Sites includes: Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS), No Further Remedial Action Planned (NFRAP), National Priorities List (NPL), Permanent List of Priorities (PLP), Sites delisted from the Permanent List of Priorities (DPLP), Hazardous Waste Permit Unit Project Facilities (HW PERM), List of Permitted Solid Waste Facilities (SW PERM), 1980 Metropolitan Area Waste Disposal Site Inventory,1980 Statewide Outstate Dump Inventory (ODI), Voluntary and Investigation Program (VIC), and Closed Landfill Sites Undergoing Cleanup (LCP). The List of Sites comes from Minnesota Pollution Control

A review of the MN LS list, as provided by EDR, has revealed that there is 1 MN LS site within approximately 0.5 miles of the target property.

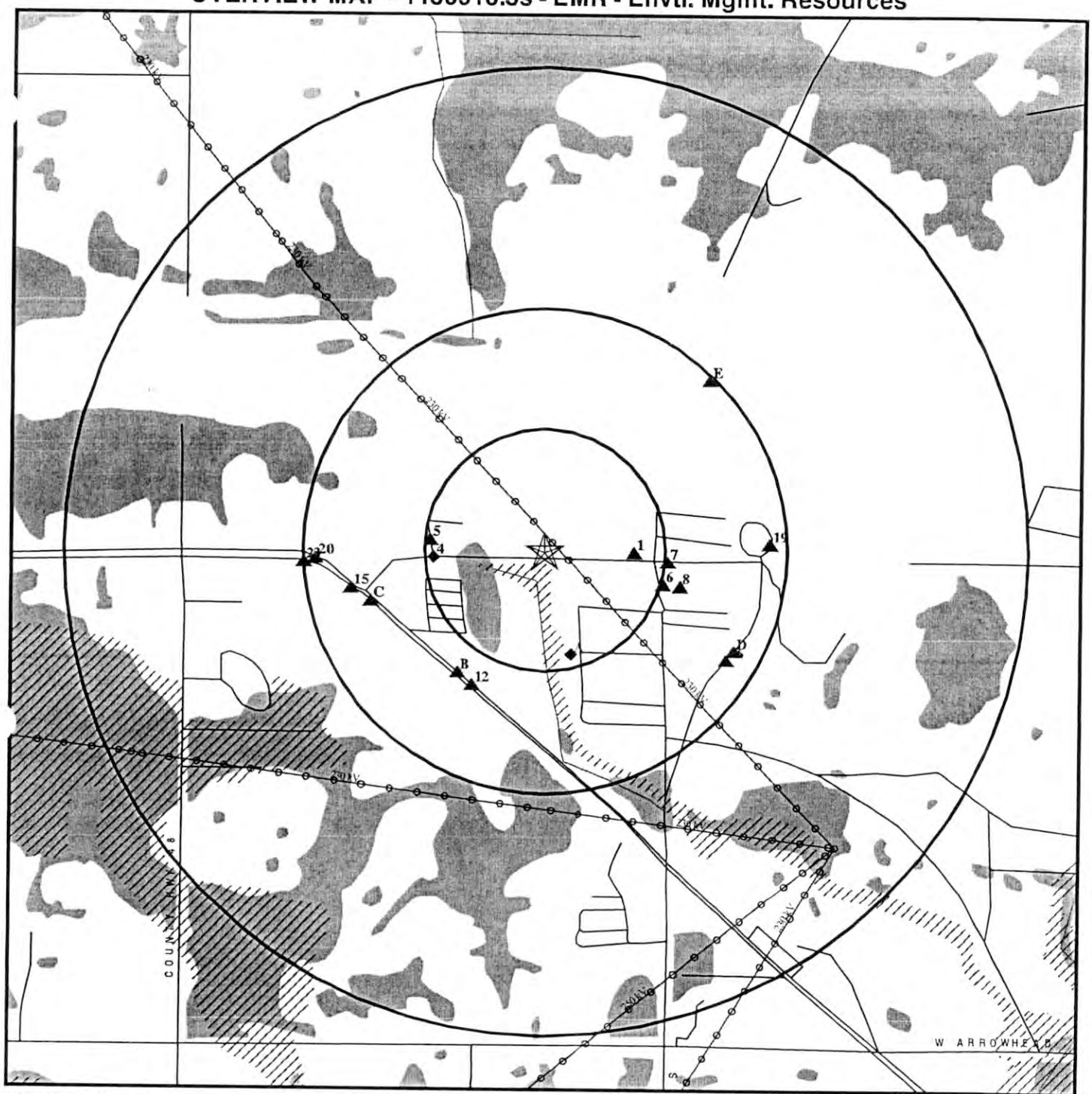
Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
DULUTH INTERNATIONAL AIRPORT -	AIRPORT ROAD, SITE 102	1/4 - 1/2 E	7	44

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
DULUTH CITY DUMP FORMER	CERC-NFRAP
FEDERAL PRISON	LUST
KOLAR BUICK USED CAR LOT	LUST
MCDONALD ELIZABETH	LUST, MN Spills
MN OUTDOOR RECREATION	UST
AUTO STOP/CONOCO	UST
HERMANTOWN SERVICE CENTER	UST
DULUTH AIRPORT MAINTENANCE SHOP	AST
TARGET STORES T4 DULUTH	RCRIS-SQG, FINDS
UNITED PIPING INC	RCRIS-SQG, FINDS
BOBCAT OF DULUTH	RCRIS-SQG, FINDS
JIFFY LUBE DULUTH	RCRIS-SQG, FINDS
FAA DMS SMO DULUTH MN ASR	RCRIS-SQG, FINDS
LENSCRAFTERS	RCRIS-SQG, FINDS
HERMANTOWN MOLDING & MILLWORK	RCRIS-SQG, FINDS
LONGVIEW INSPECTION INC	RCRIS-SQG, FINDS
DULUTH TRUCK DRIVING SCHOOL	RCRIS-SQG, FINDS
U.S. AIR FORCE DULUTH AIR NATL. GU	TRIS
HOME DEPOT - DULUTH	MN Enforcement
DULUTH INTERNATIONAL AIRPORT - BLO	MN VIC
DULUTH INTERNATIONAL AIRPORT - SIT	MN VIC
DULUTH WINNIPEG & PACIFIC RR	MN AGSPILLS

OVERVIEW MAP - 1130510.3s - EMR - Envtl. Mgmt. Resources



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- Coal Gasification Sites
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Federal Wetlands

TARGET PROPERTY:	Duluth IAP	CUSTOMER:	EMR - Envtl. Mgmt. Resources
ADDRESS:	4973 Airport Rd	CONTACT:	Tracey Turner
CITY/STATE/ZIP:	Duluth MN 55811	INQUIRY #:	1130510.3s
LAT/LONG:	46.8369 / 92.2013	DATE:	February 18, 2004 11:57 am

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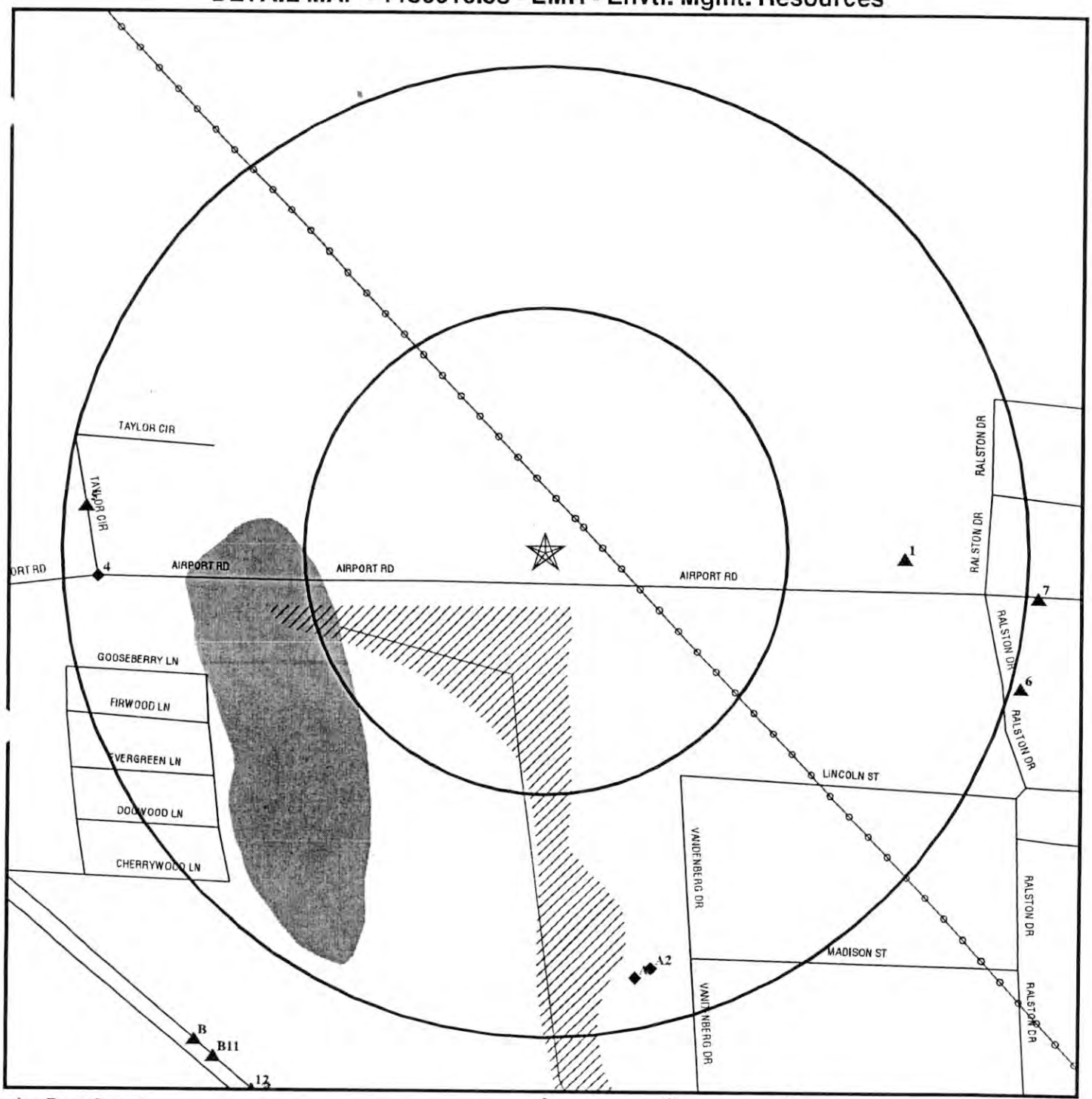
DETAIL MAP - 1130510.3s - EMR - Envtl. Mgmt. Resources



★ Target Property

▲ Sites at elevations higher than or equal to the target property

◆ Sites at elevations lower than the target property

Coal Gasification Sites

Sensitive Receptors

National Priority List Sites

Landfill Sites

Dept. Defense Sites

Power transmission lines

Oil & Gas pipelines

100-year flood zone

500-year flood zone

Federal Wetlands

TARGET PROPERTY:	Duluth IAP	CUSTOMER:	EMR - Envtl. Mgmt. Resources
ADDRESS:	4973 Airport Rd	CONTACT:	Tracey Turner
CITY/STATE/ZIP:	Duluth MN 55811	INQUIRY #:	1130510.3s
LAT/LONG:	46.8369 / 92.2013	DATE:	February 18, 2004 11:58 am

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MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FEDERAL ASTM STANDARD								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
CERCLIS		0.500	0	0	0	NR	NR	0
CERC-NFRAP		0.250	0	0	NR	NR	NR	0
CORRACTS		1.000	0	0	0	0	NR	0
RCRIS-TSD		0.500	0	0	0	NR	NR	0
RCRIS Lg. Quan. Gen.		0.250	0	0	NR	NR	NR	0
RCRIS Sm. Quan. Gen.		0.250	0	1	NR	NR	NR	1
ERNS	TP		NR	NR	NR	NR	NR	0
STATE ASTM STANDARD								
State Haz. Waste		1.000	0	0	0	0	NR	0
MN VIC		0.500	0	0	0	NR	NR	0
State Landfill		0.500	0	0	0	NR	NR	0
LUST		0.500	0	3	17	NR	NR	20
UST		0.250	0	2	NR	NR	NR	2
INDIAN UST		0.250	0	0	NR	NR	NR	0
FEDERAL ASTM SUPPLEMENTAL								
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
Delisted NPL		1.000	0	0	0	0	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
HMIRS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
NPL Liens	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
STATE OR LOCAL ASTM SUPPLEMENTAL								
AST	TP		NR	NR	NR	NR	NR	0
MN Spills	TP		NR	NR	NR	NR	NR	0
MN HWS Permit		1.000	0	0	0	0	NR	0
MN Deleted SHWS		1.000	0	0	0	0	NR	0
MN LCP		0.500	0	0	0	NR	NR	0
MN LS		0.500	0	0	1	NR	NR	1

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
CDL		TP	NR	NR	NR	NR	NR	0
MN Enforcement		TP	NR	NR	NR	NR	NR	0
BULK		TP	NR	NR	NR	NR	NR	0
MN AGSPILLS		TP	NR	NR	NR	NR	NR	0
EDR PROPRIETARY HISTORICAL DATABASES								
Coal Gas		1.000	0	0	0	0	NR	0
BROWNFIELDS DATABASES								
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
MN VIC		0.500	0	0	0	NR	NR	0
INST CONTROL		0.250	0	0	NR	NR	NR	0

NOTES:

AQUIFLOW - see EDR Physical Setting Source Addendum

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Coal Gas Site Search: No site was found in a search of Real Property Scan's ENVIROHAZ database.

1
East
1/8-1/4
979 ft.

Relative:
Higher

Actual:
1423 ft.

MN AIR NATIONAL GUARD
4680 VIPER ST/INTL AIRPORT
DULUTH, MN 55811

UST **U000883295**
LUST **N/A**
MN Spills
AST

LUST:
Leak ID: 7987
MPCA ID: 220581
Report Date: 10/31/1994
Closed Date: 7/30/1996
Contact: STEVE WABROWETZ
Legal Entity: MN AIR NATIONAL GUARD

Leak ID: 7944
MPCA ID: 220539
Report Date: 10/12/1994
Closed Date: 7/30/1996
Contact: CAPTAIN STEVE WABROWIT
Legal Entity: MN AIR NATIONAL GUARD

MN SPILLS:
Facility ID: 56049
Reported By: Not reported
Spill Date: 01/16/2002
Project Manager: Leppala
Product: JET FUEL (KEROSENE BASED)
Incident Date: Not reported
Date Reported: 01/16/2002
Amount Spilled: 10
Units: GALLONS
Priority: Not reported
Action Taken: Not reported
Incident: Not reported
Spill Cause: Not reported
Location: Not reported
Box: Steve
Region: Not reported
Spill: Not reported
Report: Not reported
Project Mngr: Not reported
Respnbl Party: Not reported
Description: Not reported
MN Pollution Control Agency: Not reported

UST:
Program Interest Id : 202263
Address Id : 200904
MPCA Tank Number : 004
Above/ Under Ground : Under Ground
Serial Number : Not reported
Date Added : 10/10/1999 10:57:05
Date Last Updated : 05/04/2002 08:23:36
Piping Cathodic Protection : None
Piping Material Description : Not reported
Tank Cathodic Protection : None
Tank Stored Product : Aviation Gas

MN AIR NATIONAL GUARD (Continued) **U000883295**

Client Tank Number :	004
AST Base Material :	Not reported
Piping Material :	Steel/Iron
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	1
Tank Status Code :	Removed
Tank Storage Capacity :	750
Tank Registration Date :	10/06/1998 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	N
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	No
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	003
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:05
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	None
Tank Stored Product :	Unregulated
Client Tank Number :	003
AST Base Material :	Not reported
Piping Material :	Steel/Iron
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	1
Tank Status Code :	Removed
Tank Storage Capacity :	580
Tank Registration Date :	Not reported
Unregulated Tank Registration Date :	10/06/1998 00:00:00
Compartmental Tank Flag :	Not reported
Heating Product Flag :	N
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	033
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:05

MN AIR NATIONAL GUARD (Continued) **U000883295**

Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Not Needed
Tank Stored Product :	Used Or Waste Oil
Client Tank Number :	033
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Fiberglass
Tank Dispenser Code :	2
Tank Status Code :	Removed
Tank Storage Capacity :	500
Tank Registration Date :	12/26/1989 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	U
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	026
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:35
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	None
Tank Stored Product :	Unregulated
Client Tank Number :	026
AST Base Material :	Not reported
Piping Material :	Steel/Iron
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	1
Tank Status Code :	Removed
Tank Storage Capacity :	150
Tank Registration Date :	10/06/1998 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	N
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	202263

MN AIR NATIONAL GUARD (Continued) **U000883295**

Address Id :	200904
MPCA Tank Number :	022
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:35
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	None
Tank Stored Product :	Unregulated
Client Tank Number :	022
AST Base Material :	Not reported
Piping Material :	Steel/Iron
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	1
Tank Status Code :	Abandoned
Tank Storage Capacity :	550
Tank Registration Date :	10/08/1998 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	N
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes

Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	002
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:35
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	None
Tank Stored Product :	Fuel Oil
Client Tank Number :	002
AST Base Material :	Not reported
Piping Material :	Steel/Iron
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	1
Tank Status Code :	Removed
Tank Storage Capacity :	500
Tank Registration Date :	11/06/1998 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Y
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported

MN AIR NATIONAL GUARD (Continued) **U000883295**

Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	035
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:12
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	None
Tank Stored Product :	Fuel Oil
Client Tank Number :	035
AST Base Material :	Not reported
Piping Material :	Steel/Iron
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	2
Tank Status Code :	Removed
Tank Storage Capacity :	300
Tank Registration Date :	11/06/1998 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Y
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	018
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:12
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Fuel Oil
Client Tank Number :	018
AST Base Material :	Not reported
Piping Material :	Steel/Iron
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	STI-P3
Tank Dispenser Code :	2
Tank Status Code :	Removed
Tank Storage Capacity :	4000
Tank Registration Date :	12/26/1989 00:00:00
Unregulated Tank Registration Date :	Not reported

MN AIR NATIONAL GUARD (Continued) **U000883295**

Compartmental Tank Flag :	Not reported
Heating Product Flag :	Y
Haz Waste Generator Id :	MND000773341
Product Replaced Date :	Not reported
Sludge Disposal Facility :	MN ANG/AZCON CORP
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	032
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:12
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Not Needed
Tank Stored Product :	Aviation Gas
Client Tank Number :	032
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Fiberglass
Tank Dispenser Code :	2
Tank Status Code :	Removed
Tank Storage Capacity :	550
Tank Registration Date :	12/26/1989 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	U
Haz Waste Generator Id :	MND000773341
Product Replaced Date :	Not reported
Sludge Disposal Facility :	MN ANG/AZCON CORP
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	015
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:43
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	None
Tank Stored Product :	Diesel
Client Tank Number :	015
AST Base Material :	Not reported
Piping Material :	Steel/Iron
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel

MN AIR NATIONAL GUARD (Continued) **U000883295**

Tank Dispenser Code :	1
Tank Status Code :	Removed
Tank Storage Capacity :	100
Tank Registration Date :	10/06/1998 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	N
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	010
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:43
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	None
Tank Stored Product :	Fuel Oil
Client Tank Number :	010
AST Base Material :	Not reported
Piping Material :	Steel/Iron
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	1
Tank Status Code :	Removed
Tank Storage Capacity :	1000
Tank Registration Date :	10/08/1998 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Y
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	005
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:43
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Fuel Oil
Client Tank Number :	005

MN AIR NATIONAL GUARD (Continued) **U000883295**

AST Base Material :	Not reported
Piping Material :	Steel/Iron
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	2
Tank Status Code :	Removed
Tank Storage Capacity :	1500
Tank Registration Date :	12/26/1989 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Y
Haz Waste Generator Id :	MND000773341
Product Replaced Date :	Not reported
Sludge Disposal Facility :	MN ANG/AZCON CORP
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	006
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:43
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Fuel Oil
Client Tank Number :	006
AST Base Material :	Not reported
Piping Material :	Steel/Iron
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	2
Tank Status Code :	Removed
Tank Storage Capacity :	15000
Tank Registration Date :	12/26/1989 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Y
Haz Waste Generator Id :	MND000773341
Product Replaced Date :	Not reported
Sludge Disposal Facility :	MN ANG/AZCON CORP
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	011
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:43
Date Last Updated :	05/04/2002 08:23:36

MN AIR NATIONAL GUARD (Continued) **U000883295**

Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Gasoline
Client Tank Number :	011
AST Base Material :	Not reported
Piping Material :	Steel/Iron
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	1
Tank Status Code :	Removed
Tank Storage Capacity :	1000
Tank Registration Date :	12/26/1989 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	U
Haz Waste Generator Id :	MND000773341
Product Replaced Date :	Not reported
Sludge Disposal Facility :	MN ANG/AZCON CORP
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	029
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:43
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Not Needed
Tank Stored Product :	Gasoline
Client Tank Number :	029
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Fiberglass
Tank Dispenser Code :	1
Tank Status Code :	Removed
Tank Storage Capacity :	10000
Tank Registration Date :	12/26/1989 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	U
Haz Waste Generator Id :	MND000773341
Product Replaced Date :	Not reported
Sludge Disposal Facility :	MN ANG/AZCON CORP
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	202263
Address Id :	200904

MN AIR NATIONAL GUARD (Continued) **U000883295**

MPCA Tank Number :	031
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:43
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Not Needed
Tank Stored Product :	Aviation Gas
Client Tank Number :	031
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Fiberglass
Tank Dispenser Code :	1
Tank Status Code :	Removed
Tank Storage Capacity :	10000
Tank Registration Date :	12/26/1989 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	U
Haz Waste Generator Id :	MND000773341
Product Replaced Date :	Not reported
Sludge Disposal Facility :	MN ANG/AZCON CORP
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	036
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:20
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	None
Tank Stored Product :	Fuel Oil
Client Tank Number :	036
AST Base Material :	Not reported
Piping Material :	Steel/Iron
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Fiberglass
Tank Dispenser Code :	2
Tank Status Code :	Removed
Tank Storage Capacity :	10000
Tank Registration Date :	11/06/1998 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Y
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported

MN AIR NATIONAL GUARD (Continued) **U000883295**

Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	009
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:20
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Used Or Waste Oil
Client Tank Number :	009
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	1
Tank Status Code :	Removed
Tank Storage Capacity :	2000
Tank Registration Date :	12/26/1989 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	U
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	012
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:20
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Gasoline
Client Tank Number :	012
AST Base Material :	Not reported
Piping Material :	Steel/Iron
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	1
Tank Status Code :	Removed
Tank Storage Capacity :	10000
Tank Registration Date :	12/26/1989 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported

MN AIR NATIONAL GUARD (Continued) **U000883295**

Heating Product Flag :	U
Haz Waste Generator Id :	MND000773341
Product Replaced Date :	Not reported
Sludge Disposal Facility :	MN ANG/AZCON CORP
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	014
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/20/1999 14:05:59
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	Not reported
Piping Material Description :	1
Tank Cathodic Protection :	Not reported
Tank Stored Product :	Unregulated
Client Tank Number :	014
AST Base Material :	Not reported
Piping Material :	Not reported
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	2
Tank Status Code :	Removed
Tank Storage Capacity :	500
Tank Registration Date :	09/27/1994 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	217U1
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	04/06/2000 15:17:21
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	Not reported
Piping Material Description :	Not reported
Tank Cathodic Protection :	Not reported
Tank Stored Product :	Chemical Other Or Unspecified
Client Tank Number :	Not reported
AST Base Material :	Not reported
Piping Material :	Steel/Iron
Second Contain Tank :	Doublewall Tank
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	Not reported

MN AIR NATIONAL GUARD (Continued) **U000883295**

Tank Status Code :	Active
Tank Storage Capacity :	1000
Tank Registration Date :	10/06/1998 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	219U1
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	04/06/2000 15:44:31
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	Not reported
Piping Material Description :	Not reported
Tank Cathodic Protection :	Not reported
Tank Stored Product :	Chemical Other Or Unspecified
Client Tank Number :	Not reported
AST Base Material :	Not reported
Piping Material :	Steel/Iron
Second Contain Tank :	Doublewall Tank
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	Not reported
Tank Status Code :	Active
Tank Storage Capacity :	550
Tank Registration Date :	10/06/1998 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	223U1
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	04/06/2000 15:53:25
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	Not reported
Piping Material Description :	Not reported
Tank Cathodic Protection :	Not reported
Tank Stored Product :	Chemical Other Or Unspecified
Client Tank Number :	Not reported
AST Base Material :	Not reported

MN AIR NATIONAL GUARD (Continued) **U000883295**

Piping Material :	Steel/Iron
Second Contain Tank :	Doublewall Tank
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	Not reported
Tank Status Code :	Active
Tank Storage Capacity :	350
Tank Registration Date :	01/01/1995 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	222U1
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	04/07/2000 07:21:03
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	Not reported
Piping Material Description :	Not reported
Tank Cathodic Protection :	Not reported
Tank Stored Product :	Chemical Other Or Unspecified
Client Tank Number :	Not reported
AST Base Material :	Not reported
Piping Material :	Steel/Iron
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Active
Tank Storage Capacity :	500
Tank Registration Date :	10/06/1998 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	119U1
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	04/07/2000 07:26:55
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	Not reported

MN AIR NATIONAL GUARD (Continued) **U000883295**

Piping Material Description :	Not reported
Tank Cathodic Protection :	Not reported
Tank Stored Product :	Not reported
Client Tank Number :	Not reported
AST Base Material :	Not reported
Piping Material :	Steel/Iron
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Removed
Tank Storage Capacity :	500
Tank Registration Date :	10/06/1998 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes

Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	025
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:50
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	None
Tank Stored Product :	Used Or Waste Oil
Client Tank Number :	025
AST Base Material :	Not reported
Piping Material :	Steel/Iron
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	1
Tank Status Code :	Removed
Tank Storage Capacity :	100
Tank Registration Date :	10/08/1998 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	N
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes

Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	007

MN AIR NATIONAL GUARD (Continued) **U000883295**

Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:50
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Fuel Oil
Client Tank Number :	007
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	1
Tank Status Code :	Removed
Tank Storage Capacity :	10000
Tank Registration Date :	12/26/1989 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Y
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	013
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:50
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Diesel
Client Tank Number :	013
AST Base Material :	Not reported
Piping Material :	Steel/Iron
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	STI-P3
Tank Dispenser Code :	2
Tank Status Code :	Removed
Tank Storage Capacity :	10000
Tank Registration Date :	12/26/1989 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	N
Haz Waste Generator Id :	MND000773341
Product Replaced Date :	Not reported
Sludge Disposal Facility :	MN ANG/AZCON CORP
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS

MN AIR NATIONAL GUARD (Continued) U000883295

In Compliance :	Yes
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	030
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:58
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Not Needed
Tank Stored Product :	Diesel
Client Tank Number :	030
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Fiberglass
Tank Dispenser Code :	1
Tank Status Code :	Removed
Tank Storage Capacity :	10000
Tank Registration Date :	12/26/1989 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	U
Haz Waste Generator Id :	MND000773341
Product Replaced Date :	Not reported
Sludge Disposal Facility :	MN ANG/AZCON CORP
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	034
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:58
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Not Needed
Tank Stored Product :	Used Or Waste Oil
Client Tank Number :	034
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Fiberglass
Tank Dispenser Code :	99
Tank Status Code :	Removed
Tank Storage Capacity :	550
Tank Registration Date :	12/26/1989 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	U

MN AIR NATIONAL GUARD (Continued) **U000883295**

Haz Waste Generator Id :	MND000773341
Product Replaced Date :	Not reported
Sludge Disposal Facility :	MN ANG/AZCON CORP
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes

The MN UST database may contain additional details for this site.
Please click here or contact your EDR Account Executive for more information.

AST:

Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	264-1
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:30
Date Last Updated :	05/05/2003 14:13:44
Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Draining ConcretePad
Tank Stored Product :	Gasoline
Client Tank Number :	264-A1-UN
AST Base Material :	Concrete Slab
Piping Material :	Steel/Iron
Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Doublewall Tank
Second Contain Pipe :	Not reported
Tank Construction Material :	Doublewall Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Active
Tank Storage Capacity :	5000
Tank Registration Date :	02/23/1995 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	EBOISSO
In Compliance :	Not reported

Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	1011
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:30
Date Last Updated :	05/05/2003 13:55:41
Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Draining ConcretePad
Tank Stored Product :	Fuel Oil
Client Tank Number :	518-A1-F0
AST Base Material :	Concrete Slab
Piping Material :	Steel/Iron
Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Doublewall Tank
Second Contain Pipe :	Not reported

MN AIR NATIONAL GUARD (Continued) **U000883295**

Tank Construction Material :	Doublewall Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Active
Tank Storage Capacity :	550
Tank Registration Date :	05/21/1997 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	EBOISSO
In Compliance :	Not reported
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	116A1
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:25
Date Last Updated :	05/05/2003 14:00:40
Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Draining ConcretePad
Tank Stored Product :	Aviation Gas
Client Tank Number :	116A1
AST Base Material :	Concrete Slab
Piping Material :	Steel/Iron
Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Doublewall Tank
Second Contain Pipe :	Not reported
Tank Construction Material :	Doublewall Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Active
Tank Storage Capacity :	5000
Tank Registration Date :	10/06/1998 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	EBOISSO
In Compliance :	Not reported
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	500A1
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:25
Date Last Updated :	05/05/2003 14:23:51
Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Draining ConcretePad
Tank Stored Product :	Diesel
Client Tank Number :	521-A-D

MN AIR NATIONAL GUARD (Continued) **U000883295**

AST Base Material :	Concrete Slab
Piping Material :	Steel/Iron
Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Doublewall Tank
Second Contain Pipe :	Not reported
Tank Construction Material :	Doublewall Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Active
Tank Storage Capacity :	200
Tank Registration Date :	06/04/1998 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	EBOISSO
In Compliance :	Not reported
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	119A5
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:25
Date Last Updated :	05/05/2003 14:02:00
Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Draining ConcretePad
Tank Stored Product :	Other Substance
Client Tank Number :	119-A5-JA
AST Base Material :	Concrete Slab
Piping Material :	Steel/Iron
Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Doublewall Tank
Second Contain Pipe :	Not reported
Tank Construction Material :	Doublewall Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Active
Tank Storage Capacity :	1000
Tank Registration Date :	12/28/1997 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	EBOISSO
In Compliance :	Not reported
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	1010
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:25

MN AIR NATIONAL GUARD (Continued) **U000883295**

Date Last Updated :	05/05/2003 13:53:31
Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Draining ConcretePad
Tank Stored Product :	Other Substance
Client Tank Number :	223-A3-AF
AST Base Material :	Concrete Slab
Piping Material :	Steel/Iron
Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Active
Tank Storage Capacity :	400
Tank Registration Date :	05/21/1997 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	EBOISSO
In Compliance :	Not reported

Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	1009
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:25
Date Last Updated :	05/05/2003 13:49:15
Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Draining ConcretePad
Tank Stored Product :	Other Substance
Client Tank Number :	223-A2-AF
AST Base Material :	Concrete Slab
Piping Material :	Steel/Iron
Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Active
Tank Storage Capacity :	450
Tank Registration Date :	05/21/1997 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	EBOISSO
In Compliance :	Not reported

Program Interest Id :	202263

MN AIR NATIONAL GUARD (Continued) U000883295

Address Id :	200904
MPCA Tank Number :	1008
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:25
Date Last Updated :	05/05/2003 13:47:06
Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Draining ConcretePad
Tank Stored Product :	Aviation Gas
Client Tank Number :	270-A1-J
AST Base Material :	Concrete Slab
Piping Material :	Other
Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Other
Tank Dispenser Code :	Not reported
Tank Status Code :	Active
Tank Storage Capacity :	2500
Tank Registration Date :	05/21/1997 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	EBOISSO
In Compliance :	Not reported

Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	1007
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:25
Date Last Updated :	05/05/2003 13:34:45
Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Draining ConcretePad
Tank Stored Product :	Mineral Spirits
Client Tank Number :	219-A1-MS
AST Base Material :	Concrete Slab
Piping Material :	Steel/Iron
Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Doublewall Tank
Second Contain Pipe :	Not reported
Tank Construction Material :	Doublewall Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Active
Tank Storage Capacity :	600
Tank Registration Date :	05/21/1997 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported

MN AIR NATIONAL GUARD (Continued) **U000883295**

Comments :	Not reported
Staff Id Who Did The Last Update :	EBOISSO
In Compliance :	Not reported
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	1006
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:25
Date Last Updated :	05/05/2003 13:31:59
Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Draining ConcretePad
Tank Stored Product :	Used Or Waste Oil
Client Tank Number :	265-A1-UO
AST Base Material :	Concrete Slab
Piping Material :	Steel/Iron
Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Doublewall Tank
Second Contain Pipe :	Not reported
Tank Construction Material :	Doublewall Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Active
Tank Storage Capacity :	400
Tank Registration Date :	05/21/1997 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	EBOISSO
In Compliance :	Not reported
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	1109
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:25
Date Last Updated :	05/05/2003 13:57:43
Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Draining ConcretePad
Tank Stored Product :	Diesel
Client Tank Number :	119-A4-D
AST Base Material :	Concrete Slab
Piping Material :	Steel/Iron
Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Doublewall Tank
Second Contain Pipe :	Not reported
Tank Construction Material :	Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Active
Tank Storage Capacity :	550
Tank Registration Date :	02/23/1995 00:00:00
Unregulated Tank Registration Date :	Not reported

MN AIR NATIONAL GUARD (Continued) **U000883295**

Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	EBOISSO
In Compliance :	Not reported
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	264-3
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:25
Date Last Updated :	05/05/2003 14:17:38
Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Draining ConcretePad
Tank Stored Product :	Aviation Gas
Client Tank Number :	264-A3-J
AST Base Material :	Concrete Slab
Piping Material :	Steel/Iron
Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Doublewall Tank
Second Contain Pipe :	Doublewall Pipe
Tank Construction Material :	Doublewall Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Active
Tank Storage Capacity :	1500
Tank Registration Date :	02/23/1995 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	EBOISSO
In Compliance :	Not reported
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	264-2
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:25
Date Last Updated :	05/05/2003 14:16:34
Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Draining ConcretePad
Tank Stored Product :	Diesel
Client Tank Number :	264-A2-D
AST Base Material :	Concrete Slab
Piping Material :	Steel/Iron
Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Doublewall Tank
Second Contain Pipe :	Doublewall Pipe
Tank Construction Material :	Doublewall Metal

MN AIR NATIONAL GUARD (Continued) **U000883295**

Tank Dispenser Code :	Not reported
Tank Status Code :	Active
Tank Storage Capacity :	5000
Tank Registration Date :	02/23/1995 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	EBOISSO
In Compliance :	Not reported
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	1255
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:25
Date Last Updated :	05/05/2003 14:09:19
Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Draining ConcretePad
Tank Stored Product :	Diesel
Client Tank Number :	255-A1-D
AST Base Material :	Concrete Slab
Piping Material :	Steel/Iron
Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Doublewall Tank
Second Contain Pipe :	Not reported
Tank Construction Material :	Doublewall Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Active
Tank Storage Capacity :	300
Tank Registration Date :	02/23/1995 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	EBOISSO
In Compliance :	Not reported
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	1223
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:25
Date Last Updated :	05/05/2003 14:04:26
Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Draining ConcretePad
Tank Stored Product :	Diesel
Client Tank Number :	223-A1-D
AST Base Material :	Concrete Slab

MN AIR NATIONAL GUARD (Continued) **U000883295**

Piping Material :	Steel/Iron
Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Doublewall Tank
Second Contain Pipe :	Not reported
Tank Construction Material :	Doublewall Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Active
Tank Storage Capacity :	300
Tank Registration Date :	02/23/1995 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	EBOISSO
In Compliance :	Not reported
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	1230
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:25
Date Last Updated :	05/05/2003 14:07:03
Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Draining ConcretePad
Tank Stored Product :	Fuel Oil
Client Tank Number :	230-A1-FO
AST Base Material :	On Concrete
Piping Material :	Steel/Iron
Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Doublewall Tank
Second Contain Pipe :	Not reported
Tank Construction Material :	Doublewall Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Active
Tank Storage Capacity :	12000
Tank Registration Date :	02/23/1995 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	EBOISSO
In Compliance :	Not reported
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	1005
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:25
Date Last Updated :	05/04/2002 08:23:36

MN AIR NATIONAL GUARD (Continued) **U000883295**

Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Not reported
Tank Stored Product :	Aviation Gas
Client Tank Number :	270-A1-J
AST Base Material :	On Concrete
Piping Material :	Steel/Iron
Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Removed
Tank Storage Capacity :	2500
Tank Registration Date :	10/21/1993 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Not reported
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	1004
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:25
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Not reported
Tank Stored Product :	Used Or Waste Oil
Client Tank Number :	265-A2-UO
AST Base Material :	Located Indoors
Piping Material :	Steel/Iron
Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Removed
Tank Storage Capacity :	300
Tank Registration Date :	01/10/1994 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Not reported
Program Interest Id :	202263
Address Id :	200904

MN AIR NATIONAL GUARD (Continued) **U000883295**

MPCA Tank Number :	1001
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:25
Date Last Updated :	05/05/2003 13:27:43
Piping Cathodic Protection :	Anode
Tank Cathodic Protection :	Impressed Current
Tank Stored Product :	Aviation Gas
Client Tank Number :	119-A1-J
AST Base Material :	Concrete Slab
Piping Material :	Steel/Iron
Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Active
Tank Storage Capacity :	420000
Tank Registration Date :	09/18/1990 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	EBOISSO
In Compliance :	Not reported
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	1002
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:25
Date Last Updated :	05/05/2003 13:28:39
Piping Cathodic Protection :	Anode
Tank Cathodic Protection :	Impressed Current
Tank Stored Product :	Aviation Gas
Client Tank Number :	119-A2-J
AST Base Material :	Concrete Slab
Piping Material :	Steel/Iron
Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Active
Tank Storage Capacity :	420000
Tank Registration Date :	09/18/1990 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported

MN AIR NATIONAL GUARD (Continued) **U000883295**

Staff Id Who Did The Last Update :	EBOISSO
In Compliance :	Not reported
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	1003
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:25
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Not reported
Tank Stored Product :	Aviation Gas
Client Tank Number :	119-A3-J
AST Base Material :	On Concrete
Piping Material :	Steel/Iron
Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Removed
Tank Storage Capacity :	210000
Tank Registration Date :	09/18/1990 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Not reported
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	246-A
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	01/20/2000 10:05:53
Date Last Updated :	05/05/2003 14:11:48
Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Draining ConcretePad
Tank Stored Product :	Other Substance
Client Tank Number :	246-A
AST Base Material :	Concrete Slab
Piping Material :	Steel/Iron
Piping Material Desc:	Not reported
Second Contain Tank :	Doublewall Tank
Second Contain Pipe :	Not reported
Tank Construction Material :	Doublewall Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Active
Tank Storage Capacity :	6000
Tank Registration Date :	12/13/1999 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported

MN AIR NATIONAL GUARD (Continued) **U000883295**

Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	EBOISSO
In Compliance :	Not reported
Program Interest Id :	202263
Address Id :	200904
MPCA Tank Number :	1023
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	04/06/2000 14:58:37
Date Last Updated :	05/04/2002 08:23:36
Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Not reported
Tank Stored Product :	Used Or Waste Oil
Client Tank Number :	Not reported
AST Base Material :	Not reported
Piping Material :	Steel/Iron
Piping Material Desc:	Not reported
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	Not reported
Tank Status Code :	Removed
Tank Storage Capacity :	300
Tank Registration Date :	10/08/1998 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Not reported

The MN AST database may contain additional details for this site.
Please click here or contact your EDR Account Executive for more information.

A2 **BUREAU OF PRISONS/DEPT OF JUSTICE** UST **U000886643**
SSE **FEDERAL PRISON CAMP DULUTH** **N/A**
1/8-1/4 **DULUTH, MN 55814**
1167 ft.

Site 1 of 2 in cluster A

Relative:
Lower

Actual:
1407 ft.

UST:

Program Interest Id :	194442
Address Id :	174408
MPCA Tank Number :	002
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:25
Date Last Updated :	05/04/2002 07:56:50
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode

BUREAU OF PRISONS/DEPT OF JUSTICE (Continued) **U000886643**

Tank Stored Product :	Gasoline
Client Tank Number :	002
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Other
Tank Dispenser Code :	1
Tank Status Code :	Removed
Tank Storage Capacity :	10000
Tank Registration Date :	04/23/1986 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	U
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	194442
Address Id :	174408
MPCA Tank Number :	004
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:25
Date Last Updated :	05/04/2002 07:56:50
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Gasoline
Client Tank Number :	004
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Other
Tank Dispenser Code :	2
Tank Status Code :	Removed
Tank Storage Capacity :	5000
Tank Registration Date :	04/23/1986 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	U
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	ZERVAS INDUSTRIAL PETROL
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	194442
Address Id :	174408
MPCA Tank Number :	010
Above/ Under Ground :	Under Ground
Serial Number :	Not reported

BUREAU OF PRISONS/DEPT OF JUSTICE (Continued) **U000886643**

Date Added :	10/10/1999 10:57:10
Date Last Updated :	05/04/2002 07:56:50
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Fuel Oil
Client Tank Number :	010
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Other
Tank Dispenser Code :	2
Tank Status Code :	Removed
Tank Storage Capacity :	10000
Tank Registration Date :	04/23/1986 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Y
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	194442
Address Id :	174408
MPCA Tank Number :	003
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:32
Date Last Updated :	05/04/2002 07:56:50
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Gasoline
Client Tank Number :	003
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Other
Tank Dispenser Code :	1
Tank Status Code :	Removed
Tank Storage Capacity :	8000
Tank Registration Date :	04/23/1986 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	U
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes

BUREAU OF PRISONS/DEPT OF JUSTICE (Continued) **U000886643**

Program Interest Id :	194442
Address Id :	174408
MPCA Tank Number :	005
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:32
Date Last Updated :	05/04/2002 07:56:50
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Gasoline
Client Tank Number :	005
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Other
Tank Dispenser Code :	2
Tank Status Code :	Removed
Tank Storage Capacity :	5000
Tank Registration Date :	04/23/1986 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	U
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	ZERVAS INDUSTRIAL PETROL
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes

Program Interest Id :	194442
Address Id :	174408
MPCA Tank Number :	009
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:32
Date Last Updated :	05/04/2002 07:56:50
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Fuel Oil
Client Tank Number :	009
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Other
Tank Dispenser Code :	2
Tank Status Code :	Removed
Tank Storage Capacity :	500
Tank Registration Date :	04/23/1986 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Y
Haz Waste Generator Id :	Not reported

BUREAU OF PRISONS/DEPT OF JUSTICE (Continued) **U000886643**

Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	194442
Address Id :	174408
MPCA Tank Number :	001
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:40
Date Last Updated :	05/04/2002 07:56:50
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Gasoline
Client Tank Number :	001
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Other
Tank Dispenser Code :	1
Tank Status Code :	Removed
Tank Storage Capacity :	10000
Tank Registration Date :	04/23/1986 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	U
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	194442
Address Id :	174408
MPCA Tank Number :	007
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:47
Date Last Updated :	05/04/2002 07:56:50
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Fuel Oil
Client Tank Number :	007
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Other
Tank Dispenser Code :	2
Tank Status Code :	Removed
Tank Storage Capacity :	500

BUREAU OF PRISONS/DEPT OF JUSTICE (Continued) **U000886643**

Tank Registration Date :	04/23/1986 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Y
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	194442
Address Id :	174408
MPCA Tank Number :	006
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:55
Date Last Updated :	05/04/2002 07:56:50
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Used Or Waste Oil
Client Tank Number :	006
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Other
Tank Dispenser Code :	2
Tank Status Code :	Removed
Tank Storage Capacity :	500
Tank Registration Date :	04/23/1986 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	U
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	194442
Address Id :	174408
MPCA Tank Number :	008
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:58
Date Last Updated :	05/04/2002 07:56:50
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Fuel Oil
Client Tank Number :	008
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported

BUREAU OF PRISONS/DEPT OF JUSTICE (Continued) **U000886643**

Second Contain Pipe :	Not reported
Tank Construction Material :	Other
Tank Dispenser Code :	2
Tank Status Code :	Removed
Tank Storage Capacity :	800
Tank Registration Date :	04/23/1986 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Y
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes

The MN UST database may contain additional details for this site.
Please click here or contact your EDR Account Executive for more information.

A3
SSE
1/8-1/4
1182 ft.

Relative:
Lower

Actual:
1406 ft.

FEDERAL PRISON CAMP
BLDG 318
DULUTH, MN 55814

LUST S101148121
N/A

Site 2 of 2 in cluster A

LUST:

Leak ID:	7453
MPCA ID:	220068
Report Date:	6/9/1994
Closed Date:	4/4/1995
Contact:	MICHAEL LINDQUIST
Legal Entity:	BUREAU OF PRISONS

4
West
1/8-1/4
1224 ft.

Relative:
Lower

Actual:
1411 ft.

DEFENSE REVITILIZATION AND MAR
4997 AIRPORT RD
DULUTH, MN 55811

LUST S103910226
N/A

LUST:

Leak ID:	10249
MPCA ID:	222753
Report Date:	6/18/1997
Closed Date:	1/14/1998
Contact:	LT COL MANNS
Legal Entity:	AIR NATIONAL GUARD BASE

5
West
1/8-1/4
1260 ft.

Relative:
Equal

Actual:
1413 ft.

CIRRUS DESIGN CORP
4515 TAYLOR CIRCLE
DULUTH, MN 55811

RCRIS-SQG 1000888768
FINDS MN0000275115
MN Enforcement
MN Spills
AST

CIRRUS DESIGN CORP (Continued) **1000888768**

RCRIS:
Owner: KLAPMEIER ALAN
(218) 727-2737
EPA ID: MN0000275115

Contact: JOHN HITCHCOCK
(218) 727-2737

Classification: Conditionally Exempt Small Quantity Generator
TSDF Activities: Not reported

Violation Status: Violations exist

Regulation Violated: Not reported
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 10/30/2001
Actual Date Achieved Compliance: 01/07/2002

Enforcement Action: FORGIVEABLE ADMN PENALTY ORDER(APO)
Enforcement Action Date: 11/19/2001
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 10/30/2001
Actual Date Achieved Compliance: 01/07/2002

Enforcement Action: FORGIVEABLE ADMN PENALTY ORDER(APO)
Enforcement Action Date: 11/19/2001
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: GENERATOR-MANIFEST REQUIREMENTS
Date Violation Determined: 10/30/2001
Actual Date Achieved Compliance: 01/07/2002

Enforcement Action: FORGIVEABLE ADMN PENALTY ORDER(APO)
Enforcement Action Date: 11/19/2001
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 06/11/1998
Actual Date Achieved Compliance: 07/23/1998

Enforcement Action: VIOLATION NOTICE (VN)
Enforcement Action Date: 08/20/1998
Penalty Type: Not reported

There are 4 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Compliance Evaluation Inspection	GENERATOR-OTHER REQUIREMENTS	20020107
	GENERATOR-OTHER REQUIREMENTS	20020107
	GENERATOR-MANIFEST REQUIREMENTS	20020107
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19980723

CIRRUS DESIGN CORP (Continued) **1000888768**

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Minnesota's Project Delta (Environmental Permitting, Compliance, and Monitoring
Resource Conservation and Recovery Act Information system (RCRAINFO)

MN Enforcement Log :

Facility ID:	MN0000275115
Action:	Administrative Penalty Order - Forgivable
Effective Start Date:	/ /
Effective End Date:	01/07/2002
Action Type:	Adminstrative Penalty Order - Forgiveable if actions taken

Facility ID:	MN0000275115
Action:	Administrative Penalty Order - Forgivable
Effective Start Date:	11/19/01
Effective End Date:	01/07/1902
Action Type:	Adminstrative Penalty Order - Forgiveable if actions taken

Facility ID:	MN0000275115
Action:	Letter of Warning
Effective Start Date:	20-Aug-1998
Effective End Date:	23-Jul-1998
Action Type:	Letter Of Warning

Facility ID:	MN0000275115
Action:	Administrative Penalty Order - Forgivable
Effective Start Date:	19-Nov-2001
Effective End Date:	7-Jan-2002
Action Type:	Adminstrative Penalty Order - Forgiveable if actions taken

MN SPILLS:

Facility ID:	109873
Reported By:	Not reported
Spill Date:	Not reported
Project Manager:	
Product:	Not reported
Incident Date:	Not reported
Date Reported:	Not reported
Amount Spilled:	Not reported
Units:	69
Priority:	Not reported
Action Taken:	Not reported
Incident:	Not reported
Spill Cause:	Not reported
Location:	Not reported
Box:	Not reported
Region:	Not reported
Spill:	Not reported
Report:	Not reported
Project Mngr:	Not reported
Respnbl Party:	Not reported
Description:	Not reported

MN Pollution Control Agency: 29921

AST:

Program Interest Id :	267373
Address Id :	382827
MPCA Tank Number :	1001

CIRRUS DESIGN CORP (Continued) **1000888768**

Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	06/27/2003 11:36:17
Date Last Updated :	06/27/2003 11:36:17
Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Internal Inspection
Tank Stored Product :	Aviation Gas
Client Tank Number :	Not reported
AST Base Material :	Concrete Slab
Piping Material :	Not reported
Piping Material Desc:	Not reported
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	Not reported
Tank Status Code :	Active
Tank Storage Capacity :	10000
Tank Registration Date :	03/31/2003 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	JHENRY
In Compliance :	Not reported

The MN AST database may contain additional details for this site.
Please click here or contact your EDR Account Executive for more information.

6
ESE
1/4-1/2
1349 ft.

BUREAU OF PRISONS/DEPT OF JUST
STEBNER RD / WOOLSON
DULUTH, MN 55814

LUST **S103910119**
N/A

Relative:
Higher

Actual:
1430 ft.

LUST:

Leak ID:	8998
MPCA ID:	221548
Report Date:	12/1/1995
Closed Date:	12/16/1996
Contact:	EARL JOHNSON
Legal Entity:	DULUTH FEDERAL PRISON CAMP

7
East
1/4-1/2
1352 ft.

DULUTH INTERNATIONAL AIRPORT -
AIRPORT ROAD, SITE 102
DULUTH, MN 55811

MN LS **S105804323**
N/A

Relative:
Higher

Actual:
1428 ft.

MN LS:

CERCLIS:	No
No Further Remedial Action Planned:	No
National Priorities List:	No
Delisted From PLP By MPCA:	No
Solid Waste Permit:	No
Voluntary Cleanup & Investigation:	Yes
Dumps:	No
Entity Type:	VIC

DULUTH INTERNATIONAL AIRPORT - (Continued) **S105804323**

County Code:	69
PLP:	No
Facility Name 2:	Not reported
Facility Address 2:	Not reported
Link ID:	5546
LCP:	No

8
ESE
1/4-1/2
1535 ft.

AVIS RENT A CAR
DULUTH INTERNATIONAL AIRPORT
DULUTH, MN 55811

UST U003907462
LUST N/A

Relative:
Higher

Actual:
1429 ft.

LUST:

Leak ID:	5937
MPCA ID:	218590
Report Date:	8/11/1992
Closed Date:	6/29/1998
Contact:	BOB HALL
Legal Entity:	AVIS RENT A CAR

UST:

Program Interest Id :	201383
Address Id :	266310
MPCA Tank Number :	001
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:13
Date Last Updated :	05/04/2002 08:20:38
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	None
Tank Stored Product :	Gasoline
Client Tank Number :	001
AST Base Material :	Not reported
Piping Material :	Steel/Iron
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	1
Tank Status Code :	Removed
Tank Storage Capacity :	4000
Tank Registration Date :	02/15/1989 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	N
Haz Waste Generator Id :	MND981774953
Product Replaced Date :	Not reported
Sludge Disposal Facility :	J&D ENTERPRISE
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	No

The MN UST database may contain additional details for this site.
Please click here or contact your EDR Account Executive for more information.

B9
SW
1/4-1/2
1634 ft.

FOOD N FUEL
4997 MILLER TRUNK HWY
DULUTH, MN 55811

LUST S101745793
N/A

Site 1 of 3 in cluster B

Relative:
Higher

Actual:
1415 ft.

LUST:
Leak ID: 8737
MPCA ID: 221296
Report Date: 8/30/1995
Closed Date: 9/29/1998
Contact: JACK CURTIS
Legal Entity: JACK CURTIS

B10
SW
1/4-1/2
1634 ft.

FOOD AND FUEL
4997 MILLER TRUNK HWY
HERMANTOWN, MN 55811

LUST S102834699
N/A

Site 2 of 3 in cluster B

Relative:
Higher

Actual:
1415 ft.

LUST:
Leak ID: 10973
MPCA ID: 223397
Report Date: 11/19/1997
Closed Date: 8/6/1998
Contact: JACK CURTIS
Legal Entity: FOOD AND FUEL

B11
SSW
1/4-1/2
1641 ft.

CURTIS OIL AND TIRE
4995 MILLER TRUNK HWY
DULUTH, MN 55811

RCRIS-SQG 1000413744
FINDS MND022763486
UST
LUST
AST

Site 3 of 3 in cluster B

Relative:
Higher

Actual:
1414 ft.

RCRIS:
Owner: CURTIS FRED
(312) 555-1212
EPA ID: MND022763486

Contact: LOUIE GAUTHIER
(218) 729-8241

Classification: Small Quantity Generator
TSDF Activities: Not reported

Violation Status: Violations exist

Regulation Violated: Not reported
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 09/11/2001
Actual Date Achieved Compliance: Not reported

Enforcement Action: VIOLATION NOTICE (VN)
Enforcement Action Date: 09/17/2001
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 09/11/2001
Actual Date Achieved Compliance: Not reported

Enforcement Action: VIOLATION NOTICE (VN)
Enforcement Action Date: 09/17/2001
Penalty Type: Not reported

CURTIS OIL AND TIRE (Continued) **1000413744**

Regulation Violated: Not reported
Area of Violation: GENERATOR-MANIFEST REQUIREMENTS
Date Violation Determined: 09/11/2001
Actual Date Achieved Compliance: Not reported

Enforcement Action: VIOLATION NOTICE (VN)
Enforcement Action Date: 09/17/2001
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 09/11/2001
Actual Date Achieved Compliance: Not reported

Enforcement Action: VIOLATION NOTICE (VN)
Enforcement Action Date: 09/17/2001
Penalty Type: Not reported

There are 4 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Compliance Evaluation Inspection	GENERATOR-OTHER REQUIREMENTS	
	GENERATOR-OTHER REQUIREMENTS	
	GENERATOR-MANIFEST REQUIREMENTS	
	GENERATOR-OTHER REQUIREMENTS	

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Minnesota's Project Delta (Environmental Permitting, Compliance, and Monitoring
Resource Conservation and Recovery Act Information system (RCRAINFO)

LUST:
Leak ID: 8660
MPCA ID: 221222
Report Date: 8/7/1995
Closed Date: Not reported
Contact: JACK CURTIS
Legal Entity: CURTIS OIL

UST:
Program Interest Id : 206973
Address Id : 273298
MPCA Tank Number : 003
Above/ Under Ground : Under Ground
Serial Number : Not reported
Date Added : 10/10/1999 10:57:07
Date Last Updated : 05/04/2002 08:39:25
Piping Cathodic Protection : None
Piping Material Description : Not reported
Tank Cathodic Protection : None
Tank Stored Product : Gasoline
Client Tank Number : 003
AST Base Material : Not reported
Piping Material : Steel/Iron
Second Contain Tank : Not reported
Second Contain Pipe : Not reported
Tank Construction Material : Bare/Painl/Asph Coat Steel
Tank Dispenser Code : 1
Tank Status Code : Removed
Tank Storage Capacity : 1000

CURTIS OIL AND TIRE (Continued) **1000413744**

Tank Registration Date :	Not reported
Unregulated Tank Registration Date :	07/07/1999 00:00:00
Compartmental Tank Flag :	Not reported
Heating Product Flag :	N
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	No
Program Interest Id :	206973
Address Id :	273298
MPCA Tank Number :	002
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:30
Date Last Updated :	05/04/2002 08:39:25
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	None
Tank Stored Product :	Fuel Oil
Client Tank Number :	002
AST Base Material :	Not reported
Piping Material :	Steel/Iron
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	2
Tank Status Code :	Active
Tank Storage Capacity :	2000
Tank Registration Date :	12/10/1996 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Y
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	206973
Address Id :	273298
MPCA Tank Number :	001
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:30
Date Last Updated :	05/04/2002 08:39:25
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Unknown
Tank Stored Product :	Used Or Waste Oil
Client Tank Number :	001
AST Base Material :	Not reported
Piping Material :	Steel/Iron
Second Contain Tank :	Not reported

CURTIS OIL AND TIRE (Continued) **1000413744**

Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	3
Tank Status Code :	Removed
Tank Storage Capacity :	500
Tank Registration Date :	12/10/1996 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	N
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes

The MN UST database may contain additional details for this site.
Please click here or contact your EDR Account Executive for more information.

AST:

Program Interest Id :	206973
Address Id :	273298
MPCA Tank Number :	1008
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	12/02/1999 08:29:15
Date Last Updated :	05/04/2002 08:39:25
Piping Cathodic Protection :	None
Tank Cathodic Protection :	None
Tank Stored Product :	Other Substance
Client Tank Number :	1008
AST Base Material :	On Ground
Piping Material :	Steel/Iron
Piping Material Desc:	Not reported
Second Contain Tank :	Exterior Liner Tank
Second Contain Pipe :	None
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	2
Tank Status Code :	Active
Tank Storage Capacity :	12000
Tank Registration Date :	12/02/1999 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Not reported

Program Interest Id :	206973
Address Id :	273298
MPCA Tank Number :	1009
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	12/02/1999 08:31:39
Date Last Updated :	05/04/2002 08:39:25

CURTIS OIL AND TIRE (Continued) **1000413744**

Piping Cathodic Protection :	None
Tank Cathodic Protection :	None
Tank Stored Product :	Other Substance
Client Tank Number :	1009
AST Base Material :	On Ground
Piping Material :	Steel/Iron
Piping Material Desc:	Not reported
Second Contain Tank :	Exterior Liner Tank
Second Contain Pipe :	None
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	2
Tank Status Code :	Active
Tank Storage Capacity :	12000
Tank Registration Date :	12/02/1999 00:00:00
Unregulated Tank Registration Date :	12/02/1999 00:00:00
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Not reported
Program Interest Id :	206973
Address Id :	273298
MPCA Tank Number :	1010
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	12/02/1999 08:33:00
Date Last Updated :	05/04/2002 08:39:25
Piping Cathodic Protection :	None
Tank Cathodic Protection :	None
Tank Stored Product :	Other Substance
Client Tank Number :	1010
AST Base Material :	On Ground
Piping Material :	Steel/Iron
Piping Material Desc:	Not reported
Second Contain Tank :	Exterior Liner Tank
Second Contain Pipe :	None
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	2
Tank Status Code :	Active
Tank Storage Capacity :	12000
Tank Registration Date :	12/02/1999 00:00:00
Unregulated Tank Registration Date :	12/02/1999 00:00:00
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Not reported
Program Interest Id :	206973
Address Id :	273298

CURTIS OIL AND TIRE (Continued) **1000413744**

MPCA Tank Number :	1011
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	12/02/1999 08:34:56
Date Last Updated :	05/04/2002 08:39:25
Piping Cathodic Protection :	None
Tank Cathodic Protection :	None
Tank Stored Product :	Other Substance
Client Tank Number :	1011
AST Base Material :	On Ground
Piping Material :	Steel/Iron
Piping Material Desc:	Not reported
Second Contain Tank :	Exterior Liner Tank
Second Contain Pipe :	None
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	2
Tank Status Code :	Active
Tank Storage Capacity :	30000
Tank Registration Date :	12/02/1999 00:00:00
Unregulated Tank Registration Date :	12/02/1999 00:00:00
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Not reported
Program Interest Id :	206973
Address Id :	273298
MPCA Tank Number :	1012
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	12/02/1999 08:36:21
Date Last Updated :	05/04/2002 08:39:25
Piping Cathodic Protection :	None
Tank Cathodic Protection :	None
Tank Stored Product :	Gasoline
Client Tank Number :	1012
AST Base Material :	On Ground
Piping Material :	Steel/Iron
Piping Material Desc:	Not reported
Second Contain Tank :	Exterior Liner Tank
Second Contain Pipe :	None
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	2
Tank Status Code :	Active
Tank Storage Capacity :	6000
Tank Registration Date :	12/02/1999 00:00:00
Unregulated Tank Registration Date :	12/02/1999 00:00:00
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported

CURTIS OIL AND TIRE (Continued) **1000413744**

Staff Id Who Did The Last Update :	TANKS
In Compliance :	Not reported
Program Interest Id :	206973
Address Id :	273298
MPCA Tank Number :	1013
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	12/02/1999 08:37:22
Date Last Updated :	05/04/2002 08:39:25
Piping Cathodic Protection :	None
Tank Cathodic Protection :	None
Tank Stored Product :	Diesel
Client Tank Number :	1013
AST Base Material :	On Ground
Piping Material :	Steel/Iron
Piping Material Desc:	Not reported
Second Contain Tank :	Exterior Liner Tank
Second Contain Pipe :	None
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	2
Tank Status Code :	Active
Tank Storage Capacity :	4000
Tank Registration Date :	12/02/1999 00:00:00
Unregulated Tank Registration Date :	12/02/1999 00:00:00
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Not reported
Program Interest Id :	206973
Address Id :	273298
MPCA Tank Number :	1007
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:33
Date Last Updated :	05/04/2002 08:39:25
Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Not reported
Tank Stored Product :	Antifreeze
Client Tank Number :	1013
AST Base Material :	On Ground
Piping Material :	Steel/Iron
Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Removed
Tank Storage Capacity :	6000
Tank Registration Date :	05/16/1997 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported

CURTIS OIL AND TIRE (Continued) **1000413744**

Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Not reported
Program Interest Id :	206973
Address Id :	273298
MPCA Tank Number :	1006
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:33
Date Last Updated :	05/04/2002 08:39:25
Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Not reported
Tank Stored Product :	Gasoline
Client Tank Number :	1012
AST Base Material :	On Ground
Piping Material :	Steel/Iron
Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Active
Tank Storage Capacity :	12000
Tank Registration Date :	04/16/1997 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Not reported
Program Interest Id :	206973
Address Id :	273298
MPCA Tank Number :	1005
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:33
Date Last Updated :	05/04/2002 08:39:25
Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Not reported
Tank Stored Product :	Gasoline
Client Tank Number :	1011
AST Base Material :	On Ground
Piping Material :	Steel/Iron
Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Metal
Tank Dispenser Code :	Not reported

CURTIS OIL AND TIRE (Continued) **1000413744**

Tank Status Code :	Active
Tank Storage Capacity :	12000
Tank Registration Date :	04/16/1997 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Not reported
Program Interest Id :	206973
Address Id :	273298
MPCA Tank Number :	1004
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:33
Date Last Updated :	05/04/2002 08:39:25
Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Not reported
Tank Stored Product :	Gasoline
Client Tank Number :	1010
AST Base Material :	On Ground
Piping Material :	Steel/Iron
Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Active
Tank Storage Capacity :	12000
Tank Registration Date :	04/16/1997 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Not reported
Program Interest Id :	206973
Address Id :	273298
MPCA Tank Number :	1003
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:33
Date Last Updated :	05/04/2002 08:39:25
Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Not reported
Tank Stored Product :	Fuel Oil
Client Tank Number :	1009
AST Base Material :	On Ground
Piping Material :	Steel/Iron

CURTIS OIL AND TIRE (Continued) **1000413744**

Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Removed
Tank Storage Capacity :	6000
Tank Registration Date :	04/16/1997 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Not reported
Program Interest Id :	206973
Address Id :	273298
MPCA Tank Number :	1002
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:33
Date Last Updated :	05/04/2002 08:39:25
Piping Cathodic Protection :	Not reported
Tank Cathodic Protection :	Not reported
Tank Stored Product :	Fuel Oil
Client Tank Number :	1008
AST Base Material :	On Ground
Piping Material :	Steel/Iron
Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Removed
Tank Storage Capacity :	15000
Tank Registration Date :	04/16/1997 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Not reported
Program Interest Id :	206973
Address Id :	273298
MPCA Tank Number :	1001
Above/ Under Ground :	Above Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:33
Date Last Updated :	05/04/2002 08:39:25
Piping Cathodic Protection :	Not reported

CURTIS OIL AND TIRE (Continued) **1000413744**

Tank Cathodic Protection :	Not reported
Tank Stored Product :	Gasoline
Client Tank Number :	1007
AST Base Material :	On Ground
Piping Material :	Steel/Iron
Piping Material Desc:	STEEL/IRON
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Metal
Tank Dispenser Code :	Not reported
Tank Status Code :	Removed
Tank Storage Capacity :	19000
Tank Registration Date :	04/16/1997 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Not reported

The MN AST database may contain additional details for this site.
Please click here or contact your EDR Account Executive for more information.

12
SSW
1/4-1/2
1664 ft.

MILLER TRUNK FOOD-N-FUEL
4991 MILLER TRUNK HWY
HERMANTOWN, MN 55811

UST U000275693
LUST N/A

Relative:
Equal

Actual:
1413 ft.

LUST:

Leak ID:	11321
MPCA ID:	223736
Report Date:	5/25/1998
Closed Date:	9/14/1998
Contact:	JACK CURTIS
Legal Entity:	CURTIS OIL & TIRE

UST:

Program Interest Id :	195114
Address Id :	193909
MPCA Tank Number :	011
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:25
Date Last Updated :	05/04/2002 07:59:10
Piping Cathodic Protection :	Anode
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Gasoline
Client Tank Number :	011
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	STI-P3
Tank Dispenser Code :	2
Tank Status Code :	Removed

MILLER TRUNK FOOD-N-FUEL (Continued) **U000275693**

Tank Storage Capacity :	2000
Tank Registration Date :	11/15/1986 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	U
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	195114
Address Id :	193909
MPCA Tank Number :	009
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:10
Date Last Updated :	05/04/2002 07:59:10
Piping Cathodic Protection :	Anode
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Gasoline
Client Tank Number :	009
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	STI-P3
Tank Dispenser Code :	1
Tank Status Code :	Reconditioned
Tank Storage Capacity :	4000
Tank Registration Date :	11/15/1986 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	U
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	195114
Address Id :	193909
MPCA Tank Number :	006
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:33
Date Last Updated :	05/04/2002 07:59:10
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Fuel Oil
Client Tank Number :	006
AST Base Material :	Not reported
Piping Material :	Galvanized steel

MILLER TRUNK FOOD-N-FUEL (Continued) **U000275693**

Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	2
Tank Status Code :	Removed
Tank Storage Capacity :	2000
Tank Registration Date :	04/24/1986 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Y
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	195114
Address Id :	193909
MPCA Tank Number :	007
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:34
Date Last Updated :	05/04/2002 07:59:10
Piping Cathodic Protection :	Anode
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Gasoline
Client Tank Number :	007
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	STI-P3
Tank Dispenser Code :	1
Tank Status Code :	Reconditioned
Tank Storage Capacity :	8000
Tank Registration Date :	09/22/1986 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	U
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	195114
Address Id :	193909
MPCA Tank Number :	002
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:17
Date Last Updated :	05/04/2002 07:59:10
Piping Cathodic Protection :	None
Piping Material Description :	Not reported

MILLER TRUNK FOOD-N-FUEL (Continued) U000275693

Tank Cathodic Protection :	Anode
Tank Stored Product :	Gasoline
Client Tank Number :	002
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	2
Tank Status Code :	Removed
Tank Storage Capacity :	4000
Tank Registration Date :	04/24/1986 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	U
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	195114
Address Id :	193909
MPCA Tank Number :	010
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:17
Date Last Updated :	05/04/2002 07:59:10
Piping Cathodic Protection :	Anode
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Diesel
Client Tank Number :	010
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	STI-P3
Tank Dispenser Code :	1
Tank Status Code :	Reconditioned
Tank Storage Capacity :	4000
Tank Registration Date :	11/15/1986 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	U
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	195114
Address Id :	193909
MPCA Tank Number :	004
Above/ Under Ground :	Under Ground

MILLER TRUNK FOOD-N-FUEL (Continued) **U000275693**

Serial Number :	Not reported
Date Added :	10/10/1999 10:56:41
Date Last Updated :	05/04/2002 07:59:10
Piping Cathodic Protection :	Anode
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Diesel
Client Tank Number :	004
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	STI-P3
Tank Dispenser Code :	2
Tank Status Code :	Removed
Tank Storage Capacity :	10000
Tank Registration Date :	04/24/1986 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	U
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes

Program Interest Id :	195114
Address Id :	193909
MPCA Tank Number :	008
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:21
Date Last Updated :	05/04/2002 07:59:10
Piping Cathodic Protection :	Anode
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Gasoline
Client Tank Number :	008
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	STI-P3
Tank Dispenser Code :	1
Tank Status Code :	Reconditioned
Tank Storage Capacity :	8000
Tank Registration Date :	09/22/1986 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	U
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes

MILLER TRUNK FOOD-N-FUEL (Continued) **U000275693**

Program Interest Id :	195114
Address Id :	193909
MPCA Tank Number :	003
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:47
Date Last Updated :	05/04/2002 07:59:10
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Gasoline
Client Tank Number :	003
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	2
Tank Status Code :	Removed
Tank Storage Capacity :	4000
Tank Registration Date :	04/24/1986 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	U
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes

Program Interest Id :	195114
Address Id :	193909
MPCA Tank Number :	005
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:47
Date Last Updated :	05/04/2002 07:59:10
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Diesel
Client Tank Number :	005
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	2
Tank Status Code :	Removed
Tank Storage Capacity :	4000
Tank Registration Date :	04/24/1986 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	U
Haz Waste Generator Id :	Not reported

MILLER TRUNK FOOD-N-FUEL (Continued) **U000275693**

Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	195114
Address Id :	193909
MPCA Tank Number :	013
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	06/11/2002 14:22:40
Date Last Updated :	06/11/2002 14:23:47
Piping Cathodic Protection :	4
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Diesel
Client Tank Number :	Not reported
AST Base Material :	Not reported
Piping Material :	Flexible
Second Contain Tank :	Not reported
Second Contain Pipe :	Doublewall Pipe
Tank Construction Material :	STI-P3
Tank Dispenser Code :	1
Tank Status Code :	Active
Tank Storage Capacity :	12000
Tank Registration Date :	06/10/2002 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	JHENRY
In Compliance :	Yes
Program Interest Id :	195114
Address Id :	193909
MPCA Tank Number :	014
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	06/11/2002 14:24:29
Date Last Updated :	06/11/2002 14:25:25
Piping Cathodic Protection :	4
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Diesel
Client Tank Number :	Not reported
AST Base Material :	Not reported
Piping Material :	Flexible
Second Contain Tank :	Not reported
Second Contain Pipe :	Doublewall Pipe
Tank Construction Material :	STI-P3
Tank Dispenser Code :	1
Tank Status Code :	Active
Tank Storage Capacity :	2000

MILLER TRUNK FOOD-N-FUEL (Continued) **U000275693**

Tank Registration Date :	06/10/2002 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Not reported
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	JHENRY
In Compliance :	Yes
Program Interest Id :	195114
Address Id :	193909
MPCA Tank Number :	012
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:55
Date Last Updated :	05/04/2002 07:59:10
Piping Cathodic Protection :	Anode
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Kerosene
Client Tank Number :	012
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	STI-P3
Tank Dispenser Code :	2
Tank Status Code :	Removed
Tank Storage Capacity :	1000
Tank Registration Date :	11/15/1986 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	U
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes
Program Interest Id :	195114
Address Id :	193909
MPCA Tank Number :	001
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:02
Date Last Updated :	05/04/2002 07:59:10
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	Anode
Tank Stored Product :	Gasoline
Client Tank Number :	001
AST Base Material :	Not reported
Piping Material :	Galvanized steel
Second Contain Tank :	Not reported

MILLER TRUNK FOOD-N-FUEL (Continued) U000275693

Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	2
Tank Status Code :	Removed
Tank Storage Capacity :	4000
Tank Registration Date :	04/24/1986 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	U
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes

The MN UST database may contain additional details for this site.
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C13
WSW
1/4-1/2
1893 ft.

PELLA WINDOWS AND DOORS
5033 MILLER TRUNK HWY
DULUTH, MN 55802

LUST S102834536
N/A

Site 1 of 2 in cluster C

Relative: Higher

Actual: 1420 ft.

LUST:

Leak ID:	10710
MPCA ID:	223140
Report Date:	9/3/1997
Closed Date:	2/7/2000
Contact:	DAN BERGERSON
Legal Entity:	PELLA WINDOWS AND DOORS

C14
WSW
1/4-1/2
1981 ft.

BILLMAN CONSTRUCTION COMPANY
5010 MILLER TRUNK HWY
HERMANTOWN, MN 55811

LUST 1004272461
N/A

Site 2 of 2 in cluster C

Relative: Higher

Actual: 1421 ft.

LUST:

Leak ID:	14598
MPCA ID:	232998
Report Date:	1/9/2002
Closed Date:	10/7/2002
Contact:	Same
Legal Entity:	Donn Billman

15
West
1/4-1/2
2157 ft.

KOLAR GARAGE
5020 MILLER TRUNK HIGHWAY
HERMANTOWN, MN 55811

LUST S103461548
N/A

Relative: Higher

Actual: 1423 ft.

LUST:

Leak ID:	11105
MPCA ID:	223527
Report Date:	2/20/1998
Closed Date:	10/14/1998
Contact:	PETER KOLAR

KOLAR GARAGE (Continued) — S103461548

Legal Entity: KOLAR BUICK

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16 ESE 1/4-1/2 2312 ft. — **OLD MUNICIPAL HANGER**, **4516 AIRPORT APPROACH RD**, **DULUTH, MN 55811** — LUST — S104168785, N/A

Relative: Higher
Actual: 1417 ft.

LUST:
- Leak ID: 12924
- MPCA ID: 225301
- Report Date: Not reported
- Closed Date: Not reported
- Contact: HANK STORM
- Legal Entity: DULUTH AIRPORT AUTHORITY

D17 ESE 1/4-1/2 2334 ft. — **NOAA STATION - DULUTH INT'L AI**, **4525 AIRPORT APPROACH RD**, **DULUTH, MN 55811** — LUST — S103910182, N/A

Site 1 of 2 in cluster D

Relative: Higher
Actual: 1418 ft.

LUST:
- Leak ID: 9696
- MPCA ID: 222219
- Report Date: 10/1/1996
- Closed Date: 7/21/1997
- Contact: JOE BURTON
- Legal Entity: NOAA

D18 ESE 1/4-1/2 2339 ft. — **OLD TERMINAL**, **4525 AIRPORT APPROACH RD**, **DULUTH, MN 55811** — LUST — S104168654, N/A

Site 2 of 2 in cluster D

Relative: Higher
Actual: 1418 ft.

LUST:
- Leak ID: 12506
- MPCA ID: 224893
- Report Date: 10/13/1998
- Closed Date: Not reported
- Contact: HANK STORMS
- Legal Entity: DULUTH AIRPORT AUTHORITY

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19 East 1/4-1/2 2453 ft. — **MN AIR NATIONAL GUARD BASE**, **DULUTH INTERNATIONAL AIRPORT**, **DULUTH, MN 55811** — LUST — S100831885, N/A

Relative: Higher
Actual: 1414 ft.

LUST:
- Leak ID: 7131
- MPCA ID: 219753
- Report Date: 1/3/1994
- Closed Date: 7/30/1996
- Contact: CAPT. STEVE WABROWITZ
- Legal Entity: MN AIR NATIONAL GUARD

MN AIR NATIONAL GUARD BASE (Continued) **S100831885**

20
West
1/4-1/2
2508 ft.

MINER'S INCORPORATED
5065 MILLER TRUNK HWY
HERMANTOWN, MN 55811

UST U002291930
LUST N/A

Relative:
Higher

Actual:
1432 ft.

LUST:

Leak ID:	9029
MPCA ID:	221578
Report Date:	12/7/1995
Closed Date:	4/8/1997
Contact:	KIP MAJESKI
Legal Entity:	MINER'S INCORPORATED

UST:

Program Interest Id :	206555
Address Id :	184523
MPCA Tank Number :	003
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:22
Date Last Updated :	05/04/2002 08:38:01
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	None
Tank Stored Product :	Fuel Oil
Client Tank Number :	003
AST Base Material :	Not reported
Piping Material :	Steel/Iron
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	2
Tank Status Code :	Removed
Tank Storage Capacity :	1000
Tank Registration Date :	11/28/1995 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	Y
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	Yes

Program Interest Id :	206555
Address Id :	184523
MPCA Tank Number :	002
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:57:22
Date Last Updated :	05/04/2002 08:38:01
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	None
Tank Stored Product :	Diesel
Client Tank Number :	002
AST Base Material :	Not reported

MINER'S INCORPORATED (Continued) U002291930

Piping Material :	Steel/Iron
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	1
Tank Status Code :	Removed
Tank Storage Capacity :	10000
Tank Registration Date :	11/28/1995 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	N
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	No

Program Interest Id :	206555
Address Id :	184523
MPCA Tank Number :	001
Above/ Under Ground :	Under Ground
Serial Number :	Not reported
Date Added :	10/10/1999 10:56:52
Date Last Updated :	05/04/2002 08:38:01
Piping Cathodic Protection :	None
Piping Material Description :	Not reported
Tank Cathodic Protection :	None
Tank Stored Product :	Gasoline
Client Tank Number :	001
AST Base Material :	Not reported
Piping Material :	Steel/Iron
Second Contain Tank :	Not reported
Second Contain Pipe :	Not reported
Tank Construction Material :	Bare/Paint/Asph Coat Steel
Tank Dispenser Code :	1
Tank Status Code :	Removed
Tank Storage Capacity :	10000
Tank Registration Date :	11/28/1995 00:00:00
Unregulated Tank Registration Date :	Not reported
Compartmental Tank Flag :	Not reported
Heating Product Flag :	N
Haz Waste Generator Id :	Not reported
Product Replaced Date :	Not reported
Sludge Disposal Facility :	Not reported
Comments :	Not reported
Staff Id Who Did The Last Update :	TANKS
In Compliance :	No

The MN UST database may contain additional details for this site.
Please click here or contact your EDR Account Executive for more information.

E21
NE
1/4-1/2
2589 ft.

DULUTH AIR FORCE BASE
HWY 53
DULUTH, MN 55728

Database(s): **RCRIS-SQG, FINDS, LUST**
EDR ID Number: **1000867413**
EPA ID Number: **MN6210890566**

Site 1 of 2 in cluster E

Relative: Higher

Actual: 1420 ft.

RCRIS:
Owner: US ARMY CORPS OF ENGINEERS
(612) 452-2505
EPA ID: MN6210890566
Contact: MARK PASCHKE
(612) 452-2505
Classification: Small Quantity Generator
TSDF Activities: Not reported
Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Resource Conservation and Recovery Act Information system (RCRAINFO)

LUST:
Leak ID: 6647
MPCA ID: 219281
Report Date: 8/11/1993
Closed Date: 3/15/1996
Contact: JOEL ROGERS
Legal Entity: US COPRS OF ENGINEERS

E22
NE
1/4-1/2
2601 ft.

AIRPORT MAINTENANCE GARAGE
DULUTH INTERNATIONAL AIRPORT
DULUTH, MN 55811

Database(s): **LUST**
EDR ID Number: **S100057005**
EPA ID Number: **N/A**

Site 2 of 2 in cluster E

Relative: Higher

Actual: 1420 ft.

LUST:
Leak ID: 4092
MPCA ID: 216819
Report Date: 6/5/1991
Closed Date: 9/27/1994
Contact: WILLIAM WENNBERG
Legal Entity: DULUTH AIRPORT AUTHORITY

23
West
1/4-1/2
2639 ft.

NORTHSIDE TRUCK SALES
5040 MILLER TRUNK HWY
HERMANTOWN, MN 55811

Database(s): **LUST**
EDR ID Number: **S101148106**
EPA ID Number: **N/A**

Relative: Higher

Actual: 1433 ft.

LUST:
Leak ID: 7380
MPCA ID: 219996
Report Date: 5/12/1994
Closed Date: 1/12/1996
Contact: STEVE HEIMBACH
Legal Entity: NORTHSIDE TRUCK SALES

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
DULUTH	1005904173	DULUTH CITY DUMP FORMER	NE 1/4 NW1/4 SEC 8 T50N R14W	55811	CERC-NFRAP
DULUTH	1004731574	TARGET STORES T4 DULUTH	1902 HWY 53	55811	RCRIS-SQG, FINDS
DULUTH	S104990055	DULUTH WINNIPEG & PACIFIC RR	63RD ST. W. / GREEN STREET		MN AGSPILLS
DULUTH	S105164627	DULUTH INTERNATIONAL AIRPORT - BLO	AIRPORT ROAD	55811	MN VIC
DULUTH	S105004383	DULUTH INTERNATIONAL AIRPORT - SIT	AIRPORT ROAD - SITE #102	55811	MN VIC
DULUTH	A100208364	DULUTH AIRPORT MAINTENANCE SHOP	AIRPORT APPROACH RD	55811	AST
DULUTH	1004739344	UNITED PIPING INC	4510 AIRPORT RD/B	55811	RCRIS-SQG, FINDS
DULUTH	S100057037	FEDERAL PRISON	6902 AIRPORT RD	55811	LUST
DULUTH	1004739904	BOBCAT OF DULUTH	4757 W ARROWHEAD RD /SITE B	55811	RCRIS-SQG, FINDS
DULUTH	1004737855	JIFFY LUBE DULUTH	115 E CENTRAL	55811	RCRIS-SQG, FINDS
DULUTH	1004736200	FAA DMS SMO DULUTH MN ASR	DULUTH AIRPORT PROPERTY	55811	RCRIS-SQG, FINDS
DULUTH	S105212029	HOME DEPOT - DULUTH	1101 MALL AVE	55811	MN Enforcement
DULUTH	1004736296	LENSCRAFTERS	1600 MILLER TRUNK HWY SITE K03	55811	RCRIS-SQG, FINDS
DULUTH	1004739523	HERMANTOWN MOLDING & MILLWORK	55191 MILLER TRUNK HWY	55811	RCRIS-SQG, FINDS
DULUTH	1006817208	LONGVIEW INSPECTION INC	4879 MILLER TRUNK HWY	55811	RCRIS-SQG, FINDS
DULUTH	S100057054	KOLAR BUICK USED CAR LOT	615 MILLER TRUNK HIGHWAY	55811	LUST
DULUTH	U003913093	MN OUTDOOR RECREATION	3350 MILLER TRUNK HWY	55811	UST
DULUTH	1000428895	DULUTH TRUCK DRIVING SCHOOL	8222 STEBNER RD	55811	RCRIS-SQG, FINDS
DULUTH	1006814998	U.S. AIR FORCE DULUTH AIR NATL. GU	4680 VIPER ST.	55811	TRIS
DULUTH	S101283751	MCDONALD ELIZABETH	3900 WARGIN RD		LUST, MN Spills
HERMANTOWN	U003864551	AUTO STOP/CONOCO	HWY 53 & HAINES RD	55811	UST
HERMANTOWN	U003852440	HERMANTOWN SERVICE CENTER	5997 MILLER TRUNK HIGHWAY	55811	UST

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Elapsed ASTM days: Provides confirmation that this EDR report meets or exceeds the 90-day updating requirement of the ASTM standard.

FEDERAL ASTM STANDARD RECORDS

NPL: National Priority List
Source: EPA
Telephone: N/A
National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 10/21/03
Date Made Active at EDR: 12/08/03
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 11/03/03
Elapsed ASTM days: 35
Date of Last EDR Contact: 11/03/03

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 6
Telephone: 214-655-6659

EPA Region 8
Telephone: 303-312-6774

Proposed NPL: Proposed National Priority List Sites
Source: EPA
Telephone: N/A

Date of Government Version: 10/14/03
Date Made Active at EDR: 12/08/03
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 12/01/03
Elapsed ASTM days: 7
Date of Last EDR Contact: 11/03/03

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System
Source: EPA
Telephone: 703-413-0223
CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 11/17/03
Date Made Active at EDR: 02/02/04
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 12/22/03
Elapsed ASTM days: 42
Date of Last EDR Contact: 12/22/03

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned
Source: EPA
Telephone: 703-413-0223
As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

Date of Government Version: 11/17/03
Date Made Active at EDR: 02/02/04
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 12/22/03
Elapsed ASTM days: 42
Date of Last EDR Contact: 12/22/03

CORRACTS: Corrective Action Report
Source: EPA
Telephone: 800-424-9346
CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/18/03
Date Made Active at EDR: 02/02/04
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 12/26/03
Elapsed ASTM days: 38
Date of Last EDR Contact: 12/08/03

RCRIS: Resource Conservation and Recovery Information System
Source: EPA
Telephone: 800-424-9346
Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs): generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs): generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs): generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 01/12/04
Date Made Active at EDR: 02/10/04
Database Release Frequency: Varies

Date of Data Arrival at EDR: 01/19/04
Elapsed ASTM days: 22
Date of Last EDR Contact: 01/19/04

ERNS: Emergency Response Notification System
Source: National Response Center, United States Coast Guard
Telephone: 202-260-2342
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/02
Date Made Active at EDR: 02/03/03
Database Release Frequency: Annually

Date of Data Arrival at EDR: 01/27/03
Elapsed ASTM days: 7
Date of Last EDR Contact: 01/26/04

FEDERAL ASTM SUPPLEMENTAL RECORDS

BRS: Biennial Reporting System
Source: EPA/NTIS
Telephone: 800-424-9346
The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/01/01
Database Release Frequency: Biennially

Date of Last EDR Contact: 12/16/03
Date of Next Scheduled EDR Contact: 03/15/04

CONSENT: Superfund (CERCLA) Consent Decrees
Source: EPA Regional Offices
Telephone: Varies
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: N/A
Database Release Frequency: Varies

Date of Last EDR Contact: N/A
Date of Next Scheduled EDR Contact: N/A

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ROD: Records Of Decision
Source: EPA
Telephone: 703-416-0223
Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 07/09/03
Database Release Frequency: Annually

Date of Last EDR Contact: 01/06/04
Date of Next Scheduled EDR Contact: 04/05/04

DELISTED NPL: National Priority List Deletions
Source: EPA
Telephone: N/A
The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 10/21/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 11/03/03
Date of Next Scheduled EDR Contact: 02/02/04

FINDS: Facility Index System/Facility Identification Initiative Program Summary Report
Source: EPA
Telephone: N/A
Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 10/23/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/06/04
Date of Next Scheduled EDR Contact: 04/05/04

HMIRS: Hazardous Materials Information Reporting System
Source: U.S. Department of Transportation
Telephone: 202-366-4555
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/18/03
Database Release Frequency: Annually

Date of Last EDR Contact: 01/19/04
Date of Next Scheduled EDR Contact: 04/19/04

MLTS: Material Licensing Tracking System
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/16/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/06/04
Date of Next Scheduled EDR Contact: 04/05/04

MINES: Mines Master Index File
Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959

Date of Government Version: 11/25/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 12/29/03
Date of Next Scheduled EDR Contact: 03/29/04

NPL LIENS: Federal Superfund Liens
Source: EPA
Telephone: 202-564-4267
Federal Superfund Liens. Under the authority granted the USEPA by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner receives notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/91
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 11/21/03
Date of Next Scheduled EDR Contact: 02/23/04

PADS: PCB Activity Database System
Source: EPA
Telephone: 202-564-3887
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 09/30/03
Database Release Frequency: Annually

Date of Last EDR Contact: 11/12/03
Date of Next Scheduled EDR Contact: 02/09/04

DOD: Department of Defense Sites
Source: USGS
Telephone: 703-648-5920
This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 10/01/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 11/12/03
Date of Next Scheduled EDR Contact: 02/09/04

STORMWATER: Storm Water General Permits
Source: Environmental Protection Agency
Telephone: 202 564-0746
A listing of all facilities with Storm Water General Permits.

Date of Government Version: N/A
Database Release Frequency: Quarterly

Date of Last EDR Contact: N/A
Date of Next Scheduled EDR Contact: N/A

US BROWNFIELDS: A Listing of Brownfields Sites
Source: Environmental Protection Agency
Telephone: 202-566-2777
Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become BCRLF cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 07/15/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 12/17/03
Date of Next Scheduled EDR Contact: 03/15/04

RMP: Risk Management Plans
Source: Environmental Protection Agency
Telephone: 202-564-8600
When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: N/A
Database Release Frequency: N/A

Date of Last EDR Contact: N/A
Date of Next Scheduled EDR Contact: N/A

RAATS: RCRA Administrative Action Tracking System
Source: EPA
Telephone: 202-564-4104
RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/95
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 12/08/03
Date of Next Scheduled EDR Contact: 03/08/04

TRIS: Toxic Chemical Release Inventory System
Source: EPA
Telephone: 202-566-0250
Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/01
Database Release Frequency: Annually

Date of Last EDR Contact: 12/22/03
Date of Next Scheduled EDR Contact: 03/22/04

TSCA: Toxic Substances Control Act
Source: EPA
Telephone: 202-260-5521
Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/02
Database Release Frequency: Every 4 Years

Date of Last EDR Contact: 12/08/03
Date of Next Scheduled EDR Contact: 03/08/04

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
Source: EPA
Telephone: 202-564-2501

Date of Government Version: 10/16/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/22/03
Date of Next Scheduled EDR Contact: 03/22/04

SSTS: Section 7 Tracking Systems
Source: EPA
Telephone: 202-564-5008
Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/01
Database Release Frequency: Annually

Date of Last EDR Contact: 01/19/04
Date of Next Scheduled EDR Contact: 04/19/04

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-564-2501
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/16/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/22/03
Date of Next Scheduled EDR Contact: 03/22/04

STATE OF MINNESOTA ASTM STANDARD RECORDS

SHWS: Superfund Permanent List of Priorities
Source: Minnesota Pollution Control Agency
Telephone: 651-296-6139
State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 06/30/03
Date Made Active at EDR: 08/22/03
Database Release Frequency: Annually

Date of Data Arrival at EDR: 07/31/03
Elapsed ASTM days: 22
Date of Last EDR Contact: 12/10/03

VIC: Voluntary Investigation and Cleanup Program
Source: Minnesota Pollution Control Agency
Telephone: 651-296-7291
Voluntary Investigation and Cleanup (VIC) Program List.

Date of Government Version: 01/06/04
Date Made Active at EDR: 02/03/04
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 01/06/04
Elapsed ASTM days: 28
Date of Last EDR Contact: 01/06/04

SWF/LF: Permitted Solid Waste Disposal Facilities
Source: Minnesota Pollution Control Agency
Telephone: 651-296-7276
Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 12/16/03
Date Made Active at EDR: 02/03/04
Database Release Frequency: Varies

Date of Data Arrival at EDR: 12/17/03
Elapsed ASTM days: 48
Date of Last EDR Contact: 12/12/03

LUST: Leak Sites
Source: Minnesota Pollution Control Agency
Telephone: 651-649-5451
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 11/17/03
Date Made Active at EDR: 12/05/03
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 11/18/03
Elapsed ASTM days: 17
Date of Last EDR Contact: 11/17/03

UST: Underground Storage Tank Database
Source: Minnesota Pollution Control Agency
Telephone: 651-649-5451
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 09/11/03
Date Made Active at EDR: 11/26/03
Database Release Frequency: Varies

Date of Data Arrival at EDR: 11/03/03
Elapsed ASTM days: 23
Date of Last EDR Contact: 11/03/03

INDIAN UST: Underground Storage Tanks on Indian Land
Source: EPA Region 5
Telephone: 312-886-6136

Date of Government Version: 11/01/02
Date Made Active at EDR: 01/10/03
Database Release Frequency: Varies
Date of Data Arrival at EDR: 11/12/02
Elapsed ASTM days: 59
Date of Last EDR Contact: 11/24/03

STATE OF MINNESOTA ASTM SUPPLEMENTAL RECORDS

AST: Aboveground Storage Tanks
Source: Minnesota Pollution Control Agency
Telephone: 651-296-0930
Registered Aboveground Storage Tanks.

Date of Government Version: 09/11/03
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 11/03/03
Date of Next Scheduled EDR Contact: 02/02/04

SPILLS: Spills Database
Source: Minnesota Pollution Control Agency
Telephone: 651-297-8617

Date of Government Version: 01/17/04
Database Release Frequency: Quarterly
Date of Last EDR Contact: 01/16/04
Date of Next Scheduled EDR Contact: 05/03/04

MN HWS PERMIT: Active TSD Facilities
Source: Minnesota Pollution Control Agency
Telephone: 651-297-8470
Active TSD Facilities.

Date of Government Version: 09/30/03
Database Release Frequency: Annually
Date of Last EDR Contact: 01/12/04
Date of Next Scheduled EDR Contact: 04/12/04

MN Deleted SHWS: Permanent List of Priority Deletions
Source: Minnessota Pollution Control Agency
Telephone: 651-296-6139
The PLP rules specify that to delist a site, either all response actions required at a site have been completed, or that the site no longer poses a threat to public health or welfare or the environment.

Date of Government Version: 06/30/03
Database Release Frequency: Annually
Date of Last EDR Contact: 12/10/03
Date of Next Scheduled EDR Contact: 03/08/04

LCP: Closed Landfills Priority List
Source: Minnesota Pollution Control Agency
Telephone: 651-296-9543
The Minnesota Legislature enacted a law to manage and clean up the state's closed Mixed Municipal Solid Waste Landfills. Under that law, the MPCA is required to create and periodically revise a priority list of qualified landfills, based on the relative health and environmental risks they present. The MPCA established the first such priority list in December, 1994.

Date of Government Version: 07/31/03
Database Release Frequency: Annually
Date of Last EDR Contact: 12/22/03
Date of Next Scheduled EDR Contact: 03/22/04

LS: List of Sites
Source: Minnesota Pollution Control Agency
Telephone: 651-297-2731
The List of Sites includes: Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS), No Further Remedial Action Planned (NFRAP), National Priorities List (NPL), Permanent List of Priorities (PLP), sites delisted from the Permanent List of Priorities (DPLP), Hazardous Waste Permit Unit Project Facilities (HW PERM), List of Permitted Solid Waste Facilities (SW PERM), 1980 Metropolitan Area Waste Disposal Site Inventory (METRO), 1980 Statewide Outstate Dump Inventory (ODI), Voluntary and Investigation Program (VIC), and Closed Landfill Sites Undergoing Cleanup (LCP).

Date of Government Version: 07/30/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 01/21/04
Date of Next Scheduled EDR Contact: 04/19/04

CDL: Clandestine Drug Labs
Source: Department of Health
Telephone: 651-215-5800
This data was passively gathered. That is, the DOH asks law enforcement and other agencies to notify them of Clandestine Drug Labs (CDLs). They do not require reporting of events. Therefore the data represents only a subset of all CDLs. This data has not been verified. The DOH has made no attempt to verify that reported CDLs actually occurred. They have no knowledge if the CDL was involved in cooking or just consisted of chemicals associated with Meth production. The reports they receive are that a suspected CDL was seized.

Date of Government Version: 01/05/04
Database Release Frequency: Varies

Date of Last EDR Contact: 12/17/03
Date of Next Scheduled EDR Contact: 05/24/04

ENFORCEMENT: Generators Associated with Enforcement Logs
Source: Minnesota Pollution Control Agency
Telephone: 651-297-8332
Regulatory Compliance, Hazardous Waste Enforcement Log and Hazardous Waste Permit Unit Project Identification List.

Date of Government Version: 01/14/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/12/04
Date of Next Scheduled EDR Contact: 04/12/04

BULK: Bulk Facilities Database
Source: Department of Agriculture
Telephone: 651-297-3997
Facilities that use bulk pesticides and fertilizers

Date of Government Version: 12/08/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 12/08/03
Date of Next Scheduled EDR Contact: 03/08/04

AG SPILLS: Department of Agriculture Spills
Source: Department of Agriculture
Telephone: 651-297-3997
This data is a list of pesticide/fertilizer incidents reported to have occurred in Minnesota.

Date of Government Version: 10/23/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 12/08/03
Date of Next Scheduled EDR Contact: 03/08/04

EDR PROPRIETARY HISTORICAL DATABASES

Former Manufactured Gas (Coal Gas) Sites: The existence and location of Coal Gas sites is provided exclusively to EDR by Real Property Scan, Inc. ©Copyright 1993 Real Property Scan, Inc. For a technical description of the types of hazards which may be found at such sites, contact your EDR customer service representative.

Disclaimer Provided by Real Property Scan, Inc.

The information contained in this report has predominantly been obtained from publicly available sources produced by entities other than Real Property Scan. While reasonable steps have been taken to insure the accuracy of this report, Real Property Scan does not guarantee the accuracy of this report. Any liability on the part of Real Property Scan is strictly limited to a refund of the amount paid. No claim is made for the actual existence of toxins at any site. This report does not constitute a legal opinion.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

BROWNFIELDS DATABASES

VIC: Voluntary Investigation and Cleanup Program
Source: Minnesota Pollution Control Agency
Telephone: 651-296-7291
Voluntary Investigation and Cleanup (VIC) Program List.

Date of Government Version: 01/06/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/06/04
Date of Next Scheduled EDR Contact: 04/05/04

INST CONTROL: Site Remediation Section Database
Source: Pollution Control Agency
Telephone: 512-296-6300
Sites that have an Institutional Control event.

Date of Government Version: 01/06/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/06/04
Date of Next Scheduled EDR Contact: 04/05/04

US BROWNFIELDS: A Listing of Brownfields Sites
Source: Environmental Protection Agency
Telephone: 202-566-2777
Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become BCRLF cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: N/A
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: N/A
Date of Next Scheduled EDR Contact: N/A

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: PennWell Corporation
Telephone: (800) 823-6277
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Child Care Centers
Source: Department of Human Services
Telephone: 651-296-3971

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

STREET AND ADDRESS INFORMATION

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GEOCHECK®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

DULUTH IAP
4973 AIRPORT RD
DULUTH, MN 55811

TARGET PROPERTY COORDINATES

Latitude (North):	46.836899 - 46° 50' 12.8"
Longitude (West):	92.201302 - 92° 12' 4.7"
Universal Tranverse Mercator:	Zone 15
UTM X (Meters):	560907.9
UTM Y (Meters):	5187131.0
Elevation:	1413 ft. above sea level

EDR's GeoCheck Physical Setting Source Addendum has been developed to assist the environmental professional with the collection of physical setting source information in accordance with ASTM 1527-00, Section 7.2.3. Section 7.2.3 requires that a current USGS 7.5 Minute Topographic Map (or equivalent, such as the USGS Digital Elevation Model) be reviewed. It also requires that one or more additional physical setting sources be sought when (1) conditions have been identified in which hazardous substances or petroleum products are likely to migrate to or from the property, and (2) more information than is provided in the current USGS 7.5 Minute Topographic Map (or equivalent) is generally obtained, pursuant to local good commercial or customary practice, to assess the impact of migration of recognized environmental conditions in connection with the property. Such additional physical setting sources generally include information about the topographic, hydrologic, hydrogeologic, and geologic characteristics of a site, and wells in the area.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata. EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

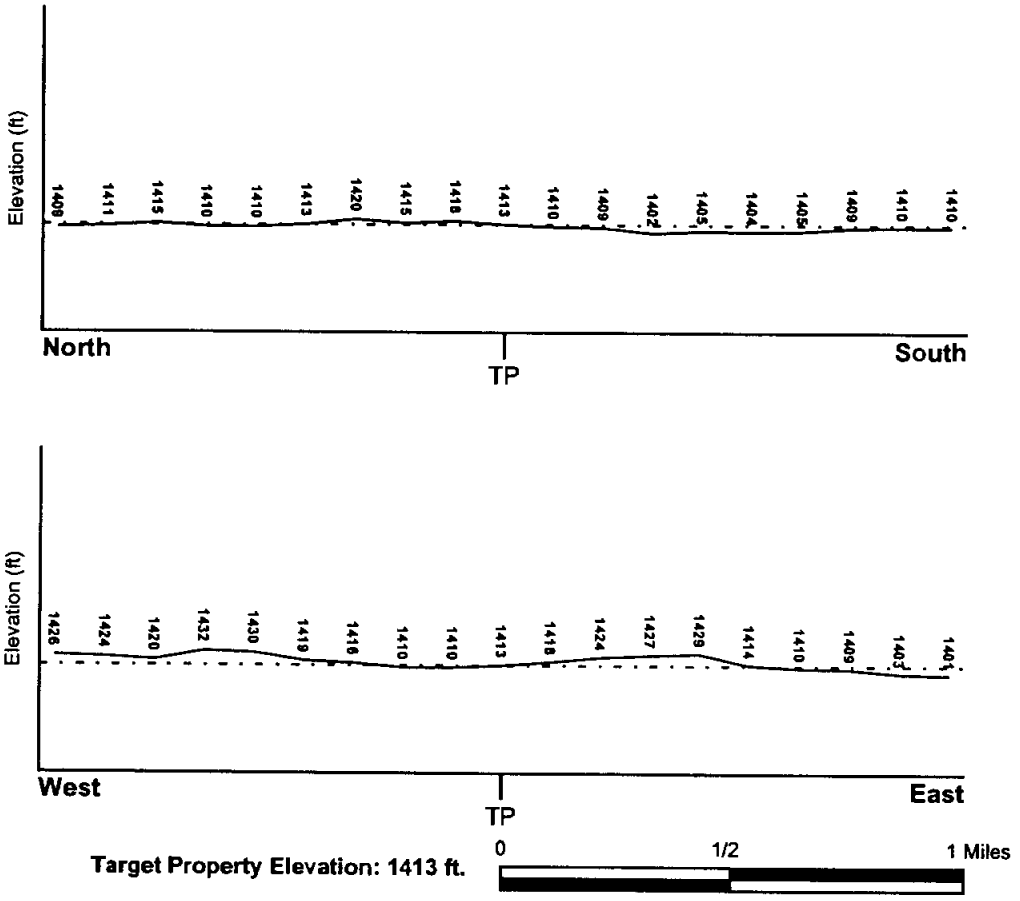
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

USGS Topographic Map:	46092-G2 DULUTH HEIGHTS, MN
General Topographic Gradient:	General WSW
Source:	USGS 7.5 min quad index

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
ST LOUIS, MN	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property:	2704210020B
Additional Panels in search area:	2707401600C 2707080003B 2707080006B

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
DULUTH HEIGHTS	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site-specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Precambrian
System:	Precambrian
Series:	Mafic intrusives
Code:	Ymi *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Plutonic and Intrusive Rocks

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name: AHMEEK

Soil Surface Texture: loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Not reported

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: MODERATE

Depth to Bedrock Min: > 60 inches

Depth to Bedrock Max: > 60 inches

Soil Layer Information

	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	2 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 2.00 Min: 0.60	Max: 6.00 Min: 4.50

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
2	2 inches	14 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 2.00 Min: 0.60	Max: 6.00 Min: 4.50
3	14 inches	33 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 0.20 Min: 0.00	Max: 6.50 Min: 5.10
4	33 inches	60 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 0.06 Min: 0.00	Max: 7.30 Min: 6.10

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: fine sandy loam
muck
sandy loam
loamy fine sand
silt loam
mucky-peat

Surficial Soil Types: fine sandy loam
muck
sandy loam
loamy fine sand
silt loam
mucky-peat

Shallow Soil Types: sandy loam
mucky - silt loam
loam

Deeper Soil Types: sandy loam
muck
loam
sand
gravelly - sandy loam
stratified
hemic material
mucky-peat

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

ADDITIONAL ENVIRONMENTAL RECORD SOURCES

According to ASTM E 1527-00, Section 7.2.2, "one or more additional state or local sources of environmental records may be checked, in the discretion of the environmental professional, to enhance and supplement federal and state sources... Factors to consider in determining which local or additional state records, if any, should be checked include (1) whether they are reasonably ascertainable, (2) whether they are sufficiently useful, accurate, and complete in light of the objective of the records review (see 7.1.1), and (3) whether they are obtained, pursuant to local, good commercial or customary practice." One of the record sources listed in Section 7.2.2 is water well information. Water well information can be used to assist the environmental professional in assessing sources that may impact groundwater flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
4	USGS0512927	1/4 - 1/2 Mile SW
10	USGS0512905	1/4 - 1/2 Mile South
11	USGS0512904	1/4 - 1/2 Mile SSE
12	USGS0512910	1/4 - 1/2 Mile WSW
13	USGS0512908	1/4 - 1/2 Mile SW
D18	USGS0512902	1/4 - 1/2 Mile SSE
D19	USGS0512853	1/4 - 1/2 Mile SSE
24	USGS0512935	1/2 - 1 Mile West
H40	USGS0512851	1/2 - 1 Mile SSE
41	USGS0512999	1/2 - 1 Mile West
H45	USGS0512849	1/2 - 1 Mile SE
J46	USGS0512914	1/2 - 1 Mile West
K47	USGS0519017	1/2 - 1 Mile South
J48	USGS0512936	1/2 - 1 Mile West
K49	USGS0512895	1/2 - 1 Mile South
L50	USGS0512932	1/2 - 1 Mile WSW
51	USGS0512844	1/2 - 1 Mile South
52	USGS0512955	1/2 - 1 Mile NNW
L53	USGS0512928	1/2 - 1 Mile WSW
M54	USGS0512931	1/2 - 1 Mile WSW
55	USGS0512915	1/2 - 1 Mile West
M58	USGS0512909	1/2 - 1 Mile WSW
59	USGS0512839	1/2 - 1 Mile SSW
60	USGS0512903	1/2 - 1 Mile WSW
62	USGS0512929	1/2 - 1 Mile WSW
63	USGS0512497	1/2 - 1 Mile West
64	USGS0512842	1/2 - 1 Mile SSE
Q111	USGS0512994	1/2 - 1 Mile West
112	USGS0512960	1/2 - 1 Mile NNW
Q121	USGS0512995	1/2 - 1 Mile West

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
122	USGS0512846	1/2 - 1 Mile SW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	3069194750	0 - 1/8 Mile NW
2	3069194785	1/8 - 1/4 Mile NNW
3	3069194784	1/8 - 1/4 Mile NW
A5	3069194789	1/4 - 1/2 Mile West
A6	3069456916	1/4 - 1/2 Mile West
B7	3069194786	1/4 - 1/2 Mile WNW
B8	3069194787	1/4 - 1/2 Mile WNW
B9	3069194788	1/4 - 1/2 Mile WNW
C14	3069194791	1/4 - 1/2 Mile West
C15	3069194790	1/4 - 1/2 Mile West
C16	3069194793	1/4 - 1/2 Mile West
C17	3069194792	1/4 - 1/2 Mile West
E20	3069446907	1/4 - 1/2 Mile East
E21	3069446908	1/4 - 1/2 Mile East
E22	3069446909	1/4 - 1/2 Mile East
E23	3069446906	1/4 - 1/2 Mile East
F25	3069494738	1/2 - 1 Mile NNW
F26	3069494739	1/2 - 1 Mile NNW
F27	3069526111	1/2 - 1 Mile NNW
F28	3069494740	1/2 - 1 Mile NNW
F29	3069526115	1/2 - 1 Mile NNW
F30	3069494737	1/2 - 1 Mile NNW
F31	3069494733	1/2 - 1 Mile NNW
F32	3069494732	1/2 - 1 Mile NNW
F33	3069494734	1/2 - 1 Mile NNW
F34	3069494736	1/2 - 1 Mile NNW
F35	3069494735	1/2 - 1 Mile NNW
G36	3069456918	1/2 - 1 Mile North
G37	3069194820	1/2 - 1 Mile North
G38	3069194749	1/2 - 1 Mile North
G39	3069194748	1/2 - 1 Mile North
I42	3069539659	1/2 - 1 Mile SSW
I43	3069540873	1/2 - 1 Mile SSW
I44	3069540874	1/2 - 1 Mile SSW
N56	3069456919	1/2 - 1 Mile NW
N57	3069456920	1/2 - 1 Mile NW

STATE DATABASE WELL INFORMATION

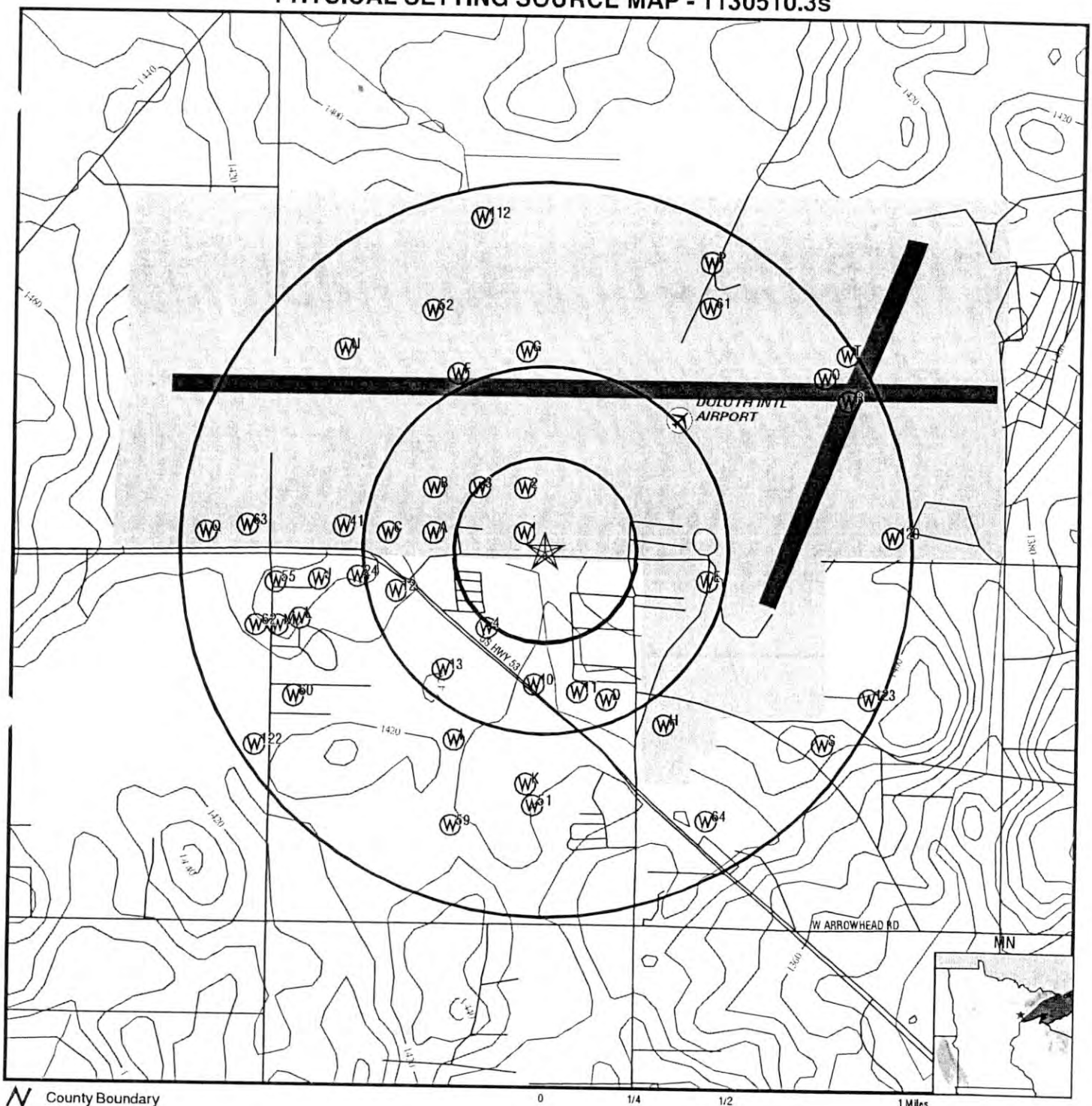
MAP ID	WELL ID	LOCATION FROM TP
61	3069194799	1/2 - 1 Mile NNE
O65	3069452789	1/2 - 1 Mile ENE
O66	3069452788	1/2 - 1 Mile ENE
O67	3069452790	1/2 - 1 Mile ENE
O68	3069452792	1/2 - 1 Mile ENE
O69	3069452791	1/2 - 1 Mile ENE
O70	3069452787	1/2 - 1 Mile ENE
O71	3069452782	1/2 - 1 Mile ENE
O72	3069448224	1/2 - 1 Mile ENE
O73	3069452783	1/2 - 1 Mile ENE
O74	3069452785	1/2 - 1 Mile ENE
O75	3069452784	1/2 - 1 Mile ENE
O76	3069452793	1/2 - 1 Mile ENE
O77	3069452801	1/2 - 1 Mile ENE
O78	3069452800	1/2 - 1 Mile ENE
O79	3069452802	1/2 - 1 Mile ENE
O80	3069452804	1/2 - 1 Mile ENE
O81	3069452803	1/2 - 1 Mile ENE
O82	3069452799	1/2 - 1 Mile ENE
O83	3069452795	1/2 - 1 Mile ENE
O84	3069452794	1/2 - 1 Mile ENE
O85	3069452796	1/2 - 1 Mile ENE
O86	3069452798	1/2 - 1 Mile ENE
O87	3069452797	1/2 - 1 Mile ENE
O88	3069448209	1/2 - 1 Mile ENE
O89	3069448208	1/2 - 1 Mile ENE
O90	3069448210	1/2 - 1 Mile ENE
O91	3069448212	1/2 - 1 Mile ENE
O92	3069448211	1/2 - 1 Mile ENE
O93	3069448203	1/2 - 1 Mile ENE
O94	3069448202	1/2 - 1 Mile ENE
O95	3069448204	1/2 - 1 Mile ENE
O96	3069448206	1/2 - 1 Mile ENE
O97	3069448205	1/2 - 1 Mile ENE
O98	3069448213	1/2 - 1 Mile ENE
O99	3069448220	1/2 - 1 Mile ENE
O100	3069448219	1/2 - 1 Mile ENE
O101	3069448221	1/2 - 1 Mile ENE
O102	3069448223	1/2 - 1 Mile ENE
O103	3069448222	1/2 - 1 Mile ENE
O104	3069448215	1/2 - 1 Mile ENE
O105	3069448214	1/2 - 1 Mile ENE
O106	3069448216	1/2 - 1 Mile ENE
O107	3069448218	1/2 - 1 Mile ENE
O108	3069448217	1/2 - 1 Mile ENE
P109	3069194798	1/2 - 1 Mile NNE
P110	3069194797	1/2 - 1 Mile NNE
R113	3069456893	1/2 - 1 Mile ENE
R114	3069456894	1/2 - 1 Mile ENE
R115	3069456895	1/2 - 1 Mile ENE
R116	3069456892	1/2 - 1 Mile ENE
S117	3069486983	1/2 - 1 Mile SE

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
S118	3069486982	1/2 - 1 Mile SE
S119	3069486981	1/2 - 1 Mile SE
120	3069545638	1/2 - 1 Mile East
123	3069114965	1/2 - 1 Mile ESE
T124	3069194814	1/2 - 1 Mile ENE
T125	3069194815	1/2 - 1 Mile ENE

PHYSICAL SETTING SOURCE MAP - 1130510.3s



- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data

TARGET PROPERTY:	Duluth IAP	CUSTOMER:	EMR - Envtl. Mgmt. Resources
ADDRESS:	4973 Airport Rd	CONTACT:	Tracey Turner
CITY/STATE/ZIP:	Duluth MN 55811	INQUIRY #:	1130510.3s
LAT/LONG:	46.8369 / 92.2013	DATE:	February 18, 2004 11:59 am

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GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
1 **NW** **0 - 1/8 Mile** **Lower**	**MN WELLS**	**3069194750**

Principal Well Information:

Unique Well #:	194750		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	DCD	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	18
Depth Drilled (in Ft.):	18	Date drilled:	12/07/1986
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	AIR NAT.GUARD	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0019	
Casing Diam (in):	2	Depth Cased (in Ft.):	8
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		Not Reported	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		100	
Potential Pollution Source Direction:		SE	
Use:	Monitor Well		
Elevation Method:	Not Reported		

Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	6	Date Static Level measured:	01/12/1987
Static Water Level Data Source/Driller's License #:		M0019	

Remarks:

AIR NATIONAL GUARD BASE, DULUTH
WELL GW8-C

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
2 **NNW** **1/8 - 1/4 Mile** **Higher**	**MN WELLS**	**3069194785**

Principal Well Information:

Unique Well #:	194785		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	DCA	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	13
Depth Drilled (in Ft.):	13	Date drilled:	12/06/1986
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	AIR NAT.GUARD	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0019	
Casing Diam (in):	2	Depth Cased (in Ft.):	3
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		Not Reported	
Potential Pollution Source Type:		Septic Tank/Drain Field	
Potential Pollution Source Distance (in Ft.):		100	
Potential Pollution Source Direction:		S	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	5	Date Static Level measured:	01/12/1987
Static Water Level Data Source/Driller's License #:		M0019	

Remarks:

AIR NATIONAL GUARD BASE, DULUTH
WELL GW8A

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
3 **NW** **1/8 - 1/4 Mile** **Higher**	**MN WELLS**	**3069194784**

Principal Well Information:

Unique Well #:	194784		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	DCB	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	20
Depth Drilled (in Ft.):	20	Date drilled:	12/06/1986
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	AIR NAT.GUARD	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0019	
Casing Diam (in):	2	Depth Cased (in Ft.):	10
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		

Any other Unused, Abandoned Well on Property ?:	Not Reported
Potential Pollution Source Type:	Other
Potential Pollution Source Distance (in Ft.):	250
Potential Pollution Source Direction:	S
Use:	Monitor Well
Elevation Method:	Not Reported
Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address: Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	6	Date Static Level measured:	01/12/1987
Static Water Level Data Source/Driller's License #:		M0019	

Remarks:

AIR NATIONAL GUARD BASE, DULUTH
WELL GW8B

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
4 **SW** **1/4 - 1/2 Mile** **Higher**	**FED USGS**	**USGS0512927**

Agency:	USGS	Site ID:	465002092121601
Site Name:	050N15W11ABC-1		
Dec. Latitude:	46.83383		
Dec. Longitude:	-92.20463		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1415.00		
Hydrologic code:	04010202		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19500101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	17.0		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1957-01-01	0.00	

	Database	EDR ID Number
A5 **West** **1/4 - 1/2 Mile** **Higher**	**MN WELLS**	**3069194789**

Principal Well Information:

Unique Well #:	194789		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	CDD	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	20
Depth Drilled (in Ft.):	20	Date drilled:	12/03/1986
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	AIR NAT.GUARD	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0019	

Casing Diam (in):	2	Depth Cased (in Ft.):	5
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		Not Reported	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		1000	
Potential Pollution Source Direction:		N	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	3	Date Static Level measured:	01/12/1987
Static Water Level Data Source/Driller's License #:		M0019	

Remarks:

AIR NATIONAL GUARD BASE, DULUTH
WELL GW4A

A6
West
1/4 - 1/2 Mile
Higher

MN WELLS **3069456916**

Principal Well Information:

Unique Well #:	456916		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	CDD	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	13
Depth Drilled (in Ft.):	17	Date drilled:	02/08/1992
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	MN NATIONAL GUARD	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0112	

Casing Diam (in):	2	Depth Cased (in Ft.):	3
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		Yes	
Potential Pollution Source Type:		Not Reported	
Potential Pollution Source Distance (in Ft.):		Not Reported	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:		Not Reported	
Indicator that an entry for this well exists in the State Water Use Data System:		Not Reported	
Data exist for this well in the PCA Integrated Ground-Water Information System:		Not Reported	
Indicator of the availability of cuttings, core or downhole geophysical data for this well:		Not Reported	
Indicator of the existence of a digitized UTM location for this well:		Not Reported	

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	Not Reported	Date Static Level measured:	02/07/1992
Static Water Level Data Source/Driller's License #:		M0112	

Remarks:

MN AIR NATIONAL GUARD BASE, DULUTH, MN 55811
WELL 017-008 MW

B7
WNW
1/4 - 1/2 Mile
Lower

MN WELLS **3069194786**

Principal Well Information:

Unique Well #:	194786		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	CDA	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	25
Depth Drilled (in Ft.):	28	Date drilled:	12/03/1986
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	AIR NAT.GUARD	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0019	
Well Name:	BENEDICT, PAT TH-1	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		91353	

Casing Diam (in):	2	Depth Cased (in Ft.):	15
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		Not Reported	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		400	
Potential Pollution Source Direction:		S	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:		Not Reported	
Indicator that an entry for this well exists in the State Water Use Data System:		Not Reported	
Data exist for this well in the PCA Integrated Ground-Water Information System:		Not Reported	
Indicator of the availability of cuttings, core or downhole geophysical data for this well:		Not Reported	
Indicator of the existence of a digitized UTM location for this well:		Not Reported	

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	7	Date Static Level measured:	01/12/1987
Static Water Level Data Source/Driller's License #:		M0019	

Geologic Information:

Geologic Interp. Method:	Not Reported		
Geologic Interpretation Source:		Not Reported	
Geologist Responsible:	Not Reported	Date of Last Update:	05/27/1993

Driller's/Geologic Log Information:

Description of Geologic Materials:	TOP SOIL
Depth to the Top of measured Interval (in Ft.):	0
Hardness of Geologic Materials:	Not Reported
Interpreted Primary Lithography:	ORGANIC DEPOSITS
Secondary Lithography:	Not Reported
Minor Lithography:	Not Reported
Color of Geo. Materials:	BLACK
Stratigraphic Unit:	Holocene Deposits,deposit type unknown or undifferentiated,materials undifferentiated or sorting unknown,black

Description of Geologic Materials:	SANDY CLAY
Depth to the Top of measured Interval (in Ft.):	2
Hardness of Geologic Materials:	Not Reported
Interpreted Primary Lithography:	CLAY
Secondary Lithography:	SAND
Minor Lithography:	Not Reported
Color of Geo. Materials:	GRAY
Stratigraphic Unit:	Pleistocene,clay + sand,materials undifferentiated or sorting unknown,gray

Description of Geologic Materials:	SAND FINE
Depth to the Top of measured Interval (in Ft.):	4
Hardness of Geologic Materials:	Not Reported
Interpreted Primary Lithography:	SAND
Secondary Lithography:	Not Reported
Minor Lithography:	Not Reported
Color of Geo. Materials:	VARIED
Stratigraphic Unit:	Pleistocene,sand,materials undifferentiated or sorting unknown,color unknown or unspedfied

Description of Geologic Materials:	SANDY CLAY
Depth to the Top of measured Interval (in Ft.):	7
Hardness of Geologic Materials:	Not Reported
Interpreted Primary Lithography:	CLAY
Secondary Lithography:	SAND
Minor Lithography:	Not Reported
Color of Geo. Materials:	BLUE
Stratigraphic Unit:	Pleistocene,clay + sand,materials undifferentiated or sorting unknown,gray

Remarks:

AIR NATIONAL GUARD BASE, DULUTH
WELL GW4D

B8
WNW
1/4 - 1/2 Mile
Lower

MN WELLS **3069194787**

Principal Well Information:

Unique Well #:	194787		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	CDA	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	20
Depth Drilled (in Ft.):	20	Date drilled:	12/03/1986
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	AIR NAT.GUARD	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0019	

Casing Diam (in):	2	Depth Cased (in Ft.):	10
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		Not Reported	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		400	
Potential Pollution Source Direction:		SE	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	8	Date Static Level measured:	01/12/1987
Static Water Level Data Source/Driller's License #:		M0019	

Remarks:

AIR NATIONAL GUARD BASE, DULUTH
WELL GW4C

B9
WNW
1/4 - 1/2 Mile
Lower

MN WELLS **3069194788**

Principal Well Information:

Unique Well #:	194788		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	CDA	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	20
Depth Drilled (in Ft.):	20	Date drilled:	12/03/1986
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	AIR NAT.GUARD	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0019	

Casing Diam (in):	2	Depth Cased (in Ft.):	5
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		Not Reported	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		250	
Potential Pollution Source Direction:		E	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	3	Date Static Level measured:	01/12/1987
Static Water Level Data Source/Driller's License #:		M0019	

Remarks:

AIR NATIONAL GUARD BASE, DULUTH
WELL GW4-B

10
South
1/4 - 1/2 Mile
Lower

FED USGS **USGS0512905**

Agency:	USGS	Site ID:	464954092120601
Site Name:	050N15W12BCB		
Dec. Latitude:	46.83161		
Dec. Longitude:	-92.20186		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1410.00		
Hydrologic code:	04010202		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	Not Reported	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		

Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	16.0		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1957-01-01	5.00	

11
SSE
1/4 - 1/2 Mile
Lower

FED USGS **USGS0512904**

Agency:	USGS	Site ID:	464953092115701
Site Name:	050N15W11ADC		
Dec. Latitude:	46.83133		
Dec. Longitude:	-92.19936		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1407.00		
Hydrologic code:	04010202		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19660426	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	42.0		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

12
WSW
1/4 - 1/2 Mile
Higher

FED USGS **USGS0512910**

Agency:	USGS	Site ID:	465007092123501
Site Name:	050N15W11BAB		
Dec. Latitude:	46.83522		
Dec. Longitude:	-92.20991		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1428.00		
Hydrologic code:	04010202		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	Not Reported	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	13.0		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1957-09-16	7.60	

13
SW
1/4 - 1/2 Mile
Higher

FED USGS **USGS0512908**

Agency:	USGS	Site ID:	464956092122501
Site Name:	050N15W11BDA		
Dec. Latitude:	46.83216		
Dec. Longitude:	-92.20713		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1423.00		
Hydrologic code:	04010202		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19120101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	16.0		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1957-01-01	5.00	

C14
West
1/4 - 1/2 Mile
Higher

MN WELLS **3069194791**

Principal Well Information:

Unique Well #:	194791		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	CDC	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	19
Depth Drilled (in Ft.):	19	Date drilled:	12/01/1986
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	AIR NAT.GUARD	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0019	

Casing Diam (in):	2	Depth Cased (in Ft.):	9
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		

Any other Unused, Abandoned Well on Property ?:	Not Reported
Potential Pollution Source Type:	Other
Potential Pollution Source Distance (in Ft.):	15
Potential Pollution Source Direction:	E
Use:	Monitor Well
Elevation Method:	Not Reported
Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	4	Date Static Level measured:	01/12/1987
Static Water Level Data Source/Driller's License #:		M0019	

Remarks:

AIR NATIONAL GUARD BASE, DULUTH
WELL GW3-C

C15
West
1/4 - 1/2 Mile
Higher

MN WELLS **3069194790**

Principal Well Information:

Unique Well #:	194790		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	CDC	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	19
Depth Drilled (in Ft.):	19	Date drilled:	12/02/1986
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	AIR NAT'L. GUARD	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0019	

Casing Diam (in):	2	Depth Cased (in Ft.):	4
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		Not Reported	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		10	
Potential Pollution Source Direction:		SW	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:		Not Reported	
Indicator that an entry for this well exists in the State Water Use Data System:		Not Reported	
Data exist for this well in the PCA Integrated Ground-Water Information System:		Not Reported	
Indicator of the availability of cuttings, core or downhole geophysical data for this well:		Not Reported	
Indicator of the existence of a digitized UTM location for this well:		Not Reported	

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	4	Date Static Level measured:	01/12/1987
Static Water Level Data Source/Driller's License #:		M0019	

Remarks:

AIR NATIONAL GUARD BASE, DULUTH
WELL 6W3-D

C16
West
1/4 - 1/2 Mile
Higher

MN WELLS **3069194793**

Principal Well Information:

Unique Well #:	194793		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	CDC	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	17
Depth Drilled (in Ft.):	17	Date drilled:	11/26/1986
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	AIR NAT.GUARD	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0019	

Casing Diam (in):	2	Depth Cased (in Ft.):	6
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		Not Reported	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		30	
Potential Pollution Source Direction:		NW	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	8	Date Static Level measured:	01/12/1987
Static Water Level Data Source/Driller's License #:		M0019	

Remarks:

AIR NATIONAL GUARD BASE, DULUTH
WELL GW3-A

C17
West
1/4 - 1/2 Mile
Higher

MN WELLS **3069194792**

Principal Well Information:

Unique Well #:	194792		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	CDC	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	20
Depth Drilled (in Ft.):	20	Date drilled:	12/01/1986
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	AIR NAT.GUARD	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0019	

Casing Diam (in):	2	Depth Cased (in Ft.):	5
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		Not Reported	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		10	
Potential Pollution Source Direction:		SE	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	6	Date Static Level measured:	01/12/1987
Static Water Level Data Source/Driller's License #:		M0019	

Remarks:

AIR NATIONAL GUARD BASE, DULUTH
WELL GW 3B

D18
SSE
1/4 - 1/2 Mile
Lower

FED USGS **USGS0512902**

Agency:	USGS	Site ID:	464952092115103
Site Name:	050N15W11ADD03		
Dec. Latitude:	46.83105		
Dec. Longitude:	-92.19769		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1406.00		
Hydrologic code:	04010202		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19670803	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		

Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	43.2		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

D19
SSE
1/4 - 1/2 Mile
Lower

FED USGS **USGS0512853**

Agency:	USGS	Site ID:	464952092115102
Site Name:	050N15W11ADD02		
Dec. Latitude:	46.83105		
Dec. Longitude:	-92.19769		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1406.00		
Hydrologic code:	04010202		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	Not Reported	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	50.0		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

E20
East
1/4 - 1/2 Mile
Higher

MN WELLS **3069446907**

Principal Well Information:

Unique Well #:	446907		
Township:	50	County:	ST. LOUIS
Range:	15	Section	12
Subsection:	BBA	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	24
Depth Drilled (in Ft.):	24	Date drilled:	05/20/1988
Status:	Active	Date of Last Update:	01/14/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0073	

Casing Diam (in):	2	Depth Cased (in Ft.):	19
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Not Reported	
Potential Pollution Source Distance (in Ft.):		Not Reported	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:		Not Reported	
Indicator that an entry for this well exists in the State Water Use Data System:		Not Reported	
Data exist for this well in the PCA Integrated Ground-Water Information System:		Not Reported	
Indicator of the availability of cuttings, core or downhole geophysical data for this well:		Not Reported	
Indicator of the existence of a digitized UTM location for this well:		Not Reported	

Well Address Information:

Well Address: Not Reported

Owner/Contact Address Information:

Owner's Address: Not Reported
DULUTH, MN 55806

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	2	Date Static Level measured:	05/27/1988
Static Water Level Data Source/Driller's License #:		M0073	

Remarks:

3000' NW STEBNER ROAD & HWY. 53, DULUTH
WELL GW9B

E21
East
1/4 - 1/2 Mile
Higher

MN WELLS **3069446908**

Principal Well Information:

Unique Well #:	446908		
Township:	50	County:	ST. LOUIS
Range:	15	Section	12
Subsection:	BBA	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	13
Depth Drilled (in Ft.):	13	Date drilled:	05/19/1988
Status:	Active	Date of Last Update:	01/14/1993
Geographic Coordinates Method:		Not Reported	

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0073	
Casing Diam (in):	2	Depth Cased (in Ft.):	8
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Not Reported	
Potential Pollution Source Distance (in Ft.):		Not Reported	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Owner/Contact Address Information:

Owner's Address:	Not Reported DULUTH, MN 55806

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	3	Date Static Level measured:	05/27/1988
Static Water Level Data Source/Driller's License #:		M0073	

Remarks:

3000' NW STEBNER ROAD & HWY. 53, DULUTH
WELL GW9C

E22
East
1/4 - 1/2 Mile
Higher

MN WELLS **3069446909**

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Principal Well Information:

Unique Well #:	446909		
Township:	50	County:	ST. LOUIS
Range:	15	Section	12
Subsection:	BBA	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	16
Depth Drilled (in Ft.):	16	Date drilled:	05/19/1988
Status:	Active	Date of Last Update:	01/14/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0073	
Casing Diam (in):	2	Depth Cased (in Ft.):	10
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		

Any other Unused, Abandoned Well on Property ?:	No
Potential Pollution Source Type:	Not Reported
Potential Pollution Source Distance (in Ft.):	Not Reported
Potential Pollution Source Direction:	Not Reported
Use: Monitor Well	
Elevation Method: Not Reported	
Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address: Not Reported

Owner/Contact Address Information:

Owner's Address: Not Reported
DULUTH, MN 55806

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	3	Date Static Level measured:	05/27/1988
Static Water Level Data Source/Driller's License #:		M0073	

Remarks:

3000' NW STEBNER ROAD & HWY. 53, DULUTH
WELL GW9D

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
E23 **East** **1/4 - 1/2 Mile** **Higher**	**MN WELLS**	**3069446906**

Principal Well Information:

Unique Well #:	446906		
Township:	50	County:	ST. LOUIS
Range:	15	Section	12
Subsection:	BBA	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	15
Depth Drilled (in Ft.):	15	Date drilled:	05/19/1988
Status:	Active	Date of Last Update:	01/14/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0073	
Casing Diam (in):	2	Depth Cased (in Ft.):	5
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Not Reported	
Potential Pollution Source Distance (in Ft.):		Not Reported	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		

Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address: Not Reported

Owner/Contact Address Information:

Owner's Address: Not Reported
DULUTH, MN 55806

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	3	Date Static Level measured:	05/27/1988
Static Water Level Data Source/Driller's License #:		M0073	

Remarks:

3000' N. STEBNER ROAD & HWY. 53, DULUTH
WELL GW9A

24
West
1/2 - 1 Mile
Higher

FED USGS **USGS0512935**

Agency:	USGS	Site ID:	465009092124301
Site Name:	050N15W11ABB		
Dec. Latitude:	46.83577		
Dec. Longitude:	-92.21213		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1430.00		
Hydrologic code:	04010202		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19450101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	22.0		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1957-01-01	10.00	

F25
NNW
1/2 - 1 Mile
Lower

MN WELLS **3069494738**

Principal Well Information:

Unique Well #:	494738		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	19
Depth Drilled (in Ft.):	19	Date drilled:	08/01/1991
Status:	Active	Date of Last Update:	02/15/1994
Geographic Coordinates Method:		Not Reported	
Well Name:	Not Reported	Owner's Name:	AIR NATIONAL GUARD
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	

Casing Diam (in):	Not Reported	Depth Cased (in Ft.):	Not Reported
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		

Any other Unused, Abandoned Well on Property ?: No
Potential Pollution Source Type: Not Reported
Potential Pollution Source Distance (in Ft.): Not Reported
Potential Pollution Source Direction: Not Reported
Use: Monitor Well
Elevation Method: Not Reported

Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address: AIR NA TIONAL GUARD BASE
DULUTH AIRPORT, MN

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	3	Date Static Level measured:	Not Reported
Static Water Level Data Source/Driller's License #:		49588	

F26
NNW
1/2 - 1 Mile
Lower

MN WELLS **3069494739**

Principal Well Information:

Unique Well #:	494739		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	20
Depth Drilled (in Ft.):	20	Date drilled:	08/02/1991
Status:	Active	Date of Last Update:	02/15/1994
Geographic Coordinates Method:		Not Reported	
Well Name:	Not Reported	Owner's Name:	AIR NATIONAL GUARD BASE
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	

Casing Diam (in):	2	Depth Cased (in Ft.):	10
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Not Reported	
Potential Pollution Source Distance (in Ft.):		Not Reported	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	AIR NA TIONAL GUARD BASE DULUTH AIRPORT, MN

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	2	Date Static Level measured:	Not Reported
Static Water Level Data Source/Driller's License #:		49588	

F27
NNW
1/2 - 1 Mile
Lower

MN WELLS **3069526111**

Principal Well Information:

Unique Well #:	526111		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	24
Depth Drilled (in Ft.):	24	Date drilled:	06/11/1993
Status:	Active	Date of Last Update:	02/15/1994
Geographic Coordinates Method:		Not Reported	
Well Name:	Not Reported	Owner's Name:	AIR NATIONAL GUARD
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	

Casing Diam (in):	2	Depth Cased (in Ft.):	11
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		

Any other Unused, Abandoned Well on Property ?: No
Potential Pollution Source Type: Not Reported
Potential Pollution Source Distance (in Ft.): Not Reported
Potential Pollution Source Direction: Not Reported
Use: Monitor Well
Elevation Method: Not Reported

Data for this well are contained in the DNT Observation Well Network Data base: Not Reported
Indicator that an entry for this well exists in the State Water Use Data System: Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System: Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well: Not Reported
Indicator of the existence of a digitized UTM location for this well: Not Reported

Well Address Information:

Well Address: DULUTH INT'L AIRPORT
DULUTH, MN

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	Not Reported	Date Static Level measured:	Not Reported
Static Water Level Data Source/Driller's License #:		49588	

F28
NNW
1/2 - 1 Mile
Lower

MN WELLS **3069494740**

Principal Well Information:

Unique Well #:	494740		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	22
Depth Drilled (in Ft.):	22	Date drilled:	08/02/1991
Status:	Active	Date of Last Update:	02/15/1994
Geographic Coordinates Method:		Not Reported	
Well Name:	Not Reported	Owner's Name:	AIR NATIONAL GUARD
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	

Casing Diam (in):	Not Reported	Depth Cased (in Ft.):	Not Reported
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Not Reported	
Potential Pollution Source Distance (in Ft.):		Not Reported	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	AIR NA TIONAL GUARD BASE DULUTH AIRPORT, MN

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	Not Reported	Date Static Level measured:	Not Reported
Static Water Level Data Source/Driller's License #:		49588	

F29
NNW
1/2 - 1 Mile
Lower

MN WELLS **3069526115**

Principal Well Information:

Unique Well #:	526115		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	17
Depth Drilled (in Ft.):	17	Date drilled:	06/11/1993
Status:	Active	Date of Last Update:	02/15/1994
Geographic Coordinates Method:		Not Reported	
Well Name:	Not Reported	Owner's Name:	AIR NATIONAL GUARD
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	

Casing Diam (in):	2	Depth Cased (in Ft.):	5
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		

Any other Unused, Abandoned Well on Property ?: No
Potential Pollution Source Type: Not Reported
Potential Pollution Source Distance (in Ft.): Not Reported
Potential Pollution Source Direction: Not Reported
Use: Monitor Well
Elevation Method: Not Reported

Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address: DULUTH INT'L AIRPORT
DULUTH, MN

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	Not Reported	Date Static Level measured:	Not Reported
Static Water Level Data Source/Driller's License #:		Not Reported	

F30
NNW
1/2 - 1 Mile
Lower

MN WELLS **3069494737**

Principal Well Information:

Unique Well #:	494737		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	25
Depth Drilled (in Ft.):	25	Date drilled:	07/27/1991
Status:	Active	Date of Last Update:	02/15/1994
Geographic Coordinates Method:		Not Reported	
Well Name:	Not Reported	Owner's Name:	AIR NATIONAL GUARD
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	

Casing Diam (in):	Not Reported	Depth Cased (in Ft.):	Not Reported
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Not Reported	
Potential Pollution Source Distance (in Ft.):		Not Reported	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address: AIR NA TIONAL GUARD
DULUTH AIRPORT, MN

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	3	Date Static Level measured:	Not Reported
Static Water Level Data Source/Driller's License #:		49588	

F31
NNW
1/2 - 1 Mile
Lower

MN WELLS **3069494733**

Principal Well Information:

Unique Well #:	494733		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	33
Depth Drilled (in Ft.):	33	Date drilled:	07/25/1991
Status:	Active	Date of Last Update:	02/15/1994
Geographic Coordinates Method:		Not Reported	
Well Name:	Not Reported	Owner's Name:	AIR NATIONAL GUARD
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	

Casing Diam (in):	2	Depth Cased (in Ft.):	21
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Not Reported	
Potential Pollution Source Distance (in Ft.):		Not Reported	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	AIR NA TIONAL GUARD BASE DULUTH AIRPORT, MN

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	3	Date Static Level measured:	Not Reported
Static Water Level Data Source/Driller's License #:		49588	

F32
NNW
1/2 - 1 Mile
Lower

MN WELLS **3069494732**

Principal Well Information:

Unique Well #:	494732		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	31
Depth Drilled (in Ft.):	31	Date drilled:	07/24/1991
Status:	Active	Date of Last Update:	02/15/1994
Geographic Coordinates Method:		Not Reported	
Well Name:	Not Reported	Owner's Name:	MN AIR NATIONAL GUARD
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	

Casing Diam (in):	2	Depth Cased (in Ft.):	18
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Not Reported	
Potential Pollution Source Distance (in Ft.):		Not Reported	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address: AIR NA TIONAL GUARD BASE
DULUTH AIRPORT, MN

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	3	Date Static Level measured:	Not Reported
Static Water Level Data Source/Driller's License #:		49588	

F33
NNW
1/2 - 1 Mile
Lower

MN WELLS **3069494734**

Principal Well Information:

Unique Well #:	494734		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	14
Depth Drilled (in Ft.):	14	Date drilled:	07/25/1991
Status:	Active	Date of Last Update:	02/15/1994
Geographic Coordinates Method:		Not Reported	
Well Name:	Not Reported	Owner's Name:	AIR NATIONAL GUARD
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	

Casing Diam (in):	2	Depth Cased (in Ft.):	4
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Not Reported	
Potential Pollution Source Distance (in Ft.):		Not Reported	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address: AIR NA TIONAL GUARD BASE
DULUTH, MN

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	2	Date Static Level measured:	Not Reported
Static Water Level Data Source/Driller's License #:		49588	

F34
NNW
1/2 - 1 Mile
Lower

MN WELLS **3069494736**

Principal Well Information:

Unique Well #:	494736		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	14
Depth Drilled (in Ft.):	14	Date drilled:	01/26/1991
Status:	Active	Date of Last Update:	02/15/1994
Geographic Coordinates Method:		Not Reported	
Well Name:	Not Reported	Owner's Name:	AIR NATIONAL GUARD
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	

Casing Diam (in):	2	Depth Cased (in Ft.):	4
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Not Reported	
Potential Pollution Source Distance (in Ft.):		Not Reported	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address: AIR NA TIONAL GUARD BASE
DULUTH AIRPORT, MN

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	2	Date Static Level measured:	Not Reported
Static Water Level Data Source/Driller's License #:		49588	

F35
NNW
1/2 - 1 Mile
Lower

MN WELLS **3069494735**

Principal Well Information:

Unique Well #:	494735		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	32
Depth Drilled (in Ft.):	32	Date drilled:	01/26/1991
Status:	Active	Date of Last Update:	02/15/1994
Geographic Coordinates Method:		Not Reported	
Well Name:	Not Reported	Owner's Name:	AIR NATIONAL GUARD
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	

Casing Diam (in):	Not Reported	Depth Cased (in Ft.):	Not Reported
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Not Reported	
Potential Pollution Source Distance (in Ft.):		Not Reported	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address: AIR NA TIONAL GUARD BASE
DULUTH AIRPORT, MN

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	3	Date Static Level measured:	Not Reported
Static Water Level Data Source/Driller's License #:		49588	

G36
North
1/2 - 1 Mile
Lower

MN WELLS **3069456918**

Principal Well Information:

Unique Well #:	456918		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	ACD	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	16
Depth Drilled (in Ft.):	17	Date drilled:	02/04/1992
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	MN AIR NATIONAL GUARD	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0112	

Casing Diam (in):	2	Depth Cased (in Ft.):	6
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	No
Well Sealed ?:	Permanently Sealed	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		Yes	
Potential Pollution Source Type:		Not Reported	
Potential Pollution Source Distance (in Ft.):		Not Reported	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:		Not Reported	
Indicator that an entry for this well exists in the State Water Use Data System:		Not Reported	
Data exist for this well in the PCA Integrated Ground-Water Information System:		Not Reported	
Indicator of the availability of cuttings, core or downhole geophysical data for this well:		Not Reported	
Indicator of the existence of a digitized UTM location for this well:		Not Reported	

Well Address Information:

Well Address: Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	9	Date Static Level measured:	02/04/1992
Static Water Level Data Source/Driller's License #:		M0112	

Remarks:

MN AIR NATIONAL GUARD BASE, DULUTH, MN
WELL 018-004 MW

G37
North
1/2 - 1 Mile
Lower

MN WELLS **3069194820**

Principal Well Information:

Unique Well #:	194820		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	ACD	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	13
Depth Drilled (in Ft.):	13	Date drilled:	12/11/1986
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	AIR NAT.GUARD	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0019	

Casing Diam (in):	2	Depth Cased (in Ft.):	3
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		Not Reported	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		60	
Potential Pollution Source Direction:		SE	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	4	Date Static Level measured:	01/12/1987
Static Water Level Data Source/Driller's License #:		M0019	

Remarks:

AIR NATIONAL GUARD BASE, DULUTH
WELL GW 10-C

G38
North
1/2 - 1 Mile
Lower

MN WELLS **3069194749**

Principal Well Information:

Unique Well #:	194749		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	ACD	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	20
Depth Drilled (in Ft.):	20	Date drilled:	12/11/1986
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	AIR NAT.GUARD	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0019	

Casing Diam (in):	2	Depth Cased (in Ft.):	9
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		Not Reported	
Potential Pollution Source Type:		Septic Tank/Drain Field	
Potential Pollution Source Distance (in Ft.):		200	
Potential Pollution Source Direction:		N	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	5	Date Static Level measured:	01/12/1987
Static Water Level Data Source/Driller's License #:		M0019	

Remarks:

AIR NATIONAL GUARD BASE, DULUTH
WELL GW10A

G39
North
1/2 - 1 Mile
Lower

MN WELLS **3069194748**

Principal Well Information:

Unique Well #:	194748		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	ACD	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	13
Depth Drilled (in Ft.):	13	Date drilled:	12/11/1986
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	AIR NAT.GUARD	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0019	

Casing Diam (in):	2	Depth Cased (in Ft.):	3
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		30	
Potential Pollution Source Direction:		S	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported
	DULUTH, MN 55811

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	5	Date Static Level measured:	01/12/1987
Static Water Level Data Source/Driller's License #:		M0019	

Remarks:

AIR NATIONAL GUARD BASE, DULUTH
WELL GW10B

H40
SSE
1/2 - 1 Mile
Lower

FED USGS **USGS0512851**

Agency:	USGS	Site ID:	464949092114101
Site Name:	050N15W12BDD		
Dec. Latitude:	46.83022		
Dec. Longitude:	-92.19491		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1420.00		
Hydrologic code:	04010201		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	Not Reported	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		

Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	18.0		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1957-01-01	8.00	

41
West
1/2 - 1 Mile
Higher

FED USGS **USGS0512999**

Agency:	USGS	Site ID:	465016092124601
Site Name:	050N15W02CCD		
Dec. Latitude:	46.83772		
Dec. Longitude:	-92.21297		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1430.00		
Hydrologic code:	04010202		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	Not Reported	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	20.0		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

I42
SSW
1/2 - 1 Mile
Higher

MN WELLS **3069539659**

Principal Well Information:

Unique Well #:	539659		
Township:	50	County:	ST. LOUIS
Range:	15	Section	11
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	11
Depth Drilled (in Ft.):	11	Date drilled:	12/07/1993
Status:	Active	Date of Last Update:	03/02/1994
Geographic Coordinates Method:		Not Reported	
Well Name:	Not Reported	Owner's Name:	CURTIS, JIM W.
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		34050	

Casing Diam (in):	2	Depth Cased (in Ft.):	4
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Not Reported	
Potential Pollution Source Distance (in Ft.):		Not Reported	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address: 4995 MILLER TRUNK HY
DULUTH, MN 55811

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	7	Date Static Level measured:	12/07/1993
Static Water Level Data Source/Driller's License #:		34050	

I43
SSW
1/2 - 1 Mile
Higher

MN WELLS **3069540873**

Principal Well Information:

Unique Well #:	540873		
Township:	50	County:	ST. LOUIS
Range:	15	Section	11
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	10
Depth Drilled (in Ft.):	10	Date drilled:	12/02/1993
Status:	Active	Date of Last Update:	03/02/1994
Geographic Coordinates Method:		Not Reported	
Well Name:	Not Reported	Owner's Name:	CURTIS, JIM W.
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		34050	

Casing Diam (in):	2	Depth Cased (in Ft.):	3
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Not Reported	
Potential Pollution Source Distance (in Ft.):		Not Reported	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	4995 MILLER TRUNK HY DULUTH, MN 55811

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	7	Date Static Level measured:	12/02/1993
Static Water Level Data Source/Driller's License #:		34050	

I44
SSW
1/2 - 1 Mile
Higher

MN WELLS **3069540874**

Principal Well Information:

Unique Well #:	540874		
Township:	50	County:	ST. LOUIS
Range:	15	Section	11
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	10
Depth Drilled (in Ft.):	10	Date drilled:	12/08/1993
Status:	Active	Date of Last Update:	03/02/1994
Geographic Coordinates Method:		Not Reported	
Well Name:	Not Reported	Owner's Name:	CURTIS, JIM W.
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		34050	

Casing Diam (in):	2	Depth Cased (in Ft.):	3
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Not Reported	
Potential Pollution Source Distance (in Ft.):		Not Reported	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address: 4995 MILLER TRUNK HY
DULUTH, MN 55811

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	5	Date Static Level measured:	12/08/1993
Static Water Level Data Source/Driller's License #:		34050	

H45
SE
1/2 - 1 Mile
Lower

FED USGS **USGS0512849**

Agency:	USGS	Site ID:	464948092113701
Site Name:	050N15W12CBB		
Dec. Latitude:	46.82994		
Dec. Longitude:	-92.1938		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1400.00		
Hydrologic code:	04010201		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19570101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	123		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1957-01-01	80.00	

J46
West
1/2 - 1 Mile
Higher

FED USGS **USGS0512914**

Agency:	USGS	Site ID:	465008092124901
Site Name:	050N15W11BBA		
Dec. Latitude:	46.8355		
Dec. Longitude:	-92.2138		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1435.00		
Hydrologic code:	04010202		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19300101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	24.2		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

K47
South
1/2 - 1 Mile
Lower

FED USGS **USGS0519017**

Agency:	USGS	Site ID:	464941092120903
Site Name:	050N15W12CBB03		
Dec. Latitude:	46.828		
Dec. Longitude:	-92.20269		
Coord Sys:	NAD83		
State:	MN		
County:	Scott County		
Altitude:	1410.00		
Hydrologic code:	04010202		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19560101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	159		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
J48 **West** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS0512936**

Agency:	USGS	Site ID:	465009092125301
Site Name:	050N15W11BBB-2		
Dec. Latitude:	46.83577		
Dec. Longitude:	-92.21491		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1430.00		
Hydrologic code:	04010202		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19200101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	30.0		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1957-01-01	20.00	

	Database	EDR ID Number
K49 **South** **1/2 - 1 Mile** **Lower**	**FED USGS**	**USGS0512895**

Agency:	USGS	Site ID:	464939092120602
Site Name:	050N15W12CBB02		
Dec. Latitude:	46.82744		
Dec. Longitude:	-92.20186		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1410.00		
Hydrologic code:	04010202		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19550101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	30.0		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
L50 **WSW** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS0512932**

Agency:	USGS	Site ID:	465004092125303
Site Name:	050N15W11BBC03		
Dec. Latitude:	46.83438		
Dec. Longitude:	-92.21491		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1440.00		
Hydrologic code:	04010202		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19540101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	30.0		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1957-01-01	15.00	

	Database	EDR ID Number
51 **South** **1/2 - 1 Mile** **Lower**	**FED USGS**	**USGS0512844**

Agency:	USGS	Site ID:	464937092120601
Site Name:	050N15W11DAD		
Dec. Latitude:	46.82688		
Dec. Longitude:	-92.20186		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1410.00		
Hydrologic code:	04010201		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19571028	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	26.5		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
52 **NNW** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS0512955**

Agency:	USGS	Site ID:	465047092122801
Site Name:	050N15W02BDA		
Dec. Latitude:	46.84633		
Dec. Longitude:	-92.20797		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1414.00		
Hydrologic code:	04010202		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19300101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	19.0		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

	Database	EDR ID Number
L53 **WSW** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS0512928**

Agency:	USGS	Site ID:	465002092125701
Site Name:	050N15W11BBC		
Dec. Latitude:	46.83383		
Dec. Longitude:	-92.21602		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1435.00		
Hydrologic code:	04010202		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19550101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	21.0		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1957-01-01	0.00	

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
M54		
WSW	**FED USGS**	**USGS0512931**
1/2 - 1 Mile		
Higher		

Agency:	USGS	Site ID:	465003092125801
Site Name:	050N15W11CBB-2		
Dec. Latitude:	46.83411		
Dec. Longitude:	-92.2163		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1430.00		
Hydrologic code:	04010202		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19390101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	27.0		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1957-01-01	17.00	

55			
West	**FED USGS**		**USGS0512915**
1/2 - 1 Mile			
Higher			

Agency:	USGS	Site ID:	465008092130001
Site Name:	050N15W11BBB-1		
Dec. Latitude:	46.8355		
Dec. Longitude:	-92.21686		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1430.00		
Hydrologic code:	04010202		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19400201	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	30.0		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1955-10-01	17.00	

N56
NW
1/2 - 1 Mile
Higher

MN WELLS **3069456919**

Principal Well Information:

Unique Well #:	456919		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	BCD	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	13
Depth Drilled (in Ft.):	13	Date drilled:	02/03/1992
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	MN AIR NATIONAL GUARD	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0112	
Casing Diam (in):	2	Depth Cased (in Ft.):	3
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Permanently Sealed	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		Yes	
Potential Pollution Source Type:		Not Reported	
Potential Pollution Source Distance (in Ft.):		Not Reported	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		

Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address: Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	6	Date Static Level measured:	02/03/1992
Static Water Level Data Source/Driller's License #:		M0112	

Remarks:

MN AIR NATIONAL GUARD, DULUTH, MN
WELL 018-005MW

N57
NW
1/2 - 1 Mile
Higher

MN WELLS **3069456920**

Principal Well Information:

Unique Well #:	456920		
Township:	50	County:	ST. LOUIS
Range:	15	Section	2
Subsection:	BCD	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	12
Depth Drilled (in Ft.):	12	Date drilled:	02/06/1992
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	MN AIR NATIONAL GUARD	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0112	
Casing Diam (in):	2	Depth Cased (in Ft.):	7
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Permanently Sealed	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		Yes	
Potential Pollution Source Type:		Not Reported	
Potential Pollution Source Distance (in Ft.):		Not Reported	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	9	Date Static Level measured:	02/06/1992
Static Water Level Data Source/Driller's License #:		M0112	

Remarks:

MN AIR NATIONAL GUARD BASE, DULUTH, MN 55811

WELL 019-004 MW

M58
WSW
1/2 - 1 Mile
Higher

FED USGS **USGS0512909**

Agency:	USGS	Site ID:	465001092130102
Site Name:	050N15W10DAA02		
Dec. Latitude:	46.83355		
Dec. Longitude:	-92.21713		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1420.00		
Hydrologic code:	04010202		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	Not Reported	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	20.0		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

59
SSW
1/2 - 1 Mile
Lower

FED USGS **USGS0512839**

Agency:	USGS	Site ID:	464934092122301
Site Name:	050N15W11DCC		
Dec. Latitude:	46.82605		
Dec. Longitude:	-92.20658		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1402.00		
Hydrologic code:	04010202		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19370101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	36.0		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

60
WSW
1/2 - 1 Mile
Lower

FED USGS **USGS0512903**

Agency:	USGS	Site ID:	464952092125601
Site Name:	050N15W23AAB		
Dec. Latitude:	46.83105		
Dec. Longitude:	-92.21575		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1380.00		
Hydrologic code:	04010202		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	Not Reported	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	16.0		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1957-01-01	6.00	

61
NNE
1/2 - 1 Mile
Higher

MN WELLS **3069194799**

Principal Well Information:

Unique Well #:	194799		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	BCA	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	19
Depth Drilled (in Ft.):	19	Date drilled:	11/23/1986
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	TACTICAL AIR COMM.	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0019	
Casing Diam (in):	2	Depth Cased (in Ft.):	9
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		Not Reported	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		150	
Potential Pollution Source Direction:		NW	

Use:	Monitor Well
Elevation Method:	Not Reported
Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	4	Date Static Level measured:	01/12/1987
Static Water Level Data Source/Driller's License #:		M0019	

Remarks:

AIR NATIONAL GUARD BASE, DULUTH
GW 7-A

62
WSW
1/2 - 1 Mile
Higher

FED USGS **USGS0512929**

Agency:	USGS	Site ID:	465002092130401
Site Name:	050N15W10AAD		
Dec. Latitude:	46.83383		
Dec. Longitude:	-92.21797		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1430.00		
Hydrologic code:	04010202		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	Not Reported	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	30.0		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1957-01-01	15.00	

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
63 **West** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS0512497**

Agency:	USGS	Site ID:	460516092130601
Site Name:	050N15W03DDD		
Dec. Latitude:	46.83772		
Dec. Longitude:	-92.21852		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1430.00		
Hydrologic code:	04010202		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19570101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	160		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1957-01-01	2.00	

	Database	EDR ID Number
64 **SSE** **1/2 - 1 Mile** **Lower**	**FED USGS**	**USGS0512842**

Agency:	USGS	Site ID:	464935092113001
Site Name:	050N15W12CBD-2		
Dec. Latitude:	46.82633		
Dec. Longitude:	-92.19186		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1400.00		
Hydrologic code:	04010201		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19450101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	35.0		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1957-08-01	2.00	

O65
ENE
1/2 - 1 Mile
Higher

MN WELLS **3069452789**

Principal Well Information:

Unique Well #:	452789		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	33
Depth Drilled (in Ft.):	33	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	2	Depth Cased (in Ft.):	23
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		

Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address: Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	8	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

MW 23

O66
ENE
1/2 - 1 Mile
Higher

MN WELLS **3069452788**

Principal Well Information:

Unique Well #:	452788		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	20
Depth Drilled (in Ft.):	21	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	2	Depth Cased (in Ft.):	10
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	12	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

MW 43

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
O67 **ENE** **1/2 - 1 Mile** **Higher**	**MN WELLS**	**3069452790**

Principal Well Information:

Unique Well #:	452790		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	20
Depth Drilled (in Ft.):	21	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	2	Depth Cased (in Ft.):	10
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		

Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	7	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

MW 21

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069452792

O68
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	452792		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	35
Depth Drilled (in Ft.):	36	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	2	Depth Cased (in Ft.):	25
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	4	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

MW 24

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069452791

O69
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	452791		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	33
Depth Drilled (in Ft.):	34	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	2	Depth Cased (in Ft.):	23
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		

Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	5	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

MW 27

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
O70 **ENE** **1/2 - 1 Mile** **Higher**	**MN WELLS**	**3069452787**

Principal Well Information:

Unique Well #:	452787		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	12
Depth Drilled (in Ft.):	13	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	2	Depth Cased (in Ft.):	2
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		

Any other Unused, Abandoned Well on Property ?:	No
Potential Pollution Source Type:	Other
Potential Pollution Source Distance (in Ft.):	0
Potential Pollution Source Direction:	Not Reported
Use: Monitor Well	
Elevation Method: Not Reported	
Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address: Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	4	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

MW 42

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069452782

O71
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	452782		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	15
Depth Drilled (in Ft.):	16	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	2	Depth Cased (in Ft.):	5
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	5	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

MW 38

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069448224

O72
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	448224		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	12
Depth Drilled (in Ft.):	13	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	2	Depth Cased (in Ft.):	2
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	8	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

MW 17

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
O73 **ENE** **1/2 - 1 Mile** **Higher**	**MN WELLS**	**3069452783**

Principal Well Information:

Unique Well #:	452783		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	14
Depth Drilled (in Ft.):	15	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	2	Depth Cased (in Ft.):	4
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	5	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

MW 39

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
O74 **ENE** **1/2 - 1 Mile** **Higher**	**MN WELLS**	**3069452785**

Principal Well Information:

Unique Well #:	452785		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	12
Depth Drilled (in Ft.):	13	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	2	Depth Cased (in Ft.):	2
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		

Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	8	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

MW 41

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
O75 **ENE** **1/2 - 1 Mile** **Higher**	**MN WELLS**	**3069452784**

Principal Well Information:

Unique Well #:	452784		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	12
Depth Drilled (in Ft.):	13	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	2	Depth Cased (in Ft.):	2
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	6	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

MW 40

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069452793

O76
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	452793		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	12
Depth Drilled (in Ft.):	13	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	2	Depth Cased (in Ft.):	2
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		

Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	5	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

MW 27

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069452801

O77
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	452801		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	15
Depth Drilled (in Ft.):	16	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	2	Depth Cased (in Ft.):	5
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	10	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

MW 31

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069452800

O78
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	452800		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	12
Depth Drilled (in Ft.):	13	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	2	Depth Cased (in Ft.):	2
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	3	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

MW 28

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069452802

O79
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	452802		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	15
Depth Drilled (in Ft.):	16	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	2	Depth Cased (in Ft.):	5
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	8	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

3MW 30

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069452804

O80
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	452804		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	16
Depth Drilled (in Ft.):	17	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	2	Depth Cased (in Ft.):	6
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	7	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

3MW-25

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation	Database	EDR ID Number
O81 **ENE** **1/2 - 1 Mile** **Higher**	**MN WELLS**	**3069452803**

Principal Well Information:

Unique Well #:	452803		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	12
Depth Drilled (in Ft.):	13	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	2	Depth Cased (in Ft.):	2
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	7	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

3MW 26

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
O82 **ENE** **1/2 - 1 Mile** **Higher**	**MN WELLS**	**3069452799**

Principal Well Information:

Unique Well #:	452799		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	22
Depth Drilled (in Ft.):	23	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	2	Depth Cased (in Ft.):	12
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		

Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address: Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	8	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

MW 33

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
O83 **ENE** **1/2 - 1 Mile** **Higher**	**MN WELLS**	**3069452795**

Principal Well Information:

Unique Well #:	452795		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	12
Depth Drilled (in Ft.):	13	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	2	Depth Cased (in Ft.):	2
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		

Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	6	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

3MW-35

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069452794

O84
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	452794		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	40
Depth Drilled (in Ft.):	41	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	2	Depth Cased (in Ft.):	30
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	9	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

MW 14

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069452796

O85
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	452796		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	12
Depth Drilled (in Ft.):	13	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	2	Depth Cased (in Ft.):	2
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		

Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	3	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

MW 28

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069452798

O86
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	452798		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	12
Depth Drilled (in Ft.):	13	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	2	Depth Cased (in Ft.):	2
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		

Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	7	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

MW 34

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069452797

O87
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	452797		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	17
Depth Drilled (in Ft.):	18	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	2	Depth Cased (in Ft.):	7
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		

Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	9	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

MW 32

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
O88 **ENE** **1/2 - 1 Mile** **Higher**	**MN WELLS**	**3069448209**

Principal Well Information:

Unique Well #:	448209		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	30
Depth Drilled (in Ft.):	31	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	1	Depth Cased (in Ft.):	25
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	3	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

WP 70

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	**3069448208**

O89
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	448208		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	18
Depth Drilled (in Ft.):	18	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	1	Depth Cased (in Ft.):	18
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	7	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

WP 9

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069448210

O90
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	448210		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	16
Depth Drilled (in Ft.):	16	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	1	Depth Cased (in Ft.):	11
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		

Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address: Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	4	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

WP 75

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
O91 **ENE** **1/2 - 1 Mile** **Higher**	**MN WELLS**	**3069448212**

Principal Well Information:

Unique Well #:	448212		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	18
Depth Drilled (in Ft.):	18	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	1	Depth Cased (in Ft.):	13
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	10	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

WP 11D

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069448211

O92
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	448211		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	20
Depth Drilled (in Ft.):	20	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	1	Depth Cased (in Ft.):	15
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	7	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

WP 8

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069448203

O93
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	448203		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	18
Depth Drilled (in Ft.):	18	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	1	Depth Cased (in Ft.):	13
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Observation Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	10	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

DULUTH INTERNATIONAL AIRPORT
WP 6

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
O94 **ENE** **1/2 - 1 Mile** **Higher**	**MN WELLS**	**3069448202**

Principal Well Information:

Unique Well #:	448202		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	15
Depth Drilled (in Ft.):	16	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	2	Depth Cased (in Ft.):	5
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		

Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	4	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

MW 37

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069448204

O95
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	448204		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	46
Depth Drilled (in Ft.):	46	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	1	Depth Cased (in Ft.):	41
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	20	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

WP 10D

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069448206

O96
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	448206		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	53
Depth Drilled (in Ft.):	53	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	1	Depth Cased (in Ft.):	48
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	36	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

WP 9D

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069448205

O97
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	448205		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	19
Depth Drilled (in Ft.):	20	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	1	Depth Cased (in Ft.):	14
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		

Any other Unused, Abandoned Well on Property ?:	No
Potential Pollution Source Type:	Other
Potential Pollution Source Distance (in Ft.):	0
Potential Pollution Source Direction:	Not Reported
Use: Monitor Well	
Elevation Method: Not Reported	
Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address: Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	6	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

WP 10

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
O98 **ENE** **1/2 - 1 Mile** **Higher**	**MN WELLS**	**3069448213**

Principal Well Information:

Unique Well #:	448213		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	23
Depth Drilled (in Ft.):	23	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	1	Depth Cased (in Ft.):	18
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		

Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address: Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	10	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

WP 16D

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069448220

O99
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	448220		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	33
Depth Drilled (in Ft.):	33	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	1	Depth Cased (in Ft.):	28
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	9	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

WP 15D

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
O100 **ENE** **1/2 - 1 Mile** **Higher**	**MN WELLS**	**3069448219**

Principal Well Information:

Unique Well #:	448219		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	13
Depth Drilled (in Ft.):	13	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	1	Depth Cased (in Ft.):	8
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	9	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

WP 14S

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069448221

O101
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	448221		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	18
Depth Drilled (in Ft.):	18	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	1	Depth Cased (in Ft.):	12
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		0	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	8	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

WP 15S

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
O102 **ENE** **1/2 - 1 Mile** **Higher**	**MN WELLS**	**3069448223**

Principal Well Information:

Unique Well #:	448223		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	31
Depth Drilled (in Ft.):	32	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	2	Depth Cased (in Ft.):	21
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	7	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

MW 16

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069448222

O103
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	448222		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	15
Depth Drilled (in Ft.):	16	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		45988	
Casing Diam (in):	2	Depth Cased (in Ft.):	5
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	10	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		45988	

Remarks:

MW 15

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069448215

0104
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	448215		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	18
Depth Drilled (in Ft.):	18	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	1	Depth Cased (in Ft.):	13
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	6	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

WP 12S

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069448214

O105
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	448214		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	35
Depth Drilled (in Ft.):	35	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	1	Depth Cased (in Ft.):	30
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	6	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

WP 12D

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069448216

O106
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	448216		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	25
Depth Drilled (in Ft.):	25	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	1	Depth Cased (in Ft.):	20
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	10	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

WP 13D

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
O107 **ENE** **1/2 - 1 Mile** **Higher**	**MN WELLS**	**3069448218**

Principal Well Information:

Unique Well #:	448218		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	28
Depth Drilled (in Ft.):	28	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	1	Depth Cased (in Ft.):	23
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	8	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

WP 14D

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069448217

O108
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	448217		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	13
Depth Drilled (in Ft.):	13	Date drilled:	09/10/1988
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L. AIRPORT	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		49588	
Casing Diam (in):	1	Depth Cased (in Ft.):	8
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		0	
Potential Pollution Source Direction:		Not Reported	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	10	Date Static Level measured:	09/10/1988
Static Water Level Data Source/Driller's License #:		49588	

Remarks:

WP 13S

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069194798

P109
NNE
1/2 - 1 Mile
Lower

Principal Well Information:

Unique Well #:	194798		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	BBD	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	20
Depth Drilled (in Ft.):	20	Date drilled:	11/23/1986
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	TACTICAL AIR COMM.	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0019	
Casing Diam (in):	2	Depth Cased (in Ft.):	5
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		Not Reported	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		75	
Potential Pollution Source Direction:		S	
Use:	Monitor Well		
Elevation Method:	Not Reported		

Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address: Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	5	Date Static Level measured:	01/12/1987
Static Water Level Data Source/Driller's License #:		M0019	

Remarks:

AIR NATIONAL GUARD BASE, DULUTH
GW 7-B

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069194797

P110
NNE
1/2 - 1 Mile
Lower

Principal Well Information:

Unique Well #:	194797		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	BBD	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	15
Depth Drilled (in Ft.):	15	Date drilled:	11/24/1986
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	TACTICAL AIR COMM.	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0019	
Casing Diam (in):	2	Depth Cased (in Ft.):	4
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		Not Reported	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		20	
Potential Pollution Source Direction:		NE	
Use:	Monitor Well		
Elevation Method:	Not Reported		

Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	2	Date Static Level measured:	01/12/1987
Static Water Level Data Source/Driller's License #:		M0019	

Remarks:

AIR NATIONAL GUARD BASE, DULUTH
GW 7-C

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
Q111 **West** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS0512994**

Agency:	USGS	Site ID:	465015092131302
Site Name:	050N15W03DDD02		
Dec. Latitude:	46.83744		
Dec. Longitude:	-92.22047		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1420.00		
Hydrologic code:	04010202		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19530101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	40.0		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1955-01-01	15.00	

	Database	EDR ID Number
112 **NNW** **1/2 - 1 Mile** **Lower**	**FED USGS**	**USGS0512960**

Agency:	USGS	Site ID:	465100092121801
Site Name:	050N15W02ABB		
Dec. Latitude:	46.84994		
Dec. Longitude:	-92.20519		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1412.00		
Hydrologic code:	04010202		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19571001	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	22.0		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

R113
ENE
1/2 - 1 Mile
Higher | **MN WELLS** | **3069456893**

Principal Well Information:

Unique Well #:	456893		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	DBB	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	16
Depth Drilled (in Ft.):	16	Date drilled:	04/19/1991
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH AIRPORT AUTHORITY	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0101	
Casing Diam (in):	2	Depth Cased (in Ft.):	9
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Tanks	
Potential Pollution Source Distance (in Ft.):		2000	
Potential Pollution Source Direction:		S	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	2	Date Static Level measured:	04/19/1991
Static Water Level Data Source/Driller's License #:		M0101	

Remarks:

DULUTH INTERNATIONAL AIRPORT, DULUTH, MN
GW 7 H

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

WELL ARE LOCATED .5 MILE NORTHWEST OF DULUTH AIRPORT TERMINAL, DULUTH

R114
ENE
1/2 - 1 Mile
Higher

MN WELLS **3069456894**

Principal Well Information:

Unique Well #:	456894		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	DBB	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	14
Depth Drilled (in Ft.):	16	Date drilled:	04/18/1991
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH AIRPORT AUTHORITY	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0101	
Casing Diam (in):	2	Depth Cased (in Ft.):	9
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Tanks	
Potential Pollution Source Distance (in Ft.):		2000	
Potential Pollution Source Direction:		S	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	3	Date Static Level measured:	04/18/1991
Static Water Level Data Source/Driller's License #:		M0101	

Remarks:

DULUTH INTERNATIONAL AIRPORT, DULUTH, MN
GW7-I

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

WELLS ARE LOCATED .5 MILES NW OF DULUTH AIRPORT TERMINAL, DULUTH

R115
ENE
1/2 - 1 Mile
Higher

MN WELLS **3069456895**

Principal Well Information:

Unique Well #:	456895		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	DBB	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	20
Depth Drilled (in Ft.):	20	Date drilled:	04/18/1991
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH AIRPORT AUTHORITY	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0101	
Casing Diam (in):	2	Depth Cased (in Ft.):	14
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Tanks	
Potential Pollution Source Distance (in Ft.):		2000	
Potential Pollution Source Direction:		S	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	5	Date Static Level measured:	04/18/1991
Static Water Level Data Source/Driller's License #:		M0101	

Remarks:

DULUTH INTERNATIONAL AIRPORT, DULUTH, MN
GW7-J

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

WELLS ARE LOCATED .5 MILES NW OF DULUTH AIRPORT TERMINAL, DULUTH

R116
ENE
1/2 - 1 Mile
Higher

MN WELLS **3069456892**

Principal Well Information:

Unique Well #:	456892		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	DBB	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	17
Depth Drilled (in Ft.):	17	Date drilled:	04/20/1991
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH AIRPORT AUTHORITY	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0101	
Casing Diam (in):	2	Depth Cased (in Ft.):	5
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Tanks	
Potential Pollution Source Distance (in Ft.):		2000	
Potential Pollution Source Direction:		S	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	2	Date Static Level measured:	04/20/1991
Static Water Level Data Source/Driller's License #:		M0101	

Remarks:

DULUTH INTERNATIONAL AIRPORT, DULUTH, MN
GW7-G

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

WELLS ARE LOCATED .5 MILES NW OF DULUTH AIRPORT TERMINAL, DULUTH, MN

S117
SE
1/2 - 1 Mile
Lower

MN WELLS **3069486983**

Principal Well Information:

Unique Well #:	486983		
Township:	50	County:	ST. LOUIS
Range:	15	Section	12
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	14
Depth Drilled (in Ft.):	14	Date drilled:	08/20/1992
Status:	Active	Date of Last Update:	02/15/1994
Geographic Coordinates Method:		Not Reported	
Well Name:	MW-3	Owner's Name:	FEDERAL PRISION CAMP
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0114	
Casing Diam (in):	2	Depth Cased (in Ft.):	3
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Volatile Organic Compounds	
Potential Pollution Source Distance (in Ft.):		50	
Potential Pollution Source Direction:		E	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	6902 AIRPORT RD DULUTH, MN 55811

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	4.6	Date Static Level measured:	08/20/1992
Static Water Level Data Source/Driller's License #:		M0114	

Remarks:

MW-3, TPT #158-91E 02-92M

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
S118 **SE** **1/2 - 1 Mile** **Lower**	**MN WELLS**	**3069486982**

Principal Well Information:

Unique Well #:	486982		
Township:	50	County:	ST. LOUIS
Range:	15	Section	12
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	14
Depth Drilled (in Ft.):	14	Date drilled:	08/19/1992
Status:	Active	Date of Last Update:	02/15/1994
Geographic Coordinates Method:		Not Reported	
Well Name:	MW-2	Owner's Name:	FEDERAL PRISION CAMP
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0114	
Casing Diam (in):	2	Depth Cased (in Ft.):	3
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Volatile Organic Compounds	
Potential Pollution Source Distance (in Ft.):		40	
Potential Pollution Source Direction:		W	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	6902 AIRPORT RD DULUTH, MN 55811

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	4.3	Date Static Level measured:	08/19/1992
Static Water Level Data Source/Driller's License #:		M0114	

Remarks:

MW-2, TPT #158-91E 02-92M

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
S119 **SE** **1/2 - 1 Mile** **Lower**	**MN WELLS**	**3069486981**

Principal Well Information:

Unique Well #:	486981		
Township:	50	County:	ST. LOUIS
Range:	15	Section	12
Subsection:	Not Reported	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	14
Depth Drilled (in Ft.):	14	Date drilled:	08/19/1992
Status:	Active	Date of Last Update:	02/15/1994
Geographic Coordinates Method:		Not Reported	
Well Name:	MW-1	Owner's Name:	FEDERAL PRISION CAMP
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0114	
Casing Diam (in):	2	Depth Cased (in Ft.):	3
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		No	
Potential Pollution Source Type:		Volatile Organic Compounds	
Potential Pollution Source Distance (in Ft.):		15	
Potential Pollution Source Direction:		N	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	6902 AIRPORT RD DULUTH, MN 55811

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	4.5	Date Static Level measured:	08/19/1992
Static Water Level Data Source/Driller's License #:		M0114	

Remarks:

MW-1, TPT #158-91E 02-92M

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069545638

120
East
1/2 - 1 Mile
Lower

Principal Well Information:

Unique Well #:	545638		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	DCD	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	Not Reported
Depth Drilled (in Ft.):	Not Reported	Date drilled:	Not Reported
Status:	Not Reported	Date of Last Update:	03/21/1995
Geographic Coordinates Method:		Not Reported	
Well Name:	DULUTH INT'L AIRPORT	Owner's Name:	FORMER AVIS CAR RENTAL
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0101	
Casing Diam (in):	Not Reported	Depth Cased (in Ft.):	Not Reported
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Not Reported
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		Not Reported	
Potential Pollution Source Type:		Not Reported	
Potential Pollution Source Distance (in Ft.):		Not Reported	
Potential Pollution Source Direction:		Not Reported	
Use:	Not Reported		
Elevation Method:	Not Reported		

Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address: 4701 AIRPORT DR

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	Not Reported	Date Static Level measured:	Not Reported
Static Water Level Data Source/Driller's License #:		M0101	

Remarks:

NOT INSTALLED.

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
Q121 **West** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS0512995**

Agency:	USGS	Site ID:	465015092131601
Site Name:	050N15W03DDC-2		
Dec. Latitude:	46.83744		
Dec. Longitude:	-92.2213		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1418.00		
Hydrologic code:	04010202		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19520101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	23.0		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

	Database	EDR ID Number
122 **SW** **1/2 - 1 Mile** **Lower**	**FED USGS**	**USGS0512846**

Agency:	USGS	Site ID:	464945092130401
Site Name:	050N15W10DAA		
Dec. Latitude:	46.82911		
Dec. Longitude:	-92.21797		
Coord Sys:	NAD83		
State:	MN		
County:	St. Louis County		
Altitude:	1420.00		
Hydrologic code:	04010202		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	Not Reported	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	21.0		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1957-01-01	13.00	

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
123 **ESE** **1/2 - 1 Mile** **Lower**	**MN WELLS**	**3069114965**

Principal Well Information:

Unique Well #:	114965		
Township:	50	County:	ST. LOUIS
Range:	15	Section	12
Subsection:	AC	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	155
Depth Drilled (in Ft.):	155	Date drilled:	12/22/1975
Status:	Active	Date of Last Update:	08/18/1991
Geographic Coordinates Method:		Not Reported	
Well Name:	OLDER CONSTRUCTION	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		Not Reported	
Casing Diam (in):	6	Depth Cased (in Ft.):	48
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	No
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		Not Reported	
Potential Pollution Source Type:		Not Reported	
Potential Pollution Source Distance (in Ft.):		150	
Potential Pollution Source Direction:		Not Reported	
Use:	Domestic		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	20	Date Static Level measured:	12/22/1975
Static Water Level Data Source/Driller's License #:		69100	

Remarks:

6 MILES E. OF JCT. STEBNER & SWAN LAKE ROADS.

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069194814

T124
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	194814		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	ACC	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	21
Depth Drilled (in Ft.):	21	Date drilled:	11/14/1986
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	AIR NAT.GUARD	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0019	
Casing Diam (in):	2	Depth Cased (in Ft.):	6
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		Not Reported	
Potential Pollution Source Type:		Septic Tank/Drain Field	
Potential Pollution Source Distance (in Ft.):		50	
Potential Pollution Source Direction:		S	
Use:	Monitor Well		
Elevation Method:	Not Reported		

Data for this well are contained in the DNT Observation Well Network Data base:	Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:	Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:	Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:	Not Reported
Indicator of the existence of a digitized UTM location for this well:	Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.):	7	Date Static Level measured:	01/12/1987
Static Water Level Data Source/Driller's License #:		M0019	

Remarks:

GW2C
NATIONAL GUARD BASE, DULUTH

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
MN WELLS	3069194815

T125
ENE
1/2 - 1 Mile
Higher

Principal Well Information:

Unique Well #:	194815		
Township:	50	County:	ST. LOUIS
Range:	15	Section	1
Subsection:	ACC	Elevation (in Ft.):	Not Reported
Location Method	Not Reported	Locator:	Not Reported
7.5 Minute Quadrangle:	Not Reported	Depth Completed (in Ft.):	15
Depth Drilled (in Ft.):	15	Date drilled:	11/14/1986
Status:	Active	Date of Last Update:	01/08/1993
Geographic Coordinates Method:		Not Reported	
Well Name:	AIR NAT.GUARD	Owner's Name:	Not Reported
Local Identifier:	Not Reported	Local Identifier Type:	Not Reported
Data Source/Driller's License #:		M0019	
Casing Diam (in):	2	Depth Cased (in Ft.):	2
Permit #:	Not Reported	Permit Type:	Not Reported
First Bedrock:	Not Reported	Wellhead Protection Area:	Not Reported
Open Interval-Top:	Not Reported	Open Interval-Bottom Unit:	Not Reported
DNR Application #:	Not Reported	Well Grouted ?:	Yes
Well Sealed ?:	Not Reported	Date Well Abandoned:	Not Reported
Aquifer:	Not Reported		
Depth to Bedrock (Ft.):	Not Reported		
Any other Unused, Abandoned Well on Property ?:		Not Reported	
Potential Pollution Source Type:		Other	
Potential Pollution Source Distance (in Ft.):		75	
Potential Pollution Source Direction:		SW	
Use:	Monitor Well		
Elevation Method:	Not Reported		
Data for this well are contained in the DNT Observation Well Network Data base:			Not Reported
Indicator that an entry for this well exists in the State Water Use Data System:			Not Reported
Data exist for this well in the PCA Integrated Ground-Water Information System:			Not Reported
Indicator of the availability of cuttings, core or downhole geophysical data for this well:			Not Reported
Indicator of the existence of a digitized UTM location for this well:			Not Reported

Well Address Information:

Well Address:	Not Reported

Coliform/Nitrate/Static Water Level Information:

Coliform Bacteria Count:	Not Reported	Detection Limit Flag:	Not Reported
Coliform Sampling Date:	Not Reported	Coliform Analysis Source:	Not Reported
Colif. Analys. Reliability:	Not Reported	Bacteria Analysis Technique:	Not Reported
Nitrate Count (mg/l):	Not Reported	Nitrate Detection Limit Flag:	Not Reported
Nitrate Sampling Date:	Not Reported	Nitrate Analysis Source:	Not Reported
Nit. Analys. Reliability:	Not Reported	Nit. Analysis Technique:	Not Reported
Static Water Lev. (in Ft.)	2	Date Static Level measured:	01/12/1987
Static Water Level Data Source/Driller's License #:		M0019	

Remarks:

AIR NATIONAL GUARD BASE, DULUTH
WELL GW2-B

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: MN Radon

Radon Test Results

County	Num Sites	< Pci/L	>= 4 Pci/L	% >= 4 Pci/L
ST. LOUIS	857	717	140	16%

Federal EPA Radon Zone for ST. LOUIS County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 55811

Number of sites tested: 8

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	Not Reported	Not Reported	Not Reported	Not Reported
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	2.875 pCi/L	75%	25%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002. 7.5-Minute DEMs correspond to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

ADDITIONAL ENVIRONMENTAL RECORD SOURCES

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STATE RECORDS

Minnesota Groundwater Database
Source: Minnesota Geological Survey County Water Well Index (CWI)
Telephone: 612-627-4780

RADON

State Database: MN Radon
Source: Department of Health
Telephone: 651-215-0909
Radon Test Results

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Appendix B
Preliminary NRCS Soil Survey Map and Descriptions

THIS INFORMATION IS A DRAFT AND IS SUBJECT TO CHANGE WITHOUT NOTICE.

SOUTH ST. LOUIS COUNTY LEGEND

Nov. 2002

Geo	MLRA	
20-1A	D123A	Blackhoof Cathro-Baden complex, 0 to 1 percent slopes
20-2A	B124A	Dusler-Ellsburg complex, 0 to 3 percent slopes
20-3B	B125B	Culver silt loam, 3 to 8 percent slopes
20-3D	B126D	Duluth-Culver silt loams, 3 to 18 percent slopes
20-3E	B126E	Duluth silt loam, 18 to 45 percent slopes
20-4B	B143B	Dinham-Dusler complex, 0 to 8 percent slopes
20-4D	B150D	Dinham-Duluth complex, 8 to 18 percent slopes
20-6B	B127B	Culver-Dusler-Ellsburg silt loams, 0 to 8 percent slopes
20-6D	B128D	Duluth-Culver Cathro complex, 3 to 18 percent slopes
20-7B	B129B	Culver-Culver coarse substratum-Ellsburg complex 0 to 8 percent slopes
20-7D	B130D	Duluth-Duluth coarse substratum-Ellsburg complex, 0 to 18 percent slopes
20-7E	B131F	Duluth and Duluth, coarse substratum complex, 18 to 45 percent slopes
20-8A		Hellwig-Grytal complex, 0 to 3 percent slopes
20-10A	B144A	Ellsburg-Dusler silt loams, 0 to 3 percent slopes
20-11B	B145B	Dusler-Culver silt loams, 0 to 8 percent slopes

26-1A	F101A	Bugcreek extremely stony sandy loam, 0 to 1 percent slopes, rubbly
26-2A	F102A	Nevens stony loam, 0 to 2 percent slopes, very stony
26-2B	F103B	Brimson stony fine sandy loam, 2 to 5 percent slopes, very stony
26-3B	F104B	Toimi stony loam, 3 to 8 percent slopes, very stony
26-3D	F104D	Toimi stony loam, 8 to 18 percent slopes, very stony
26-3E	F104E	Toimi stony loam, 18 to 45 percent slopes, very stony
26-7	F110A	Seelyeville and Cathro soils, ponded, 0 to 1 percent slopes
26-8	F111A	Uskabwanka peat, 0 to 1 percent slopes
26-9D	F105D	Toimi-Brimson-Rock Outcrop complex, 0 to 20 percent slopes
26-10B	F106B	Toimi-Nevens-Brimson complex, 0 to 8 percent slopes, very stony
26-10D	F107D	Toimi-Nevens complex, 0 to 18 percent slopes, very stony
26-11B	F108B	Brimson-Bugcreek-Nevens complex, 0 to 5 percent slopes, very stony

27-1A	F117A	Rollins sandy loam, 0 to 2 percent slopes
27-1B	F117B	Rollins sandy loam, 2 to 8 percent slopes
27-1D	F117D	Rollins sandy loam, 8 to 18 percent slopes
27-1E	F117F	Rollins sandy loam, 18 to 45 percent slopes *(B132F MLRA 88)*
27-2B	F118B	Aldenlake-Pequaywan, complex, 0 to 6 percent slopes *(B133B MLRA 88)*
27-3A	F119B	Cloquet fine sandy loam, 0 to 5 percent slopes
27-4A	F120A	Cromwell-Unnamed Udipsamment complex, 0 to 2 percent slopes
27-4B	F120B	Cromwell-Unnamed Udipsamment complex, 2 to 8 percent slopes
27-4D	F120D	Unnamed Udipsamment-Cromwell complex, 8 to 18 percent slopes
27-4E	F120F	Unnamed Udipsamment-Cromwell complex, 18 to 45 percent slopes
27-6A	F121A	Aldenlake sandy loam, 0 to 3 percent slopes
27-6B	F121B	Aldenlake sandy loam, 3 to 8 percent slopes *(B134B MLRA 88)*
27-6D	F121D	Aldenlake sandy loam, 8 to 18 percent slopes *(B134D MLRA 88)*
27-6E	F121E	Aldenlake sandy loam, 18 to 45 percent slopes
27-7B	F122B	Aldenlake-Pequaywan complex, pitted, 0 to 8 percent slopes
27-7D	F122D	Aldenlake-Pequaywan complex, pitted, 0 to 18 percent slopes

27-7E	F122F	Aldenlake-Pequaywan complex, pitted, 0 to 45 percent slopes
27-8B	F123B	Unnamed Udipsamment-Cromwell-Grytal complex, pitted, 0 to 8 percent slopes
27-8D	F123D	Unnamed Udipsamment-Cromwell-Grytal complex, pitted, 0 to 18 percent slopes
27-9B	F124B	Rollins-Pequaywan complex, pitted, 0 to 8 percent slopes
27-9D	F124D	Rollins-Pequaywan complex, pitted, 0 to 18 percent slopes
27-9E	F124F	Rollins-Pequaywan complex, pitted, 0 to 45 percent slopes
27-10A	F125A	Pequaywan loam, 0 to 3 percent slopes
27-11A	F126A	Grytal sandy loam, 0 to 3 percent slopes
27-13	F127A	Hulligan mucky fine sandy loam, depressional 0 to 2 percent slopes
27-14	F128A	Hulligan (Poorly D.) fine sandy loam, 0 to 2 percent slopes
27-15D	F149D	Aldenlake-Rock outcrop complex, 0 to 20 percent slopes
1028	F131B	Pits, Gravel-Udorthents complex MLRA93 GP2
1028	B112B	Pits, Gravel-Udorthents complex MLRA 88 GP2
6-6D	F149D	Conversion legend change to 27-15D in geo 27

30-1A	F134A	Giese mucky loam, depressional, 0 to 1 percent slopes
30-2A	F135A	Hermantown-Canosia-Giese complex, 0 to 3 percent slopes
30-3A	F136A	Hermantown silt loam, 1 to 3 percent slopes
30-4B	F137B	Normanna-Canosia-Hermantown complex, 0 to 8 percent slopes
30-4D	F138D	Ahmeek-Normanna complex, 3 to 18 percent slopes
30-4E	F139F	Ahmeek fine sandy loam 18 to 45 percent slopes
30-4B	F140B	Normanna-Giese depressional, complex pitted, 0 to 18 percent slopes
30-4D	F141D	Ahmeek-Normanna-Cathro depressional complex pitted, 0 to 18 percent slopes
30-5A	F142A	Canosia fine sandy loam, 0 to 2 percent slopes
30-6B	F143B	Normanna-Aldenlake complex, 3 to 8 percent slopes
30-6D	F144D	Aldenlake-Ahmeek complex, 8 to 18 percent slopes
30-6E	F145F	Ahmeek-Aldenlake complex, 18 to 45 percent slopes
30-7A	F146A	Giese mucky loam Rubbly, 0 to 2 percent slopes
30-9D	F147D	Ahmeek-Canosia-Rock Outcrop complex, 0 to 25 percent slopes
30-10A	F150	Twig-Tacoosh-Giese complex, 0 to 1 percent slopes
30-11E	F148E	Ahmeek-Hermantown-Fluvaqents, frequently flooded-Bedrock complex, 0 to 50 percent slopes

GEO 31 TRANSISTION AREA MLRA 92

	Superior Fine Loamy till /coarse loamy at approx 60 inches
31-1A	Unnamed VPD (fine-loamy depression)
31-2A	Unnamed PD-Unnamed SWP complex, 0 to 3 percent slopes (fine-loamy flats)
31-4B	Unnamed MW-Unnamed SWP complex, 1 to 8 percent slopes (fine-loamy undulating)
31-4D	Unnamed MWD-PD complex, 0 to 18 percent slopes (fine-loamy rolling)
31-5B	Unnamed MWD 3 to 8 percent slopes (fine-loamy simple side slope)
31-5D	Unnamed MWD 8 to 18 percent slopes (fine-loamy simple side slope)
31-5E	Unnamed WD, 18 to 45 percent slopes (fine loamy simple side slope)
31-10A	Unnamed PD-Unnamed VPD complex, 0 to 1 percent slopes (fine-loamy flats)
	Lacustrine deposits (Gap soils)
31-21A	Unnamed PD-Unnamed VPD complex, 0 to 1 percent slopes (coarse-loamy flats)
31-21B	Unnamed MW-Unnamed SWP complex, 1 to 8 percent slopes (coarse-loamy slopes)
31-23A	Unnamed PD-Unnamed SWP complex, 0 to 3 percent slopes (fine-silty flats)
31-23B	Unnamed SWP-Unnamed MW complex, 1 to 8 percent slopes (fine-silty slopes)
31-28A	Unnamed SWP-Unnamed PD complex, 0 to 3 percent slopes (fine lacustrine flats)
31-28B	Unnamed SWP-Unnamed MW complex, 1 to 8 percent slopes (fine lacustrine)
	Bedrock controlled areas
31-26D	Barto-Bedrock Outcrop complex, 8 to 18 percent slopes
31-26E	Barto-Bedrock Outcrop complex, 18 to 60 percent slopes

GEO 32 CLAY PLAIN
SEE DESCRIPTIVE LEGEND AND KEY

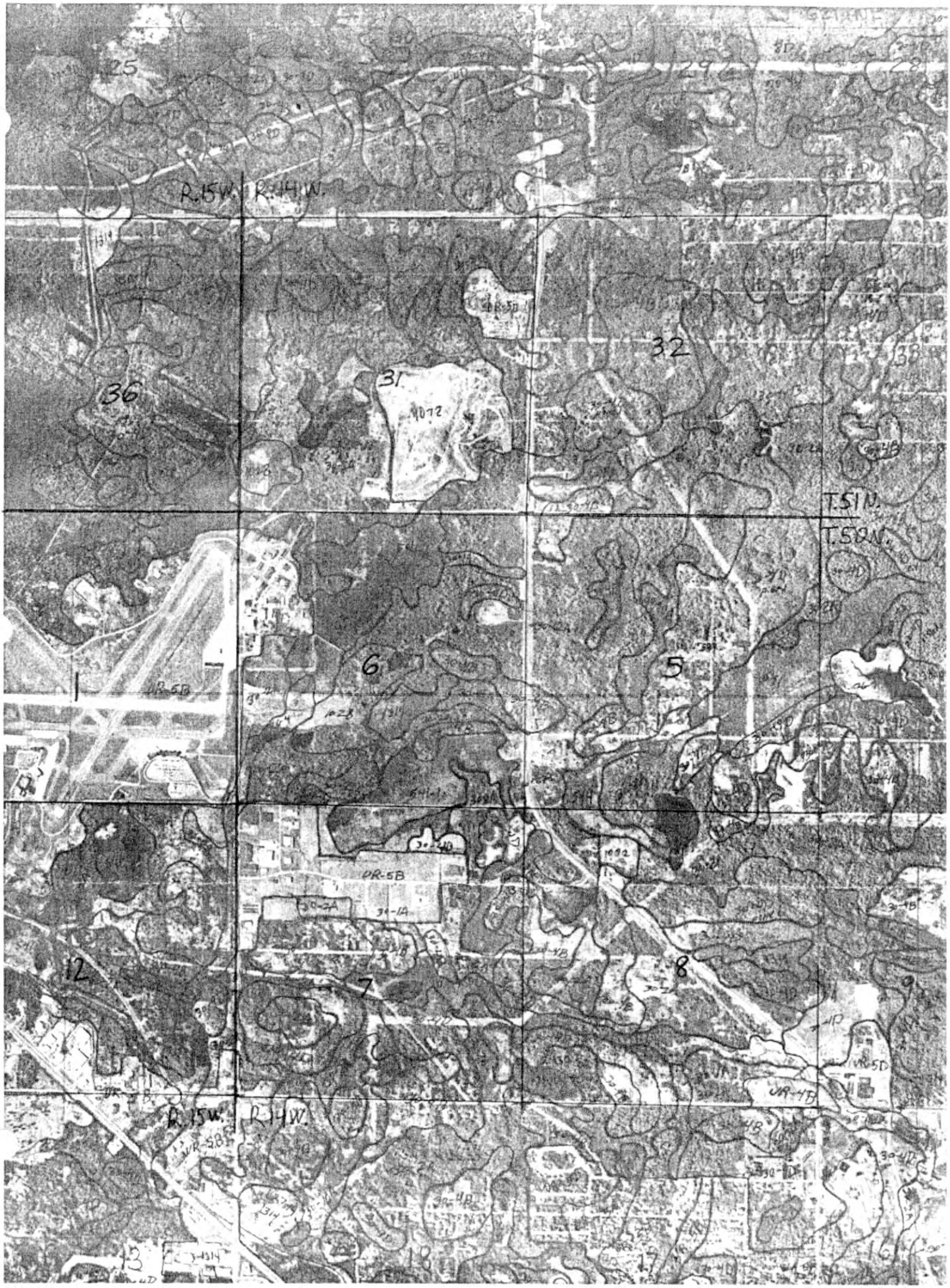
32-1A	Fluvaquents VPD, 0 to 1 percent slopes, frequently flooded
32-1B	Amnicon-Cuttre-Fluvaqents frequently flooded complex, 0 to 8 percent slopes.
32-2A	Cuttre-Unnamed (PD) complex, 0 to 3 percent slopes.
32-3B	Hapludalfs,Unnamed MWD-Cuttre-Unnamed PD complex, 0 to 8 percent slopes.
32-7A	Bergland-Unnamed PD complex, 0 to 1 percent slopes.
32-8B	Amnicon-Cuttre complex, 0 to 8 percent slopes.
32-8D	Amnicon-Cuttre complex, 0 to 18 percent slopes.
32-9B	Amnicon-Cuttre complex, 3 to 8 percent slopes.
32-9D	Amnicon-Cuttre complex, 3 to 18 percent slopes.
32-9E	Amnicon-Cuttre complex, 3 to 45 percent slopes.
32-11D	Amnicon-Fluvaquents, frequently flooded complex, 0 to 18 percent slopes.
32-11E	Miskoaki-Fluvaquents, frequently flooded complex, 0 to 45 percent slopes.
32-12D	Amnicon-Udifluvents, frequently flooded, complex 0 to 18 percent slopes.
32-12E	Miskoaki-Udifluvents, frequently flooded, complex 0 to 45 percent slopes.
32-13E	Miskoaki-Bedrock, frequently flooded complex,0 to 45 percent slopes.
32-14	Udifluvents, 0 to 3 percent slopes, frequently flooded.
32-15	Udifluvents, occasionaly flooded-Rollins complex, 0 to 30 percent slopes.
32-16B	Unnamed MWD very fine till over bedrock-bedrock complex, 0 to 8 percent slopes
32-16D	Unnamed MWD very fine till over bedrock-bedrock complex, 0 to 18 percent slopes.
32-17A	Badriver-Dagwagi (PD) complex, 0 to 3 percent slopes.
32-18B	Badriver-Sanborg complex, 1 to 8 percent slopes.
32-18D	Sanborg-Badriver complex, 8 to 18 percent slopes.

35-2A	B101A	Schisler-Ellsburg complex, 0 to 2 percent slopes
35-5A	B102A	Hellwig-Ellsburg complex, 0 to 2 percent slopes
35-6A	B103A	Schisler-Melrude complex, 0 to 2 percent slopes
35-9A	B104A	Ellsburg-Baden complex, 0 to 2 percent slopes
35-10A	B105A	Spidercreek sandy loam, 0 to 2 percent slopes
35-11A	B106A	Grytal sandy loam, 0 to 3 percent slopes
35-12B	B115B	Menahga loam sand, 2 to 8 percent slopes
35-12D	B115D	Menahga loam sand, 8 to 18 percent slopes
35-12F	B115F	Menahga loam sand, 18 to 45 percent slopes
35-14	B107A	Baden mucky silt loam, depressional, 0 to 1 percent slopes
35-15	F109A	Bowstring and Fluvaquents soils, frequently flooded
35-16	B110A	Moquah and Fluvaquents soils, occasionally flooded
147		Spooner silt loam, 0 to 2 percent slopes
1072	F132B	Udorthents, shallow (sanitary landfill) MLRA 93
1072	B114B	Udorthents, shallow (sanitary landfill) MLRA 88
1356	B113A	Water, miscellaneous (lagoons, manmade ponds, etc.) MLRA 88
1356	F133A	Water, miscellaneous (lagoons, manmade ponds, etc.) MLRA 93

Organic soils

SAPRIC

543	B111A	Markey muck, 0 to 1 percent slopes (sapric/sandy-Euic) MLRA 88
543	F130A	Markey muck, 0 to 1 percent slopes (sapric/sandy-Euic) MLRA 93


R.15W.
R.14W.
T.51N.
T.50N.
25
30
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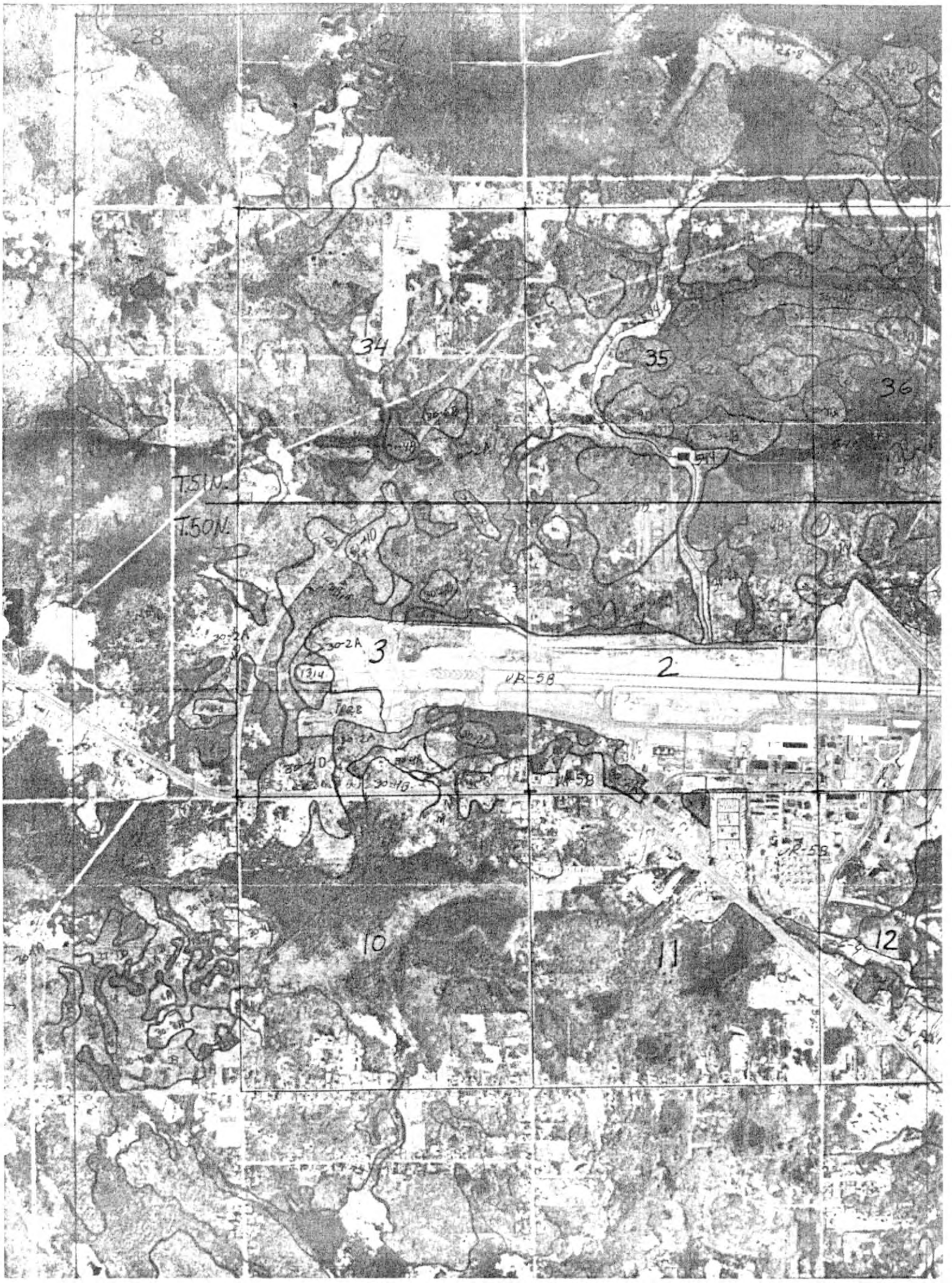
UR-4B
30-2A
30-1A
1072


28
27
34
35
36
T.51N.
T.50N.
3
2
VR-58
VR-58
VR-58
10
11
12

Appendix C
List of Records Reviewed

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Baxter, Rich, Project Manager – MPCA, Personnel Communications, April, 2004.

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Dempsey, Bob, USACE – St. Paul District, *Personal Communication*, April 22, 2004.

Department of the Army, 1961, *Detail Utilities Map – Duluth, MN* (1:50).

Department of Defense – Defense Environmental Restoration Program: Volume 1, 2004, www.dtic.mil/envirodod/derpreport95/vol_1/fud.html.

Duluth International Airport Website, www.duluthairport.com/history/txt.html, 2004.

Dillion, Jason, Facility Director - Cirrus, *Personal Communication*, March 2, 2004

Engineering-Science, 1982, *Phase I – Records Search* – Installation Restoration Program, Atlanta, GA.

Engineering-Science, 1990, *Remedial Investigation Report.*

Engineering-Science, 1994, *Feasibility Study* – Installation Restoration Program.

Gawrys, Beth, Hydrologist - MPCA, Personnel Communications, April, 2004.

Holley, Jim, Program Manager – ACC, *Personal Communications*, April, 2004.

Hobbs, H.C., and Goebel, J.E., 1982. *Geologic Map of Minnesota: Quaternary Geology (1:500,000)*. Minnesota Geological Society: Minneapolis, MN.

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Appendix D
Summary of Personal Interviews

Mr. Tom Wilks
Retired USAF Photographer
Assigned to Duluth AFB: August 1955 to September 1958.

Notes:

Hanger 101 was used for plane maintenance including engine change outs, radar maintenance and change outs, and general maintenance. No knowledge of specific chemical usage or disposal practices. Major aircraft overhauls were completed in Utah.

Approximately 1,500 personnel on the AFB during the 1950s.

The black room was situated in the basement of one of the barracks located south of Hanger 101. Development and fixer chemicals were simply released into sink drains.

The paint shop building was used for paint storage and painting of smaller vehicles and components. Tom seems to remember the building being used by a metal plating company after the AFB closed.

Mentioned the presence of the Base Gas Station. The location of the gas station could not be pinpointed due to aerial photo coverage.

Mentioned the Rocket Storage Building but was unable to locate during interview due to aerial photo coverage. The location of the Rocket Storage Building was determined following the interview.

Was not aware of any other ordinance storage areas. Aircraft at that time were armed with only missiles.

Does not recall the DPDO in the CPA but seems to remember a scrap yard in that area.

An aircraft (apparently a B-47) crashed between the east end of the main east-west runway and Rice Lake Road.

Tom also identified several buildings on the aerial photos including: barracks, USO building, mess hall, steam plant, headquarters building, motor pool, and the flight simulator building.

Supplied EMR with two following aerial photos of the Building 102/102 area taken in either 1954 or 1955.

Tom mentioned Roger Coon as another person that served at the AFB during the late 1950's

Roger Coon
Retired 1st Sergeant in the 179th Fighter Squadron
Assigned to Duluth AFB: April 1956 to 1959.

Notes:
Worked in the print shop that was in the Flight Simulator Building.

Thought that there were a lot of solvents and other chemicals (oil, fuel) stored, at least temporarily in both Hanger 101 and 103. Most of the aircraft maintenance took place within the hangers.

Stated that the Paint Shop had a lot of yellow paint, since that was the color vehicles and other equipment were painted at the time. Personnel color coded the tails of the aircraft.

No other specifics on materials or handling practices within the Project Areas.

Thought that POL Quonset hut was used for sand and salt storage.

Recalled the presence of cement bunkers in the Cirrus area. Roger stated that they might have been taken out by the USAF.

Disposal practices seemed to be either flushing materials down the drain or pouring materials on the ground. Stated that personnel used to change the oil in their cars behind the HQ and the oil was left on the ground. Inks and water from publishing was flushed down drains.

He also recalled the airplane crash near Rice Lake Road, said that he witnessed the crash and fireball with other personnel.

Recalled a broken pipe between the POL and the Runway [maybe the piping between Building 112 and the Jet Fueling Vaults?]

Jim Holley
Program Manager – Air Combat Command April 23, 2004

Asked about ACC project areas and status and if there were any other sources for ACC information available beside the public record located at the Duluth Public Library.

Notes:
ACC has only had a total of six sites at the Duluth IAP.

ACC took responsibility for only five sites from the list of sites that was developed by the Phase I Records Search (Engineering-Science, 1982).

ACC took responsibility for one additional site – ST-12 RAPCON.

ST-12 RAPCON was discovered during line of sight clearing when a bulldozer uncovered two USTs.

Will send project summary and map for ST-12.

Said that I should contact Eric Evans of Hydrogeologic since Hydrogeologic recently completed an update of the ACC public record at the Duluth Public Library.

Said that all public ACC records are present in the Duluth Public Library – no other known sources for documentation.

[redacted]

Asked [redacted] about information on the Building 112 UST removal project, specifically if he had any documentation or knowledge of the Lot 1 UST removal.

He vaguely recalled the Lot 1 UST removal – thought it was either a diesel fuel or gasoline UST. Thought it was a clean removal since he doesn't recall the removal of any contaminated soil. Thought it was a fairly small UST.

He doesn't have any documentation related to the project – sent to Omaha when they took over the project.

Steve Lepella and Tim Musik were the MPCA contacts – documentation might be available through them.

Contaminated soils from the 55,000-gallon USTs were stockpiled and remediated through an ex-situ air sparging system installed into the stockpile. Soils were later determined to be clean (prior to Cirrus construction).

[redacted]
Environmental Engineer – Minnesota Air National Guard (April 24, 2004)

Asked about UST removal projects conducted by the MNANG.

All the MNANG UST removal projects that list 4860 Viper Street as an address were removed from the current MNANG base. They have not removed USTs in, or near our project areas. The MNANG does not have any more USTs at the Duluth IAP.

Asked if surface water monitoring that was conducted by the USAF continues.

The surface water sampling conducted by the USAF was discontinued (date unknown). The only surface water sampling that is currently conducted by the MNANG is related to the SWPP plan.

He cannot think of any potential FUDS sites.

[redacted]
Hydrologist – Minnesota Pollution Control Agency (April 23, 2004)

Asked about her general knowledge of Duluth IAP projects and if there were any outstanding work or areas that had not been investigated.

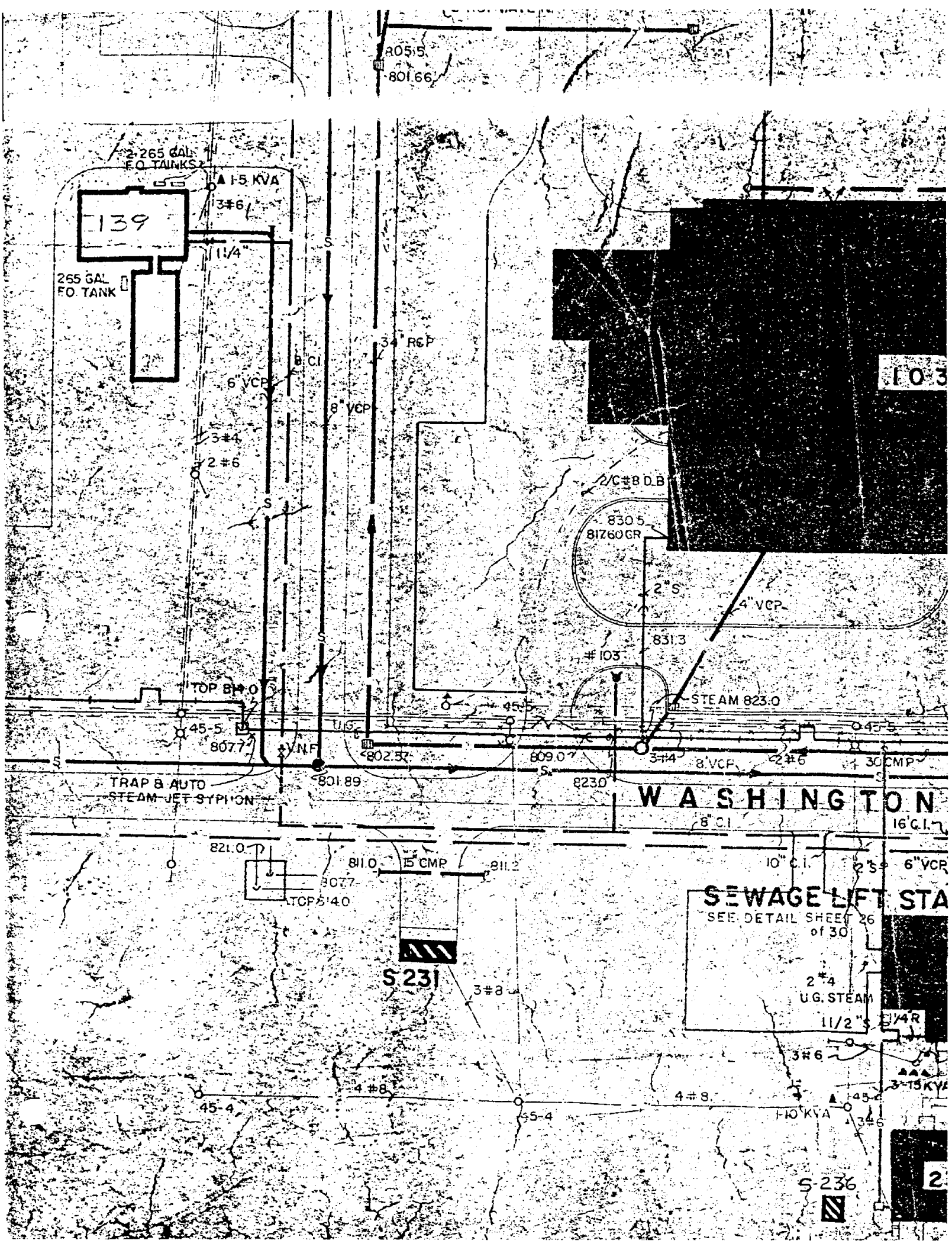
Notes:
Has not worked on Duluth IAP site for approximately 5 years.

Previously worked on the Imhoff Tank Site and other RCRA sites at the Duluth IAP.

Did not know anything about UST removal projects on the south side of the Duluth IAP.

Recalled that the MPCA had requested additional sediment sampling for metals in the marsh southeast of the former Imhoff Tank Site. Did not know if the sampling had ever been completed.

Appendix E
Applicable Portions of USAF Utility Map (1961)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2" S
4" VCP
831.3
#103
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30" CMP
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15" CMP
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807.7
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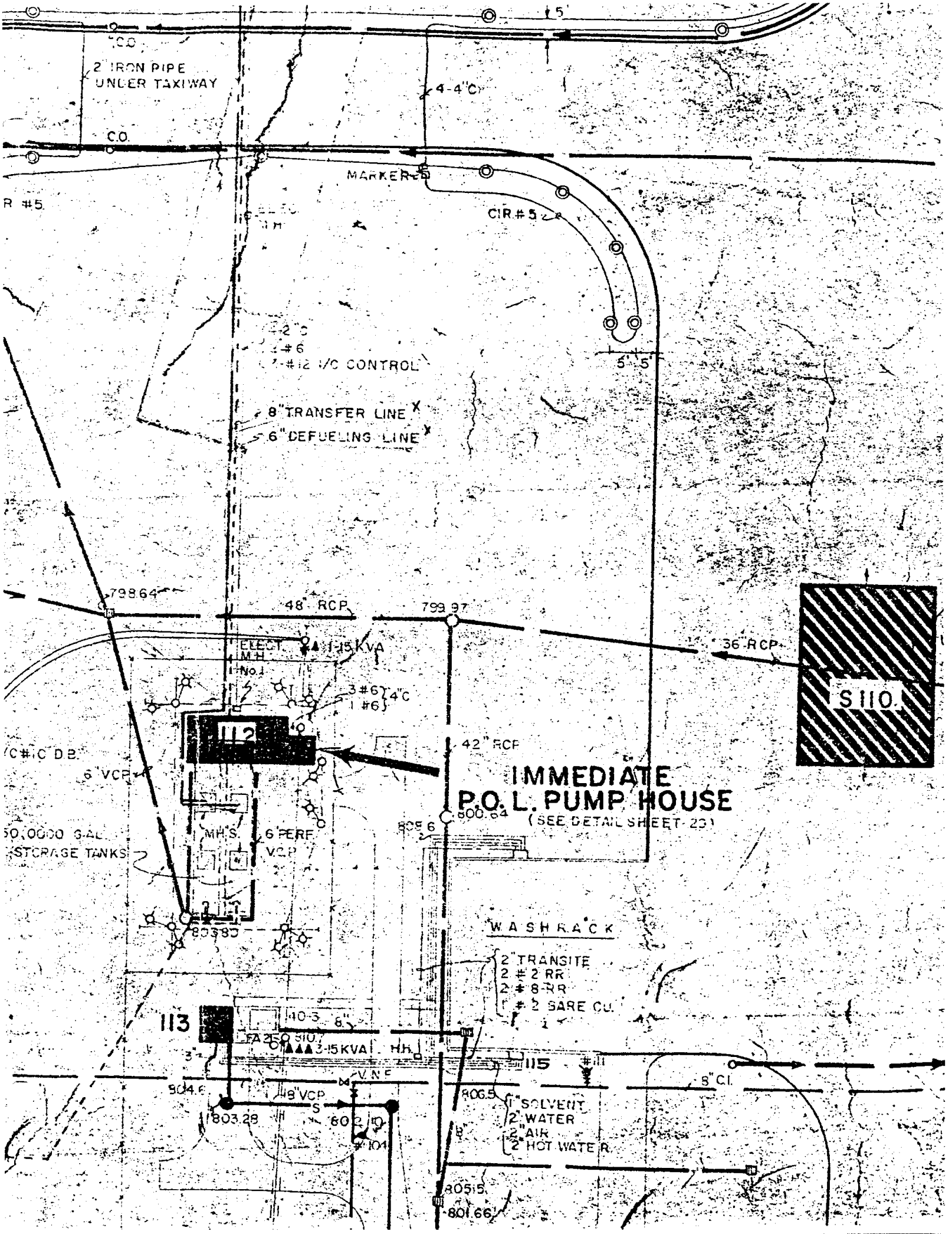
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6" DEFUELING LINE
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2" AIR
2" HOT WATER
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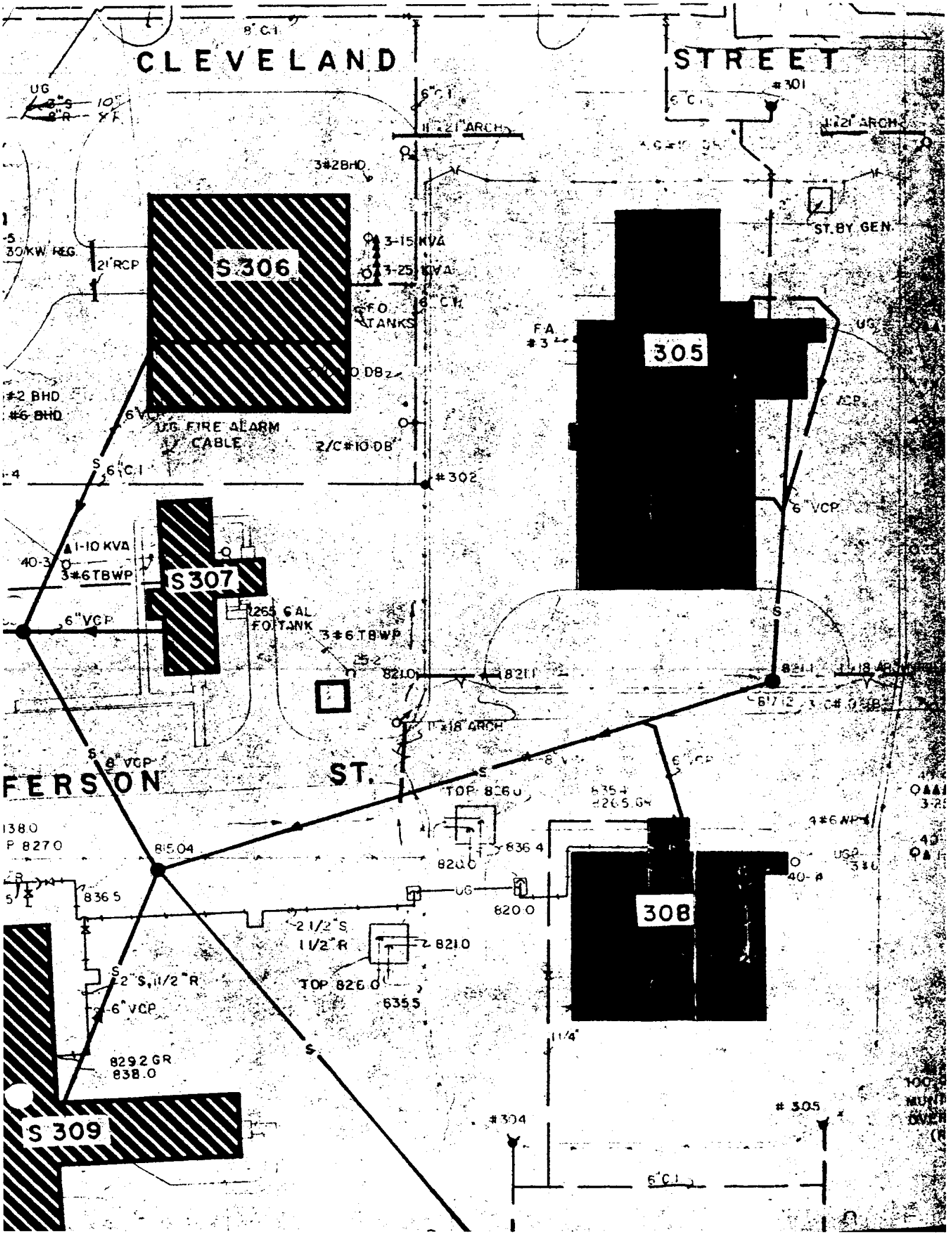
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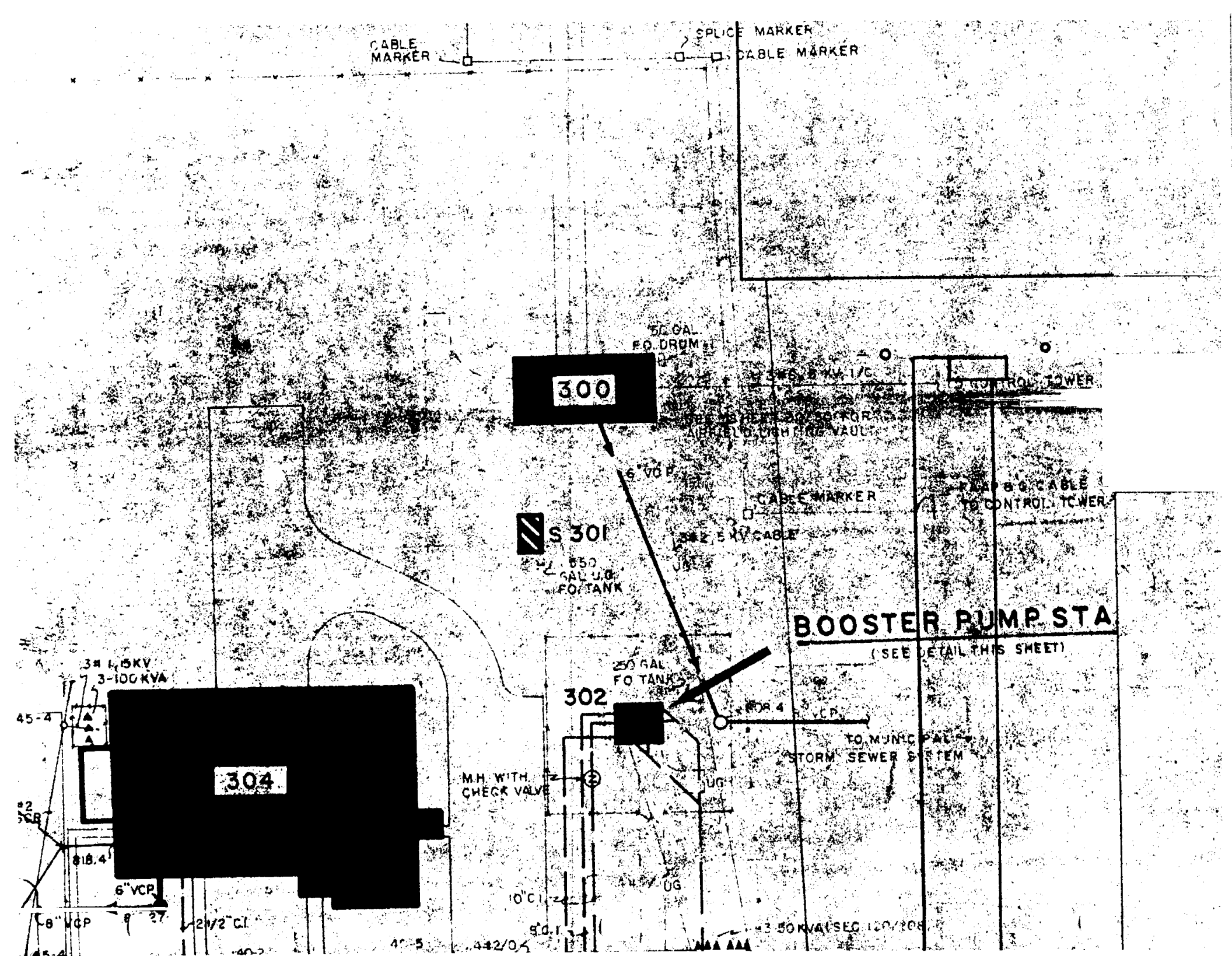
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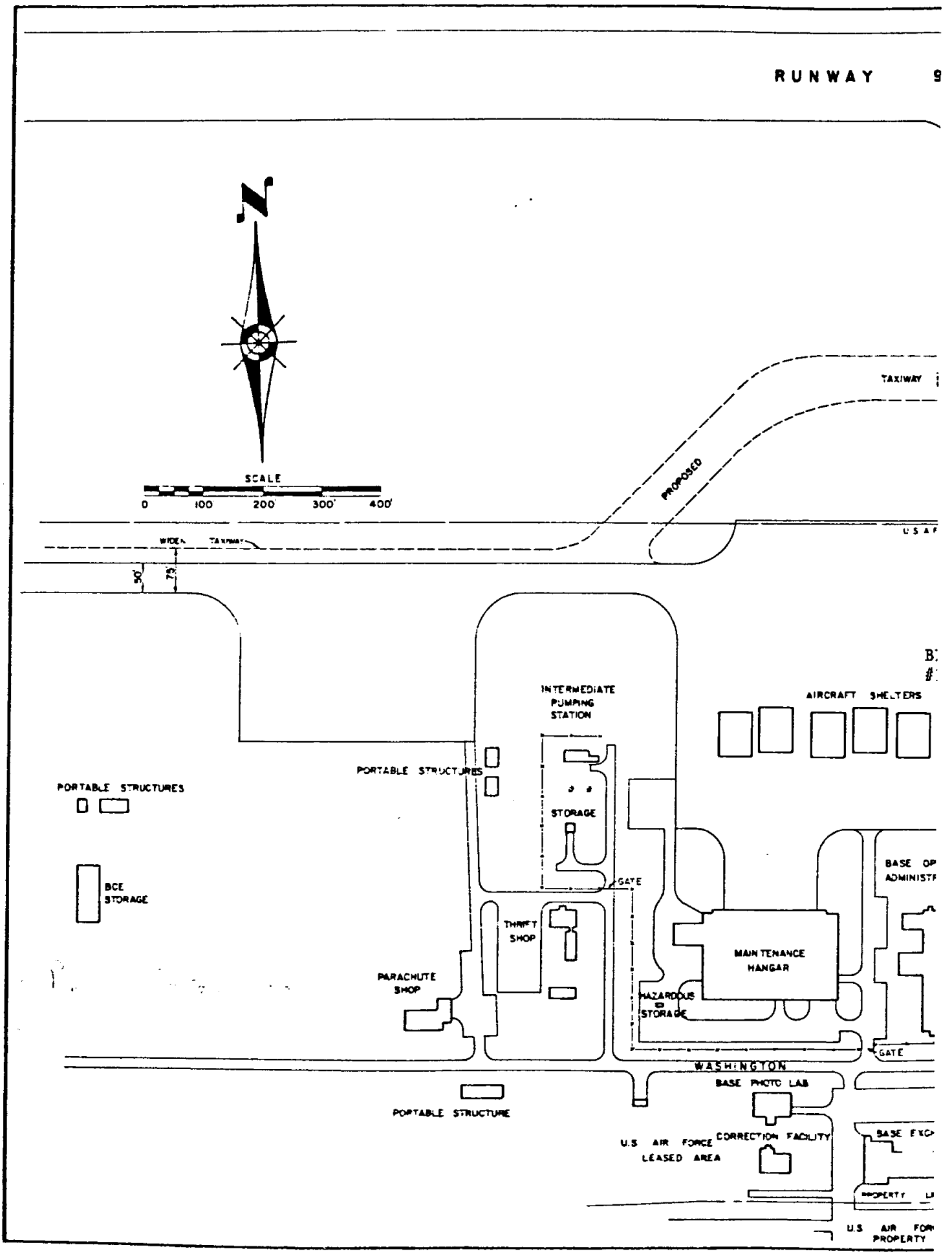
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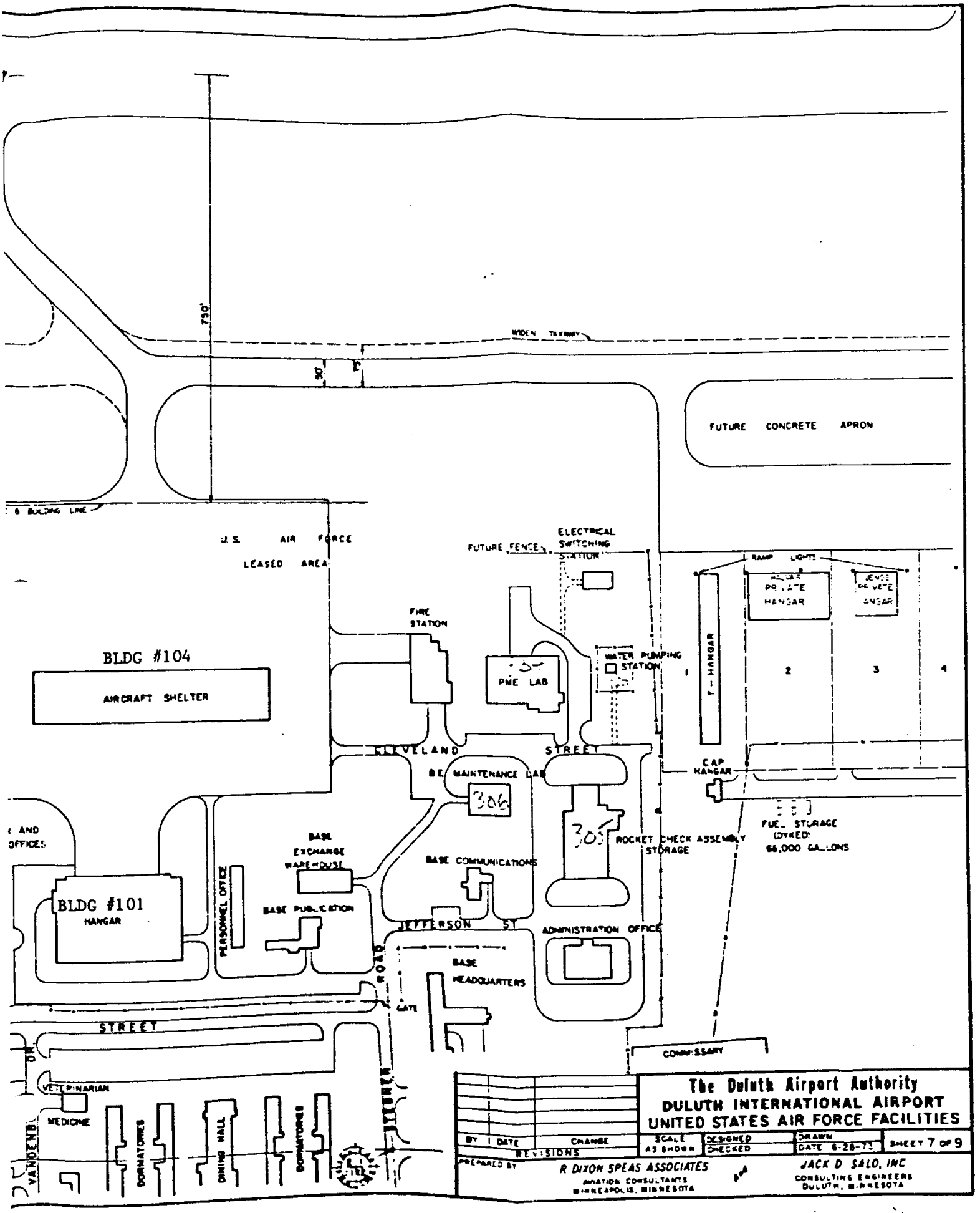

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The Duluth Airport Authority
DULUTH INTERNATIONAL AIRPORT
UNITED STATES AIR FORCE FACILITIES

PREPARED BY

R DIXON SPEAS ASSOCIATES
AVIATION CONSULTANTS
MINNEAPOLIS, MINNESOTA

JACK D SALO, INC
CONSULTING ENGINEERS
DULUTH, MINNESOTA

INSTALLATION RESTORATION PROGRAM

FINAL
FIVE-YEAR REVIEW REPORT
FOR SITES 2, 3, 4, 21, 23, 25, 29, TS737, AND TS738

DULUTH AIR NATIONAL GUARD BASE
148th FIGHTER WING
MINNESOTA AIR NATIONAL GUARD
DULUTH, MINNESOTA

Prepared By:
NGB/A4VR
Joint Base Andrews, Maryland

SEPTEMBER 2025

FINAL
FIVE-YEAR REVIEW REPORT
FOR SITES 2, 3, 4, 21, 23, 25, 29, TS7373, AND TS738

DULUTH AIR NATIONAL GUARD BASE
148th FIGHTER WING
MINNESOTA AIR NATIONAL GUARD
DULUTH, MINNESOTA

Prepared By:
NGB/A4VR
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Digitally signed by CALLAN.CHAD.RICHARD.10087 74966
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NGB/A4 Associate Director, Engineering

11 September 2025

Date

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Table 1 – Site Status Summary

LIST OF ACRONYMS AND ABBREVIATIONS

µg/L	microgram per liter
ACC	Air Combat Command
AFB	Air Force Base
AFFF	aqueous film forming foam
Amec	Amec Foster Wheeler Environment & Infrastructure, Inc.
ANG	Air National Guard
ANGB	Air National Guard Base
AOC	area of concern
ARAR	applicable, relevant and appropriate requirements
AST	aboveground storage tank
BB&E	BB&E, Inc.
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylene
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CIP	Community Involvement Plan
CMS	Corrective Measures Study
COC	constituent of concern
CSE	Comprehensive Site Evaluation
CSM	conceptual site model
CY	cubic yard
D&D	deactivation and decommissioning
DAA	Duluth Airport Authority
DCA	dichloroethane
DCE	dichloroethene
DD	decision document
DGI	Data Gap Investigation
DIA	Duluth International Airport
DO	dissolved oxygen
DoD	Department of Defense
DRMO	Defense Reutilization and Marketing Office
DRO	diesel-range organics
EA	EA Engineering, Science, and Technology, PLC
EEO	emulsified edible oil
EESOH-MIS	Enterprise Environmental Safety and Occupational Health – Management Information System
EISB	enhanced in-situ bioremediation
ELS	Emulsified Lecithin Substrate
EM	Environmental Manager

LIST OF ACRONYMS AND ABBREVIATIONS (CONTD.)

ERD	enhanced reductive dechlorination
ERM	Environmental Resources Management
eSSS	electronic Staff Summary Sheet
FFS	Focused Feasibility Study
FS	Feasibility Study
ft	feet
FTA	fire training area
FW	Fighter Wing
FYR	Five-Year Review
GIS	geographic information system
GRO	gasoline-range organics
HBV	Health-Based Value
HRL	Health Risk Limit
IC	institutional control
IDP	Installation Development Plan
IP	injection point
IRP	Installation Restoration Program
ISRI	in-situ remedial injection
IRSV	Industrial Soil Reference Value
lbs.	pounds
LNAPL	light non-aqueous phase liquid
LTM	long-term monitoring
LUC	land use control
MDH	Minnesota Department of Health
mg/kg	milligram per kilogram
MMRP	Military Munitions Response Program
MNA	monitored natural attenuation
MNANG	Minnesota Air National Guard
MPCA	Minnesota Pollution Control Agency
MPE	multiphase extraction
MWH	MWH Americas, Inc.
NCP	National Oil and Hazardous Substance Contingency Plan
NFA	no further action
NFRAP	No Further Remedial Action Planned
NGB	National Guard Bureau
NGB/A4VR	Headquarters Air National Guard, Civil Engineering Directorate, Operations Division, Restoration Branch
ORC®	Oxygen Release Compound®
ORP	oxidation-reduction potential

LIST OF ACRONYMS AND ABBREVIATIONS (CONTD.)

OU	operable unit
PA	Preliminary Assessment
PAH	polynuclear aromatic hydrocarbon
PCE	tetrachloroethene
PCI	Pre-Characterization Investigation
PCS	petroleum-contaminated soil
PFAS	per- and polyfluoroalkyl substance
PM	project manager
PP	Proposed Plan
POL	petroleum, oil, and lubricants
PRG	Preliminary Remediation Goal
PRL	potential release location
RA	remedial action
RAC	remedial action construction
RAO	remedial action objective
RA-O	remedial action operations
RCRA	Resource Conservation and Recovery Act
RG	remediation goal
RI	Remedial Investigation
RPO	Remedial Process Optimization
ROD	Record of Decision
SEH	Short Elliot Hendricks, Inc.
SI	Site Inspection
SRV	Soil Reference Value
SVOC	semi volatile organic compound
TA	treatment area
TCE	trichloroethene
TMB	trimethylbenzene
TPH	total petroleum hydrocarbon
URS	URS Group, Inc.
USACE	United States Army Corps of Engineers
USAF	United States Air Force
USEPA	United States Environmental Protection Agency
UST	underground storage tank
UU/UE	unlimited use/unrestricted exposure
VAS	vertical aquifer sampling
VC	vinyl chloride
VOC	volatile organic compound

I. INTRODUCTION

The purpose of a Five-Year Review (FYR) is to evaluate the implementation and performance of remedies to determine if the remedies are and will continue to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in FYR reports. In addition, FYR reports identify any issues found during the review and documents recommendations to address them. A summary of documents referenced during the preparation of this FYR can be found in **Appendix A**.

The Air National Guard (ANG) is preparing this FYR pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121, consistent with the National Oil and Hazardous Substance Contingency Plan (NCP) (40 Code of Federal Regulations [CFR] Section 300.430(f)(4)(ii)) and considering United States Environmental Protection Agency (USEPA) policy and FYR guidance (USEPA, 2001). This FYR was prepared utilizing the FYR recommended template provided by the USEPA Office of Land and Emergency Management 9200.0-89.

This FYR is being completed for nine Installation Restoration Program (IRP) sites located at the Duluth ANG Base (ANGB; hereinafter referred to as the "Base") in Duluth, Minnesota, as outlined below and indicated in **Table 1**.

This is the third FYR for the following IRP Sites:

- Former Defense Reutilization and Marketing Office (DRMO): SS003 (Site 3); and,
- Old Motor Pool Area: ST025 (Site 25).

This is the second FYR for the following IRP Sites:

- Fire Training Area (FTA) 1 and FTA 2: FT002 (Site 2);
- Fuel Storage Area: SS004 (Site 4);
- Imhoff Tank Treatment System: WP021 (Site 21);
- Aircraft Parking Ramp: SS023 (Site 23); and,
- Former Refueler Parking Area: SS029 (Site 29).

This is the first FYR for the following IRP Sites:

- Military Munitions Response Program (MMRP) Trap Range Site: TS737; and,
- MMRP Skeet Range Site: TS738.

In accordance with USEPA Guidance (USEPA, 2001), the triggering action for this statutory FYR is the signature date of the previous FYR Report, August 1, 2019 (BB&E, Inc. [BB&E], 2019), and the completion of a Record of Decision (ROD) for MMRP Sites TS737 and TS738 dated June 2018 (MMG-TLI JV/AECOM, 2018). This FYR has been prepared due to on-going remedial action at the sites. The on-going remedial actions were part of the selected remedies in the RODs for the sites. It is anticipated that upon completion of remedial actions, hazardous substances, pollutants, or contaminants at the sites will be at levels that allow for unlimited use and unrestricted exposure (UU/UE); however, the remedial actions have required five years or more to complete, and therefore the sites have been evaluated as part of this FYR.

The following sections discuss the background information for the Base and Sites 2, 3, 4, 21, 23, 25, 29, TS737, and TS738, including a general description of the property, the environmental setting, land use at the Base, and history of soil and groundwater contamination at the sites. Site figures are included in **Appendix B**. Although Site 2 and Site 23 have been approved for no further action (NFA) and Sites 3, 4, 21, 25, 29, TS737, and TS738 are undergoing long-term monitoring (LTM) and remedial activities, as noted above, conditions at the sites do not currently allow for UU/UE.

It should be noted that a base-wide Per- and Polyfluoroalkyl Substances (PFAS) Remedial Investigation (RI) is currently on-going at the Base. PFAS are discussed below in the Technical Assessment (Section V). As PFAS are emerging contaminants, they will be evaluated through a similar process used under the IRP and consistent with the provisions of CERCLA, as amended.

The team for this FYR was led by Ms. Celeste Holtz of BB&E. Participants included Mr. William Myer (Environmental Restoration Program Manager) of the Headquarters Air National Guard, Civil Engineering Directorate, Environmental Division, Restoration Branch (NGB/A4VR), Ms. Mikah Inkawhich (Federal Environmental Manager [EM] at the Base), SSgt Blake Bornholdt (State EM at the Base), Mr. Dan Cervin (Project Manager [PM] for the Minnesota Pollution Control Agency [MPCA]), and Mr. Mark Elliot (PM for MPCA).

Site Background

The Base, located at Duluth International Airport (DIA), is home to the 148th Fighter Wing (FW). The DIA is located in St. Louis County in northeastern Minnesota, approximately seven miles northwest of the City of Duluth (see Figure 1 in **Appendix B**). The City of Duluth owns the main east-west runway and supporting taxiways. Ownership of the remaining property at the DIA is divided among the Federal government, the State of Minnesota, and the City of Duluth. Commercial, industrial, residential, and recreational properties are located in the vicinity of the Base (Amec Foster Wheeler Environment & Infrastructure, Inc. [Amec], 2017a).

The DIA comprises approximately 2,000 acres, and the 148th FW facilities are located on leased property at several locations in the vicinity of the east-west runway (Amec, 2017a). The 148th FW main Base is located on the eastern side of DIA (see Figure 2 in **Appendix B**). It should be noted that portions of the Base fall on federally owned land, which is comprised of a total of approximately 18.84 acres.

The Duluth Air Force Base (AFB) was opened in 1948 as the Williamson-Johnson Airport and was operated jointly by the United States Air Force (USAF) Air Combat Command (ACC), the Minnesota ANG, and the City of Duluth. Duluth AFB hosted a variety of USAF operations until December 1981, when the USAF's operational missions were terminated at the Duluth AFB; however, commercial and ANG activities continued (ERM, 2013a).

The Base houses aircraft, vehicles, and equipment. Current and past operations at the Base have involved the use of products such as fuels, oils, lubricants, paints, paint thinners, solvents, and aqueous film forming foam (AFFF; Amec, 2017a). Figures showing the installation location and areas of Sites 2, 3, 4, 21, 23, 25, 29, TS737, and TS738 can be found in **Appendix B**. Supporting documentation for the sites can be found in **Appendix C** through **Appendix J**. Historical releases and potential impacts to the environment have been investigated through the IRP, as outlined below.

Site 2: FTA 1 and FTA 2

Site 2 is an area that encompasses approximately 30 acres (see Figure 3 in **Appendix B**). Site 2 was used twice per month from 1960 until 1987 to burn up to 500 gallons of jet propulsion fuel #4, along with smaller volumes of contaminated fuels and oils, paint thinners, and solvents for fire training activities (MWH Americas, Inc. [MWH], 2002). Fire training exercises, likely utilizing aqueous film forming foam (AFFF), led to the creation of site AT028, located within the footprint of Site 2, for the investigation of PFAS in soil and groundwater (HydroGeoLogic, Inc. [HydroGeoLogic], 2015). As such, details regarding PFAS within the footprint of Site 2 will not be discussed further in this FYR.

Site 3: Former DRMO

Site 3 is currently unoccupied and is the former location of a weapons calibration facility at Building 123 and, more recently, the DRMO. Site 3 is located near the southwest end of the runway. The site consists of four storage buildings, approximately 5 acres of paved storage areas, roadways, woodlands, grassy areas, and a network of drainage ditches (see Figure 4 in **Appendix B**). The DRMO was in use from 1965 until the early 2000s to store unused equipment and supplies, including petroleum, oils, lubricants, solvents, and various chemicals. At any one time, a maximum of one hundred 55-gallon drums were stored on a gravel storage pad located in the southwest corner of Site 3, where minor drum leaks occurred. The storage pad was used until 1980. No major spills have been recorded at Site 3; nevertheless, soil and shallow groundwater at Site 3 were impacted (BB&E, 2014).

Site 4: Fuel Storage Area

Site 4 was used as a petroleum, oil, and lubricants (POL) facility from 1950 to 2011. Decommissioning and demolition of the former POL facility was completed in March 2012 by Twin Ports Environmental/Construction LLC of Duluth, with oversight by EBI Consulting. Decommissioning and demolition activities included removal

of aboveground storage tanks (ASTs) and aboveground structures/ancillary equipment but did not include removal of any subsurface infrastructure or utilities. Site 4 is located on the southern side of the DIA and west of the Cirrus Aircraft manufacturing facility and is part of a parcel historically leased by the USAF on behalf of the State of Minnesota from the City of Duluth (see Figure 7 in **Appendix B**). Site 4 is separated from both DIA operations and the public roadway by permanent chain-link fencing, which provides engineering controls for the site (Amec, 2017b).

Site 21: Imhoff Tank Treatment System

Site 21 is a former treatment system that provided primary and secondary sewage treatment for the industrial and administrative areas of the Base. Site 21 is located in the central portion of the main Base and is located adjacent to Site 25 (see Figure 10 in **Appendix B**). The system was constructed in 1949 and consisted of an Imhoff tank, sludge drying beds, and biological filter bed. A 750-feet (ft) outfall pipe discharged the system's liquid effluent to the Miller Creek Wetlands. The City of Duluth connected the area to the municipal sewer in 1969. A Base Entrance Relocation Project was completed in 2005, which relocated the Base entrance road to cross Site 21 near its southern boundary (Amec, 2017a).

Site 21 is located South of the current Building 252 and where the former buildings 249 and 253 were demolished. Apparently, there were multiple small releases near Building 252 or a release of diluted dissolved-phase contamination from a stormwater outfall at the former Imhoff tank treatment system.

Site 23: Aircraft Parking Ramp

Site 23 is located along the northwest property boundary of the main Base and east of the northeast-southwest runway (see Figure 13 in **Appendix B**). Site 23 is located in the vicinity of Sites 25 and 26; Site 25 is located east of the northern portion of Site 23, and Site 26 is located west of the southern portion of Site 23. The aircraft parking ramp has been used for aircraft parking and refueling since 1948. Overfills and spills of aircraft fuel may have infiltrated the joints of the apron and taxiway and migrated into the soil and groundwater below. Site 23 was identified in 1990 during planning activities for the reconstruction of the aircraft parking apron and taxiway (Montgomery Watson, 2002).

Site 25: Old Motor Pool Area

Site 25 is located on the eastern portion of the DIA and near the current entrance to the Base (see Figure 15 in **Appendix B**). Site 25 includes former Building 239, and Buildings 240 and 242. Building 240 was originally the motor pool building, but has served as the Transportation Management Office, as well as the Base Supply Packing and Crating facility since the early 1990s. The site encompasses an area of approximately 1.2 acres that was used as the Base Motor Pool from 1948 until 1975. The site includes the old motor pool and two adjacent areas of related motor pool activities: 1) a former 1,000-gallon gasoline underground storage tank (UST) area and 2) the old motor pool floor drain outfall that flowed southeast from the old motor pool area. The 1,000-gallon gasoline UST was removed in September 1994. Two groundwater plumes have been identified at the site: a larger plume adjacent to the east and south of the former USTs and a smaller plume located south of the larger plume. Site 25 also includes the former sites of one 10,000-gallon gasoline UST, one 10,000-gallon diesel fuel 4 UST, and one 500-gallon waste solvent UST. These three tanks were removed in 1995 (EA Engineering, Science, and Technology, PLC [EA], 2015).

Site 29: Former Refueler Parking Area

Site 29 was last used as the administrative offices for POL Facility personnel (Building 117) and for parking tanker trucks used to fuel the aircraft at the Base (see Figure 19 in **Appendix B**). In the past, structures in the area of Site 29 included a former Quonset Hut (Building 68) used for storing paints, fertilizers, and cleaning solvents, and former Building 66, which had been equipped with a septic system and a fuel oil tank. It should be noted that Cirrus Aircraft, also on a lease with the Duluth Airport Authority (DAA), operates a manufacturing facility for small personal aircraft located immediately east of Site 29. Spills from cleaning solvents stored at the Quonset Hut, solvents inadvertently disposed of in the fuel oil tank near former Building 66, and an upgradient source beneath the Cirrus Facility are all potential sources of environmental impacts at Site 29 (Environmental Resources Management [ERM], 2015a).

Demolition and decommissioning of the former POL facility (Site 4) occurred in March 2012; however, no significant infrastructure was removed from Site 29. Site 29 was formerly located within the DIA secured perimeter fence. In January 2013, a new fence was constructed north of Site 29 that placed the Site outside the secured perimeter. However, engineering controls for the site are still intact, as the old fence and access gate remain in place (Amec, 2017c).

Site TS737: MMRP Trap Range Site

TS737 is located west of the Duluth ANGB installation boundary and north of the intersection of Runway 21 and Runway 13 on property owned by the DAA (see Figure 21 in **Appendix B**). The former range covers approximately four acres and was used by the 148th FW from 1985 to 1992. The Comprehensive Site Evaluation (CSE) Phase I report indicated use until 1999, whereas the CSE Phase II report indicated use until 1992. The CSE Phase I investigation indicated that this range was developed for use by the 148th FW and according to the ANG Real Property Manager for the 148th FW, the Minnesota Air National Guard (MNANG) has never held a lease or license for the Trap Range property. No other users of the former range other than the 148th FW were identified in previous investigations. This range was removed in 1999 as part of the Northwest Airlines Maintenance Facility construction project. No decommissioning efforts were completed prior to or during the construction project. The former range is accessible via a dirt access road through the off-base recycling facility. The terrain is mostly flat, with the center of the former range comprised of a low-lying marshland. Vegetation consists of tall grasses and densely wooded areas. Approximately half of the site is recognized as wetlands by the state but have not been formerly delineated as jurisdictional wetlands by the United States. Army Corps of Engineers (USACE). Therefore, no permit is needed under Section 401 of the Clean Water Act, but state wetlands requirements do apply. Two retention ponds are located near the Trap Range and are used for both storm water management and fire emergency water supply (URS Group Inc. [URS], 2007; MMG-TLI JV, 2016).

Site TS738: MMRP Skeet Range Site

TS738 is located within the Duluth ANGB installation boundary, on property owned by the Minnesota Department of Military Affairs, leased to the USAF, and licensed to the MNANG (see Figure 21 in **Appendix B**). A portion of the former firing fan extends across the installation boundary onto an adjacent parcel to the east also owned by the Minnesota Department of Military Affairs. The Skeet Range is approximately 15.3 acres and was used by the ANG from 1960 to 1970 for small arms (shotgun) training. The former range is mostly flat and bordered by buildings and associated parking areas in all directions. Buildings, roads, and parking areas also occur within the western side of the Skeet Range boundary. Surface waters on the site include a wetland, which drains into Miller Creek, a small pond/water feature, and a State designated trout stream (URS, 2007). The center of the former range (to the east of the Base buildings) is a low-lying, densely wooded wetland (MMG-TLI JV, 2016).

FIVE-YEAR REVIEW SUMMARY FORM

SITE IDENTIFICATION		
Site Name: 148th Fighter Wing, Duluth Air National Guard Base		
EPA ID: MND000773341		
Region: V	**State:** MN	**City/County:** Duluth/St. Louis County

SITE STATUS	
NPL Status: Non-NPL	
Multiple Operable Units (OUs)? No (Multiple Sites)	**Has the site achieved construction completion?** No

REVIEW STATUS
Lead agency: Other Federal Agency ***[If "Other Federal Agency", enter Agency name]*:** National Guard Bureau
Author name (Federal or State Project Manager): Celeste Holtz
Author affiliation: BB&E, Inc.
Review period: 2019 – 2024
Date of site inspection: 7/17/2024
Type of review: Statutory
Review number: 3
Triggering action date: 08/01/2019
Due date *(five years after triggering action date)*: 08/01/2024

II. RESPONSE ACTION SUMMARY

Basis for Taking Action: Site 2

In March 1982, during a Phase I Records Search, Site 2 was identified as needing further investigation. A Phase II Confirmation/Quantification Study was conducted from 1982 to 1988. A 1990 RI indicated that benzene, toluene, ethylbenzene, and xylene (BTEX), and phenolics were detected in collected soil samples, and chlorinated volatile organic compounds (VOCs) including trans-1,2-dichloroethene (DCE) and trichloroethene (TCE) were detected in collected groundwater samples. The 1990 RI recommended a Feasibility Study (FS) be conducted. The FS was completed in October 1991 and recommended excavation and land farming of the contaminated soil at Site 2 (MWH, 2002).

Response Actions: Site 2

Soil excavations took place at Site 2 in October 1993 and July 1994, and the removed soil was treated using low temperature thermal treatment. The remedial alternative recommended for impacted groundwater was collection and treatment of the groundwater using ultraviolet photolysis and oxidation followed by a period of groundwater monitoring. In November 1995, an FS addendum was prepared addressing MPCA comments and re-evaluating alternatives by comparing the previous RI groundwater results with those from a subsequent groundwater monitoring event conducted in February 1995. The FS addendum recommended additional groundwater monitoring on a quarterly basis for two years. Following two years of additional groundwater monitoring, a Decision Document (DD) for Site 2 was prepared in 1997. The 1997 DD was rejected by the MPCA. As a result, an additional three years of groundwater monitoring were completed as part of the LTM activities at the site. During the LTM, no VOCs exceeding MPCA Health Risk Limits (HRLs) were detected in groundwater samples collected at Site 2 (MWH, 2002).

In May 2002, a DD was prepared and signed for Site 2 that outlined the selected remedy of NFA (MWH, 2002; **Appendix C**). The NFA determination outlined in the DD was based on continued industrial land use, and Land Use Controls (LUCs)/Institutional Controls (ICs) are in place at Site 2.

The NFA alternative for groundwater at this site includes the implementation of LUCs/ICs to maintain the industrial land use and control exposures to constituents remaining in place at the site. In the event this land should pass out of the control of the Department of Defense (DoD), CERCLA Section 120 (h) provisions will be implemented to ensure adequate LUCs/ICs are maintained.

Status of Implementation: Site 2

The selected remedy at Site 2 per the DD is NFA based on continued industrial land use. Because hazardous substances, pollutants, or contaminants remain on-site above levels that do not allow for a UU/UE scenario, general LUCs/ICs are in place and reviewed annually to maintain industrial land use. The annual LUCs/ICs checklist is included in **Appendix K**. The specific regulatory LUCs/ICs for Site 2 are summarized in **Table 2**.

LUCs/ICs Summary Table

Table 2: Summary of Planned and/or Implemented LUCs/ICs at Site 2

Media, engineered controls, and areas that do not support UU/UE based on current conditions	LUCs/ICs Needed (Y/N)?	LUCs/ICs Called for in the Decision Documents (Y/N)?	Impacted Parcel(s)	LUCs/ICs Objective	Title of LUCs/ICs Instrument Implemented and Date (or planned)
Groundwater	Yes	Yes	Site Boundary	Maintain current industrial land use and control exposures to constituents remaining in place at the site. In the event this land should pass out of the control of the DoD, CERCLA Section 120 (h) provisions will be implemented to ensure adequate LUCs/ICs are maintained.	NFA DD for Site 2, MWH, May 2002

Notes:
LUCs/ICs Checklists are utilized by the Base to verify implementation of LUCs/ICs.
CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act
DD – Decision Document
DoD – Department of Defense
IC – Institutional Control
LUC – Land Use Control
NFA – No Further Action
UU/UE – unlimited use/unrestricted exposure

Basis for Taking Action: Site 3

Site 3 was identified in a Phase I Records search in 1982 as needing further investigation. A Phase II Confirmation/Quantification Study was subsequently completed. Stages 1 and 2 were conducted in 1983 and 1986, respectively, confirming that VOCs, pesticides, and metals were present in soil and groundwater beneath Site 3. An RI report was completed in January 1990 and indicated that VOCs and chromium were detected in the soil and groundwater and recommended a FS be performed. The 1994 FS recommended excavation and land farming of the contaminated soil, collection of the contaminated groundwater using an interceptor trench, and treatment of the groundwater using ultraviolet photolysis and oxidation, followed by a period of groundwater monitoring. In 1995 an FS addendum recommended a groundwater interceptor trench for removal of contaminated groundwater, followed by carbon adsorption treatment, and groundwater monitoring (ERM, 2010).

In 1995 and 1996 most of the gravel storage pad was removed during soil excavation activities. Approximately 2,058 cubic yards (CY) of soil were removed from the area of the pad to a depth of approximately 10 ft below ground surface (bgs) and from the adjacent drainage network to a depth of one to 10 ft bgs. Excavated areas were backfilled with clean fill material. Based on the confirmation soil sampling results from the original excavation areas, the MPCA issued an NFA memorandum for Site 3 soils on 4 May 2000, approving the soil sampling results and stating that no additional remedial action (RA) for soils was necessary (BB&E, 2014).

A 1996 DD was approved by the ANG and MPCA to conduct quarterly groundwater monitoring at Site 3 for a period of three years. This DD stipulated that if COCs are migrating off-site and are impacting human health and/or the environment at concentrations exceeding HRLs, groundwater remediation may be necessary. The quarterly

groundwater sampling was conducted from 2000 through 2003, and the monitoring data indicated that the COC plume was not migrating off-site; however, it was persistent at concentrations exceeding HRLs. A follow up Data Gap Investigation (DGI) was conducted from March 2005 to October 2006. The DGI identified TCE, 1,1-dichloroethane (DCA), tetrachloroethene (PCE), and vinyl chloride (VC) as the primary COCs at the site and determined that the characterization of groundwater impacts was sufficient to proceed with the design and implementation of remedial actions. Following completion of bench and field scale pilot testing, a Proposed Plan (PP) was developed in 2008 to present the selected remedy for Site 3 (ERM, 2010).

Response Actions: Site 3

The ROD for Site 3 was developed in 2010 and indicated that based on the results of the field scale pilot test at Site 3, full scale implementation of enhanced in-situ bioremediation (EISB) with emulsified edible oil (EEO) amendment would provide a complete RA for VOC-impacted groundwater at Site 3. Monitored natural attenuation (MNA) was indicated as a final polishing step, if necessary (ERM, 2010). Remedial Action Objectives (RAOs) developed for Site 3 groundwater are as follows:

- Remediate site groundwater to or below HRLs; and,
- Prevent COC-impacted groundwater exceeding HRLs from migrating from the site via the surface drainage network.

In 2009, a full-scale RA was implemented at Site 3. EISB with EEO was chosen as the RA for Site 3 to promote enhanced in situ biodegradation by reductive dechlorination of the chlorinated VOCs. A total of 24 injection points (IPs) were advanced within the two Site 3 plumes, with each point receiving approximately 170 to 930 gallons of EEO amendment or Newman Zone. A total of 18,190 gallons of amendment was injected in 2009. Following the initial RA in 2009, two rounds of supplemental injections were conducted in April 2015 to December 2016, and April to May 2019. Following completion of the last injection event in May 2019, Site 3 entered an LTM phase to assess plume stability and COC concentration changes in groundwater relative to the cleanup levels specified in the ROD (Jacobs, 2024).

Currently the Site 3 COCs are PCE, TCE, VC, and 1,1-DCE, with constituents of interest including 1,4-dioxane, cis-1,2-DCE, and toluene. Residual PCE, TCE, and VC are still present in groundwater at concentrations greater than their ROD cleanup levels. Increasing dissolved oxygen (DO) concentrations and oxidation-reduction potential (ORP) indicate that the deeply reducing conditions necessary to promote reductive dechlorination are waning; therefore, reductive dechlorination rates are expected to continue decreasing. Other natural attenuation processes such as advection, dispersion, dilution, and abiotic reduction might support further concentration declines. However, the rates of concentration change observed indicate that ROD cleanup levels will likely not be achieved in the near future (Jacobs, 2024).

Site 3 was included in the 2025 RPO (BB&E, 2025). The RPO addresses remedial progress, potential data gaps in the conceptual site model, and provides options for optimizing remedy completion. Options including continued LTM, risk-based closure, enhanced LTM, and enhanced LTM with the addition of EISB and enhanced reductive dechlorination (ERD) injections were evaluated. Options outlined in the RPO are being considered for implementation.

Status of Implementation: Site 3

Site 3 is currently undergoing LTM to track the progress toward achieving the RAOs. The LTM program consists of collecting groundwater samples semiannually at 18 monitoring wells and analyzing the samples for VOCs and 1,4-dioxane. Analytical data are used to determine if the site has met the criteria established for closure in accordance with the ROD.

Because hazardous substances, pollutants, or contaminants remain on-site above levels that allow for a UU/UE scenario, general LUCs/ICs are in place and reviewed annually to maintain industrial land use. The annual LUCs/ICs checklist is included in **Appendix K**.

Basis for Taking Action: Site 4

Site 4 was originally identified in a Phase I records search in March 1982 as needing further investigation. The Phase II Confirmation/Quantification Study, Stages 1 and 2 were conducted in 1983 and 1986, respectively. Following the Phase II, a RI was completed in 1988. The RI Report indicated that total petroleum hydrocarbons (TPH), oil, and metals were present in the soil, and metals were observed in groundwater. Light non-aqueous phase liquid (LNAPL) was observed on groundwater near the ASTs. Dissolved-phase VOCs were observed in shallow groundwater, approximately 5 to 6 ft bgs, over approximately 2.7 acres of the POL facility, apparently contained by the drainage ditches that likely act as a barrier to the shallow groundwater (Wood, 2021a).

An FS was completed in 1994 to evaluate alternatives for treating COCs in soil and sediment at multiple sites, including Site 4. In response to comments from the MPCA, an addendum was added to the FS in 1995 to re-evaluate the original alternatives and to develop, screen, and evaluate additional alternatives. Ultimately, excavation and bio-treatment were recommended for remediating the contaminated soil (Wood, 2021a).

Response Actions: Site 4

From 1995 to 1997, approximately 2,400 CY of readily accessible contaminated soil were excavated from near Site 4 ASTs, berms, and along the loop road and drainage ditches to a contracted depth of 5 ft bgs. This excavation work was not considered a complete soil remedy and confirmatory samples were not collected.

In June 2009, sulfate and nitrate amendments were utilized to facilitate EISB in groundwater and resulted in a 40 to 90 percent reduction in benzene concentrations.

A ROD was finalized in 2015 to document remedies at Site 4 that included multiphase extraction (MPE) in source areas where LNAPL and high concentrations of dissolved-phase VOCs were observed, and injection of a sulfate and nitrate amendment into the groundwater to facilitate EISB in areas of lower VOC concentrations (Wood, 2021a). The ROD indicated the COCs for Site 4 include benzene, 1,2-dichloropropane, ethylbenzene, naphthalene, isopropyl benzene, methylene chloride, and LNAPL.

The RAOs for Site 4 soils are as follows (ERM, 2015b):

- Remediate site soil to below applicable Soil Reference Values (SRVs);
- Achieve the acceptable risk levels for human exposure to site; and,
- Remove deactivated underground utilities, including fuel pipelines, within the footprint of the remedial action.

The RAOs for Site 4 groundwater were as follows:

- Remediate site groundwater to below Health-Base Values (HBV)/HRLs; and,
- Prevent COC-impacted groundwater exceeding HRLs from migrating off site via the surface drainage network.

An MPE system was operated as an interim and approved remedy, removing an estimated 6,836 pounds (lbs.) of hydrocarbon mass from August 2008 through December 2011. After a significant reduction in hydrocarbon recovery rates, the MPCA recommended shutdown of the MPE system at Site 4, consistent with the 2010 Remedial Process Optimization (RPO) Report, which also recommended no further capital expenditure on MPE and implementation of an excavation RA after deactivation and decommissioning (D&D) of the POL facility (Wood, 2021a). Following this recommendation, the MNANG proactively shut down and decommissioned the MPE system and associated extraction and monitoring wells to facilitate the POL D&D in March 2012.

In December 2012 and January 2013, a DGI was completed. The DGI was primarily conducted to support the remedial design and development of a RA Work Plan for Site 4. During the DGI, the extent of petroleum hydrocarbon impact in Site 4 soil and groundwater was delineated, encompassing approximately 2.7 acres associated with the groundwater plume. Based on the results of the DGI, prior historical data and discussions with the MPCA, COCs identified for the Site 4 soil and groundwater included benzene, 1,2-dichloropropane,

ethylbenzene, n-butyl benzene, n-propylbenzene, naphthalene, isopropyl benzene, methylene chloride, 1,2,4- and 1,3,5-trimethylbenzene (TMB), total xylenes, sec-butylbenzene, toluene, and TPH diesel range organics (DRO), and LNAPL (Wood, 2021a).

In 2014 and 2015, ERM conducted remedial action construction (RAC) activities at the Site. The RAC activities completed at Site 4 included:

- Source removal excavation of petroleum contaminated soils (PCS) to below the groundwater table;
- Removal of the MPE system, monitoring wells, and underground infrastructure within the footprint of the excavation;
- Segregation of PCS and excavated soil appropriate to be backfilled;
- Sidewall soil sampling to confirm that the horizontal extent of soil impacts had been defined;
- Mixing ORC® or other equivalent into the excavation base below the water table to treat residual soil impacts and minimize potential rebound of COCs in groundwater;
- Backfill of the excavation with the segregated clean soil, aeration-treated soil, and additional imported clean soil;
- Construction of nine biopiles (Biopile 1 through Biopile 9) over the footprint of the excavation to compost the PCS; and
- Installation of groundwater monitoring wells in and around the excavation footprint to monitor groundwater.

A pre-characterization investigation was conducted to provide additional site information and update the conceptual site model (CSM). Analytical data was used to define groundwater treatment areas (TAs) for in-situ injections and identify the hot spot locations for soil excavation. In 2016 and 2017, RA operation (RA-O) activities were conducted at Site 4, including biopile deconstruction, hot spot soil excavation and remedial in-situ injections. Biopile excavation and deconstruction was performed on 22 August through 8 September 2017. Upon completion of the biopile deconstruction and grading, 25 soil confirmation samples were collected from a site-wide gridded area (Wood, 2021a).

Remedial in-situ injections were conducted in 2017. Three TAs with groundwater COCs at concentrations above MDH criteria were identified, based on analytical results from pre-characterization groundwater sampling activities conducted in November 2016 as detailed in the Final Remedial Action Operations Work Plan (Amec Foster Wheeler, 2017b). The total amount of product injected into the subsurface at Site 4 included 99,400 lbs. of Persulfox® and 21,320 lbs. of ORC®. Persulfox® and ORC® were introduced into the subsurface via a total of 26,076 gallons of solution between the three TAs.

Based on analytical results of post-injection monitoring, RA-O activities appeared to be significantly reducing VOC concentrations as designed. As such, LTM activities were conducted to continue to monitor the effectiveness of the RA-O activities. Following the second LTM event, a Technical Memorandum was submitted to the MPCA detailing the proposed description of work for the additional round of injections (Wood, 2021a). The MPCA approved the additional injections, and the second round of remedial in-situ injections was conducted in September 2020. Two TAs were identified based upon analytical results from LTM Events #1 and #2 for further injections. The purpose of the second round of injections was to focus remedial activities in the vicinity of monitoring wells GW4-II and GW4-LL, where concentrations of VOCs were observed to have rebounded (Wood, 2021a).

The total amount of product injected into the subsurface at IRP Site 4 included 2,810 lbs. of Persulfox® and 760 lbs. of ORC-A®. Persulfox® and ORC-A® were introduced into the subsurface via a total of 2,390 gallons of solution between the two TAs (Wood, 2021a).

Site 4 was included in the 2025 RPO (BB&E, 2025). The RPO addresses remedial progress, potential data gaps in the conceptual site model, and provides options for optimizing remedy completion. Options including continued

LTM, risk-based closure, continued LTM and EISB injections, and continued LTM with the addition of soil excavation were evaluated. Options outlined in the RPO are being considered for implementation.

Status of Implementation: Site 4

Site 4 is currently undergoing LTM to track the progress toward achieving the RAOs. The LTM program consists of collecting groundwater samples semiannually at 12 monitoring wells at Site 4 and analyzing the samples for VOCs. Analytical data are used to determine if the site has met the criteria established for closure in accordance with the ROD (ERM, 2015b). Per the RA-O Work Plan, once monitoring wells reach four consecutive events without an exceedance, a request for NFA will be submitted to MPCA.

Because hazardous substances, pollutants, or contaminants remain on-site above levels that allow for a UU/UE scenario, general LUCs/ICs are in place and reviewed annually to maintain industrial land use. The annual LUCs/ICs checklist is included in **Appendix K**.

Basis for Taking Action: Site 21

Site 21 was identified in a Resource Conservation and Recovery Act (RCRA) Facility Assessment Sampling Visit Report completed in July 1988 as needing further investigation. A 1992 RCRA Facility Investigation included the installation of two piezometer wells, three monitoring wells, and the advancement of 10 soil borings. Laboratory analysis detected toluene, xylenes, phenanthrene, pyrene, lead, and TPH-DRO in soil samples. During the same investigation, TCE and lead were detected in groundwater (MWH, 2011).

During 2005 and 2006, seven additional groundwater monitoring wells were installed at Site 21 and soil and groundwater samples were collected. Results of soil sampling indicated no compounds were detected in soil at concentrations exceeding MPCA Tier 2 Industrial Soil Reference Values (ISRVs). Results of the groundwater sampling indicated dissolved benzene, TCE, PCE, and VC were the primary groundwater COCs at Site 21 (MWH, 2008).

An RI DGI was conducted from 2008 to 2009 to characterize and delineate groundwater contamination. During the 2008/2009 RI DGI, vertical aquifer sampling (VAS), soil borings with temporary well sampling, permanent monitoring well installation and sampling, and PushPoint groundwater or pore water sampling were conducted. Eighteen VAS locations, seven soil borings with temporary wells, and 18 permanent monitoring wells were sampled for VOCs, and select permanent wells were also sampled for metals and MNA parameters (MWH, 2010).

Based on the groundwater analytical results from the 2008/2009 RI DGI, a TCE source was not identified, only diffused dissolved phase TCE was identified. Based on TCE concentrations in groundwater, the TCE plume appeared to be bifurcated at the marsh boundary near the intersection of Mustang Drive and Perimeter Road. TCE was not detected within the marsh at concentrations greater than the applicable, relevant and appropriate requirements (ARARs) that were determined in the Final RI DGI/Treatability Study/Focused FS Work Plan (MWH, 2008). Chemical-specific ARARs used for groundwater sampling investigation at IRP Site 21 included State of Minnesota HRLs, Federal Maximum Contaminant Levels, and State of Minnesota Specific Standards of Quality and Purity for Class 2B waters of the State (MWH, 2011).

Response Actions: Site 21

Following the RI DGI, a ROD (MWH, 2011) was approved for Site 21. The ROD identified the COCs as TCE, VC, benzene, and 1,2,4-TMB. Based on the results of the Focused FS (FFS), a combination of phytoremediation and enhanced bioremediation, plus ICs were selected as the remedy for Site 21. Additionally, installing ORC® socks in monitoring well 021-029MW was proposed to address benzene and 1,2,4-TMB. The major components of the selected response action are as follows:

- Groundwater ICs (including posting warning signs) to deter unauthorized use of the Site 21, placing a land use restriction on the site in the Installation Master Use Plan, prohibiting the use of groundwater, and conducting FYRs until regulatory criteria are achieved.

- Enhanced anaerobic bioremediation for the accessible areas of the TCE plume where concentrations exceed the site-specific criterion of 5 micrograms per liter (µg/L).
- Phytoremediation at a 0.5-acre treatment area to treat groundwater at depths down to 15 ft bgs.
- Installing three new performance monitoring wells to monitor enhanced bioremediation and phytoremediation effectiveness.
- Annual groundwater monitoring for the 15 years (estimated duration) of the remedy.
- Installing ORC® socks in monitoring well 021-029MW to address benzene and 1,2,4-TMB concentrations greater than the Minnesota Department of Health (MDH) HRLs and the MPCA Groundwater Intrusion Screening Values.

Per the ROD, the RAOs for Site 21 are as follows:

- Prevent ingestion or contact with groundwater contaminated with dissolved chlorinated solvents and petroleum constituents under industrial scenarios;
- Reduce chlorinated solvent and petroleum contamination in groundwater to reach the HRLs; and,
- Achieve concentration of COCs in groundwater at the marsh boundary and groundwater associated with Site 21 that are protective of human health and the environment.

The ROD also set forth the site-specific cleanup criterion as the Long-Term RAO HRLs for each site COC. However, criteria for certain COCs have been revised after implementation of the ROD; specifically, the current MDH criterion for TCE is currently 0.4 µg/L and the MDH criterion at the time of the ROD was 5 µg/L. RAs will be considered complete when concentrations meet the criteria specified in the ROD (5 µg/L).

In August and October of 2013, an RA injection program was initiated at Site 21. A total of 11,487 gallons of 7.5 to 100 percent emulsified vegetable oil solution was injected into 315 IPs. A total of 65 IPs were bioaugmented with a one-liter dose of dechlorinating and halorespiring bacteria (KB-1®; ERM, 2015a).

A phytoremediation buffer consisting of 307 poplar and 256 willow trees was designed and installed at Site 21. A ditch trencher and an excavator were used to trench a total of 17 east-west trending rows to a depth of 8 ft bgs. A mixture of molasses and water was placed in the bottom of each trench to act as a carbon source for root development. Fertilizer and mulch were then mixed in the native soil and placed back into the trenches to further support tree growth. A total of nine sugar maples and 12 red maples were placed within and around phytoremediation buffer (ERM, 2015a).

Groundwater sampling events were conducted at Site 21 in 2014 and 2015 following injection activities. In 2015, a comparative analysis was completed of target analytes across the plume and showed that the average TCE concentration has been reduced, with subsequent increases in average concentrations of daughter products, as expected with reductive dechlorination. As TCE is expected to drive the groundwater cleanup effort at IRP Site 21, it was selected as the representative COC to illustrate performance as a percent reduction. After the initial remedial action, the average TCE concentration across the plume was reduced by approximately 54 percent toward the target TCE concentration of 5 µg/L when compared to baseline conditions (ERM, 2015a).

To gain a further understanding of site conditions, a Pre-Characterization Investigation (PCI) was conducted from 7 through 18 November 2016. The PCI involved the collection of 21 groundwater samples (one from each well), advancement of three soil borings (including collection of two samples from each boring location), and two sub-slab air samples collected from existing sample points in Building 252. The PCI indicated that groundwater concentrations continued to exceed MDH criteria, but the sub-slab soil vapor samples did not exhibit any concentrations of MPCA Intrusion Screening Values criteria.

Following the PCI activities, a RA-O Work Plan was prepared (Amec, 2017a). In-situ injection activities were conducted between 8 August and 7 September 2017. During the injection event, Persulfox®, 3-D Microemulsion,

and Bio-Dechlor INOCULUM Plus were introduced into the target groundwater remediation zone through a total of 120 total IPs in seven TAs (TA-1 through TA-7).

Once in-situ injection activities were concluded, performance groundwater monitoring activities were conducted. Based on analytical results, RA-O activities appeared to be reducing TCE concentrations, as designed. RA-O activities and results are summarized in the RA-O Summary Completion Report (Amec, 2019).

Site 21 was included in the 2025 RPO (BB&E, 2025). The RPO addresses remedial progress, potential data gaps in the conceptual site model, and provides options for optimizing remedy completion. Options including continued LTM, risk-based closure, and continued LTM with the addition of EISB and ERD injections were evaluated. Options outlined in the RPO are being considered for implementation.

Status of Implementation: Site 21

Site 21 is currently undergoing LTM to track the progress toward achieving the RAOs. The LTM program consists of collecting groundwater samples semiannually at 21 monitoring wells at Site 21 and analyzing the samples for VOCs. Analytical data is used to determine if the site has met the criteria established for closure in accordance with the ROD (MWH, 2011). Per the RA-O Work Plan, once monitoring wells reach four consecutive events without an exceedance, a request for NFA will be submitted to MPCA.

Because hazardous substances, pollutants, or contaminants remain on-site above levels that allow for a UU/UE scenario, general LUCs/ICs are in place and reviewed annually to maintain industrial land use. The annual LUCs/ICs checklist is included in **Appendix K**. The specific regulatory LUCs/ICs for Site 21 are summarized in **Table 3**, below

LUCs/ICs Summary Table

Table 3: Summary of Planned and/or Implemented LUCs/ICs at Site 21

Media, engineered controls, and areas that do not support UU/UE based on current conditions	LUCs/ICs Needed (Y/N)?	LUCs/ICs Called for in the Decision Documents (Y/N)?	Impacted Parcel(s)	LUCs/ICs Objective	Title of LUCs/ICs Instrument Implemented and Date (or planned)
Groundwater	Yes	Yes	Site Boundary	Prohibit the use of site groundwater until regulatory criteria are achieved. Including posting warning signs and a restriction on the Installation Master Use Plan.	ROD for IRP Site 21, MWH, December 2011

Notes:
LUCs/ICs Checklists are utilized by the Base to verify implementation of LUCs/ICs.
IC – Institutional Control
IRP – Installation Restoration Program
LUC – Land Use Control
ROD – Record of Decision
UU/UE – unlimited use/unrestricted exposure

Basis for Taking Action: Site 23

After Site 23 was identified during planning activities for the reconstruction of the aircraft parking apron, an investigation was conducted and documented in an Environmental Exploration Program Report that was completed in August 1990. A Preliminary Potential Corrective Action Design was completed in April 1991 and BTEX, as well as TPH, were reportedly detected in soil samples, and a subsequent removal action was completed at the site in September 1993. A No Further Remedial Action Planned (NFRAP) DD was submitted to the MPCA for their

approval in January 1998. The MPCA did not concur with the NFRAP DD and requested that two quarterly groundwater sampling events be conducted. These events were included in the base wide LTM project (MWH, 2002).

As part of the LTM program completed at Site 23, groundwater samples were collected from six monitoring wells during two sampling events and submitted for laboratory analysis of VOCs, TPH-gasoline range organics (GRO), and TPH-DRO. Several VOCs were detected in groundwater samples collected at Site 23; however, no contaminants were detected at concentrations exceeding MDH HRLs and the site was approved for NFA (MWH, 2002).

A base-wide Preliminary Assessment (PA) was conducted on 20 and 21 January 2015 to assess the potential presence of PFAS at the Base. The PA identified ten potential release locations (PRLs), all of which were recommended for NFA (HydroGeoLogic, Inc, 2015). NGB contracted BB&E to complete a review of the PFAS PA Report as documented in the Review Summary for PFAS PA Site Visit Report for Duluth, Minnesota – Revision 1 (BB&E, 2016). Four of the PFAS PRLs were recommended for further evaluation. One of those PRLs, PRL 11, shares a footprint and contaminant release mechanism with Site 23, and, during the follow-up Site Inspection (SI) conducted in 2018, PRL 11 was recommended for further investigation as part of an RI (AECOM, 2019).

Response Actions: Site 23

Following the NFA determination in 2002, SS023 was reopened following completion of the PFAS PA/SI. The PFAS RI at the Base is currently underway.

Status of Implementation: Site 23

The selected remedy at Site 23 per the DD is NFA based on continued industrial land use. Because hazardous substances, pollutants, or contaminants remain on-site above levels that do not allow for a UU/UE scenario, general LUCs/ICs are in place and reviewed annually to maintain industrial land use. The annual LUCs/ICs checklist is included in **Appendix K**. The specific regulatory LUCs/ICs for Site 23 are summarized in **Table 4**.

LUCs/ICs Summary Table

Table 4: Summary of Planned and/or Implemented LUCs/ICs at Site 23

Media, engineered controls, and areas that do not support UU/UE based on current conditions	LUCs/ICs Needed (Y/N)?	LUCs/ICs Called for in the Decision Documents (Y/N)?	Impacted Parcel(s)	LUCs/ICs Objective	Title of LUCs/ICs Instrument Implemented and Date (or planned)
Groundwater	Yes	Yes	Site Boundary	Maintain current industrial land use and control exposures to constituents remaining in place at the site. In the event this land should pass out of the control of the DoD, CERCLA Section 120 (h) provisions will be implemented to ensure adequate LUCs/ICs are maintained.	NFA DD, Montgomery Watson, January 2002

Notes:
LUCs/ICs Checklists are utilized by the Base to verify implementation of LUCs/ICs.
CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act
DD – Decision Document
DoD – Department of Defense
IC – Institutional Control
LUC – Land Use Control
NFA – No Further Action
UU/UE – unlimited use/unrestricted exposure

Basis for Taking Action: Site 25

Site 25 was first identified during an August 1993 PA completed at the Base as needing further investigation. A SI was subsequently conducted and included soil and groundwater sampling for potential impacts. Analytical results indicated that hydrocarbon products, including BTEX, were present in soil and groundwater at Site 25. Based on the results of the previous investigations, a Corrective Measures Study (CMS) was performed at the site. The CMS recommended excavation with thermal treatment of soil and air sparging for groundwater treatment. Soil Vapor Extraction/Air Sparging and ORC® pilot tests were both performed in 1997 to evaluate groundwater treatment. Neither technology was determined to be feasible for the site. Approximately 50 CY of contaminated soils were excavated and thermally treated off-site in 1997 (EA, 2015).

PCS was encountered in 1998 during replacement of a sewer line in the area of the tanks that were removed in 1995. An Interim RA was conducted in the fall of 1999 in this same area. Approximately 3,262 CY of contaminated soils were removed to the depth of the groundwater table. Bottom and sidewall confirmation samples were collected from the excavated areas and analyzed for VOCs, TPH-DRO, and TPH-GRO. One soil sample indicated a detected concentration of TPH-DRO above MPCA soil cleanup criteria. No additional compounds or analytes were detected above MPCA soil cleanup criteria from the excavated areas and the excavation report recommended NFA for soils at Site 25. A RI was performed at Site 25 in 2000. VOCs and semi volatile organic compounds (SVOCs) were found at concentrations greater than the MDH groundwater HRLs. Groundwater monitoring continued at the site between 2000 and 2003 and a DGI was conducted in 2005 and 2006. The DGI identified benzene and ethylbenzene in groundwater as the primary COCs for the site. Based on the findings of the RI and DGI, a pilot test consisting of sulfate/nitrate reduction was conducted at the site in 2006/2007. The results of the pilot test were favorable, such

that implementation of a full-scale sulfate/nitrate amendment was selected as part of the groundwater remedy for the site (EA, 2015).

Response Actions: Site 25

In August of 2008, MPE was selected to recover free product in source areas, and it was successfully implemented at Site 25. Additionally, a primary and secondary target area was identified for EISB injection of a condensed sulfate-nitrate amendment for remediation of dissolved phase groundwater impacts. In June 2009, a total of 43 IPs were advanced at Site 25 with each point receiving approximately 846 – 1,143 gallons of the condensed sulfate-nitrate amendment. Benzene, ethylbenzene, and 1,2-DCA continued to be detected at concentrations greater than their respective MDH groundwater values and appeared to originate from the former UST area. As a result, the MPE system was expanded in June 2011 to include six new extraction wells (BB&E, 2014).

In 2010, a Final ROD for Site 25 was issued to document the final RA chosen to address groundwater impacts at Site 25. The ROD recommended a combination of remedial technologies for Site 25 including MPE for LNAPL recovery in the source area and sulfate/nitrate amendments for residual dissolved phase groundwater impacts in the areas outside of the MPE zone of influence. Additionally, the ROD stated that MNA as a final polishing step may be necessary (EA, 2015). COCs identified in the ROD include benzene and ethylbenzene. The RAOs for Site 25 are as follows:

- Remediate site groundwater to or below HRLs; and,
- Prevent impact or degradation of the downgradient wetland.

In 2013, a FYR/RPO was conducted at Site 25 to evaluate the status of the site (at that time), evaluate groundwater conditions and the effectiveness of the RAs being conducted, and assess potential new activities to move the site towards closure. The FYR/RPO Report concluded that the MPE remedy had performed as intended; concentrations of petroleum hydrocarbons measured in source area extractions wells had decreased since implementation of the MPE response action. As of 2012, approximately 1,171 pounds of petroleum hydrocarbons have been recovered by the MPE system since startup in August 2008. Additionally, the total hydrocarbon recovery rate increased seven-fold immediately after MPE system expansion in June 2011 (BB&E, 2014). However, the FYR/RPO Report noted that mass removal rates had become asymptotic, and expansion of the system was impractical. The document acknowledged that the ROD stipulated polishing steps of EISB and possibly MNA. Recommendations in the document included: removal of the existing MPE system, with the potential to use some of the existing wells as part of the EISB remedy; performance of a plume stability analysis to develop an EISB remedy; and design and implementation of the EISB remedy at the site (EA, 2015). Additionally, the FYR/RPO stated that although Site 25 appeared to have been adequately characterized southeast of Mustang Drive, there remained a concern that an area between Mustang Drive and Building 238 may be continuing to feed the groundwater impacts at Site 25 (BB&E, 2014).

In December 2013 the MPE system was permanently shut down in favor of completing polishing treatment utilizing EISB. The EISB remedy utilizing a sulfate/nitrate amendment performed in 2009 had been exhausted and was not capable of effectively remediating the impacts to groundwater within a reasonable timeframe. Based on the groundwater sampling events conducted at the site in October 2013 and April 2014, both TCE and benzene are present in site groundwater above MDH Groundwater Values. It was determined that a data gap existed at the site and additional delineation of the dissolved phase plume was necessary prior to completion of additional RA-O. As sulfate/nitrate amendment addition through EISB focuses on reduction of petroleum hydrocarbons, particularly polycyclic aromatic hydrocarbons, and not chlorinated solvents, a combination of technologies would be required to successfully reduce concentrations of both TCE and petroleum hydrocarbons to below applicable criteria (EA, 2015).

As outlined in the Final RA-O/LTM Work Plan (EA, 2015), DGI activities, including groundwater sampling, were recommended to address data gaps and to further refine the extent of groundwater impacts. Based on this data, modifications to the EISB implementation, including dosage, substrate mixture ratios, and locations of IPs for the second injections, were considered. Additionally, a remedy for TCE was not included in the ROD because at that time TCE was not identified as a COC (based on groundwater data collected up to that time). As such, filing a formal letter documenting the additional EISB amendments to treat TCE at Site 25 was required.

The following activities were completed as part of DGI and RA-O activities at Site 25 in 2015 and 2016 (EA, 2015):

- Installed 3 new monitoring wells and performed a DGI groundwater sampling event, including collection and analysis of samples from the new wells as well as 15 existing monitoring wells;
- Injected approximately 3,360 pounds of EHC-L® into the subsurface via six IPs;
- Injected approximately 25 gallons of Nutrisulfate™ into the subsurface via 34 IPs (diluted in-line with water; for approximately 500 - 1,110 gallons per IP); and,
- Performed the 1st, 2nd, and 3rd performance monitoring sampling events following the first injection at 45-, 90-, and 330-days post-injection.

As noted above, the 2013 RPO Report stated that although Site 25 appeared to have been adequately characterized southeast of Mustang Drive, there were concerns that an area between Mustang Drive and Building 238 may be continuing to feed the groundwater impacts at the Site (BB&E, 2014). Performance monitoring results from the most recent monitoring activities appear to have confirmed an additional source area near the top of the hill, which may not have been identified during operation of the duel-phase extraction system at the site. In summary, implementation of the remedy was initiated; however, results of post-injection monitoring indicated that concentrations of COCs in groundwater were much greater than observed prior to implementation of the remedy. A second injection event was deemed inappropriate at that time and was not conducted (EA, 2018). Additional SI activities were recommended to determine the extent of soil contamination and dissolved phase impacts in groundwater, to help shape future RA at the site.

To address the emerging contaminant 1,4-dioxane, a one-time sampling event was conducted in August 2016 at Site 25. The sampling event included collection of groundwater samples for analysis of 1,4-dioxane from existing pre-selected monitoring wells representative of the source of the previously assessed plume, downgradient of the previously assessed plume, and the downgradient limit of the previously assessed plume at Site 25. The analytical results indicated that 1,4-dioxane was not detected in any of the groundwater samples collected at Site 25 (EA, 2018).

In August 2016, additional groundwater monitoring and soil screening were conducted at the site. Additional impacts to soil, approximately 10 - 12 ft bgs, were encountered near the northeastern corner of Building 240. In September 2018, six groundwater monitoring wells were installed, and groundwater was sampled from 21 existing and six newly installed wells. Sixteen exploratory soil borings were advanced during this investigation, and soil samples were collected from 10 of the borings. Based on the results of the characterization activities, it was determined that residual soil contamination existed at the site, primarily located between 15.5 and 17 ft bgs and north and east of the northeastern corner of Building 240. In addition, the dissolved-phase plume located east of Buildings 238 and 240 was larger and demonstrated greater concentrations of COCs than was observed immediately following the shutdown of the MPE system in 2014 (EA, 2018). Given the status of the site, including the size of the impacted area and COC concentration within this area, it was recommended that the site move into LTM/MNA (EA, 2018). The Final Work Plan for conducting LTM/MNA for Site 25 (Leidos, 2020) was approved by MPCA in June 2020.

Site 25 was included in the 2025 RPO (BB&E, 2025). The RPO addresses remedial progress, potential data gaps in the conceptual site model, and provides options for optimizing remedy completion. Options including continued LTM, risk-based closure, and continued LTM with the addition of EISB injections and VI study were evaluated. Options outlined in the RPO are being considered for implementation.

Status of Implementation: Site 25

Site 25 is currently undergoing LTM to track the progress toward achieving the RAOs. The LTM program consists of collecting groundwater samples semiannually at 15 monitoring wells at Site 25 and analyzing the samples for VOCs, TPH-DRO, and MNA parameters. Analytical data is used to determine if the site has met the criteria established for closure in accordance with the ROD (Leidos, 2020).

Because hazardous substances, pollutants, or contaminants remain on-site above levels that allow for a UU/UE scenario, general LUCs/ICs are in place and reviewed annually to maintain industrial land use. The annual LUCs/ICs checklist is included in **Appendix K**.

Basis for Taking Action: Site 29

Site 29, Former Refueler Parking Area, was originally identified in a Phase I records search in March 1982 that recommended a Phase II investigation. Phase II Stages 1 and 2 were conducted in 1983 and 1986, respectively, with soil and groundwater samples collected. Based on impacts observed, a RI was conducted. The RI Report indicated that TPH, oil, and metals were present in the soil, and metals were observed in groundwater (Engineering-Science, 1990). LNAPL was observed in groundwater near the location where former ASTs were reportedly present. Dissolved-phase VOCs were observed in shallow groundwater (i.e., 5 to 6 ft bgs) over approximately 2.7 acres of the POL facility. The VOC footprint was reportedly observed to be confined by the drainage ditches, which appeared to act as a shallow groundwater barrier (ERM, 2012).

A FS was conducted to evaluate alternatives for treating COCs in soil, groundwater, surface water, and sediment at multiple sites, including Site 29. In response to comments from the MPCA, an addendum to the FS was prepared to re-evaluate the original alternatives and to develop, screen, and evaluate additional alternatives. Ultimately, bio-treatment was recommended for remediating the contaminated soil (Montgomery Watson, 1995).

In May 2005, an RI of a Quonset Hut area east of the former fueling pad was conducted on behalf of Cirrus Aircraft (herein referred to as the Cirrus RI; Short Elliot Hendricks, Inc. [SEH], 2005). The Cirrus RI was conducted in preparation of the DIA property lease transfer of a portion of the parcel to Cirrus in support of facility expansion. Groundwater samples were collected from existing monitoring wells, and soil and groundwater samples were collected from four Geoprobe® soil borings to assess the degree and extent of the chlorinated VOC plume. The Cirrus RI Report indicated that the small VOC plume resulted from past uses of the property and primarily impacted shallow groundwater. The Cirrus RI concluded that, although chlorinated VOCs in groundwater exceeded MDH HRLs, the extent of impact was limited and there were no significant receptors within one mile downgradient of Site 29 (SEH, 2005). The Cirrus RI recommended a monitoring program to verify the stability of the groundwater plume.

In 2006, after the Quonset Hut parcel was removed from the POL Facility lease and added to the Cirrus lease, the Quonset Hut study area was designated as area of concern (AOC)-C. The MPCA and MNANG agreed to a groundwater monitoring plan for AOC-C. The groundwater monitoring program for AOC-C (which became Site 29) was completed in December 2007. Groundwater monitoring indicated that the plume boundary appeared to be stable, limited in areal extent as previously defined, and natural attenuation by reductive dechlorination was occurring. Chlorinated VOCs detected in groundwater were consistent with the Cirrus RI, located south of the drainage ditch and downgradient from the former Quonset Hut. However, elevated concentrations of chlorinated VOCs at wells GW4-AA and GW4-BB indicated the presence of another chlorinated VOC “hot spot” located near the northern drainage ditch at concentrations of an order of magnitude higher than previously identified for AOC-C (ERM, 2008a). Therefore, in 2012, AOC-C was designated as Site 29.

On various utility maps, as recent as 1996, a suspected UST was noted in the area. The notes indicated the tank was a 265-gallon capacity steel fuel oil tank. A geophysical survey conducted at Site 29 indicated the possible presence of the UST, a suspected source of dissolved phase chlorinated VOCs in Site 29 groundwater. Therefore, from 2009 to 2011, an RI was conducted that included a geophysical survey, soil, soil gas, and groundwater sampling in the area of the reported UST suspected to be the source of groundwater impact. In addition to the review of existing utility maps and completion of a geophysical survey, investigation activities to locate the suspected UST included use of a magnetometer. However, after attempting to locate the UST through use of a magnetometer and completion of 32 excavation locations over an approximately 2,500-square ft area, a UST was never found. After consulting with the Base personnel and the MPCA, the project team concluded that the UST had already been removed, but not reported. The results of the RI suggested implementation of a RA was necessary to address groundwater impacts at Site 29 (ERM, 2012).

Response Actions: Site 29

Following the RI, a ROD (ERM, 2013a) was completed. The remedy chosen from the Final ROD for Site 29 was biological reductive dichlorination, with a five-year MNA program as a polishing step (ERM, 2013b). The ROD identified the primary COCs as TCE, cis-1,2-DCE, trans-1,2-DCE, and VC. The RAOs for Site 29 are as follows:

- Reduce COC concentrations in site groundwater to the promulgated HRLs;
- Prevent degradation of groundwater and surface water from off-site migration of contaminated groundwater; and,
- Comply with ANG policy to perform remedial actions in accordance with CERCLA.

Criteria for certain COCs have been revised after implementation of the ROD; specifically, the current MDH criterion for TCE is 0.4 µg/L and the MDH criterion at the time of the ROD was 5 µg/L. Remedial actions will be considered complete when concentrations meet the criteria specified in the ROD (5 µg/L). From July through October 2013, 4,015 gallons of emulsified vegetable oil were injected into the subsurface at 82 IPs to address COCs in groundwater to concentrations below MDH HRLs/HBVs/Risk Assessment Advice. Additionally, approximately 47 percent of IPs were augmented with dechlorinating and halorespiring bacteria (ERM, 2015a).

From June through November 2014, two rounds of groundwater sampling were conducted at Site 29. Although several monitoring wells continued to exhibit concentrations of TCE above applicable criterion, average concentrations of TCE in the groundwater plume had decreased by 98 percent when compared to 2009 RI conditions. The Final RAC and Performance Monitoring Report for Sites 21 and 29 (ERM, 2015a) concluded that concentrations of reductive dechlorination daughter products indicate that anaerobic degradation is occurring for target COCs.

To gain a thorough understanding of Site conditions, PCI activities were conducted from 8 through 15 November 2016. Data collected included a total of 14 groundwater samples (one from each existing monitoring well), four soil borings, and vertical aquifer samples at three locations. The data collected during the PCI were evaluated and used to augment existing previous data to prepare the RA-O WP (Amec, 2017c) for Site 29 and as a baseline to compare future remedial progress.

In-Situ remedial injection (ISRI) activities were conducted between 1 and 14 June 2018 (Wood, 2020). Wood conducted ISRIs of EHC®, Emulsified Lecithin Substrate (ELS), and SDC-9® Dehalococcoides to the estimated shallow and deep contaminant plumes identified during the PCI event. ISRIs were conducted to target Site 29 COCs (TCE and VC) exceeding site-specific cleanup criterion. Approximately 8,800 lbs. of EHC®, 1,840 lbs. of ELS, and 29 liters of SDC-9 bacteria were mixed with water to form a 9,817-gallon solution that was injected into the subsurface at Site 29. LTM for groundwater began after the 2018 injection activities.

Site 29 was included in the 2025 RPO (BB&E, 2025). The RPO addresses remedial progress, potential data gaps in the conceptual site model, and provides options for optimizing remedy completion. Options including continued LTM, risk-based closure, and continued LTM with the addition of EISB and ERD injections were evaluated. Options outlined in the RPO are being considered for implementation.

Status of Implementation: Site 29

Site 29 is currently undergoing LTM to track the progress toward achieving the RAOs. The LTM program consists of collecting groundwater samples semiannually at 15 monitoring wells at Site 29 and analyzing the samples for VOCs. Analytical data is used to determine if the site has met the criteria established for closure in accordance with the ROD (ERM, 2013a). Per the RA-O Work Plan, once monitoring wells reach four consecutive events without an exceedance, a request for NFA will be submitted to MPCA.

Because hazardous substances, pollutants, or contaminants remain on-site above levels that allow for a UU/UE scenario, general LUCs/ICs are in place and reviewed annually to maintain industrial land use. The annual LUCs/ICs checklist is included in **Appendix K**. The specific regulatory LUCs/ICs for Site 1 are summarized in **Table 5**.

LUCs/ICs Summary Table

Table 5: Summary of Planned and/or Implemented LUCs/ICs at Site 29

Media, engineered controls, and areas that do not support UU/UE based on current conditions	LUCs/ ICs Needed (Y/N)?	LUCs/ICs Called for in the Decision Document[1] (Y/N)?	Impacted Parcel(s)	LUCs/ICs Objective	Title of LUCs/ICs Instrument Implemented and Date (or planned)
Groundwater	Yes	Yes	Site Boundary	ICs, including construction controls and engineering controls, will be required until RAOs are achieved.	ROD for Site 29, ERM, May 2013

Notes:
LUCs/ICs Checklists are utilized by the Base to verify implementation of LUCs/ICs.
IC – institutional controls
LUC – land use control
RA-O – remedial action operations
ROD – record of decision
UU/UE – unlimited use/unrestricted exposure

Basis for Taking Action: TS737 and TS738

The USAF MMRP conducted a CSE Phase I in 2007, which identified and confirmed the presence of the two munition response sites. A subsequent CSE Phase II Investigation was conducted in 2008 at both sites with the goal of determining the presence or absence of munitions and explosives of concern and munitions constituent at the sites and recommending appropriate response actions based on the screening of collected data against applicable State and Federal standards. The CSE Phase II investigation consisted of surface soil screening using X-ray fluorescence detectors, surface and subsurface soil sampling, sediment sampling, and surface water sampling. All samples were analyzed for metals and polynuclear aromatic hydrocarbons (PAHs; MMG-TLI JV/AECOM, 2018).

The CSE Phase II investigation of the TS737 detected elevated concentrations of metals in surface soil, subsurface soil, sediment, and surface water. Concentrations of lead in surface and subsurface soil exceeded both the MPCA Tier I SRVs and Soil Leaching Values (MMG-TLI JV/AECOM, 2018).

During the CSE Phase II investigation of TS738, lead was detected at concentrations in excess of MPCA Tier I SRVs in subsurface soil and at concentrations in excess of the regional background level in surface and subsurface soil. Lead and PAHs were detected at concentrations in excess of screening levels in sediment, and lead was detected at concentrations in excess of screening levels in surface water (MMG-TLI JV/AECOM, 2018).

The CSE Phase II Final Report recommended that a RI be conducted to complete the characterization of the nature and extent of contamination of surface soil, subsurface soil, surface water, and sediment at both the Trap and Skeet Ranges (AECOM, 2010). The RI was completed in 2013, during which additional samples were collected and analyzed. The results defined the lateral and vertical extent of the metals contamination in soils, sediment, and surface water associated with TS737 and TS738. Following the RI, an FS was completed in 2015 and evaluated four remedial alternatives (MMG-TLI JV/AECOM, 2018).

Response Actions: Site TS737 and TS738

Per the 2018 ROD (MMG-TLI JV/AECOM, 2018) for TS737 and TS738, the RAOs developed for the sites include establishing an unrestricted residential exposure scenario and a remediation goal (RG) of 300 milligrams per kilogram (mg/kg) for lead in soil while preserving wetlands and ecological habitats to the greatest extent practical. The selected remedy to achieve the RAO at both sites is excavation with off-site disposal. The planned excavation activities at TS737 will be completed to 2.0 ft bgs over approximately 1.4 acres where lead concentrations exceeded

the RG of 300 mg/kg (an estimated 4,517 CY). Although concentrations of lead in soil at TS738 do not exceed unacceptable carcinogenic, non-carcinogenic risks, or blood lead target standards; "hot spots" were identified where lead concentrations exceeded the RG. At TS738, the excavation will be completed to a depth of up to 4.0 ft bgs at multiple "hot spot" areas totaling approximately 0.2 acres where lead concentrations exceeded the RG of 300 mg/kg (an estimated 645 CY). As of the writing of this FYR, excavation activities have not yet taken place.

Status of Implementation: Site TS737 and TS738

The selected remedy included in this FYR, based on the ROD, is excavation with off-site disposal. Because hazardous substances, pollutants, or contaminants remain on site above levels that allow for a UU/UE scenario, LUCs/ICs are in place. As of the writing of this FYR, excavation activities have not taken place.

Because hazardous substances, pollutants, or contaminants remain on-site above levels that allow for a UU/UE scenario, general LUCs/ICs are in place and reviewed annually to maintain industrial land use. The annual LUCs/ICs checklist is included in **Appendix K**.

III. PROGRESS SINCE THE LAST REVIEW

This is the first FYR for Sites TS737 and TS738; the second FYR for Sites 2, 4, 21, 23, and 29; and the third FYR for Sites 3 and 25. The ANG has implemented a formal process to inform and track Installation staff compliance with LUC/IC requirements. Part of this process includes an annual review checklist to ensure the appropriate LUCs/ICs are maintained and documented properly. This checklist includes regulatory required controls, as well as additional best management practices related to affected environmental media. A copy of the LUCs/ICs checklist for Duluth ANGB is attached as **Appendix K**.

This section includes the protectiveness determinations and statements from the previous FYR as well as the recommendations from the previous FYR and the current status of those recommendations. Additionally, since the last FYR, the ANG completed an RPO for Sites 3, 4, 21, 25 and 29 (BB&E, 2025). The RPO addresses remedial progress, potential data gaps in the conceptual site model, and provides options for optimizing remedy completion. Options outlined in the RPO are being considered for implementation.

Table 6: Protectiveness Determinations/Statements from the 2019 FYR

OU #	Protectiveness Determination	Protectiveness Statement
Site 2, Site 17, Site 20, Site 22, and Site 23	Protective	The remedies for Sites 2, 17, 20, 22, and 23 are protective of human health and the environment.
Sites 3, 4, 21, 25, and 29	Protective	The remedies for Sites 3, 4, 21, 25, and 29 are protective of human health and the environment.

Table 7: Status of Recommendations from the 2019 FYR

OU #	Issue	Recommendations	Current Status	Current Implementation Description
Sites 2 and 23	The anticipated future industrial land use is not expected to change, and as such, no changes to the current remedies are recommended or required.	It is recommended that Base Civil Engineering personnel continue to conduct inspections of the sites and review the LUCs/ICs at all closed sites on an annual basis, as requested by MPCA. The next time the Base Installation Development Plan (IDP) is updated, it is recommended that the update captures the sites which have LUCs/ICs in-place. Capturing LUCs/ICs in the base IDP is an effective way to document potential actions which may be necessary if land use or site conditions change.	Annual LUCs/ICs ongoing. The IDP has not been updated to include the LUCs/ICs; ensure the next IDP update includes LUCs/ICs.	ANG has implemented a formal LUCs checklist process to be followed at all applicable ANG Installations. The LUCs/ICs checklist can be found in **Appendix K**.

OU #	Issue	Recommendations	Current Status	Current Implementation Description
Sites 3, 4, 21, 25, and 29	TCE is a site COC for several active IRP sites as identified in the respective RODs for the sites. The current MPCA HRL for TCE is 0.4 ug/L; the HRL for TCE at the time of the DDs for the sites was 5 ug/L.	If TCE levels in groundwater still exceed the HRL promulgated criteria at the time on-going remedial actions are completed, additional response activities and/or LUCs/ICs may be warranted.	Ongoing review of TCE levels relative to the HRL criteria	RAs will be evaluated for achievement of HRL criteria
Sites 3, 4, 21, 25, and 29	The active IRP sites at the Base are located on land that is not owned by the DoD.	It is recommended that this FYR Report be provided to site property owners. If land restrictions are required at the time of site closure, then the landowners must be appropriately notified, and provisions must be in place to ensure the controls are maintained.	Notification ongoing	Existing property lease instruments cover environmental liability requirements
Sites 3, 4, 21, 25, and 29	The State of Minnesota is reviewing LUCs/ICs that are in place at the Base to determine if they meet state requirements.	If any of these achieve non-UU/UE site closure prior to the next FYR, it is recommended that the ANG work with MPCA to ensure adequate LUCs/ICs are in place, and that they meet State of Minnesota requirements.	Not applicable	If UU/UE is achieved, the approval will determine LUCs/ICs are not required. MPCA will continue to be involved in LUCs/ICs review
Site 3	Although LTM results from RA activities were positive, daughter products are lingering, and performance monitoring results indicated that the injected substrate has likely been depleted.	Prior to MNA and site close-out it appears that additional injections may be warranted to achieve site cleanup goals. Additionally, 1,4-dioxane does not appear to be fully delineated at the site, and therefore, may warrant further evaluation.	RPO conducted	RPO evaluated options to ensure cleanup goals are achieved. Options are being considered for implementation.
Site 4	At the time of writing this FYR report, LTM results following the most recent RA activities had not yet been finalized.	It is recommended that once the results of the LTM are received, the data be evaluated to determine whether the site meets the requirements for NFA, and if not, additional polishing events may be warranted to achieve site cleanup levels.	RPO conducted	RPO evaluated options to ensure cleanup goals are achieved. Options are being considered for implementation.

OU #	Issue	Recommendations	Current Status	Current Implementation Description
Site 21	At the time of writing this FYR report, LTM results following the most recent RA activities had not yet been finalized.	It is recommended that once the results of the LTM are received, the data be evaluated to determine whether the site meets the requirements for NFA, and if not, additional polishing events may be warranted to achieve site cleanup levels.	RPO conducted	RPO evaluated options to ensure cleanup goals are achieved. Options are being considered for implementation.
Site 23	At the time of the writing of this FYR, the final PFAS SI Report had not been completed for IRP Site 23.	If PFAS are detected at Site 23 at concentrations above applicable criteria, additional investigation will be recommended as part of an expanded SI or RI/FS. The presence of PFAS related to IRP Site 23 should be evaluated during the next FYR.	SI completed RI underway	PFAS related to Site 23 is being evaluated in current FYR
Site 25	Additional RA and site characterization activities indicated the presence of an additional source area near the top of the hill (near Building 240).	Additional site characterization activities are recommended to fully delineate the extents of the unidentified contamination. Once determined, additional RA activities will likely be necessary in order to achieve site cleanup goals.	RPO conducted	RPO evaluated options to ensure cleanup goals are achieved. Options are being considered for implementation.
Site 29	At the time of writing this FYR report, LTM results following the most recent RA activities had not yet been finalized.	It is recommended that once the results of the LTM are received, the data be evaluated to determine whether the site meets the requirements for NFA, and if not, additional polishing events may be warranted to achieve site cleanup levels. Once received, the data from the sub-surface vapor point (VP-1) should be evaluated to determine if there is a potential for vapor intrusion into the neighboring Cirrus building.	RPO conducted	RPO evaluated options to ensure cleanup goals are achieved. Options are being considered for implementation.

IV. FIVE-YEAR REVIEW PROCESS

Community Notification, Involvement, and Site Interviews

The Base has engaged in active community outreach in the past. A Community Relations Plan was initially prepared for the Base in 1996. PPs were prepared to document the rationale for the preferred remediation alternatives at Sites 3, 4, and 25 (ERM, 2008b), Site 21 (ANG, 2011), Site 29 (ANG, 2012), Site 4 (ANG, 2013b), and TS737 and TS738 (MMG-TLI JV, 2016). As part of the development of the PPs, the ANG solicited public comments on the PPs during public comment periods and provided opportunities for public meetings to discuss the PPs and preferred alternatives. Additionally, during the public comment period, the PPs and the Information Repositories for the Sites were made available to the public at the Duluth Public Library located at 520 W. Superior Street in Duluth, Minnesota. The public comment periods were as follows:

- Sites 3, 4, and 25 PP comment period began on 17 November 2008 and ran through 16 December 2008;
- Site 21 PP comment period began on 9 May 2011 and ran through 9 June 2011;
- Site 29 PP comment period began 9 April 2012 and ran through 9 May 2012;
- Site 4 Revised PP comment period began on 18 November 2013 and ran through 17 December 2013; and,
- Sites TS737 and TS738 PP comment period began on 5 December 2016 and ran through 3 January 2017.

No comments were received on the PPs during any of the public comment periods. Public meetings were also held following the closure of public comment periods. A public meeting was not held following the closure of the Sites TS737 and TS738 public comment period due to lack of interest from the public (MMG-TLI JV/AECOM, 2018).

In 2009, a Community Involvement Plan (CIP) was prepared for the Base (URS, 2009). As part of the development of the CIP, the ANG conducted 28 local community interviews. A second CIP was prepared for the Base in 2022 (Jacobs, 2022). As part of the development of the 2022 CIP, the ANG conducted 20 local community interviews. The public was notified of the availability of the CIPs and related documents on the Administrative Record, and it was indicated that documents requiring a public comment period should be provided to Duluth Public Library for convenient public access.

MCPA has been involved in serving the interest of the general public at these sites. As such, the ANG, as the lead agency, has determined that broader public participation is not required as part of this FYR and is not addressed further in this report. The ANG has established an Information Repository located at the Environmental Management Office of the 148th Wing at the Duluth ANGB, in Duluth, Minnesota. The complete Administrative Record can also be viewed online at https://ar.cce.af.mil/.

Data Review for Site 2

Based on the results of the 2000 Annual Report and 2001 Annual Report (Montgomery Watson, 2000 and 2001), no COCs at concentrations exceeding HRLs are present in the groundwater at Site 2. The groundwater at Site 2 does not pose an unacceptable threat to human health or the environment for the current restricted land use. The site currently meets all HRLs established for groundwater; therefore, no remediation activities are planned for groundwater at the site. The recommended alternative, No Action, for groundwater at this site includes implementation of LUCs/ICs to maintain the current land use and control exposures to constituents remaining in place at the site. Adequate LUCs/ICs are in place at Site 2. In the event this land should pass out of the control of the DoD, CERCLA Section 120 (h) provisions will be implemented to ensure adequate institutional controls are maintained. Supporting information for Site 2 can be found in **Appendix C**.

Data Review for Site 3

June 2024 LTM sampling indicates that residual PCE, TCE, and VC are still present in groundwater at concentrations greater than their ROD cleanup levels. Increasing DO and ORP indicate that the deeply reducing conditions necessary to promote reductive dechlorination are waning; therefore, reductive dechlorination rates are expected to continue decreasing (Jacobs, 2024). Results and data from the June 2024 LTM sampling can be found in **Appendix D**.

Data Review for Site 4

Following the 2017 and 2020 injection events, concentrations of COC in groundwater samples have seen a significant decrease since the November 2016 baseline sampling event. The latest analytical data from the April 2021 LTM event indicated concentrations of 1,2,4-TMB, benzene, naphthalene, and VC were detected in exceedance of applicable criteria (Wood, 2021a). Results and data from the April 2021 LTM event can be found in **Appendix E**. A new contract was recently awarded for continued LTM at Site.

Data Review for Site 21

Data from September 2020 indicated that TCE remains above site-specific criteria in the interior well network, as well as two wells outside the phytoremediation area, while VC is generally decreasing or stable. While slight increases of VC concentrations have been exhibited in some monitoring wells, the increases are expected as the parent product, TCE, degrades in the subsurface. Recorded ORP, DO concentrations, and pH values indicate slightly favorable conditions for continued reductive dechlorination (Wood, 2021a). Results and data from the September 2020 LTM sampling event can be found in **Appendix F**. A new contract was recently awarded for continued LTM at Site.

Data Review for Site 23

Based on the results of the 2000 Annual Report (Montgomery Watson, 2000), no COCs at concentrations exceeding HRLs are present in the groundwater at Site 23. The groundwater at Site 23 does not pose an unacceptable threat to human health or the environment for the current restricted land use. The site currently meets all HRLs established for groundwater. Therefore, no remediation activities are planned for groundwater at the site. The recommended alternative, No Action, for groundwater at this site includes implementation of ICs to maintain the current land use and control exposures to constituents remaining in place at the site. Adequate LUCs are in place. In the event this land should pass out of the control of the DoD, CERCLA Section 120 (h) provisions will be implemented to ensure adequate institutional controls are maintained.

Site 23 has been reopened for PFAS investigation due to having the same footprint and release mechanism as PRL 11. The reopened Site 23 is currently being investigated as part of a PFAS RI that is underway at the Base. PFAS results from the SI, as well as the original NFA concurrence, can be found in **Appendix G**.

Data Review for Site 25

Groundwater analytical results from the December 2023 semi-annual sampling event indicate concentrations of site COCs persist above criteria in 11 of the 15 wells that were sampled. Based on the analytical results from the downgradient wells, contaminant migration to the Miller Creek wetlands does not appear to be a concern. Benzene and ethylbenzene, the primary COCs, exceeded their respective MDH groundwater values in nine and five wells, respectively. The exceedances of the MDH groundwater values in December 2023 are similar to those that were detected during the previous semi-annual sampling events. The MNA parameter results combined with the DO and ORP results from December 2023 indicate mildly reducing conditions, which are conducive to degradation of petroleum hydrocarbons and chlorinated solvents remaining at Site 25 (Leidos, 2024). Results and data from the December 2023 LTM sampling event can be found in **Appendix H**. A new contract was recently awarded for continued LTM at Site.

Data Review for Site 29

Based on analytical results of September/October 2020 LTM sampling, concentrations of TCE are confined to a single area around monitoring well GW29-D located to the east of the Site on the Cirrus property. The persistence of TCE in monitoring well GW29-D indicates a potential continuing upgradient source from beneath the Cirrus Facility. VC concentrations on-site have generally decreased from the baseline sampling concentrations across the Site. Only monitoring wells GW29-A, GW29-B, and GW29-D indicated higher concentrations of VC compared to the 2016 baseline sampling. However, increases in VC concentrations are expected as the parent product (TCE) breaks down in the subsurface. Recorded ORP and pH values also indicate favorable conditions for reductive

dechlorination to continue. In addition, TCE and VC detections throughout the Site appeared to be generally stable and/or exhibit decreasing trends (Wood, 2021b). Results and data from the September/October 2020 LTM sampling event can be found in **Appendix I**. A new contract was recently awarded for continued LTM at Site.

Data Review for Site TS737

Analytical results from the 2013 RI indicated surface soil contamination above screening criteria is concentrated in an area of approximately 250 ft by 350 ft in the presumed target impact area. Subsurface soil contamination above screening criteria is limited to isolated hot spots within the presumed target impact area, with highest concentrations occurring between 6 and 12 inches. Lead was detected in subsurface soils at depths greater than 36 inches bgs in only one location. Sediment contamination above screening criteria is limited to the section of the stream that runs through the northeast of TS737, located within the presumed target area. Surface water contamination above screening criteria correlates with the location of sediment contamination. Groundwater samples did not contain elevated concentrations of sampled constituents above criteria. Site groundwater was assumed to potentially discharge to surface water and was therefore evaluated with surface water quality standards (MMG-TLI JV/AECOM, 2018). Results and data from the 2013 RI can be found in **Appendix J**. Contracting activities are in progress for executing the planned RA at site TS737.

Data Review for Site TS738

Analytical results from the 2013 RI indicated that surface soil contamination above screening criteria is limited to isolated hot spot areas. Subsurface soil contamination above screening criteria was limited to a single location in the 6 to 12 inches bgs depth interval that showed an exceedance of lead. Sediment contamination above screening criteria is limited to one of two small ponds/water features that showed limited exceedances of lead. Surface water contamination above screening criteria was detected at one location within both of the two small ponds/water features that showed exceedances of lead. Lead was detected above screening criteria in one temporary monitoring well at the south end of the former range, but the well is located cross gradient to groundwater flow at the range and therefore the exceedance was concluded to not be associated with impacts from TS738 (MMG-TLI JV/AECOM, 2018). Results and data from the 2013 RI can be found in **Appendix J**. Contracting activities are in progress for executing the planned RA at site TS737.

Site Inspection

This FYR included a site reconnaissance on 17 July 2024. Those participating included Mr. William Myer, ANG/A4VR; Ms. Mikah Inkawhich, ANG 148 FW; SSgt Blake Bornholdt, ANG 148 FW; Mr. Mark Elliott, MPCA; Mr. Dan Cervin, MPCA; Mr. Tom Barzyk, BB&E, and Ms. Celeste Holtz, BB&E. The purpose of this FYR is to assess the current status of the sites in support of the protectiveness determination of the remedy.

The site inspection component of the FYR is conducted and maintained by local ANG installation personnel. The most recent site inspections were completed by base personnel on 17 July 2024. Site inspections are documented by installation personnel by completing the LUC checklist which are filed and maintained by the installation.

LUCs/ICs are managed properly by the ANG utilizing multiple tools including the aforementioned site inspections and completion of the associated LUC checklist. In the event of a property transfer/potential land development, LUCs/ICs are also properly communicated to the property owner and/or other stakeholders. Tools utilized by the ANG for tracking/managing LUCs/ICs include, but are not limited to the following:

- ANG's Geographic Information System (GIS) system (GeoBase): GeoBase can be used to depict IRP site boundaries and the associated LUC/IC description, as applicable.
- Enterprise Environmental Safety and Occupational Health – Management Information System (EESOH-MIS): EESOH-MIS is a web-based information system used by the Air Force/ANG to collect and track environmental data. It is used to track hazardous waste, hazardous materials, air quality, and in this case, environmental liabilities/cleanup data and information for the Environmental Restoration Program including LUCs/ICs at sites. EESOH-MIS is required to be updated routinely/frequently to ensure

information is up to date/accurate, including updating the LUCs/ICs information on an annual basis, at a minimum.

- Annual LUCs/ICs Tracking/Checklist: LUCs/ICs are inspected/maintained on an annual basis via completion of the Annual LUCs/ICs Checklist. To ensure accountability at the base level, the annual LUCs/ICs checklist, when prepared (and/or updated) is transmitted from NGB to the Base via an electronic Staff Summary Sheet (eSSS). The eSSS is an electronic document used in the Air Force/ANG for coordinating and tracking staff packages, and includes key elements like coordination, identification, and a summary, ensuring that the information and requirements are reviewed and signed off on by the appropriate personnel at the base. In the instance of the LUCs/ICs eSSS, the package is routed up to the Base Civil Engineer level.
- IDPs: IDPs are developed/prepared for bases to support on-installation planning decisions and align strategic, operational, and tactical requirements with mission support requirements while considering other constraints such as natural resources, incompatible land uses, etc. IDPs are often used by the Air Force/ANG to ensure the appropriate personnel at the Base are informed of any land use restrictions (e.g., areas that may have LUCs/ICs in place).
- FYRs: FYRs are used as a component under CERCLA to evaluate the status of LUCs/ICs at sites where a site did not meet UU/UE criteria and LUCs/ICs were identified in the ROD. The FYR process is utilized for sites with LUCs/ICs to ensure that cleanup actions at sites are still effective and continue to protect human health and the environment.

No additional site activities were noted that would interfere with the planned remedies. The anticipated future land use is not expected to change, and, as such, no changes to the current remedies are recommended or required.

V. TECHNICAL ASSESSMENT

QUESTION A: *Is the remedy functioning as intended by the decision documents?*

Question A Summary:

Yes, the remedies for Sites 2, 3, 4, 21, 23, 25, and 29 are functioning as intended and documented in the RODs, so long as LUCs/ICs remain in place until the sites meet the requirements for UU/UE status. A remedy has not yet been implemented at MSR Sites TS737 and TS738; however, contracting actions are in progress. Sites 3, 4, 21, 25, and 29 are being actively monitored to evaluate protectiveness and progress towards achieving the RAOs specified in their respective RODs. Site 23 has been reopened, and an RI is ongoing to determine the nature and extent of PFAS at the site.

QUESTION B: *Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection still valid?*

Question B Summary:

Yes, the assumptions and RAOs used at the time of remedy selection are still considered valid, applicable, or relevant in accordance with CERCLA, 42 USC § 9601 et seq., as amended by the Superfund Amendments and Reauthorization Act of 1986 and the NCP, 40 CFR Part 300 et seq., as amended.

For Site 3, in December 2021, the analytical method used for 1,4-dioxane was modified from EPA Method SW8260D to EPA Method SW8270-SIM to achieve a reporting limit of less than the MDH groundwater value of 1 µg/L. Use of EPA Method SW8270-SIM was successful in meeting the lower reporting limit. A new analytical laboratory Method 8260C-SIM has been used, starting in May 2022 at Site 3. A reporting limit of 1 µg/L was achieved using this method and is comparable to the method identified in the final Addendum No. 1, Long-Term Monitoring Work Plan for Site 3 (Jacobs, 2021). Based on the assumptions and nature of the remedy for Site 3, this will not affect the protectiveness of the remedy.

There have been no changes in the land use or the physical condition of the Base that would affect the protectiveness of the remedies. There have been no significant changes to the exposure pathways used in the baseline risk assessments for Sites 2, 3, 4, 21, 23, 25, 29, TS737, or TS738. The original assumptions regarding current and future land use for the sites remain valid.

The DDs for Site 2 and Site 23 present monitoring data that indicates no exceedances of HRLs in groundwater, yet NFA was based on continued industrial land use and implementation of LUCs/ICs to ensure industrial land use and land transfer notification. This appears to be unnecessary and may warrant amendment of the DDs to remove this requirement if the stakeholders agree.

QUESTION C: *Has any other information come to light that could call into question the protectiveness of the remedy?*

Question C Summary:

The current remedial and post-response action activities remain protective per the objectives of the current ROD/DDs.

The identification of emerging contaminants at Site 23 led the ANG to re-open Site 23 to address PFAS contamination. A Base-wide RI is underway at the installation to determine the extent of PFAS. As PFAS are emerging contaminants, these new potential COCs will be evaluated through a similar process used under the IRP and consistent with the provisions of CERCLA, as amended. Any other PFAS overlap with the active sites in this FYR will be evaluated upon completion of the RI in the next FYR.

No other information has become known that could call into question the protectiveness of the remedy at the nine sites included in this FYR.

VI. ISSUES/RECOMMENDATIONS

Issues/Recommendations

Issues and Recommendations Identified in the Five-Year Review:

OU(s): Site 23	**Issue Category:** Changed Site Conditions			
	Issue: The identification of emerging contaminants at Site 23 potentially related to the initial release indicates the current NFRAP DD is likely insufficient to address the current risk.			
	Recommendation: Determine the nature and extent of PFAS and assess associated risk.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
Yes	Yes	Federal Facility	State	November 2027

OU(s) without Issues/Recommendations Identified in the Five-Year Review: Sites 2, 3, 4, 21, 25, 29, TS737, and TS738

OTHER FINDINGS

The MPCA continues to have concerns regarding the status of LUCs/ICs at the nine sites, specifically regarding proper documentation of LUCs/ICs inspections, communication with the DAA, and sites that are on land not owned by the DoD. It is recommended that Base Civil Engineering personnel continue to maintain communication with the MPCA (and other stakeholders, such as the DAA) regarding LUCs/ICs and develop a LUC Implementation Plan to aid in documentation regarding inspections, maintenances, and potential actions needed for LUCs/ICs.

In addition to the LUC Implementation Plan, it is recommended that the ANG update the IDP to include sites with LUCs/ICs, and that the ANG's GIS system (GeoBase) continue to be updated/maintained along with other tracking tools described above (e.g., EESOH-MIS, completion of the Annual LUCs/ICs checklist, etc.).

Per discussions with MPCA during the site visit, MPCA noted having concerns regarding VI for the sites that were going to be included in the RPO effort (Sites 3, 4, 21, 25, and 29). As such, a VI evaluation, comparing the most recent groundwater LTM data against USEPA vapor intrusion screening levels was conducted at each of the sites included in the RPO (Sites 3, 4, 21, 25, and 29; BB&E, 2025). Options outlined in the RPO are being considered for implementation.

Due to the potential for ANG to divest land for several of the sites (e.g., Sites 3, 4, and 29) in the near future, restrictive closure (e.g., permanent LUCs/ICs, inclusion of vapor barriers, etc.) due to relatively low concentrations of COCs, was discussed as an option in order to expedite the property divestment process. Restrictive site closure was evaluated as an alternative in the RPO.

Comments from MPCA on the Draft Final version of this FYR, ANG's responses to the comments, and a letter containing MPCA's approval of the FYR can be found in **Appendix L**.

VII. PROTECTIVENESS STATEMENT

Sitewide Protectiveness Statement	
Protectiveness Determination: Protectiveness Deferred	*Planned Addendum Completion Date:* November 2028
Protectiveness Statement: A protectiveness determination of the remedy at Site 23 cannot be made until further information is obtained. The emerging contaminant PFAS, related to the original release, is present and the current risk has not been evaluated. Further information will be obtained by completing an RI, determining the nature and extent of PFAS contamination, and completing a risk assessment. It is expected that these actions will take approximately four years to complete, after which a protectiveness determination can be made. There are no issues at Sites 2, 3, 4, 21, 25, 29, TS737, and TS738 that would affect protectiveness. The remedies at Sites 2, 3, 4, 21, 25, 29, TS737, and TS738 are protective of human health and the environment.	

VIII. NEXT REVIEW

Pursuant to CERCLA Section 121(c), 42 USC § 9621(c), and as provided in the current guidance (OSWER Directive 9355.7-03B-P, Comprehensive Five-Year Review Guidance [USEPA, 2001]), the NGB will conduct a FYR within five years from the completion of the previous FYR dated August 2019 (BB&E, 2019). Previous FYRs were completed in August 2019 (Sites 2, 3, 4, 17, 20, 21, 22, 23, 25, and 29) and June 2014 (Sites 3 and 25). This is the third FYR for Duluth ANGB.

This FYR results in a determination of Protectiveness Deferred for Site 23. An FYR Addendum is planned for November 2028 to make a protectiveness determination upon completion of an RI and risk assessment. After completion of the FYR, the trigger for subsequent reviews is the signature date of the previous FYR report. Therefore, the completion date for the next FYR is five years from the signature date of this FYR.

APPENDIX A – REFERENCE LIST

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TABLES

Table 1. Site Status Summary
148th Fighter Wing
Duluth Air National Guard Base
Duluth, Minnesota

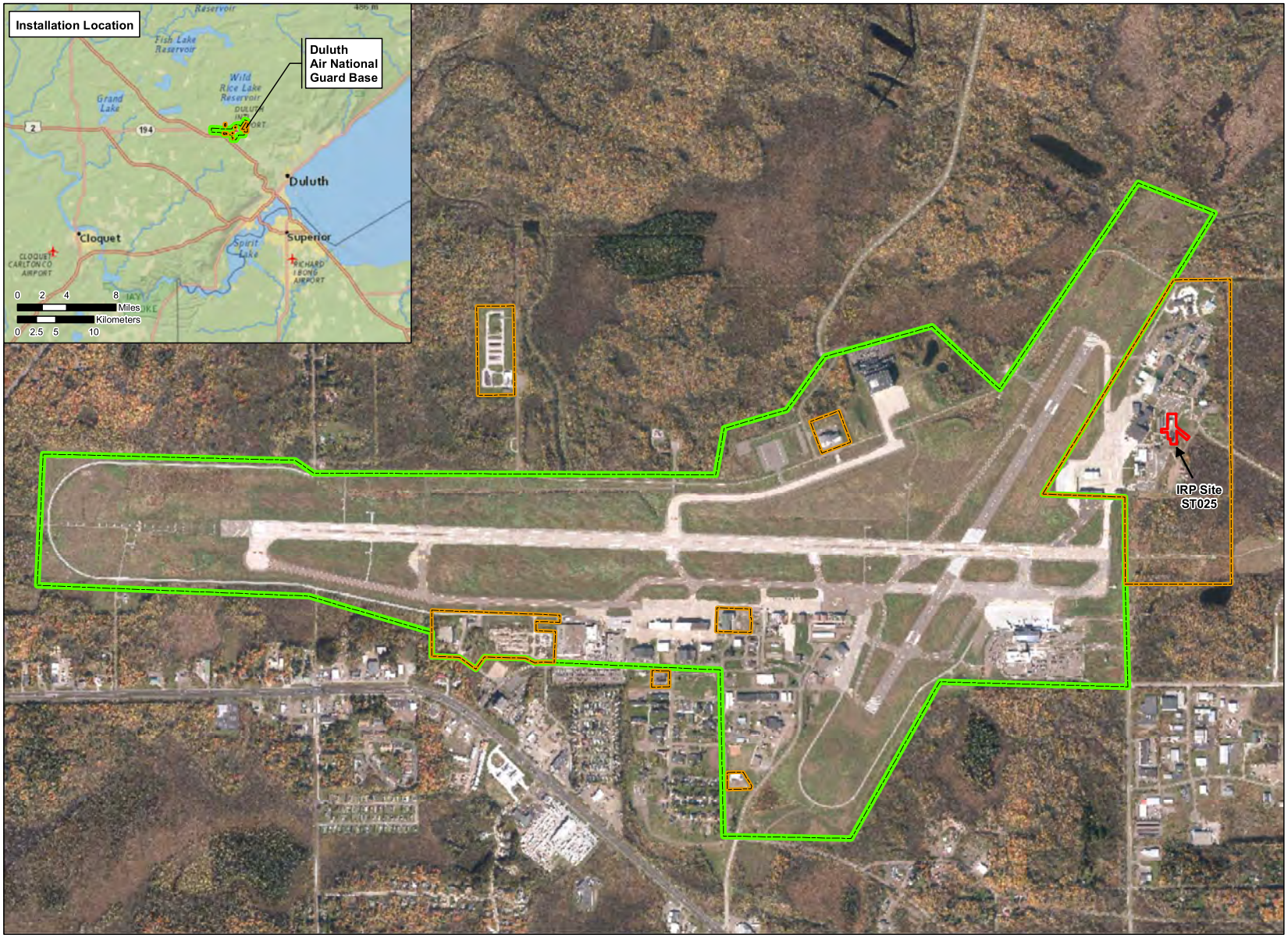
EESOH-MIS ID#	IRP Site Name	MPCA Historic General Site Name	MPCA Site Response Database Site Name	MPCA Site Response Project ID #	MPCA OU ID#	Site Status: SC/Active	Property Owner	LUC/IC Description	ROD/DD (date, AR#)	Closure Letters (date, AR#)
FT002	Former Fire Training Areas	Fire Training Areas 1 and 2	Duluth AFB Site 2 - MANG fire training	SR252	2	SC	City of Duluth[1]	According to the 2002 NFRAP DD: The No Action alternative for groundwater at this site includes the implementation of ICs to maintain the current land use and control exposures to constituents remaining in place at the site. Adequate land use controls are in place through the base Master Plan. In the event this land should pass out of the control of the DOD, CERCLA Section 120 (h) provisions will be implemented to ensure adequate ICs are maintained.	05/01/2002, 88976	NA
SS003	Site S-2 DPDO Storage Area C	DPDO Storage Area "C"	Duluth AFB Site 3 - DPDO Storage Area	SR253	3	Active	City of Duluth[1]	Restrictions on Groundwater Withdrawal: Restrict groundwater use, other than for monitoring, in GeoBase. Land Transfer Notification: Notify new owner that the site is undergoing remedial action and contaminants remain at the site above levels that allow for UU/UE, should land be transferred to another property owner.	03/01/2010, 83598	12/01/1999, 42440
SS004	Former Petroleum, Oil and Lubricants (POL) Facility	Fuel Storage Area (Tank Farm)	Duluth AFB Site 4 - MANG Tank Farm	SR254	4	Active	City of Duluth[1]	Restrictions on Groundwater Withdrawal: Restrict groundwater use, other than for monitoring, in GeoBase. Land Transfer Notification: Notify new owner that the site is undergoing remedial action and contaminants remain at the site above levels that allow for UU/UE, should land be transferred to another property owner.	03/01/2010, 83599	NA
WP021	Imhoff Tank Treatment System	Imhoff tank treatment system	Duluth AFB OU31-MANG Site 21 TCE Plume	SR366	31	Active	State of Minnesota Department of Military Affairs	From the December 2011 ROD: groundwater ICs (including posting warning signs) to deter unauthorized use of the site, placing a land use restriction on the Installation Master Use Plan, prohibiting the use of groundwater, and conducting FYRs until regulatory criteria are achieved.	12/01/2011, 86993	NA
SS023	Aircraft Parking Ramp	Aircraft Parking Ramp	Duluth AFB OU23	SR269	23	SC (Reopened for PFAS)	State of Minnesota Department of Military Affairs	From the January 2002 NFA DD: Implementation of ICs to maintain the current land use and control exposures to constituents remaining in place at the site.	01/01/2002, 89158	01/01/2002, 89158
ST025	Old Motor Pool Area	Motor pool maintenance facility	Duluth AFB OU21/25	RCRA45	25	Active	State of Minnesota Department of Military Affairs	Restrictions on Groundwater Withdrawal: Restrict groundwater use, other than for monitoring, in GeoBase. Land Transfer Notification: Notify new owner that the site is undergoing remedial action and contaminants remain at the site above levels that allow for UU/UE, should land be transferred to another property owner.	03/01/2010, 83600	NA
SS029	Former Refueler Parking	(AOC C) TCE plume east of Site 4	Duluth AFB Site 32 - MANG AOC C	SR368	32	Active	City of Duluth[1]	From the May 2013 ROD: ICs, including construction controls and engineering controls, will be required until this interim RA-O is achieved.	05/01/2013, 90275	NA
TS737	Trap Range Site	*Unknown*	*Unknown*	*Unknown*	*Unknown*	Active	City of Duluth[1]	Restrictions on Land Use: Restrict access to site soils in GeoBase; include outline of site in GeoBase; restrict construction for residential use in GeoBase; verify no residential construction has occurred at the site. Land Transfer Notification: Notify new owner that the site is undergoing remedial action and contaminants remain at the site above levels that allow for UU/UE, should land be transferred to another property owner.	06/01/2018, 582918	NA
TS738	Skeet Range Site	*Unknown*	*Unknown*	*Unknown*	*Unknown*	Active	State of Minnesota Department of Military Affairs	Restrictions on Land Use: Restrict access to site soils in GeoBase; include outline of site in GeoBase; restrict construction for residential use in GeoBase; verify no residential construction has occurred at the site. Land Transfer Notification: Notify new owner that the site is undergoing remedial action and contaminants remain at the site above levels that allow for UU/UE, should land be transferred to another property owner.	06/01/2018, 582918	NA

Table 1. Site Status Summary
148th Fighter Wing
Duluth Air National Guard Base
Duluth, Minnesota

Notes:

[1] At some point in time, the Duluth Airport Authority, a political subdivision created by Minnesota Laws, 1969, CHAP 577, was created to administer land owned by the City of Duluth at the former Duluth Municipal Airport. Therefore, historical property records which state Duluth Airport Authority, are owned by the City of Duluth.
Columns 1 and 2 correspond to the United States Air Force/Air National Guard (ANG) Enterprise Environmental, Safety, and Occupational Health Management Information System (EESOH-MIS) site IDs/names for each Installation Restoration Program (IRP) site. Columns 3 - 6 were added per request from MPCA and correspond to current and historic MPCA Site Response IDs, project numbers and names.
AFB - Air Force Base
AOC - Area of Concern
AR - Administrative Record (number corresponds to the document number in the "Duluth Int Airport, MN" administrative record).
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
DD - Decision Document
DPDO - Defense Property Disposal Office
EESOH-MIS - Enterprise Environmental, Safety, Occupational, Health Management Information System
FYR - Five Year Review
IC - Institutional Control
ID - Identification
LUC - Land Use Control
MANG - Minnesota Air National Guard
MPCA - Minnesota Pollution Control Agency
NA - Not Applicable
NFA - No Further Action
NFRAP - No Further Response Action Planned
OU - Operable Unit
PFAS - Per- and polyfluoroalkyl substances
POL - Petroleum, Oil, and Lubricants
RA-O - Remedial Action-Operations
RCRA - Resource Conservation and Recovery Act
ROD - Record of Decision
SC - Site Closed
TCE - trichloroethylene
UU/UE - unlimited use/unrestricted exposure

APPENDIX B – SITE FIGURES



LEGEND:

- Site Location*
- Installation Boundary*
- Duluth International Airport

NOTES:

* Source: Common Installation Picture (CIP) and Mission geodatabases for Duluth ANGB.

1. Background Source: 2014-2017 MN High Resolution Orthoimagery available at https://gisdata.mn.gov/.

N W E S

0 500 1,000 2,000 Feet

0 100 200 400 Meters

leidos

148TH FIGHTER WING
DULUTH AIR NATIONAL GUARD BASE
DULUTH, MINNESOTA

DULUTH ANGB
LOCATION MAP

FIGURE: 1 | DATE: 12/19/2019

PROJECT: \827Projects\ANG FY19 Midwest IRP\z_GIS\Duluth\Projects\LTM_WP\Figure 1 Duluth ANGB Installation Location_11x17.mxd

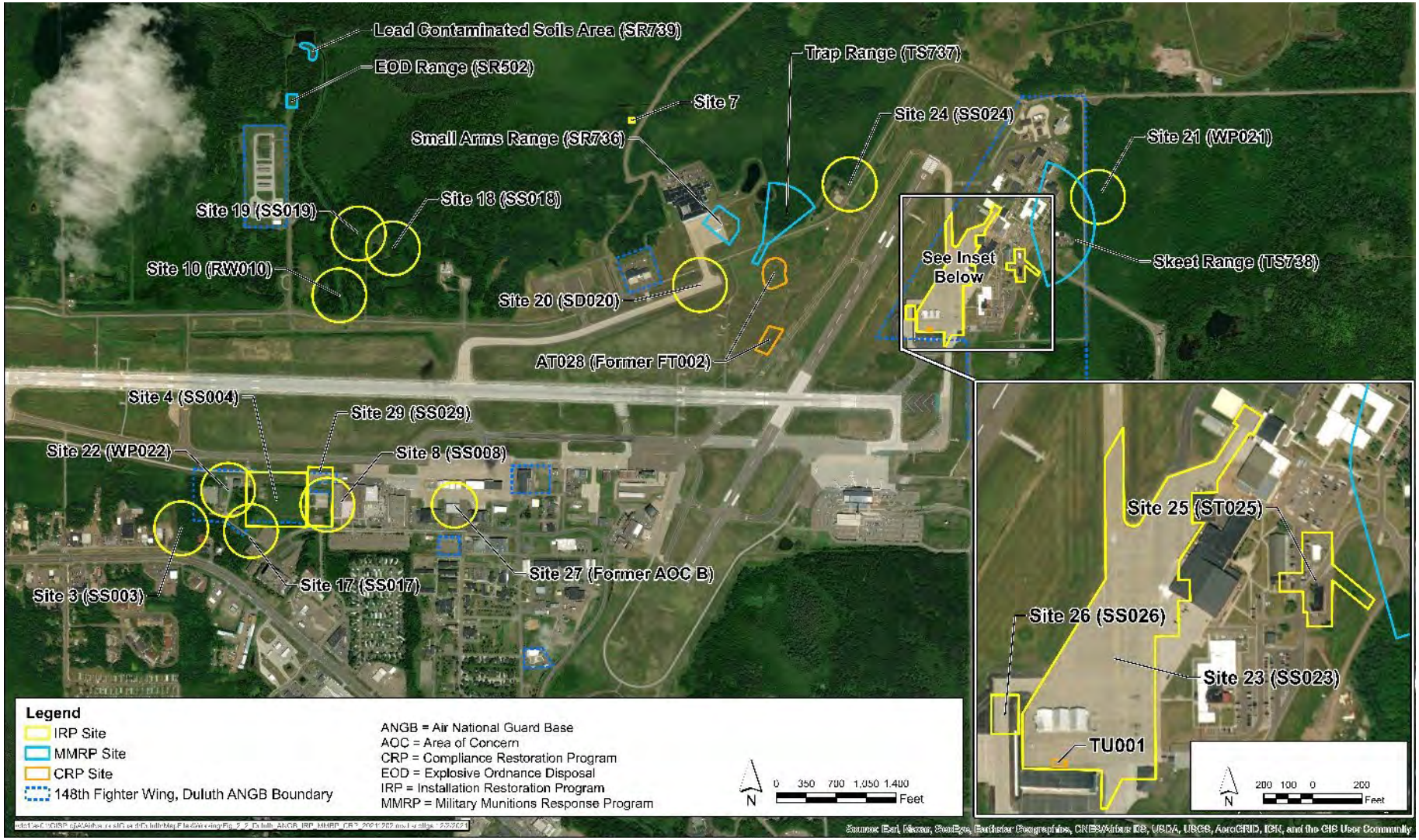
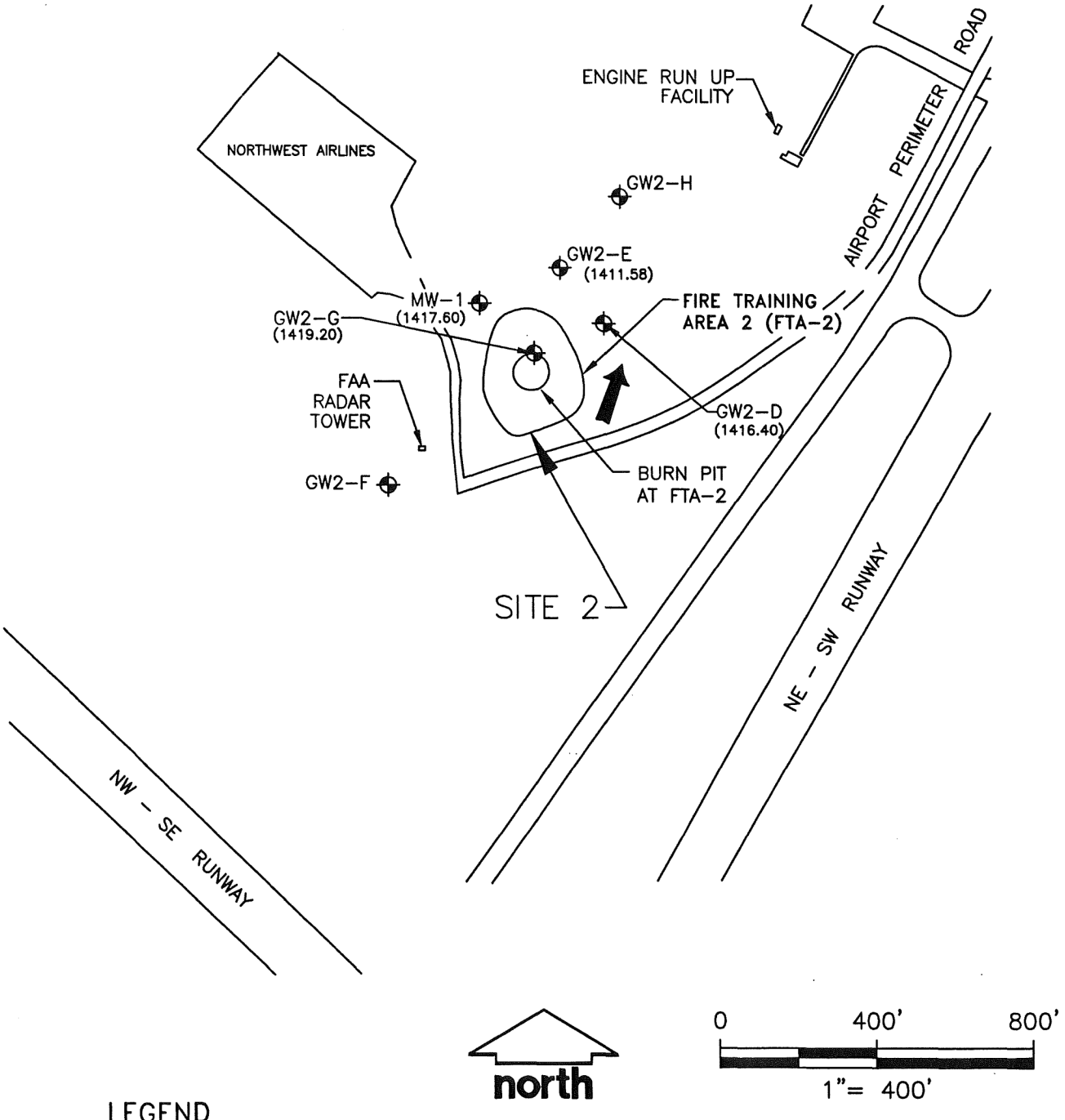


Figure 2. Duluth ANGB IRP, MMRP and CRP Site Locations



LEGEND

MONITORING WELL LOCATION

INTERPRETED GROUNDWATER FLOW DIRECTION

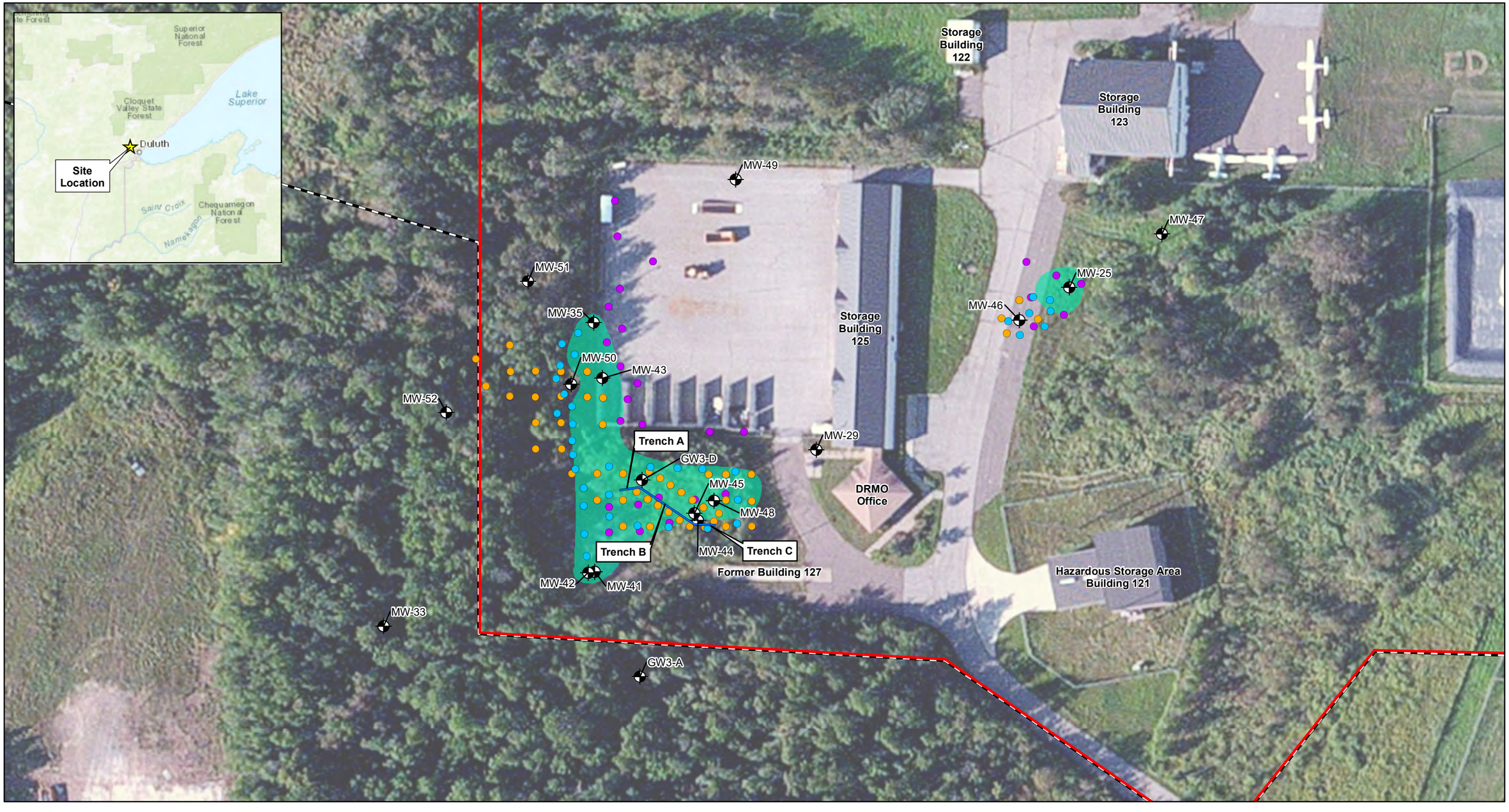
148TH FIGHTER WING, MINNESOTA AIR NATIONAL GUARD
DULUTH INTERNATIONAL AIRPORT
DULUTH, MINNESOTA

SITE 2 FEATURES

FIGURE 3

MWH
MONTGOMERY WATSON HARZA

J:\jobs\NGB\ Old Contract\Federal\67\cadd\Reports\DD\Draft\Fig 3 | Drawn By & Date: | Approved By & Date: | Revised By & Date: str 5/6/02 | Approved By & Date:



LEGEND

Injection Well Points
- 2009
- 2015
- 2019
- Monitoring Well

- Trench
- Estimated Plume Extent Based on May 2023 Data and ROD Cleanup Levels
- Air National Guard Installation Boundary
- Duluth International Airport Boundary

Source: ESRI World Imagery (Clarity)

N

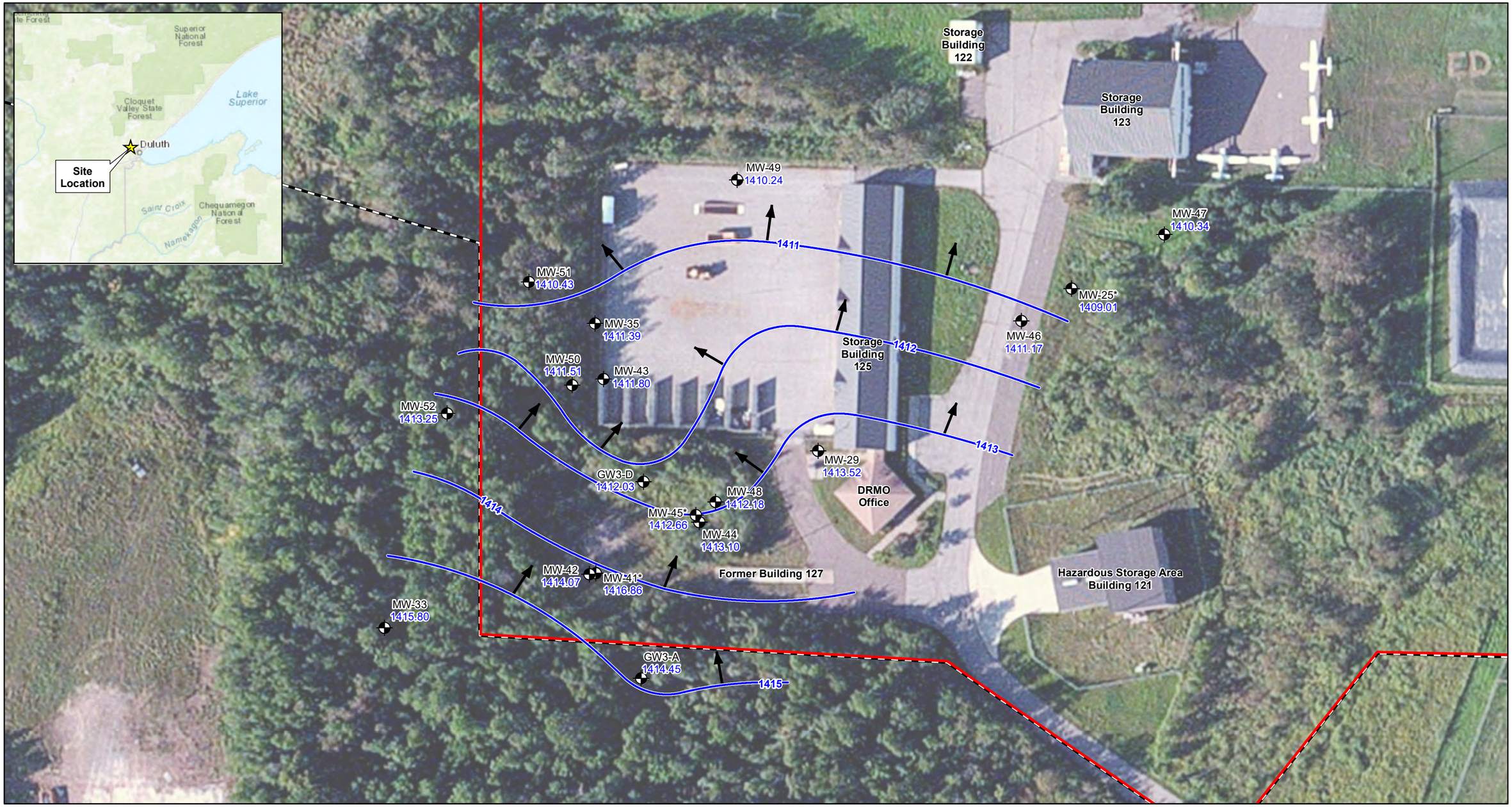
0 75 150

Approximate scale in feet

Figure **4**. Injection Locations
148th FW Site 3
Duluth, Minnesota

Jacobs

\\DC1VS01\GISPROJ\A\AIRNATIONALGUARD\ANG_MIDWEST_DULUTH_MN\MAPS\REPORT\DEC_2023\FIGURE_1-2_INJECTION_LOCATIONS.MXD AESPEJO 3/12/2024



LEGEND

- Monitoring Well
- Groundwater Elevation Contour
- Inferred Groundwater Flow Direction
- Air National Guard Installation Boundary
- Duluth International Airport Boundary

* = Groundwater Elevation At This Location Not Used for Contouring

Source: ESRI World Imagery (Clarity)

N

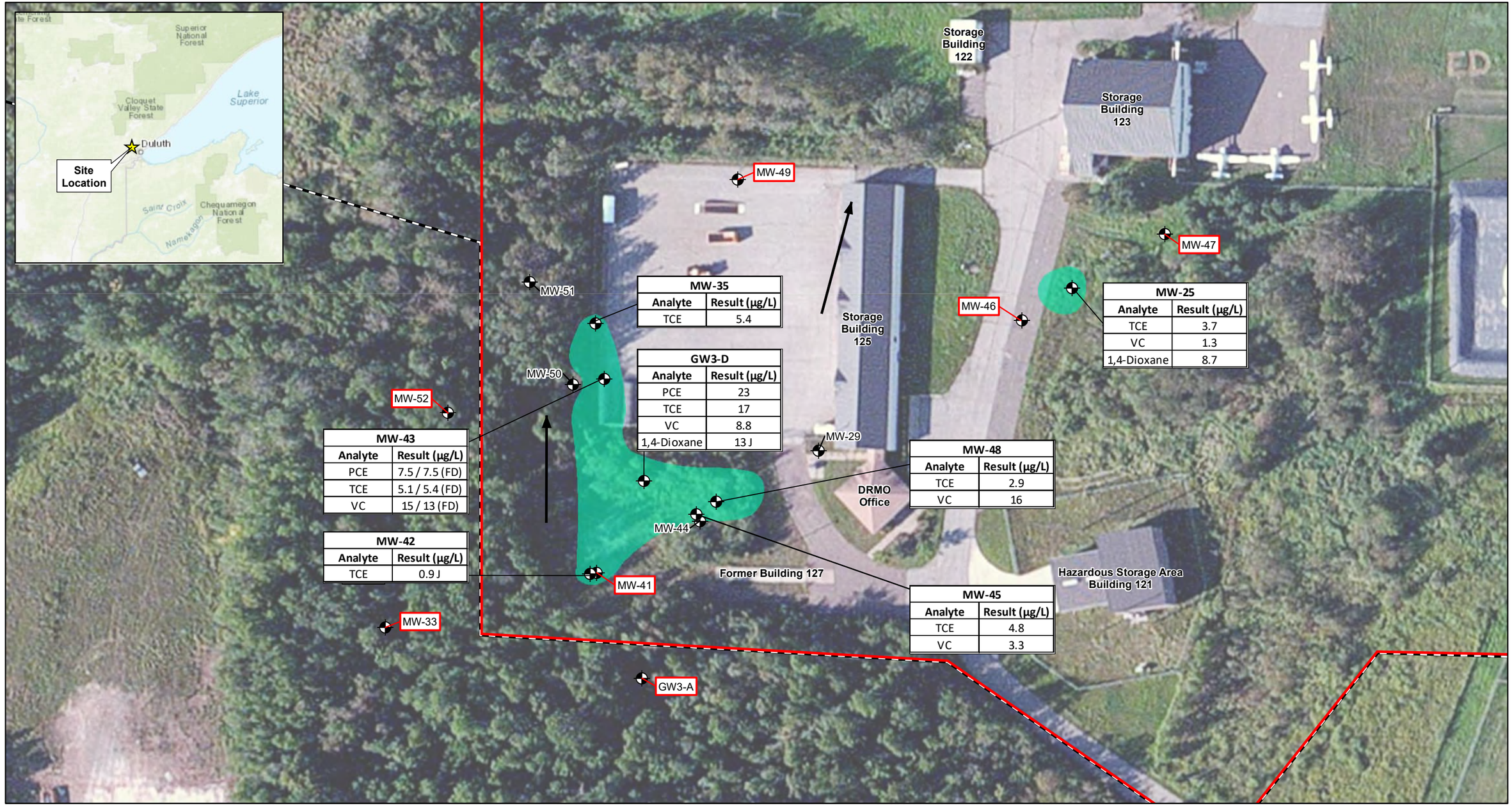
0 75 150

Approximate scale in feet

Figure **5**. Potentiometric Surface Map - June 2024
148th FW Site 3
Duluth, Minnesota

Jacobs

\\DC1VS01\GISPROJ\A\AIRNATIONALGUARD\ANG_MIDWEST_DULUTH_MN\MAPS\REPORT\JUNE_2024\FIGURE_3-1_POTENTIOMETRIC_SURFACE_MAP.MXD AESPEJO 8/26/2024



LEGEND

- Monitoring Well
- Estimated Plume Extent Based on June 2024 Data and ROD Cleanup Levels
- Air National Guard Installation Boundary
- MW-33 — Well Locations where 1,4-Dioxane Analysis was Discontinued as of June 2024
- Inferred Groundwater Flow Direction
- Duluth International Airport Boundary

Source: ESRI World Imagery (Clarity)

Notes:
1. Nondetect and detections below ROD cleanup levels and MDH values are not shown.
2 µg/L = micrograms per liter
3. FD = field duplicate
4. J = result is less than the reporting limit, but greater than or equal to the maximum detection level and the concentration is an approximate value
5. NS = not sampled
6. TCE = trichloroethene
7. VC = vinyl chloride

N

0 75 150
Approximate scale in feet

Figure **6**. Groundwater Sampling Exceedances - June 2024 and Wells Where 1,4-Dioxane Analysis Will be Discontinued
148th FW Site 3
Duluth, Minnesota

Jacobs

\\DC1VS01\GISPROJ\A\AIRNATIONALGUARD\ANG_MIDWEST_DULUTH_MN\MAPS\REPORT\JUNE_2024\FIGURE_3-2_GROUNDWATER_EXCEEDANCES.MXD AESPEJO 8/26/2024

IRP Site Boundary

Main Base

POL: petroleum, oil, and lubricants

0 1,000 2,000 4,000 Feet

N

Aerial Image Source: St. Lous County, MN GIS

G:\Duluth\a_MXD\Site 4\Completion Report\Fig1_SiteLocationMap_v2.mxd

Figure 7

Site Location Map
IRP Site 4
148th Fighter Wing
Minnesota Air National Guard
Duluth, Minnesota

Wood
Environment & Infrastructure Solutions, Inc.
46850 Magellan Dr #190
Novi, MI 48377
248 926 4008

Date:	Created By:	Project:
April, 2021	MSC	291330005

Existing Monitoring Wells

Existing Monitoring Wells- not used for GW elevation

Groundwater Contours

Flow Direction

IRP Site Boundary

Fence

Stormwater Culvert

Surface Drainage Ditch

1409.05 Groundwater Elevation

NOTE:
1) Groundwater elevation not measured in monitoring well GW4-DD due to obstruction in well casing.

0 25 50 100 Feet

N

Aerial Image Source: St. Lous County, MN GIS
G:\Duluth\a_MXD\Site 4\Completion Report\2020 Figures\Site4Map_April2021Contours.mxd

Figure 8

April 2021 Groundwater Elevation
IRP Site 4
148th Fighter Wing
Minnesota Air National Guard
Duluth, Minnesota

Wood
Environment & Infrastructure Solutions, Inc.
46850 Magellan Dr #190
Novi, MI 48377
248 926 4008

Date:	Created By:	Project:
April, 2020	MSC	291330005

SITE04-GW4-HH	LTM #1	LTM#2	LTM#3	LTM#4
	6/10/2019	10/15/2019	11/4/2020	4/6/2021
1,2,4 Trimethylbenzene	**190**	<0.6	<0.6	**6.9**
1,2 Dichloroethane	**1.7**	**0.24**	<0.6	<0.6
Benzene	**59**	**9.1**	**1.3 J**	**5.5**

SITE04-GW4-II	LTM #1	LTM#2	LTM#3	LTM#4
	6/10/2019	10/15/2019	11/3/2020	4/6/2021
1,2,4 Trimethylbenzene	**160 J**	**120 JT**	**120 J**	**110 J**
Benzene	**97 J**	**160 JT**	**290 J**	**240 J**
Ethylbenzene	**140 J**	**92 JT**	**100 J**	<120
Naphthalene	**5400**	**5800 T**	**6200**	**5000**
Total Xylenes	**310**	**53 JT**	<240	<240
Trichloroethene	**74 J**	<120 T	<120	<120

SITE04-GW4-JJ	LTM #1	LTM#2	LTM#3	LTM#4
	6/10/2019	10/15/2019	11/5/2020	4/7/2021
Benzene	**6.3**	**6.9**	**12**	**17**

SITE04-GW4-KK	LTM #1	LTM#2	LTM#3	LTM#4
	6/10/2019	10/15/2019	11/5/2020	4/6/2021
Benzene	**4.4**	**3.5**	**2.8**	**2.8**
Vinyl Chloride	<0.18	**2.9**	**2.1**	**1**

SITE04-GW4-LL	LTM #1	LTM#2	LTM#3	LTM#4
	6/10/2019	10/15/2019	11/5/2020	4/6/2021
1,2,4 Trimethylbenzene	**410**	**440**	<0.6	**240**
Benzene	**21**	**21**	**4.1**	**12**
Dichloromethane	<0.4	**6.3 J**	<1	<1
Ethylbenzene	**150**	**150**	**0.91 J**	<0.6
Total Xylenes	**370**	**520**	<1.2	**150**

Northern Drainage Sample
GW4-EE
GW4-DD
GW4-HH
MW-21
GW4-FF
GW4-II
1 2 3 4 5 6 7 8
Treatment Area 1
Eastern Drainage Sample
GW4-GG
GW4-JJ
GW4-KK
MW-24
Treatment Area 2
9 10 11 12 13 14 15 16
GW4-LL
MW-40

Drainage Sample
2020 Wood Injection Point
Monitoring Well
IRP Site Boundary
Fence
Stormwater Culvert
Treatment Ares
Surface Drainage Ditch

Criteria:
1, 2, 4 Trimethylbenzene (TMB) = 100 ug/L
Benzene = 2 ug/L
Ethylbenzene = 50 ug/L
Total Xylenes = 300 ug/L
Vinyl Cloride = 0.2 ug/L
Dichlormethene = 5 ug/L
Napthalene = 70 ug/L
TCE = 0.4 ug/L
1, 2 Dichloroethane = 1 ug/L

Aerial Image Source: St. Lous County, MN GIS
G:\Duluth\a_MXD\Site 4\Completion Report\2021 Figures\Site4Map_May2021.mxd

Note:
Results are in micrograms per liter (ug/L)
J: Estimated Detected Concentration
T: Sample received with improper preservation
9.1 detected exeeding Health-Based Water Guidance Values, Minnesota Department of Health
Bolded values indicate concentrations above detection limits

0 25 50 100 Feet
N

Figure 9

June 2019 - April 2021 Groundwater Concentrations Exceeding Criteria.
IRP Site 4
148th Fighter Wing
Minnesota Air National Guard
Duluth, Minnesota

Wood
Environment & Infrastructure Solutions, Inc.
46850 Magellan Dr #190
Novi, MI 48377
248 926 4008

Date:	Created By:	Project:
May, 2021	DGJ	291330005

148th FW Main Base

IRP Site 21

148th FW Main Gate/
Security Checkpoint

Duluth International
Airport Terminal

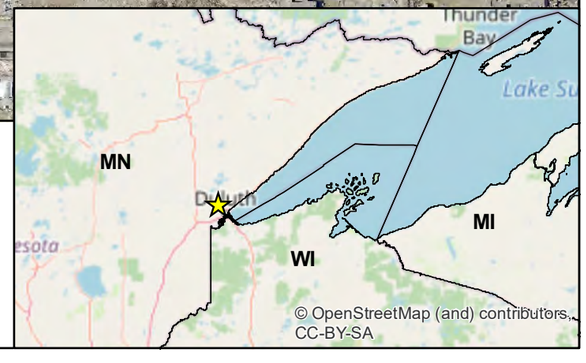


Figure 10

Site Location Map
IRP Site 21
148th Fighter Wing
Minnesota Air National Guard
Duluth, Minnesota

wood.

Wood
Environment & Infrastructure Solutions, Inc.
46850 Magellan Dr #190
Novi, MI 48377
248 926 4008

Date: December 2020	**Drawn:** DGJ
Project No. 291330005	**Checked:** JR

Imagery courtesy of St. Louis County, MN - Enterprise GIS

N

0 550,000 1,100,000
Feet

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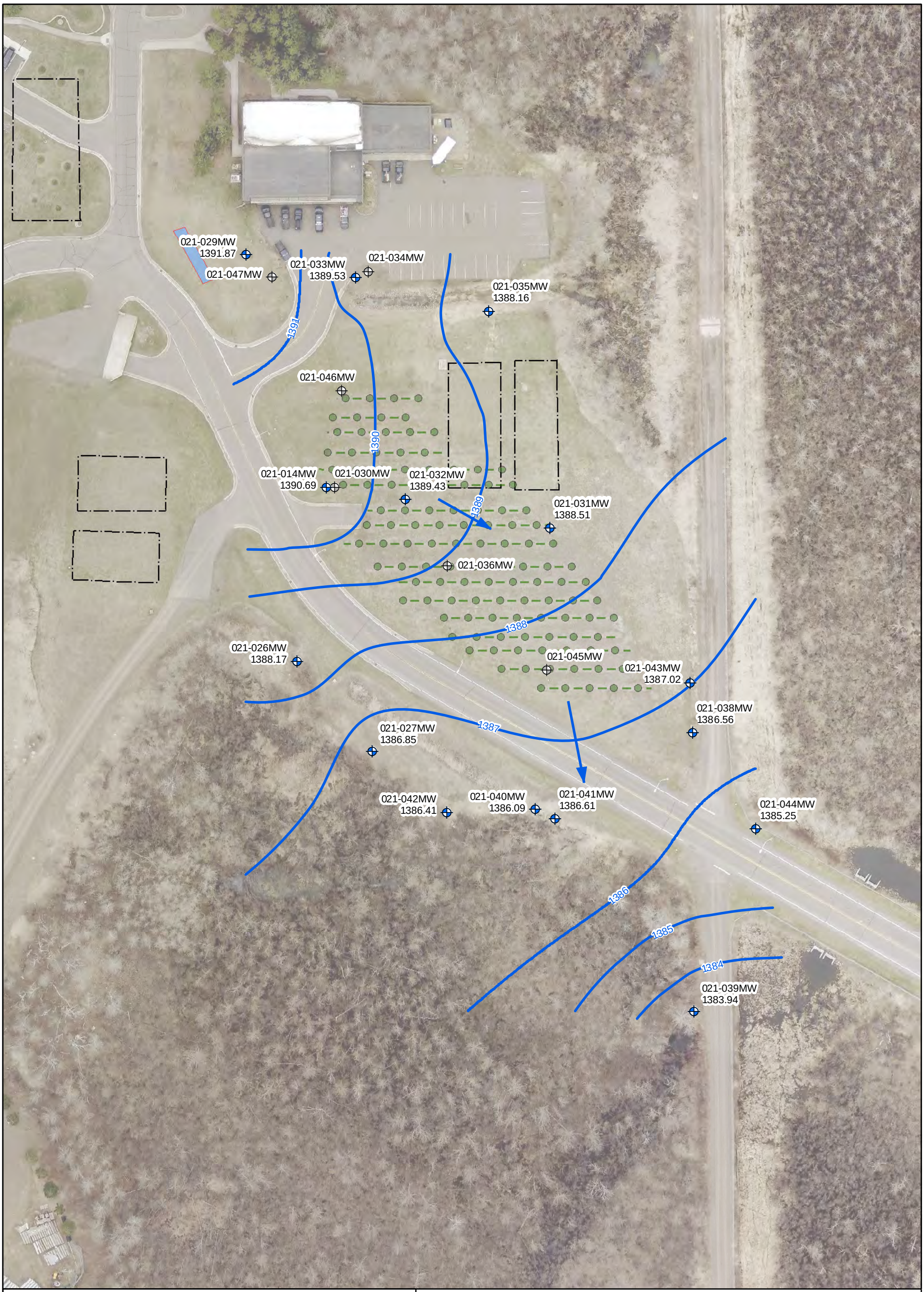

Figure 11

September 2020 Groundwater Elevations Map
IRP Site 21
148th Fighter Wing
Minnesota Air National Guard
Duluth, Minnesota

Wood
Environment & Infrastructure Solutions, Inc.
46850 Magellan Dr #190
Novi, MI 48377
248 926 4008

Date: December 2020	**Project No.** 291330005	Imagery courtesy of St. Louis County, MN - Enterprise GIS
Drawn: MSC	**Checked:** JR	

- Existing Monitoring Wells
- Existing Monitoring Wells (Not used to create contours)
- Groundwater Surface Elevation Contour
- Planted Trees
- HistoricBuildingFootprints
- StormWater_StorageTank
- Groundwater Flow Direction
- 1409.05 Groundwater Elevation

NOTE:
1) 021-046MW, 021-030MW, 021-0M47W, and 021-045MW not used to create contours as groundwater elevations do not appear to be representative of site conditions.
2) Groundwater elevation not measured in monitoring wells 021-034MW and 021-036MW due to obstruction in well casing.

N

0 50 100 Feet

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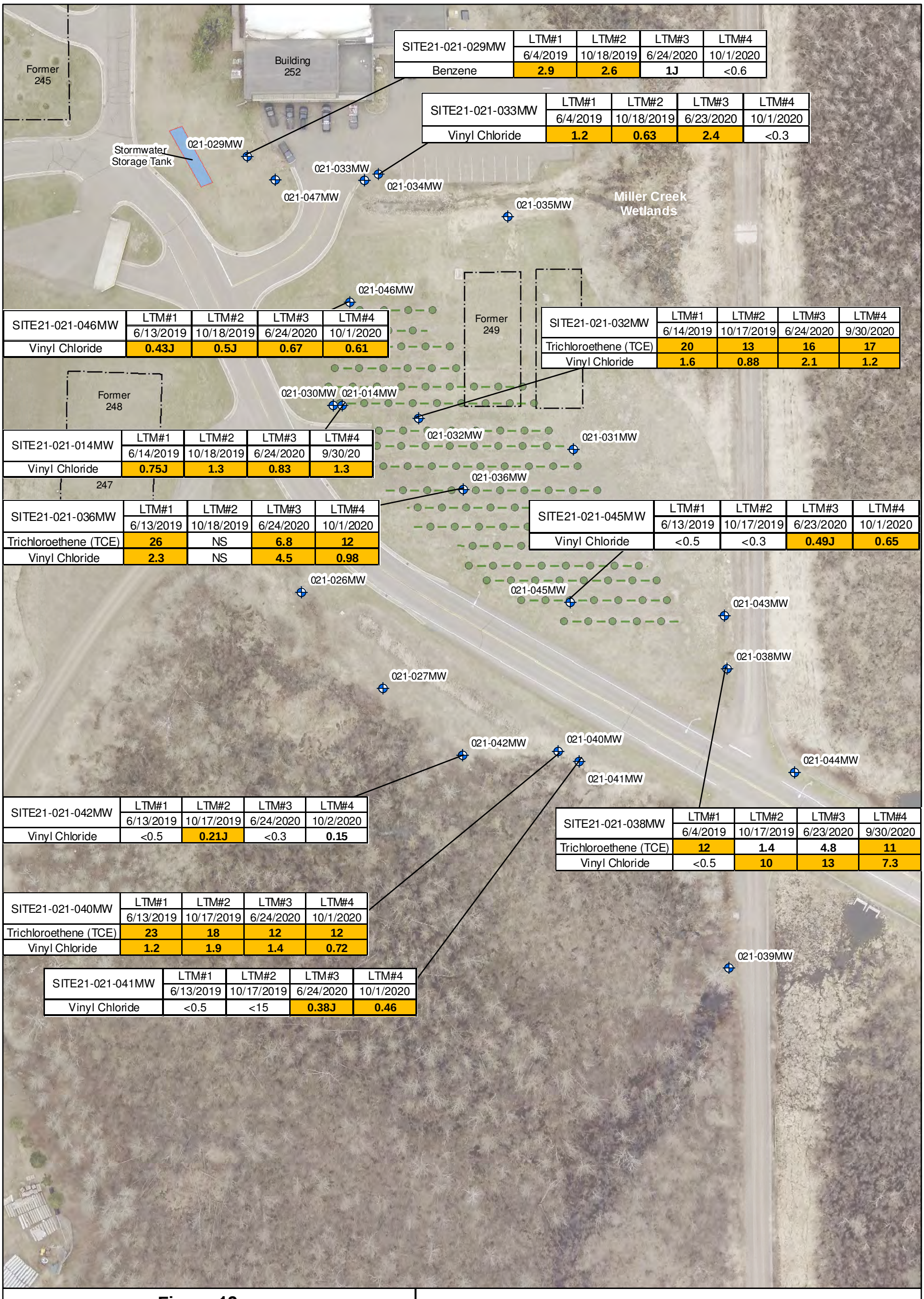

SITE21-021-029MW	LTM#1	LTM#2	LTM#3	LTM#4
	6/4/2019	10/18/2019	6/24/2020	10/1/2020
Benzene	**2.9**	**2.6**	**1J**	<0.6

SITE21-021-033MW	LTM#1	LTM#2	LTM#3	LTM#4
	6/4/2019	10/18/2019	6/23/2020	10/1/2020
Vinyl Chloride	**1.2**	**0.63**	**2.4**	<0.3

SITE21-021-046MW	LTM#1	LTM#2	LTM#3	LTM#4
	6/13/2019	10/18/2019	6/24/2020	10/1/2020
Vinyl Chloride	**0.43J**	**0.5J**	**0.67**	**0.61**

SITE21-021-032MW	LTM#1	LTM#2	LTM#3	LTM#4
	6/14/2019	10/17/2019	6/24/2020	9/30/2020
Trichloroethene (TCE)	**20**	**13**	**16**	**17**
Vinyl Chloride	**1.6**	**0.88**	**2.1**	**1.2**

SITE21-021-014MW	LTM#1	LTM#2	LTM#3	LTM#4
	6/14/2019	10/18/2019	6/24/2020	9/30/20
Vinyl Chloride	**0.75J**	**1.3**	**0.83**	**1.3**

SITE21-021-036MW	LTM#1	LTM#2	LTM#3	LTM#4
	6/13/2019	10/18/2019	6/24/2020	10/1/2020
Trichloroethene (TCE)	**26**	NS	**6.8**	**12**
Vinyl Chloride	**2.3**	NS	**4.5**	**0.98**

SITE21-021-045MW	LTM#1	LTM#2	LTM#3	LTM#4
	6/13/2019	10/17/2019	6/23/2020	10/1/2020
Vinyl Chloride	<0.5	<0.3	**0.49J**	**0.65**

SITE21-021-042MW	LTM#1	LTM#2	LTM#3	LTM#4
	6/13/2019	10/17/2019	6/24/2020	10/2/2020
Vinyl Chloride	<0.5	**0.21J**	<0.3	**0.15**

SITE21-021-038MW	LTM#1	LTM#2	LTM#3	LTM#4
	6/4/2019	10/17/2019	6/23/2020	9/30/2020
Trichloroethene (TCE)	**12**	**1.4**	**4.8**	**11**
Vinyl Chloride	<0.5	**10**	**13**	**7.3**

SITE21-021-040MW	LTM#1	LTM#2	LTM#3	LTM#4
	6/13/2019	10/17/2019	6/24/2020	10/1/2020
Trichloroethene (TCE)	**23**	**18**	**12**	**12**
Vinyl Chloride	**1.2**	**1.9**	**1.4**	**0.72**

SITE21-021-041MW	LTM#1	LTM#2	LTM#3	LTM#4
	6/13/2019	10/17/2019	6/24/2020	10/1/2020
Vinyl Chloride	<0.5	<15	**0.38J**	**0.46**

Figure 12

September 2020 Groundwater Concentrations
IRP Site 21
148th Fighter Wing
Minnesota Air National Guard
Duluth, Minnesota

Wood
Environment & Infrastructure Solutions, Inc.
46850 Magellan Dr #190
Novi, MI 48377
248 926 4008

Date: December 2020	Project No. 291330005	Imagery courtesy of St. Louis County, MN - Enterprise GIS
Drawn: MSC	Checked: JR	

Legend

- Existing Monitoring Well
- Stormwater Storage Tank
- Planted Rows of Trees
- Historic Building Footprints

Notes:
0.55 indicates above criterion.

Criteria
Benzene - 2 µg/L
TCE - 5 µg/L * Site Specific Criterion
Vinyl Chloride - 0.2 µg/L
J – Estimated Value
NS- Not sampled
LTM- Long Term Monitoring

µg/L= Micrograms per Liter

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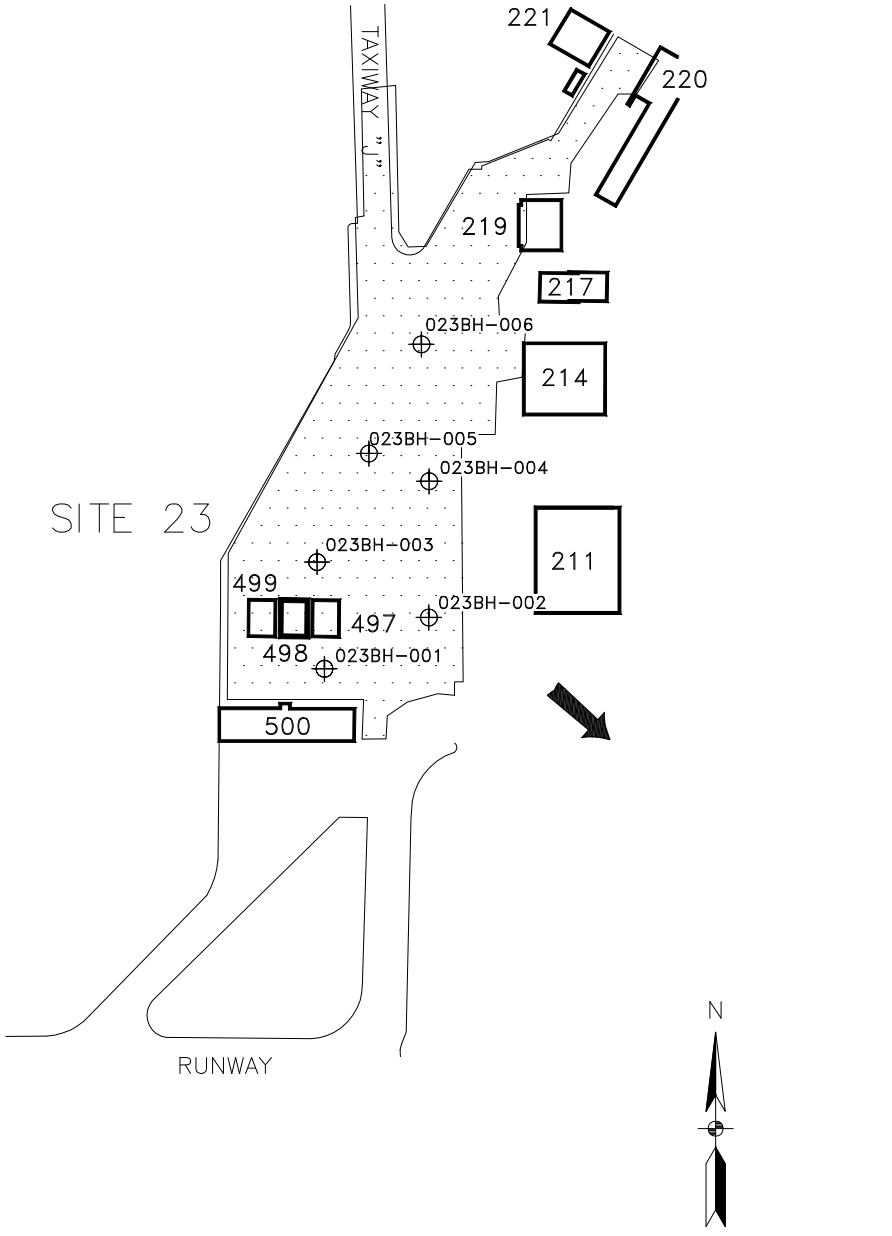


LEGEND

INTERPRETED GROUNDWATER FLOW DIRECTION

023BH-001 MICRO WELL LOCATION

499 BUILDING/BUILDING NUMBER

APPROXIMATE EXTENT OF SITE

148TH FIGHTER WING, MINNESOTA AIR NATIONAL GUARD
DULUTH INTERNATIONAL AIRPORT
DULUTH, MINNESOTA

SITE FEATURES MAP – SITE 23

FIGURE 13

MONTGOMERY WATSON

J:\jobs\NGB\Old Contract\Fed\67\Reports\Decision Document\Site 23-Fig3.dwg | Drawn By & Date: cek 8/29/00 | Approved By & Date: | Revised By & Date: str 12/3/01 | Approved By & Date:

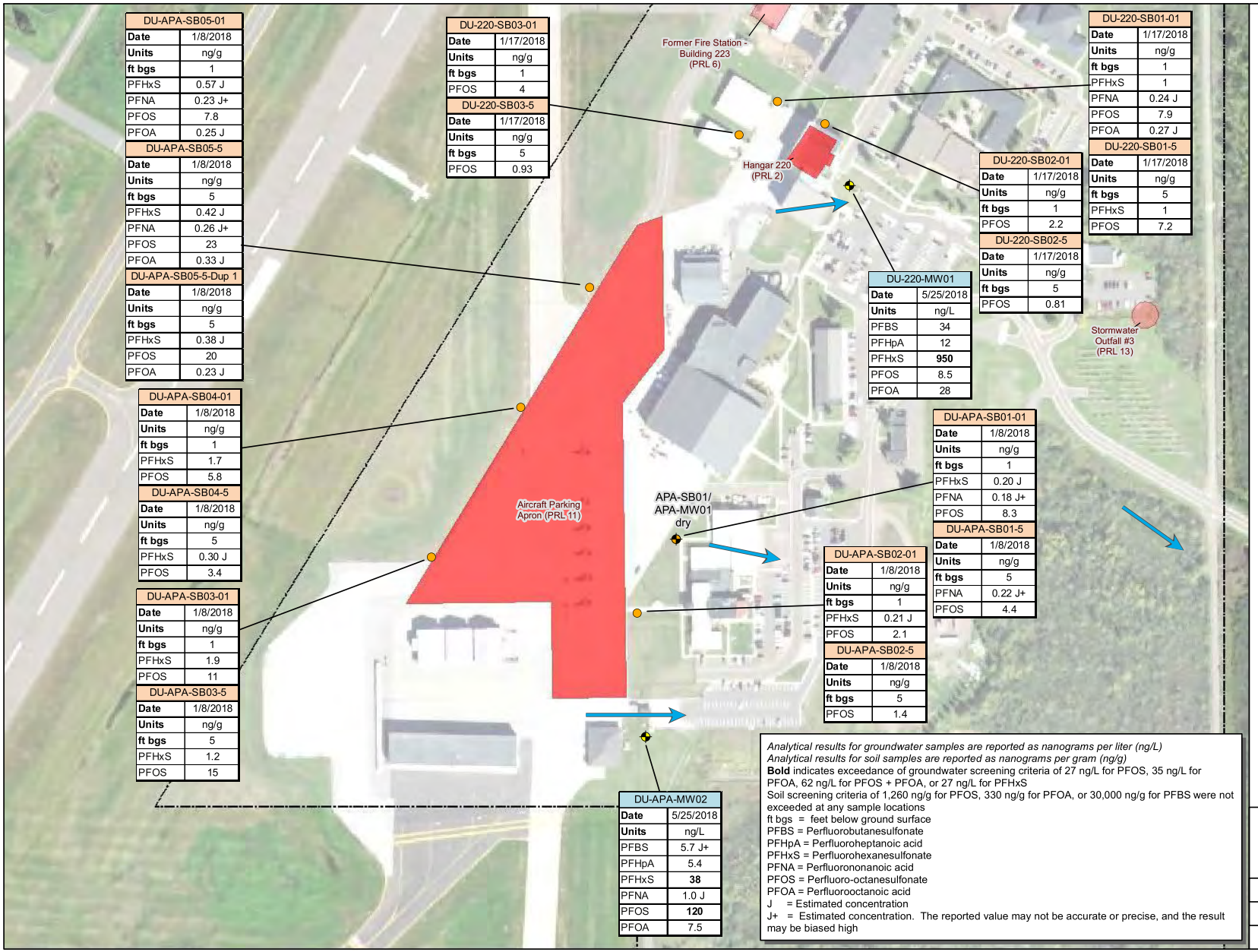


Figure 14

Detected Soil and Groundwater Sample Results
PRLs 2 & 11: Hangar 220 & Aircraft Parking Apron

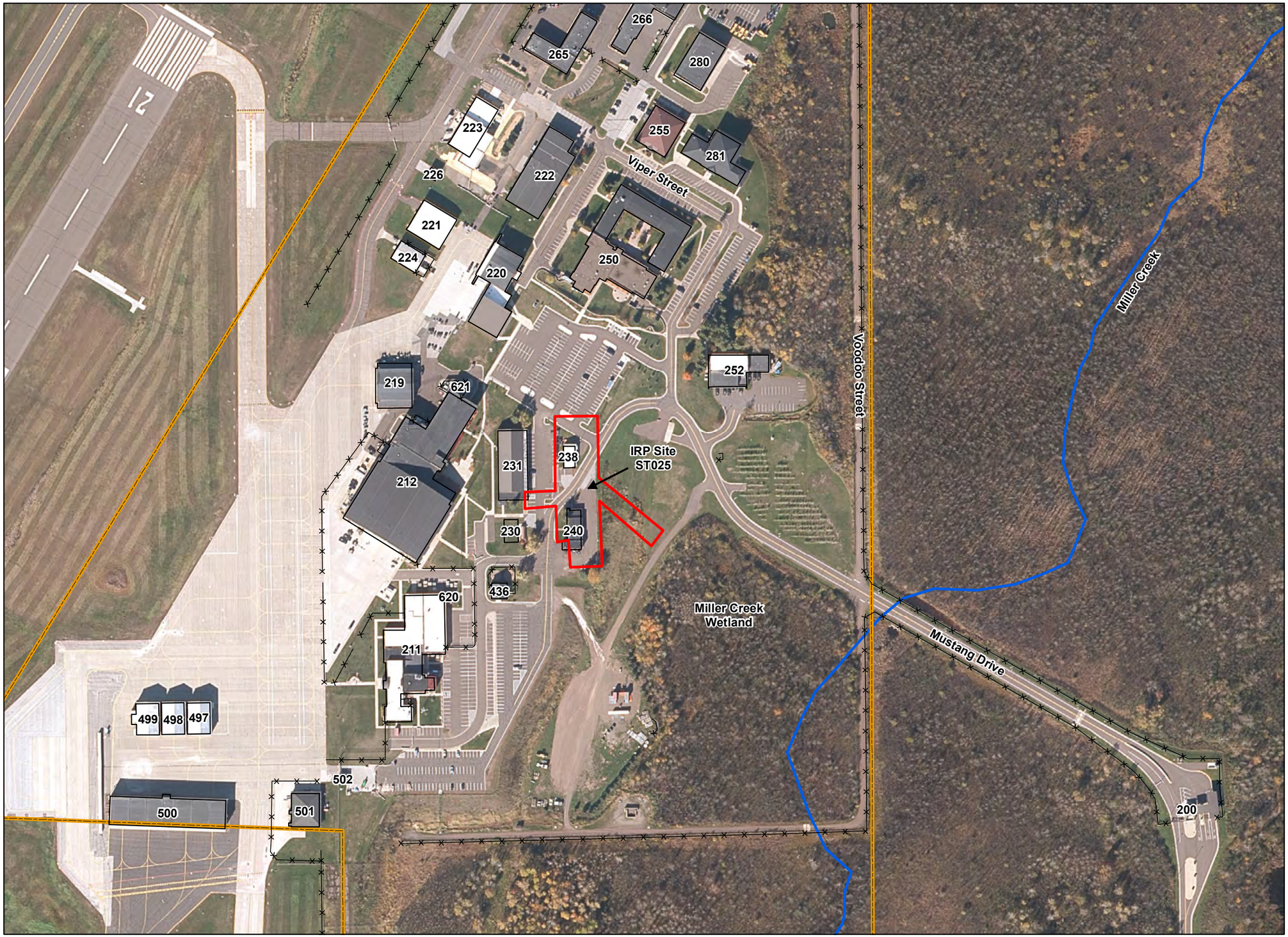
Analytical results for groundwater samples are reported as nanograms per liter (ng/L)
Analytical results for soil samples are reported as nanograms per gram (ng/g)
Bold indicates exceedance of groundwater screening criteria of 27 ng/L for PFOS, 35 ng/L for PFOA, 62 ng/L for PFOS + PFOA, or 27 ng/L for PFHxS
Soil screening criteria of 1,260 ng/g for PFOS, 330 ng/g for PFOA, or 30,000 ng/g for PFBS were not exceeded at any sample locations
ft bgs = feet below ground surface
PFBS = Perfluorobutanesulfonate
PFHpA = Perfluoroheptanoic acid
PFHxS = Perfluorohexanesulfonate
PFNA = Perfluorononanoic acid
PFOS = Perfluoro-octanesulfonate
PFOA = Perfluorooctanoic acid
J = Estimated concentration
J+ = Estimated concentration. The reported value may not be accurate or precise, and the result may be biased high

Duluth Air National Guard Base (ANGB)
Site Inspection Report - Air National Guard
Phase II Regional Site Inspections for Per- and Polyfluoroalkyl Substances
Duluth, Minnesota

AECOM
3101 Wilson Blvd., Arlington, VA 22201
T (703) 682-4900 F (703) 682-4901

Drawn:	DS 12/5/2018
Approved:	BP 12/5/2018
Project No.:	60520893

1:2,700 \\arlington.na.aecomnet.com\Arlington\DCS\GIS\GIS_Data\60520893_ANG_PFCs\MXDs\Duluth\Site Investigation Report\Figure 5-1 PRLs 2,11.mxd



LEGEND:

- Stream
- Fence*
- Site Location*
- Building*
- Installation Boundary*

NOTES:

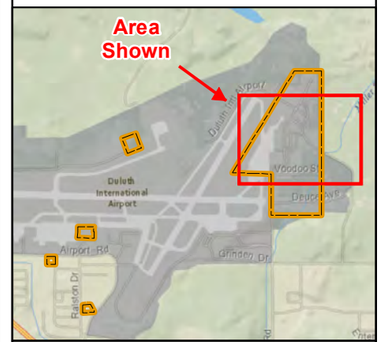
* Source: Common Installation Picture (CIP) and Mission geodatabases for Duluth ANGB.

1. Background Source: 2014-2017 MN High Resolution Orthoimagery available at https://gisdata.mn.gov/.

N W E S

0 100 200 400 Feet

0 25 50 100 Meters



leidos

148TH FIGHTER WING
DULUTH AIR NATIONAL GUARD BASE
DULUTH, MINNESOTA

SITE LOCATION MAP

FIGURE: 15 | DATE: 9/25/2020

PROJECT: \827Projects\ANG FY19 Midwest IRP\z_GIS\Duluth\Projects\LTM_Rpt01_2020Jun\Figure 2 Site Location_11x17.mxd

LEGEND:

- Monitoring Well
- Site Location*
- Building*
- Installation Boundary*
- Fence*
- Groundwater Contour (ft amsl)
- Inferred Groundwater Flow Direction

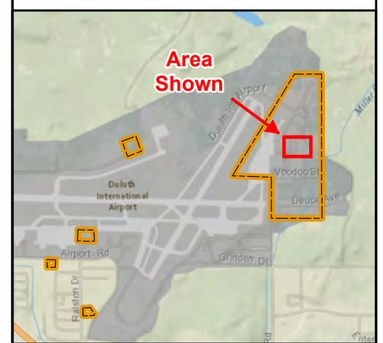
NOTES:

025-025MW - Well not gauged for water level in December 2023.

1394.54 - Groundwater Elevation in in feet above mean sea level (ft amsl).

* Source: Common Installation Picture (CIP) and Mission geodatabases for Duluth ANGB.

1. Water levels measured from 15 wells in December 2023 per the LTM Work Plan (Leidos 2020).
3. Background Source: 2014-2017 MN High Resolution Orthoimagery available at https://gisdata.mn.gov/.

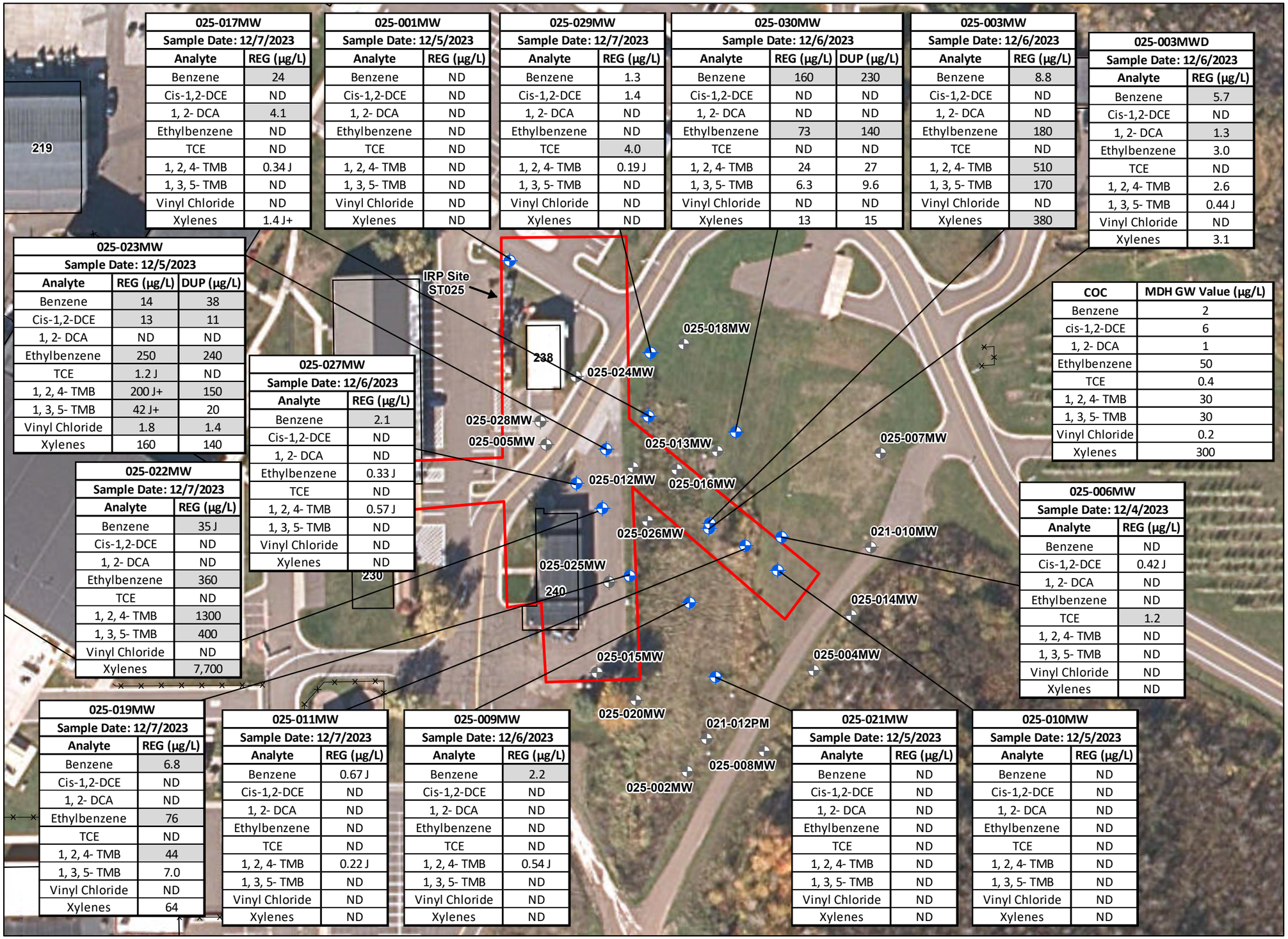


148TH FIGHTER WING
DULUTH AIR NATIONAL GUARD BASE
DULUTH, MINNESOTA

IRP SITE ST025
DECEMBER 2023
POTENTIOMETRIC SURFACE

FIGURE: 16 | DATE: 3/18/2024

PROJECT: \827Projects\ANG FY19 Midwest IRP\z_GIS\Duluth\Projects\LTM_Rpt08_2023Dec\Figure 3 Potentiometric Surface_11x17.mxd



025-017MW	
Sample Date: 12/7/2023	
Analyte	REG (µg/L)
Benzene	24
Cis-1,2-DCE	ND
1, 2- DCA	4.1
Ethylbenzene	ND
TCE	ND
1, 2, 4- TMB	0.34 J
1, 3, 5- TMB	ND
Vinyl Chloride	ND
Xylenes	1.4 J+

025-001MW	
Sample Date: 12/5/2023	
Analyte	REG (µg/L)
Benzene	ND
Cis-1,2-DCE	ND
1, 2- DCA	ND
Ethylbenzene	ND
TCE	ND
1, 2, 4- TMB	ND
1, 3, 5- TMB	ND
Vinyl Chloride	ND
Xylenes	ND

025-029MW	
Sample Date: 12/7/2023	
Analyte	REG (µg/L)
Benzene	1.3
Cis-1,2-DCE	1.4
1, 2- DCA	ND
Ethylbenzene	ND
TCE	4.0
1, 2, 4- TMB	0.19 J
1, 3, 5- TMB	ND
Vinyl Chloride	ND
Xylenes	ND

025-030MW		
Sample Date: 12/6/2023		
Analyte	REG (µg/L)	DUP (µg/L)
Benzene	160	230
Cis-1,2-DCE	ND	ND
1, 2- DCA	ND	ND
Ethylbenzene	73	140
TCE	ND	ND
1, 2, 4- TMB	24	27
1, 3, 5- TMB	6.3	9.6
Vinyl Chloride	ND	ND
Xylenes	13	15

025-003MW	
Sample Date: 12/6/2023	
Analyte	REG (µg/L)
Benzene	8.8
Cis-1,2-DCE	ND
1, 2- DCA	ND
Ethylbenzene	180
TCE	ND
1, 2, 4- TMB	510
1, 3, 5- TMB	170
Vinyl Chloride	ND
Xylenes	380

025-003MWD	
Sample Date: 12/6/2023	
Analyte	REG (µg/L)
Benzene	5.7
Cis-1,2-DCE	ND
1, 2- DCA	1.3
Ethylbenzene	3.0
TCE	ND
1, 2, 4- TMB	2.6
1, 3, 5- TMB	0.44 J
Vinyl Chloride	ND
Xylenes	3.1

025-023MW		
Sample Date: 12/5/2023		
Analyte	REG (µg/L)	DUP (µg/L)
Benzene	14	38
Cis-1,2-DCE	13	11
1, 2- DCA	ND	ND
Ethylbenzene	250	240
TCE	1.2 J	ND
1, 2, 4- TMB	200 J+	150
1, 3, 5- TMB	42 J+	20
Vinyl Chloride	1.8	1.4
Xylenes	160	140

025-027MW	
Sample Date: 12/6/2023	
Analyte	REG (µg/L)
Benzene	2.1
Cis-1,2-DCE	ND
1, 2- DCA	ND
Ethylbenzene	0.33 J
TCE	ND
1, 2, 4- TMB	0.57 J
1, 3, 5- TMB	ND
Vinyl Chloride	ND
Xylenes	ND

025-022MW	
Sample Date: 12/7/2023	
Analyte	REG (µg/L)
Benzene	35 J
Cis-1,2-DCE	ND
1, 2- DCA	ND
Ethylbenzene	360
TCE	ND
1, 2, 4- TMB	1300
1, 3, 5- TMB	400
Vinyl Chloride	ND
Xylenes	7,700

025-006MW	
Sample Date: 12/4/2023	
Analyte	REG (µg/L)
Benzene	ND
Cis-1,2-DCE	0.42 J
1, 2- DCA	ND
Ethylbenzene	ND
TCE	1.2
1, 2, 4- TMB	ND
1, 3, 5- TMB	ND
Vinyl Chloride	ND
Xylenes	ND

025-019MW	
Sample Date: 12/7/2023	
Analyte	REG (µg/L)
Benzene	6.8
Cis-1,2-DCE	ND
1, 2- DCA	ND
Ethylbenzene	76
TCE	ND
1, 2, 4- TMB	44
1, 3, 5- TMB	7.0
Vinyl Chloride	ND
Xylenes	64

025-011MW	
Sample Date: 12/7/2023	
Analyte	REG (µg/L)
Benzene	0.67 J
Cis-1,2-DCE	ND
1, 2- DCA	ND
Ethylbenzene	ND
TCE	ND
1, 2, 4- TMB	0.22 J
1, 3, 5- TMB	ND
Vinyl Chloride	ND
Xylenes	ND

025-009MW	
Sample Date: 12/6/2023	
Analyte	REG (µg/L)
Benzene	2.2
Cis-1,2-DCE	ND
1, 2- DCA	ND
Ethylbenzene	ND
TCE	ND
1, 2, 4- TMB	0.54 J
1, 3, 5- TMB	ND
Vinyl Chloride	ND
Xylenes	ND

025-021MW	
Sample Date: 12/5/2023	
Analyte	REG (µg/L)
Benzene	ND
Cis-1,2-DCE	ND
1, 2- DCA	ND
Ethylbenzene	ND
TCE	ND
1, 2, 4- TMB	ND
1, 3, 5- TMB	ND
Vinyl Chloride	ND
Xylenes	ND

025-010MW	
Sample Date: 12/5/2023	
Analyte	REG (µg/L)
Benzene	ND
Cis-1,2-DCE	ND
1, 2- DCA	ND
Ethylbenzene	ND
TCE	ND
1, 2, 4- TMB	ND
1, 3, 5- TMB	ND
Vinyl Chloride	ND
Xylenes	ND

COC	MDH GW Value (µg/L)
Benzene	2
cis-1,2-DCE	6
1, 2- DCA	1
Ethylbenzene	50
TCE	0.4
1, 2, 4- TMB	30
1, 3, 5- TMB	30
Vinyl Chloride	0.2
Xylenes	300

LEGEND:

- Monitoring Well
- Monitoring Well (Not Sampled)
- Site Location*
- Building*
- Installation Boundary*
- Fence*

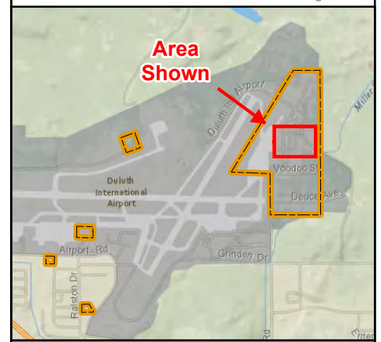
NOTES:

cis-1,2-DCE- cis-1,2-Dichloroethene
1.2-DCA- 1,2-Dichloroethane
TCE- Trichloroethene
1,2,4-TMB- 1,2,4-Trimethylbenzene
1,3,5-TMB- 1,3,5-Trimethylbenzene
MDH- Minnesota Department of Health

Qualifiers:
ND- Not Detected
J- Estimated Concentration
J+- The analyte was positively identified; the result is an estimated concentration and may be biased high.

* Source: Common Installation Picture (CIP) and Mission geodatabases for Duluth ANGB.
1. Shaded value = Exceeds MDH GW Value.
2. Background Source: 2014-2017 MN High Resolution Orthoimagery available at https://gisdata.mn.gov/.

0 25 50 100 Feet
0 5 10 20 Meters



leidos

148TH FIGHTER WING
DULUTH AIR NATIONAL GUARD BASE
DULUTH, MINNESOTA

IRP SITE ST025
DECEMBER 2023
GROUNDWATER
ANALYTICAL RESULTS

FIGURE: 17 | DATE: 3/20/2024

PROJECT: \827Projects\ANG FY19 Midwest IRP\z_GIS\Duluth\Projects\LTM_Rpt08_2023Dec\Figure 4 Analytical Results_11x17.mxd

148th FW Main Base

IRP Site 29

Duluth International Airport Terminal

Main Base

IRP Site Boundary

0 1,000 2,000 4,000 Feet

N

Aerial Image Source: St. Lous County, MN GIS

G:\Duluth\a_MXD\Site29\Completion Report\Fig1_SiteLocationMap.mxd

Figure 18

Site Location Map
IRP Site 29
148th Fighter Wing
Minnesota Air National Guard
Duluth, Minnesota

Wood
Environment & Infrastructure Solutions, Inc.
46850 Magellan Dr #190
Novi, MI 48377
248 926 4008

Date:	Created By:	Project:
December, 2020	MSC	291330005

029-GW4-CC
029-GW4-F
029-GW4-AA
029-GW4-BB
029-GW29-E
1408.03
029-GW29-A
029-GW29-D
1409.57
029-GW29-B
029-GW29-C
1409.77
1408.5
1409
1409.5
029-GW4-O
1409.21
029-GW4-P
029-GW4-E
1409.39
Former Building 68
(Quonset Hut)
029-WP10D
1408.71
029-WP10
1408.62
1408.5
029-GW4-Z
1408.3

Existing Monitoring Wells
Existing Monitoring Wells- not used for GW elevation
Groundwater Contours
Fence
Gate
Stormwater Culvert
Base Boundary
Surface Drainage Ditch
Groundwater Flow Direction
1409.05 Groundwater Elevation

NOTE:
1) 029-GW4-F, 029-GW4-CC, 029-GW4-AA and 029-GW29-BB not used to create contours as the wells were not included in the 2015 well survey.
2) 029-GW29-A, 029-GW29-B, and 029-GW4-P not used to create contours as groundwater elevations do not appear to be representative of site conditions.

0 25 50 100 Feet

N

Aerial Image Source: St. Lous County, MN GIS
G:\Duluth\a_MXD\Site29\Sept2020\Fig2_GWE_Sept2020.mxd

Figure 19

September 2020 Groundwater Elevation
IRP Site 29
148th Fighter Wing
Minnesota Air National Guard
Duluth, Minnesota

Wood
Environment & Infrastructure Solutions, Inc.
46850 Magellan Dr #190
Novi, MI 48377
248 926 4008

Date:	Created By:	Project:
December, 2020	MSC	291330005

SITE29-GW4-BB	Baseline	LTM#1	LTM#2	LTM#3	LTM#4
	11/15/2016	6/11/2019	10/16/2019	6/25/2020	9/30/2020
Vinyl Chloride	**19**	**0.5 JT**	**10T**	**4.4T**	**8.7J**

SITE29-GW29-A	Baseline	LTM#1	LTM#2	LTM#3	LTM#4
	11/15/2016	6/11/2019	10/15/2019	6/25/2020	9/29/2020
Vinyl Chloride	**2.3J**	<0.18	<0.17	**0.35J**	**0.38J**

SITE29-GW29-D	Baseline	LTM#1	LTM#2	LTM#3	LTM#4
	11/15/2016	6/12/2019	10/16/2019	6/25/2020	10/2/2020
Trichloroetene (TCE)	**46**	**20**	**13**	**13**	**18**
Vinyl Chloride	**0.08J**	**0.94J**	**1.3**	**0.95**	**1.9**

SITE29-GW29-E	Baseline	LTM#1	LTM#2	LTM#3	LTM#4
	6/12/2019	6/11/2019	10/15/2019	6/25/2020	9/29/2020
Vinyl Chloride	2.5	<0.18	<0.3	<1.5	<1.5

SITE29-GW29-B	Baseline	LTM#1	LTM#2	LTM#3	LTM#4
	11/15/2016	6/12/2019	10/15/2019	6/25/2020	9/29/2020
Vinyl Chloride	**0.32J**	**2.2**	**1.6**	**1.5**	**0.79**

SITE29-GW29-C	Baseline	LTM#1	LTM#2	LTM#3	LTM#4
	11/15/2016	6/12/2019	10/16/2019	6/25/2020	9/29/2020
Vinyl Chloride	**11**	<0.18	<0.3	**1.6**	**2.7J**

SITE29-GW4-E	Baseline	LTM#1	LTM#2	LTM#3	LTM#4
	11/15/2016	6/12/2019	10/16/2019	6/25/2020	10/2/2020
Vinyl Chloride	**0.87**	<0.18	**0.27J**	**0.22J**	**0.79**

SITE29-GW4-P	Baseline	LTM#1	LTM#2	LTM#3	LTM#4
	11/15/2016	6/12/2019	10/16/2019	6/25/2020	10/2/2020
Vinyl Chloride	**360 D**	**1.4**	**1.5**	**2.6**	**1.8**

SITE29-WP10D	Baseline	LTM#1	LTM#2	LTM#3	LTM#4
	11/15/2016	6/12/2019	10/16/2019	6/25/2020	9/29/2020
Vinyl Chloride	**13**	**5.4**	**5.7**	**6.9**	**6.7**

SITE29-GW4-Z	LTM#1	LTM#2	LTM#3	LTM#4
	6/12/2019	10/17/2019	6/25/2020	9/29/2020
Vinyl Chloride	<0.18	**0.24J**	<0.3	**0.19J**

029-GW4-CC
029-GW4-F
029-GW4-AA
029-GW4-BB
029-GW29-A
029-GW29-E
029-GW29-B
VP-1
029-GW29-D
029-GW29-C
029-GW4-O
029-GW4-E
029-GW4-P
Former Building 68 (Quonset Hut)
029-WP10D
029-WP10
029-GW4-Z

Monitoring Wells
Vapor Point
Fence
Gate
Stormwater Culvert
Base Boundary
Surface Drainage Ditch

Criteria:
TCE: 5 (ug/L) Site Specific Criterion
Vinyl Chloride: 0.2 (ug/L)

NOTES:
Results are in micrograms per liter (ug/L)
J: Estimated Detected Concentrations
T: Sample received with improper preservation
5.1 detected exceeding Health-Based Water Guidance Values, MDH (HRL, HBV, and/or RAA) or onsite specific criterion of 5 ug/L for TCE

0 25 50 100 Feet

N

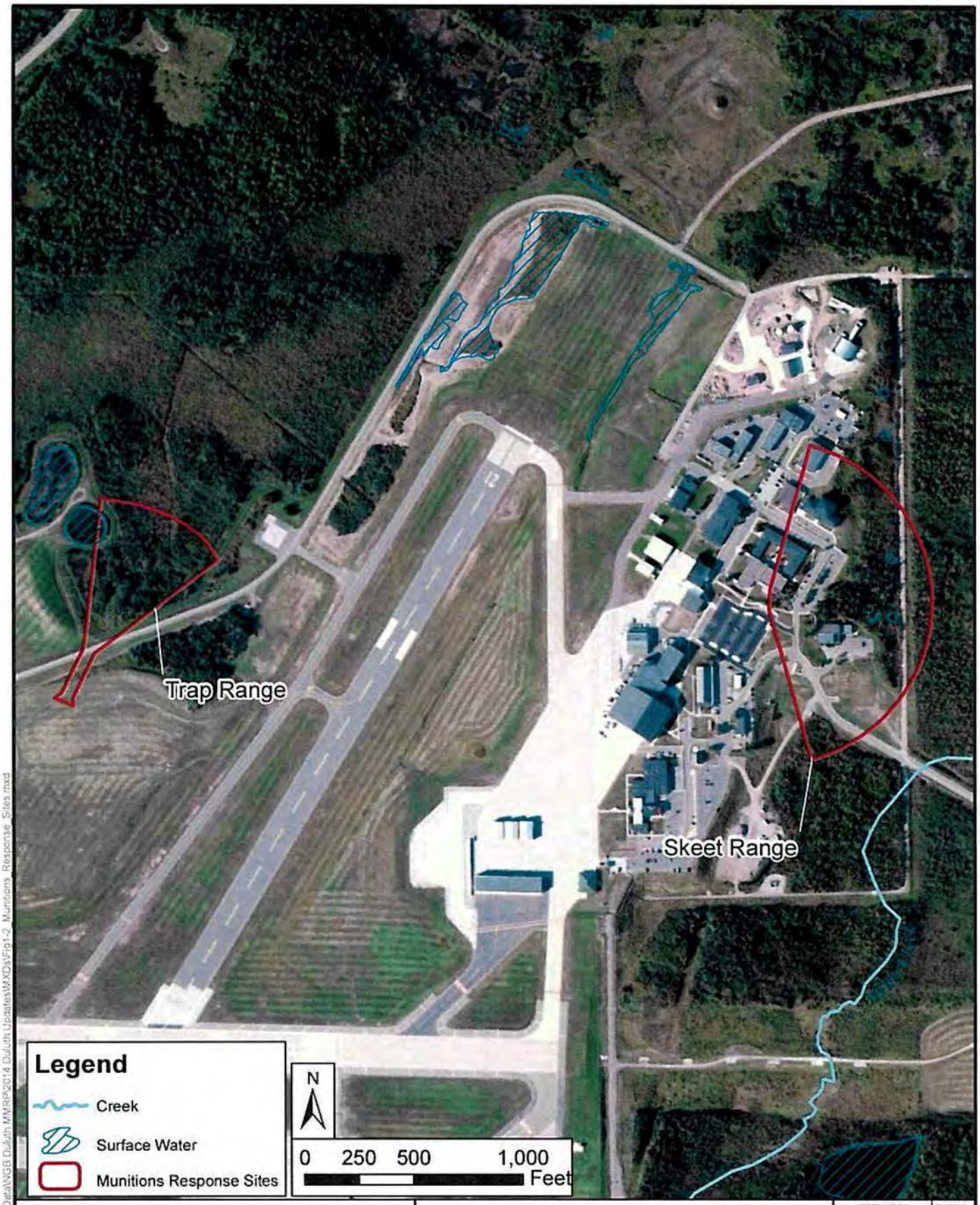
Aerial Image Source: St. Lous County, MN GIS
G:\Duluth\a_MXD\Site29\Sept2020\Fig3_Sampling_Concs.Sept2020.mxd

Figure 20

June 2019 to September 2020
Groundwater Concentrations
Exceeding Criteria
IRP Site 29
148th Fighter Wing
Minnesota Air National Guard
Duluth, Minnesota

Wood
Environment & Infrastructure Solutions, Inc.
46850 Magellan Dr #190
Novi, MI 48377
248 926 4008

Date:	Created By:	Project:
December, 2020	MSC	291330005



Path: L:_Common\GIS_Data\ANGB Duluth MMRP\2014 Duluth Updates\MXDs\Fig1-2_Munitions_Response_Sites.mxd

AECOM
675 N. Washington Street, Suite 300, Alexandria VA 22314
Phone: 703.549-8728 FAX: 703.549.9134 aecom.com

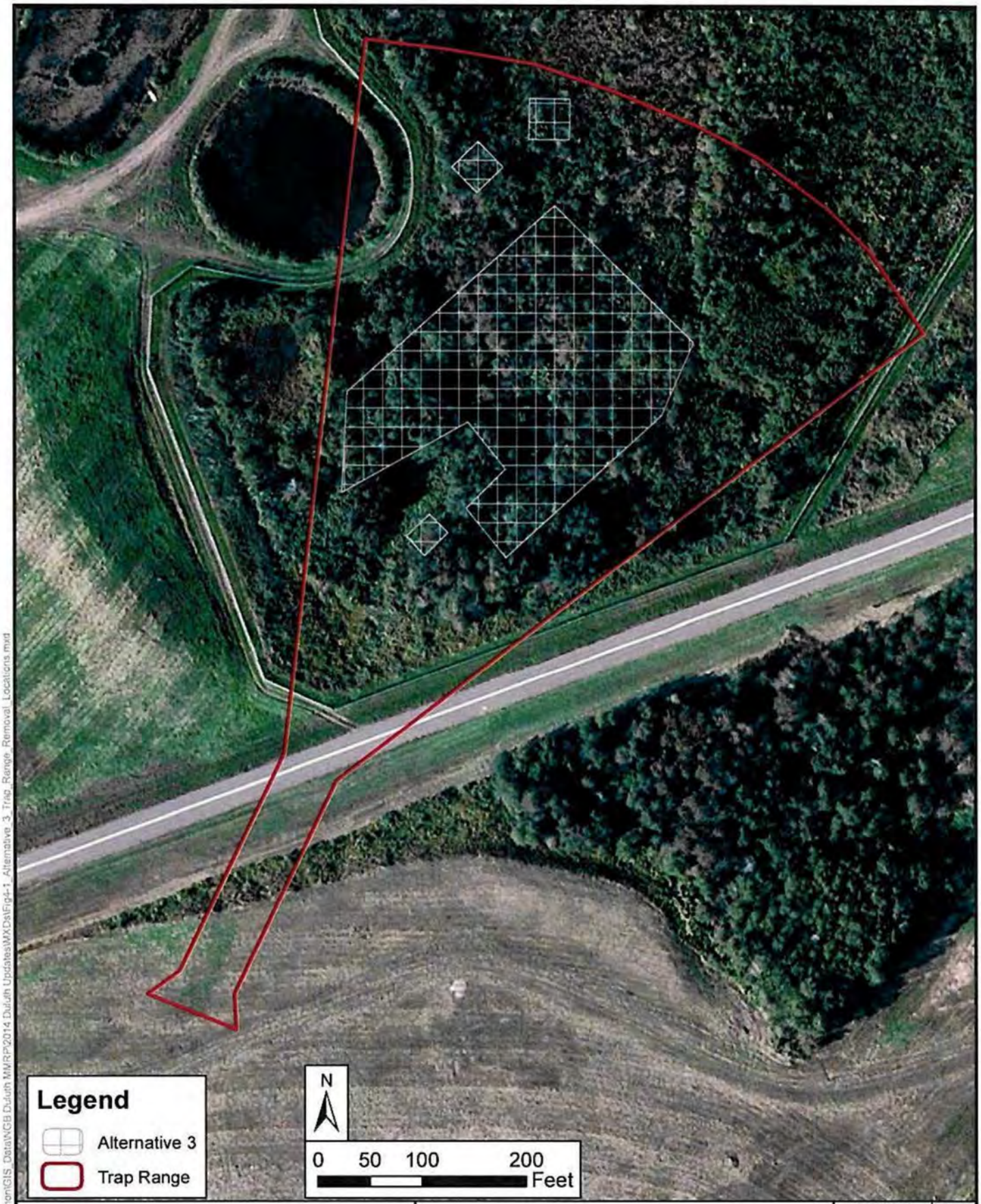
Duluth ANGB MMRP Remedial Investigation

FIGURE 2

Locations of Trap Range and Skeet Range
Duluth, MN

CONTRACT NO	TASK NO
60288397	1
DESIGNED BY: A. Weber	DRAWN BY: A. Weber
CHECKED BY: M. MacEwan	DATE: February 2014
SCALE: 1"=575'	SHEET: 1 of 1

Figure 21



Path: A:\env_prod_Common\GIS_Data\NGB\Duluth MMRP\2014 Duluth Updates\MXD\stFig4-1_Alternative_3_Trap_Range_Removal_Locations.mxd

AECOM
675 N. Washington Street, Suite 300, Alexandria VA 22314
Phone: 703.549-8728 FAX: 703.549.9134 aecom.com

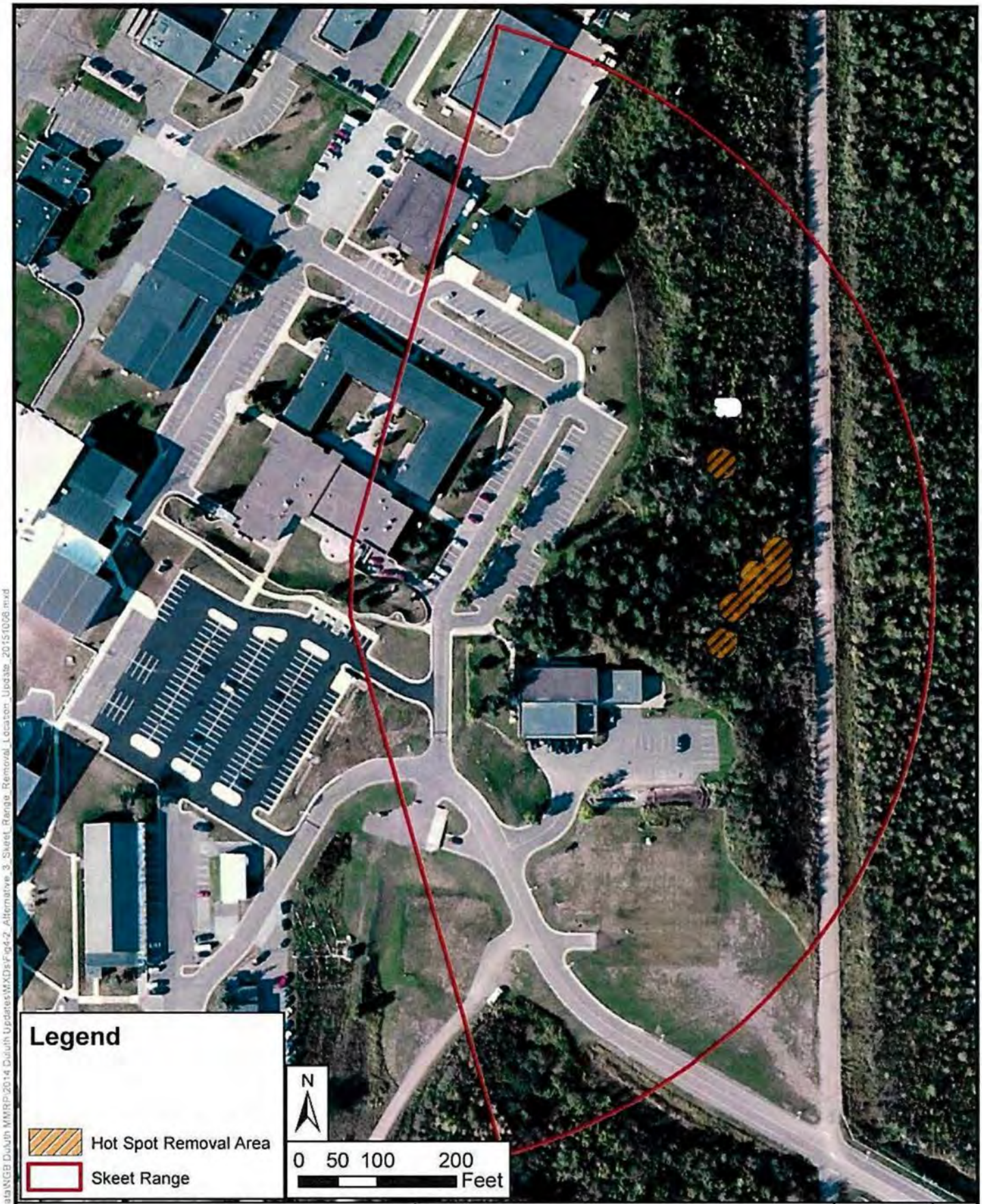
Duluth ANGB MMRP Remedial Investigation

FIGURE 5

Alternative 3 - MRS Trap Range (TS737)
Removal Locations Duluth, MN

CONTRACT NO	TASK NO
60288397	1
DESIGNED BY: A. Weber	DRAWN BY: A. Weber
CHECKED BY: M. MacEwan	DATE: December 2014
SCALE: 1" = 120'	SHEET: 1 of 1

Figure 22



Path: L:\Common\GIS_Data\NGB Duluth MMRP\2014 Duluth Updates\MXDs\Fig4-2_Alternative_3_Skeet_Range_Removal_Locaten_Update_20151006.mxd

AECOM
3101 Wilson Boulevard, Suite 900, Arlington, VA 22201
Phone: 703.682.4900 FAX: 703.682.4901 www.aecom.com

Duluth ANGB MMRP Remedial Investigation

FIGURE 6

Alternative 3 MRS Skeet Range (TS738)
Removal Locations Duluth, MN

CONTRACT NO	TASK NO
60283397	1
DESIGNED BY: A. Weber	DRAWN BY: A. Weber
CHECKED BY: M. MacEwan	DATE: October 2015
SCALE: 1" = 160'	SHEET: 1 of 1

APPENDIX C – SITE 2 SUPPORTING INFORMATION

6.0 DECISION

On the basis of the findings at IRP Site 2 at the 148th FW, MNANG, Duluth, Minnesota, the groundwater at IRP Site 2 does not pose an unacceptable threat to human health or the environment for the current industrial land use. Adequate institutional controls are in place, through the base Master Plan, for both current land use, and for the future, in the event of a change in land use. No remedial action is necessary for groundwater at this site to ensure protection of human health and the environment, as long as the current land use is maintained and controlled. In accordance with National Oil and Hazardous Substances Pollution Contingency Plan (NCP) Section 300.430 (f)(4)(ii), a review will be conducted within five years after finalization of this Decision to ensure that this decision provides continued protection of human health and the environment.

Chief, Environmental Division — Date: 23 May 02

--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---

Minnesota Pollution Control Agency

[✓] Concur

[ ] Non-Concur (Please provide reason)

Signature — Title: Project Manager — Date: 20 June 02

APPENDIX D – SITE 3 SUPPORTING INFORMATION

Table 3-1. Summary of Groundwater Elevations and Field Water Quality Parameters

Site 3 Long-Term Monitoring Report 8 (June 2024), 148th Fighter Wing, Duluth Air National Guard Base, Duluth International Airport

Well ID	State Plane[a] Northing Coordinate	State Plane[a] Easting Coordinate	Top of Casing Elevation (feet amsl)	Date	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)	Conductivity (mS/cm)	Temp (°C)	pH	ORP (mV)	DO (mg/L)	Turbidity (NTU)
Target Range for Reductive Dechlorination[a]							**NA**	**NA**	**5 - 9**	**< -100**	**< 0.5**	**NA**
GW3-A	137946.65	867853.85	1423.86	May-15	10.55	1413.31	0.99	7.49	6.03	369	11.46	19.6
				Jun-15	NM	NM	NS	NS	NS	NS	NS	NS
				Aug-15	NM	NM	NS	NS	NS	NS	NS	NS
				Apr-16	NM	NM	NS	NS	NS	NS	NS	NS
				Dec-16	NM	NM	NS	NS	NS	NS	NS	NS
				Dec-17	9.73	1414.13	0.13	6.61	6.76	178	4.69	25.3
				Jul-19	NM	NM	NS	NS	NS	NS	NS	NS
				Jun-21	10.90	1412.96	0.102	11.19	7.4	166	6.49	43.1
				Sep-21	11.81	1412.05	0.211	13.01	6.33	163	3.95	32.0
				Dec-21	11.22	1412.64	0.246	5.61	6.68	102	2.87	26.1
				May-22	8.85	1415.01	0.09	6.22	5.48	195	10.03	9.1
				Dec-22	11.36	1412.50	0.28	6.28	6.68	214	2.78	2.8
				May-23	8.88	1414.98	0.05	6.10	6.75	266	11.82	15.0
				Dec-23	10.41	1413.45	0.14	6.24	5.35	313	7.56	4.1
				Jun-24	9.41	1414.45	0.083	8.13	5.89	174	9.23	21.2
GW3-D	137993.00	867854.37	1417.64	May-15	6.14	1411.50	1.18	7.68	6.9	-69	2.12	4.5
				Jun-15	6.07	1411.57	1.06	9.01	6.84	-90	1.43	1.1
				Aug-15	6.25	1411.39	1.22	9.86	6.74	-180	1.06	10.7
				Apr-16	5.75	1411.89	1.2	7.08	6.88	-40	3.5	5.1
				Dec-16	7.31	1410.33	1.42	8.09	6.54	-51	2.91	18.6
				Dec-17	5.38	1412.26	1.24	6.68	7.06	-32	1.61	78.9
				Jul-19	6.00	1411.64	3.24	10.3	6.16	87	0.93	30.4
				Jun-21	6.09	1411.55	1.36	8.5	7.4	-107	2.36	38.6
				Sep-21	6.25	1411.39	1.46	10.97	7.46	-122	1.41	9.2
				Dec-21	6.28	1411.36	1.620	7.16	7.04	-126	1.32	29.9
				May-22	6.67	1410.97	1.89	6.61	7.03	-117	1.89	0.0
				Dec-22	6.33	1411.31	2.63	7.18	7.11	-76	1.46	17.2
				May-23	5.62	1412.02	1.77	6.90	6.54	-62	1.35	8.7
				Dec-23	5.75	1411.89	1.66	7.32	5.92	-81	0.99	0.6
				Jun-24	5.61	1412.03	1.48	7.49	6.23	-138	1.4	0.0

Table 3-1. Summary of Groundwater Elevations and Field Water Quality Parameters

Site 3 Long-Term Monitoring Report 8 (June 2024), 148th Fighter Wing, Duluth Air National Guard Base, Duluth International Airport

Well ID	State Plane[a] Northing Coordinate	State Plane[a] Easting Coordinate	Top of Casing Elevation (feet amsl)	Date	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)	Conductivity (mS/cm)	Temp (°C)	pH	ORP (mV)	DO (mg/L)	Turbidity (NTU)
MW-25	138038.57	867955.29	1415.1	May-15	6.96	1408.14	1.03	7.65	7.49	530	1.5	1.9
				Jun-15	6.52	1408.58	1.05	10.76	7.52	-58	0.99	1.8
				Aug-15	7.56	1407.54	1.07	12.42	7.25	-83	2.62	5.4
				Apr-16	6.3	1408.8	0.997	7.63	7.17	24	2.3	8.2
				Dec-16	6.17	1408.93	1.18	10.81	7.45	-87	1.21	2.5
				Dec-17	6.87	1408.23	1.06	8.96	7.89	152	1.29	0
				Jul-19	6.9	1408.2	2.59	18.52	6.62	146	1.93	74
				Jun-21	7.14	1407.96	1.05	10.33	7.91	-68	2.91	43.3
				Sep-21	7.02	1408.08	1.05	13.53	7.97	-157	1.79	7.4
				Dec-21	6.79	1408.31	1.040	7.90	7.87	-153	1.82	4.9
				May-22	6.20	1408.90	1.16	7.22	7.39	-63	2.04	0.0
				Dec-22	6.83	1408.27	1.70	3.90	7.83	186	2.48	18.3
				May-23	6.44	1408.66	1.25	7.57	6.38	25	1.28	0.0
				Dec-23	7.08	1408.02	1.19	8.54	6.36	-51	0.82	0.0
				Jun-24	6.09	1409.01	0.452	9.99	6.58	-48	9.10	75
MW-29	138000.27	867895.52	1416.99	May-15	5.15	1411.84	0.114	8.84	6.87	444	8.36	17.9
				Jun-15	NM	NM	NS	NS	NS	NS	NS	NS
				Aug-15	NM	NM	NS	NS	NS	NS	NS	NS
				Apr-16	NM	NM	NS	NS	NS	NS	NS	NS
				Dec-16	NM	NM	NS	NS	NS	NS	NS	NS
				Dec-17	5.41	1411.58	0.113	8.03	6.99	204	1.24	38.8
				Jul-19	NM	NM	NS	NS	NS	NS	NS	NS
				Jun-21	4.89	1412.10	0.116	13.26	7.50	37	4.86	23.4
				Sep-21	4.97	1412.02	0.174	14.09	6.66	78	5.73	15.0
				Dec-21	4.56	1412.43	0.170	7.95	6.81	75	5.26	10.7
				May-22	4.40	1412.59	0.14	8.56	5.81	170	8.15	0.0
				Dec-22	4.58	1412.41	0.23	5.54	7.23	170	5.17	5.7
				May-23	4.62	1412.37	0.12	8.27	6.01	183	7.32	2.4
				Dec-23	5.14	1411.85	0.19	4.14	5.32	138	1.64	3.4
				Jun-24	3.47	1413.52	0.129	10.31	6.37	141	10.87	32.2

Table 3-1. Summary of Groundwater Elevations and Field Water Quality Parameters

Site 3 Long-Term Monitoring Report 8 (June 2024), 148th Fighter Wing, Duluth Air National Guard Base, Duluth International Airport

Well ID	State Plane[a] Northing Coordinate	State Plane[a] Easting Coordinate	Top of Casing Elevation (feet amsl)	Date	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)	Conductivity (mS/cm)	Temp (°C)	pH	ORP (mV)	DO (mg/L)	Turbidity (NTU)
MW-33	137958.62	867793.39	1420.79	May-15	7.5	1413.29	3.06	10.03	6.92	114	2.71	17.1
				Jun-15	NM	NM	NS	NS	NS	NS	NS	NS
				Aug-15	NM	NM	NS	NS	NS	NS	NS	NS
				Apr-16	NM	NM	NS	NS	NS	NS	NS	NS
				Dec-16	NM	NM	NS	NS	NS	NS	NS	NS
				Dec-17	5.6	1415.19	2.84	6.46	7.54	116	9.05	23.2
				Jul-19	NM	NM	NS	NS	NS	NS	NS	NS
				Jun-21	7.12	1413.67	1.68	10.28	7.69	167	3.84	37.3
				Sep-21	7.89	1412.90	1.90	9.16	7.27	107	2.7	21.2
				Dec-21	7.33	1413.46	2.04	6.88	7.09	68	2.86	0
				May-22	4.94	1415.85	2.28	6.38	6.80	77	1.75	12.2
				Dec-22	7.39	1413.40	3.11	5.89	7.17	93	2.91	19.2
				May-23	4.94	1415.85	2.16	6.47	6.1	161	1.39	15.3
				Dec-23	6.41	1414.38	1.96	6.27	5.84	127	1.50	0.0
				Jun-24	4.99	1415.80	1.90	9.24	6.67	-14	9.9	132
MW-35	138030.24	867842.98	1416.03	May-15	5.1	1410.93	0.493	6.98	7.21	324	2.8	2.7
				Jun-15	NM	NM	NS	NS	NS	NS	NS	NS
				Aug-15	NM	NM	NS	NS	NS	NS	NS	NS
				Apr-16	NM	NM	NS	NS	NS	NS	NS	NS
				Dec-16	NM	NM	NS	NS	NS	NS	NS	NS
				Dec-17	5.49	1410.54	0.813	7.6	7.7	159	1.07	17.2
				Jul-19	5.60	1410.43	1.99	13.76	6.69	116	0.87	42
				Jun-21	6.54	1409.49	0.717	10.35	8.10	132	2.69	31.0
				Sep-21	5.51	1410.52	0.479	14.30	7.15	144	2.45	5.7
				Dec-21	5.41	1410.62	0.820	5.19	7.66	37	2.24	0
				May-22	4.75	1411.28	0.85	6.52	7.59	18	1.79	0.0
				Dec-22	5.41	1410.62	1.15	4.30	7.35	188	1.65	7.6
				May-23	5.14	1410.89	0.64	6.79	6.99	129	2.69	0.0
				Dec-23	5.53	1410.50	0.76	6.42	6.36	118	1.70	3.3
				Jun-24	4.64	1411.39	0.62	8.88	6.81	51	11.15	0.0

Table 3-1. Summary of Groundwater Elevations and Field Water Quality Parameters

Site 3 Long-Term Monitoring Report 8 (June 2024), 148th Fighter Wing, Duluth Air National Guard Base, Duluth International Airport

Well ID	State Plane[a] Northing Coordinate	State Plane[a] Easting Coordinate	Top of Casing Elevation (feet amsl)	Date	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)	Conductivity (mS/cm)	Temp (°C)	pH	ORP (mV)	DO (mg/L)	Turbidity (NTU)
MW-41	137971.50	867843.21	1420.99	May-15	7.87	1413.12	0.382	12.32	6.22	281	1.74	7.1
				Jun-15	NM	NM	NS	NS	NS	NS	NS	NS
				Aug-15	NM	NM	NS	NS	NS	NS	NS	NS
				Apr-16	NM	NM	NS	NS	NS	NS	NS	NS
				Dec-16	NM	NM	NS	NS	NS	NS	NS	NS
				Dec-17	7.12	1413.87	0.82	6.21	6.84	66	1.25	0
				Jul-19	NM	NM	NS	NS	NS	NS	NS	NS
				Jun-21	8.44	1412.55	0.346	10.64	7.07	150	3.27	36.3
				Sep-21	8.89	1412.10	0.361	14.49	6.97	41	4.58	26.5
				Dec-21	8.63	1412.36	0.359	7.40	6.44	141	2.17	27
				May-22	6.70	1414.29	0.51	7.18	6.76	128	3.86	0.0
				Dec-22	8.10	1412.89	0.36	5.99	6.35	101	2.64	38.2
				May-23	6.67	1414.32	0.32	5.53	6.85	268	8.78	0.0
				Dec-23	7.94	1413.05	0.38	6.37	5.58	115	0.84	9.9
				Jun-24	4.13	1416.86	0.356	11.43	6.37	52	10.61	0.0
MW-42	137971.24	867841.67	1420.75	May-15	7.62	1413.13	1.64	9.52	7.2	254	3.06	166
				Jun-15	NM	NM	NS	NS	NS	NS	NS	NS
				Aug-15	NM	NM	NS	NS	NS	NS	NS	NS
				Apr-16	NM	NM	NS	NS	NS	NS	NS	NS
				Dec-16	NM	NM	NS	NS	NS	NS	NS	NS
				Dec-17	6.70	1414.05	1.38	6.95	7.44	103	5.03	30.5
				Jul-19	8.70	1412.05	3.1	18.7	6.45	274	3.86	20.5
				Jun-21	8.16	1412.59	1.16	13.26	7.73	107	3.80	35.6
				Sep-21	8.75	1412.00	1.42	12.37	7.71	19	2.44	40.1
				Dec-21	8.49	1412.26	1.330	5.16	7.43	18	1.97	13.9
				May-22	6.51	1414.24	1.78	6.10	7.42	-63	3.71	0.0
				Dec-22	7.91	1412.84	1.50	5.89	6.80	81	6.61	7.8
				May-23	6.46	1414.29	1.70	7.77	5.44	257	5.47	31
				Dec-23	7.64	1413.11	1.48	7.41	6.33	98	8.28	16.7
				Jun-24	6.68	1414.07	1.53	9.96	6.76	60	5.14	518

Table 3-1. Summary of Groundwater Elevations and Field Water Quality Parameters

Site 3 Long-Term Monitoring Report 8 (June 2024), 148th Fighter Wing, Duluth Air National Guard Base, Duluth International Airport

Well ID	State Plane[a] Northing Coordinate	State Plane[a] Easting Coordinate	Top of Casing Elevation (feet amsl)	Date	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)	Conductivity (mS/cm)	Temp (°C)	pH	ORP (mV)	DO (mg/L)	Turbidity (NTU)
MW-43	138017.10	867845.04	1416.37	May-15	4.95	1411.42	0.88	8.5	6.58	230	1.19	9.9
				Jun-15	4.90	1411.47	0.82	13.03	6.4	-88	0.98	24.3
				Aug-15	5.96	1410.41	0.842	14.99	6.2	-99	0.82	8
				Apr-16	5.10	1411.27	0.726	6.74	6.5	-41	0.87	4.9
				Dec-16	6.00	1410.37	1.6	8.44	6.36	-86	0.95	127
				Dec-17	5.20	1411.17	1.11	8.56	6.9	11	0.95	36.3
				Jul-19	5.40	1410.97	2.48	11.6	6.79	186	1.2	15.5
				Jun-21	5.42	1410.95	0.884	10.19	7.19	-17	1.88	46.4
				Sep-21	5.41	1410.96	0.778	13.84	7.02	-123	1.57	2.0
				Dec-21	5.70	1410.67	0.918	6.45	6.73	-110	2.14	9.0
				May-22	4.97	1411.40	1.19	6.64	7.19	-143	2.01	0.0
				Dec-22	5.75	1410.62	1.23	6.00	6.90	-13	1.59	19.0
				May-23	5.00	1411.37	1.13	6.07	6.56	-73	1.05	2.6
				Dec-23	5.31	1411.06	0.84	7.44	5.75	-66	0.44	0.0
				Jun-24	4.57	1411.80	0.99	8.49	6.54	-158	8.60	2.6
MW-44	137983.50	867867.58	1417.46	May-15	5.50	1411.96	0.801	5.15	6.72	-84	2.02	142
				Jun-15	5.48	1411.98	0.266	9.81	5.99	0	1.04	1000
				Aug-15	5.71	1411.75	2.46	9.98	6	-98.6	1.03	93.2
				Apr-16	4.35	1413.11	0.334	5.68	5.69	58	1.02	25.1
				Dec-16	3.98	1413.48	0.823	7.19	6.2	-47	0.93	78.1
				Dec-17	4.43	1413.03	0.631	6.8	6.79	-40	1.09	11.1
				Jul-19	5.90	1411.56	1.62	15.06	6.4	183	0.7	41
				Jun-21	5.14	1412.32	0.622	11.05	6.79	-82	2.07	45.5
				Sep-21	5.44	1412.02	0.735	15.10	6.97	-123	1.77	16.8
				Dec-21	5.73	1411.73	0.568	5.49	6.28	-69	1.7	1.0
				May-22	4.88	1412.58	0.43	6.59	6.75	-97	1.63	0.0
				Dec-22	5.81	1411.65	0.92	5.25	6.54	-35	1.58	4.8
				May-23	4.86	1412.60	0.30	6.02	6.62	-44	1.17	0.0
				Dec-23	5.54	1411.92	0.52	6.37	5.55	-57	0.41	0.1
				Jun-24	4.36	1413.10	0.331	8.64	5.97	-116	10.17	0.0

Table 3-1. Summary of Groundwater Elevations and Field Water Quality Parameters

Site 3 Long-Term Monitoring Report 8 (June 2024), 148th Fighter Wing, Duluth Air National Guard Base, Duluth International Airport

Well ID	State Plane[a] Northing Coordinate	State Plane[a] Easting Coordinate	Top of Casing Elevation (feet amsl)	Date	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)	Conductivity (mS/cm)	Temp (°C)	pH	ORP (mV)	DO (mg/L)	Turbidity (NTU)
MW-45	137985.21	867886.76	1417.4	May-15	5.22	1412.18	1.42	9.27	7.14	-68	3.72	191
				Jun-15	NM	NM	NS	NS	NS	NS	NS	NS
				Aug-15	NM	NM	NS	NS	NS	NS	NS	NS
				Apr-16	NM	NM	NS	NS	NS	NS	NS	NS
				Dec-16	NM	NM	NS	NS	NS	NS	NS	NS
				Dec-17	9.35	1408.05	0.247	6.29	5.4	32	1.22	1000
				Jul-19	NM	NM	NS	NS	NS	NS	NS	NS
				Jun-21	6.81	1410.59	NS	NS	NS	NS	NS	NS
				Sep-21	NM	NM	NS	NS	NS	NS	NS	NS
				Dec-21	NM	NM	NS	NS	NS	NS	NS	NS
				May-22	NM	NM	NS	NS	NS	NS	NS	NS
				May-23	4.38	1413.02	NS	NS	NS	NS	NS	NS
				Dec-23	NM	NM	NS	NS	NS	NS	NS	NS
				Jun-24	4.74	1412.66	1.65	12.41	6.39	-104	7.35	223
MW-46	138030.83	867943.50	1413.1	May-15	3.85	1409.25	0.385	8.63	7.1	571	3.75	7
				Jun-15	2.20	1410.90	0.345	21.11	6.88	159	5.41	0
				Aug-15	4.58	1408.52	0.499	19.12	6.85	55	1.19	14.3
				Apr-16	2.74	1410.36	0.317	8.14	6.84	93	7.6	20.6
				Dec-16	2.38	1410.72	2.15	10.09	6.34	-69	4.9	0
				Dec-17	3.80	1409.30	1.48	8.23	6.97	-17	1.53	320
				Jul-19	2.20	1410.90	0.848	18.86	6.89	350	4.28	54
				Jun-21	3.47	1409.63	0.205	11.52	7.40	41	2.98	38.6
				Sep-21	3.24	1409.86	0.189	14.25	7.16	-40	2.00	38.4
				Dec-21	3.11	1409.99	0.183	7.09	7.19	-43	2.10	20.4
				May-22	2.61	1410.49	0.51	9.53	7.08	34	3.21	0.0
				May-23	3.00	1410.10	0.34	9.45	6.11	176	4.49	0.0
				Dec-23	3.19	1409.91	NS	NS	NS	NS	NS	NS
				Jun-24	1.93	1411.17	0.261	16.5	6.52	50	9.34	7.9

Table 3-1. Summary of Groundwater Elevations and Field Water Quality Parameters

Site 3 Long-Term Monitoring Report 8 (June 2024), 148th Fighter Wing, Duluth Air National Guard Base, Duluth International Airport

Well ID	State Plane[a] Northing Coordinate	State Plane[a] Easting Coordinate	Top of Casing Elevation (feet amsl)	Date	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)	Conductivity (mS/cm)	Temp (°C)	pH	ORP (mV)	DO (mg/L)	Turbidity (NTU)
MW-47	138051.17	867977.13	1416.02	May-15	7.81	1408.21	0.597	7.28	6.83	292	9.02	23
				Jun-15	NM	NM	NS	NS	NS	NS	NS	NS
				Aug-15	NM	NM	NS	NS	NS	NS	NS	NS
				Apr-16	NM	NM	NS	NS	NS	NS	NS	NS
				Dec-16	NM	NM	NS	NS	NS	NS	NS	NS
				Dec-17	7.45	1408.57	0.678	7.54	7.04	112	1.37	8.6
				Jul-19	NM	NM	NS	NS	NS	NS	NS	NS
				Jun-21	8.24	1407.78	0.558	11.02	7.29	104	4.61	18.5
				Sep-21	5.00	1411.02	0.788	13.70	7.37	55	4.35	10.3
				Dec-21	8.41	1407.61	0.834	7.83	7.24	55	3.21	8.7
				May-22	5.50	1410.52	0.87	7.83	6.51	86	3.88	0.0
				Dec-22	8.52	1407.50	1.11	4.55	7.26	130	2.45	0.7
				May-23	5.65	1410.37	0.82	6.67	6.07	183	3.02	0.0
				Dec-23	7.71	1408.31	0.78	5.22	5.37	152	0.89	0.0
				Jun-24	5.68	1410.34	0.826	9.35	6.32	72	10.9	0.0
MW-48	137988.23	867871.37	1417.63	May-15	5.75	1411.88	1.53	5.58	7.19	-125	1.89	6.3
				Jun-15	NM	NM	NS	NS	NS	NS	NS	NS
				Aug-15	NM	NM	NS	NS	NS	NS	NS	NS
				Apr-16	NM	NM	NS	NS	NS	NS	NS	NS
				Dec-16	NM	NM	NS	NS	NS	NS	NS	NS
				Dec-17	5.37	1412.26	1.48	7.47	7.35	-65	2.19	78.7
				Jul-19	6.05	1411.58	4.06	11.51	6.77	45	0.76	45
				Jun-21	6.16	1411.47	NS	NS	NS	NS	NS	NS
				Sep-21	6.28	1411.35	1.47	12.22	7.55	-126	1.24	3.3
				Dec-21	7.09	1410.54	1.660	6.00	7.04	-123	2.01	39.8
				May-22	5.51	1412.12	1.87	6.46	7.32	-129	1.96	0.0
				Dec-22	7.09	1410.54	2.71	5.39	7.04	-64	1.56	36.9
				May-23	5.58	1412.05	1.75	6.36	5.28	-62	1.14	9.0
				Dec-23	5.81	1411.82	1.63	7.78	5.87	-61	0.34	12.3
				Jun-24	5.45	1412.18	1.68	6.96	6.56	-171	0.00	0.0

Table 3-1. Summary of Groundwater Elevations and Field Water Quality Parameters

Site 3 Long-Term Monitoring Report 8 (June 2024), 148th Fighter Wing, Duluth Air National Guard Base, Duluth International Airport

Well ID	State Plane[a] Northing Coordinate	State Plane[a] Easting Coordinate	Top of Casing Elevation (feet amsl)	Date	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)	Conductivity (mS/cm)	Temp (°C)	pH	ORP (mV)	DO (mg/L)	Turbidity (NTU)
MW-49	138064.05	867876.51	1412.00	May-15	4.82	1407.18	0.811	7.1	6.95	150	1.68	6.7
				Jun-15	NM	NM	NS	NS	NS	NS	NS	NS
				Aug-15	NM	NM	NS	NS	NS	NS	NS	NS
				Apr-16	NM	NM	NS	NS	NS	NS	NS	NS
				Dec-16	NM	NM	NS	NS	NS	NS	NS	NS
				Dec-17	5.4	1406.60	0.565	7.57	7.47	170	0.84	0
				Jul-19	NM	NM	NS	NS	NS	NS	NS	NS
				Jun-21	4.49	1407.51	0.289	11.79	7.02	-10	4.55	39.3
				Sep-21	4.40	1407.60	0.298	14.25	7.04	28	2.03	31.6
				Dec-21	4.13	1407.87	0.259	7.09	7.07	33	2.13	20.1
				May-22	4.28	1407.72	0.20	12.88	5.57	152	3.49	0.0
				Dec-22	4.20	1407.80	0.50	6.90	7.17	4	1.70	19
				May-23	4.41	1407.59	0.17	9.94	5.32	110	4.76	22.5
				Dec-23	5.24	1406.76	0.32	7.89	5.39	140	0.74	0.0
				Jun-24	1.76	1410.24	0.177	10.90	6.63	88	4.31	2.4
MW-50	138015.74	867837.64	1419.00	May-15	7.72	1411.28	1.378	5.78	6.71	131	3.82	1
				Jun-15	8.41	1410.59	1.4	9.18	6.82	-4	1.16	3.9
				Aug-15	9.25	1409.75	1.53	11.4	6.71	-44	1.6	2.2
				Apr-16	7.29	1411.71	0.982	8.19	6.48	120	3.71	0.6
				Dec-16	7.60	1411.40	2.4	7.2	6.48	-34	1.16	13.9
				Dec-17	7.57	1411.43	0.741	11.5	6.72	59	0.82	12.9
				Jul-19	NM	NM	NS	NS	NS	NS	NS	NS
				Jun-21	7.12	1411.88	1.06	12.32	7.22	-70	2.90	38.7
				Sep-21	9.44	1409.56	1.32	11.40	7.06	-90	1.98	6.0
				Dec-21	9.37	1409.63	1.630	2.89	6.73	-57	1.74	4.9
				May-22	7.22	1411.78	1.02	5.80	6.02	20	1.94	0.0
				Dec-22	9.46	1409.54	2.38	5.40	7.29	-54	1.45	2.7
				May-23	7.20	1411.80	0.89	8.79	6.97	90	1.91	0.0
				Dec-23	8.06	1410.94	1.83	5.34	4.97	-8	0.47	0.0
				Jun-24	7.49	1411.51	0.73	8.60	5.93	-111	10.07	0.0

Table 3-1. Summary of Groundwater Elevations and Field Water Quality Parameters

Site 3 Long-Term Monitoring Report 8 (June 2024), 148th Fighter Wing, Duluth Air National Guard Base, Duluth International Airport

Well ID	State Plane[a] Northing Coordinate	State Plane[a] Easting Coordinate	Top of Casing Elevation (feet amsl)	Date	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)	Conductivity (mS/cm)	Temp (°C)	pH	ORP (mV)	DO (mg/L)	Turbidity (NTU)
MW-51	138039.99	867827.38	1416.80	May-15	6.26	1410.54	1.05	5.9	6.87	175	2.28	13
				Jun-15	6.92	1409.88	0.954	10.3	6.87	-29	1.15	1.5
				Aug-15	7.56	1409.24	1.09	11.3	6.76	39	1.55	3.7
				Apr-16	6.12	1410.68	1.09	9.48	6.97	89	1.35	1.2
				Dec-16	6.28	1410.52	1.28	6.23	6.8	5	1.18	14.9
				Dec-17	6.71	1410.09	1.25	6.55	7.3	151	0.88	1
				Jul-19	NM	NM	NS	NS	NS	NS	NS	NS
				Jun-21	9.35	1407.45	1.18	12.97	7.20	130	3.07	30.5
				Sep-21	9.28	1407.52	1.39	14.16	7.29	55	1.58	8.2
				Dec-21	9.28	1407.52	1.580	5.65	7.17	19	1.33	0
				May-22	6.09	1410.71	1.58	7.42	7.13	31	1.58	0.0
				Dec-22	9.41	1407.39	2.22	5.08	7.58	134	1.61	0.0
				May-23	6.29	1410.51	1.45	8.13	6.77	68	1.44	0.0
				Dec-23	6.70	1410.10	1.57	3.87	5.68	-25	0.72	0.0
				Jun-24	6.37	1410.43	1.42	7.75	6.40	-21	8.35	0.0
MW-52	138009.04	867808.17	1418.27	May-15	5.54	1412.73	1.5	5.06	7.32	174	1.68	97
				Jun-15	5.99	1412.28	1.33	8.43	7.33	53	0.82	36.8
				Aug-15	7.1	1411.17	1.3	11.26	7.26	23	1.26	137
				Apr-16	6.11	1412.16	1.26	7.45	7.53	74	1	55.6
				Dec-16	5.58	1412.69	1.27	6.55	7.31	-10	1.33	55.4
				Dec-17	5.37	1412.90	1.04	6.65	7.65	130	2.31	0
				Jul-19	NM	NM	NS	NS	NS	NS	NS	NS
				Jun-21	6.91	1411.36	1.01	13.60	7.99	-66	2.85	43.7
				Sep-21	6.90	1411.37	1.34	12.42	7.94	91	1.49	39.0
				Dec-21	7.40	1410.87	1.580	6.40	7.61	-26	1.54	13.6
				May-22	4.98	1413.29	1.18	6.45	7.66	33	2.23	36.8
				Dec-22	7.95	1410.32	2.05	4.82	7.12	-69	1.87	55.4
				May-23	5.10	1413.17	1.08	6.12	6.07	198	1.13	32.5
				Dec-23	5.79	1412.48	1.51	2.03	6.15	151	0.93	17.6
				Jun-24	5.02	1413.25	1.06	7.15	6.60	64	6.20	0.0

Notes:

[a] *Minnesota State Plane North N83, U.S. Survey Foot.*

Identifies well locations influenced by past injections

°C = degree(s) Celsius DO = dissolved oxygen mV = millivolt(s) NS = not sampled

Table 3-1. Summary of Groundwater Elevations and Field Water Quality Parameters

Site 3 Long-Term Monitoring Report 8 (June 2024), 148th Fighter Wing, Duluth Air National Guard Base, Duluth International Airport

Well ID	State Plane[a] Northing Coordinate	State Plane[a] Easting Coordinate	Top of Casing Elevation (feet amsl)	Date	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)	Conductivity (mS/cm)	Temp (°C)	pH	ORP (mV)	DO (mg/L)	Turbidity (NTU)

amsl = above mean sea level
btoc = below top of casing
mg/L = milligram(s) per liter
mS/cm = millisiemens(s) per centimeter
NA = not available
NM = not measured
NTU = nephelometric turbidity unit
ORP = oxidation-reduction potential

Table 3-2. Summary of Groundwater Analytical Results

Site 3 Long-Term Monitoring Report 8 (June 2024), 148th Fighter Wing, Duluth Air National Guard Base, Duluth International Airport

		Concentration (µg/L) - Constituents of Interest						Concentration (µg/L) - Constituents of Concern															
	COC CAS No.	1,4-Dioxane 123-91-1	Q	cis-1,2-DCE 156-59-2	Q	Toluene 108-88-3	Q	Benzene 71-43-2	Q	1,2-DCA 107-06-02	Q	1,1-DCA 75-34-3	Q	1,1-DCE 75-35-4	Q	PCE 127-18-4	Q	1,1,1-TCA 71-55-6	Q	TCE 79-01-6	Q	Vinyl Chloride 75-01-4	Q
Cleanup Level Identified in the ROD (ANG 2010)		NS		NS		NS		5		4		70		6		5		200		5		0.2	
MDH Groundwater HRLs[a], HBVs[b], or RAAs[c]		1		50		200		2		1		200		80		5		9000		0.4		0.2	
Well ID	**Sample Date**																						
GW3-A	9/17/1988	NA		ND		ND		ND		ND		ND		ND		4.4		0.3		ND		ND	
	8/19/1997	NA		0.2	U	0.2	U	0.2	U	0.1	U	0	U	0.4	U	0.5	U	0.4	U	0.3	U	0.3	U
	10/22/1997	NA		0.2	U	0.2	U	0.2	U	0.1	U	0	U	0.4	U	NA		0.4	U	NA		0.3	U
	4/9/1998	NA		0.2	U	0.2	U	0.2	U	0.1	U	0	U	0.4	U	NA		0.4	U	NA		0.3	U
	7/1/1998	NA		NA		NA		5.0	U	NA		NA		NA		NA		NA		NA		NA	
	9/17/2008	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.40	U
	9/15/2009	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.40	U
	11/19/2009	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.40	U
	9/16/2010	NA		1.0	U	1.0	U	**1.9**		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.50	U	0.20	U
	11/4/2010	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	5/19/2011	NA		0.20	U	0.10	U	0.10	U	0.20	U	0.20	U	0.20	U	0.30	U	0.20	U	0.20	U	0.20	U
	8/18/2011	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	11/8/2011	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	5/10/2012	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	8/6/2012	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	11/7/2012	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	11/6/2013	1.0	U	0.50	U	0.5	U	0.50	U	0.50	U	1.0	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
	4/11/2014	1.0	U	0.50	U	2.5	U	0.50	U	0.50	U	1.0	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
	12/13/2017	0.19	UJ	0.60	U	0.6	U	0.60	U	0.60	U	1.0	U	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U
	6/24/2021	50.0	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
	9/28/2021	50.0	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
	12/8/2021	0.2	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
	12/29/2022	1.0	U	0.40	U	0.40	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.40	U	1.00	U
	5/19/2023	1.0	U	0.40	UJ	0.40	UJ	0.80	UJ	0.80	UJ	0.80	UJ	0.80	UJ	0.80	UJ	0.50	UJ	0.40	UJ	1.00	UJ
	12/11/2023	NA		0.40	U	0.40	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	1.00	U
	12/11/2023 (D)	NA		0.40	U	0.40	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	1.00	U
	6/4/2024	1.0	U	0.40	U	0.40	U	0.80	U	0.50	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	0.40	U

Table 3-2. Summary of Groundwater Analytical Results

Site 3 Long-Term Monitoring Report 8 (June 2024), 148th Fighter Wing, Duluth Air National Guard Base, Duluth International Airport

		Concentration (µg/L) - Constituents of Interest						Concentration (µg/L) - Constituents of Concern															
	COC CAS No.	1,4-Dioxane 123-91-1	Q	cis-1,2-DCE 156-59-2	Q	Toluene 108-88-3	Q	Benzene 71-43-2	Q	1,2-DCA 107-06-02	Q	1,1-DCA 75-34-3	Q	1,1-DCE 75-35-4	Q	PCE 127-18-4	Q	1,1,1-TCA 71-55-6	Q	TCE 79-01-6	Q	Vinyl Chloride 75-01-4	Q
Cleanup Level Identified in the ROD (ANG 2010)		NS		NS		NS		5		4		70		6		5		200		5		0.2	
MDH Groundwater HRLs[a], HBVs[b], or RAAs[c]		1		50		200		2		1		200		80		5		9000		0.4		0.2	
Well ID	Sample Date																						
GW3-D	9/17/1988	NA		NA		ND		**0.7**		ND		**20.0**		**58.0**		NA		**1300**		NA		NA	
	8/19/1997	NA		**96.0**		0.2	U	**1.5**		0.5	J	0.3	U	**38.0**		**810**		**440**		**22.0**		**5.9**	
	10/22/1997	NA		**120**		0.2	U	**1.0**		0.1	U	**31.0**		**36.0**		**520**		**280**		**76.0**		**5.1**	
	4/9/1998	NA		**72.0**		0.2	U	0.2	U	0.1	U	**22.0**		**44.0**		**340**		0.4	U	**18.0**		0.3	U
	7/1/1998	NA		NA		NA		**1.7**		NA		NA		NA		**NA**		NA		NA		NA	
	10/19/1999	NA		**179**		1.0	U	**3.4**		1.0	U	**63.2**		**43.4**		**452**		**283**		**130**		**42.1**	
	5/2/2000	NA		**145**		2.0	U	**3.2**		2.0	U	**46.8**		**34.0**		**379**		**223**		**69.4**		**25.7**	
	1/7/2000	NA		**68.8**		2.0	U	**1.5**		2.0	U	**34.5**		**26.9**		2.0	U	**225**		**21.1**		**10.3**	
	7/19/2000	NA		**152**		1.0	U	**2.1**		1.0	U	**48.2**		**35.1**		**600**		**412**		**57.1**		**21.2**	
	9/19/2000	NA		**108**		2.0	U	2.0	U	2.0	U	**38.6**		**34.3**		**778**		**430**		**54.3**		**3.1**	
	4/26/2001	NA		**155**		1.0	U	**3.2**		1.0	U	**52.2**		**32.7**		1.0	U	**229**		**51.8**		**24.5**	
	9/18/2008	NA		**241**		1.0	U	**3.5**		1.0	U	**40.2**		**22.6**		**236**		**88.8**		**70.4**		**59.3**	
	9/15/2009	NA		**168**		1.0	U	**3.0**		1.0	U	**33.1**		**18.1**		**228**		**74.5**		**58.1**		**49.1**	
	11/19/2009	NA		**128**		1.0	U	**2.4**		1.0	U	**29.0**		**18.5**		**284**		**89.9**		**61.3**		**34.9**	
	9/16/2010	NA		**150**		1.0	U	**1.9**		1.0	U	**21.0**		**13.0**		**140**		**62.0**		**44.0**		**27.0**	
	11/8/2010	130	U	**160**		6.7	U	6.7	U	6.7	U	**24.0**		**21.0**		**200**		**83.0**		**51.0**		**23.0**	
	5/26/2011	**8.20**		**120**		0.7	U	0.20	U	0.1	U	**19.0**		**7.2**		**100**		**35.0**		**30.0**		**25.0**	
	8/18/2011	**6.70**		**120**		10.0	U	10.0	U	10.0	U	**19.0**		**9.8**		**120**		**54.0**		**18.0**		**40.0**	
	11/8/2011	NA		**100**		5.7	U	**1.5**	**J**	5.7	U	**20.0**		**11.0**		**82.0**		**41.0**		**15.0**		**110**	
	5/10/2012	NA		**93.0**		4.0	U	**2.1**	**J**	4.0	U	**25.0**		**11.0**		**68.0**		**27.0**		**33.0**		**51.0**	
	8/6/2012	NA		**84.0**		4.0	U	**1.8**	**J**	4.0	U	**20.0**		**8.9**		**56.0**		**37.0**		**28.0**		**75.0**	
	11/8/2012	**8.5**		**120**		5.0	U	**1.7**	J	0.50	U	**24.0**		**11.0**		**35.0**		**28.0**		**32.0**		**140**	
	11/7/2013	**7.4**		**100**		2.50	U	**2.0**		0.50	U	**27.0**		**8.5**		**40**		**18.0**		**34.0**		**73.0**	
	4/9/2014	**7.2**		**75.0**		2.50	U	**1.6**		0.50	U	**23.0**		**7.7**		**59.0**		**12.0**		**32.0**		**47.0**	
	5/5/2015	0.9	J	**59.0**		0.6	U	**1.2**		0.6	U	**21.0**		**6.1**		**93.0**		**22.0**		**33.0**		**23.0**	
	6/30/2015	**1.4**	J	**62.0**		0.6	U	**0.96**	J	0.6	U	**18.0**		**6.9**		**140.0**		**26.0**		**35.0**		**20.0**	
	8/25/2015	**1.2**	J	**67.0**		0.6	U	**1.8**		0.6	U	**24.0**		**7.6**		**81.0**		**26.0**		**42.0**		**33.0**	
	4/18/2016	0.19	U	**77.0**		0.6	U	**1.4**		0.6	U	**20.0**		**6.1**		**91.0**		**23.0**		**40.0**		**26.0**	
	12/6/2016	**1.2**		**70.0**		0.6	U	**1.3**		0.6	U	**16.0**		**1.9**		**68.0**		**36.0**		**13.0**		**6.4**	
	12/11/2017	0.19	U	**57.0**		0.6	U	**0.76**	J	0.6	U	**4.2**		**1.5**		**33.0**		**16.0**		**9.8**		**17.0**	
	7/30/2019	**3.3**		**28.6**		1.0	U	1.0	U	1.0	U	**9.3**		**1.1**		**22.8**		**8.9**		**9.5**		**6.3**	
	6/24/2021	50.0	U	**26.4**		0.50	U	**1.13**		0.50	U	**6.7**		**0.8**	J	**14.3**		**7.4**		**9.8**		**6.9**	
	9/30/2021	50.0	U	**34.3**		0.50	U	**1.24**		0.50	U	**6.6**		**0.9**		**22.6**		**7.1**		**9.7**		**7.7**	
	12/8/2021	**2.87**		**31.1**		0.50	U	**1.24**		0.50	U	**7.3**		**0.8**	J	**12.6**		**4.9**		**8.0**		**6.7**	
	5/25/2022	**2.0**		**27.0**		0.40	U	**1.20**		0.40	U	**9.2**		**1.3**		**20.0**		**7.0**		**19.0**		**9.6**	
	12/29/2022	**3.2**	**J**	**24.0**		0.40	U	**1.40**		0.80	U	**12.0**		**0.8**	**J**	**9.4**		**4.4**		**6.2**		**10.0**	
	5/18/2023	**2.5**		**31.0**		0.40	U	**1.00**		0.80	U	**10.0**		**1.4**		**16.0**		**6.3**		**17.0**		**11.0**	
	12/14/2023	**2.6**		**29.0**		0.40	U	**1.20**	J	0.80	U	**11.0**		**1.1**	**J**	**6.0**		**3.3**		**5.1**	**J**	**9.7**	
	6/5/2024	**1.3**	**J**	**31**		0.40	U	**0.73**	J	0.50	U	**8.3**		**1.2**		**23**		**6.6**		**17**		**8.8**	

Table 3-2. Summary of Groundwater Analytical Results

Site 3 Long-Term Monitoring Report 8 (June 2024), 148th Fighter Wing, Duluth Air National Guard Base, Duluth International Airport

		Concentration (µg/L) - Constituents of Interest						Concentration (µg/L) - Constituents of Concern															
	COC CAS No.	1,4-Dioxane 123-91-1	Q	cis-1,2-DCE 156-59-2	Q	Toluene 108-88-3	Q	Benzene 71-43-2	Q	1,2-DCA 107-06-02	Q	1,1-DCA 75-34-3	Q	1,1-DCE 75-35-4	Q	PCE 127-18-4	Q	1,1,1-TCA 71-55-6	Q	TCE 79-01-6	Q	Vinyl Chloride 75-01-4	Q
Cleanup Level Identified in the ROD (ANG 2010)		NS		NS		NS		5		4		70		6		5		200		5		0.2	
MDH Groundwater HRLs[a], HBVs[b], or RAAs[c]		1		50		200		2		1		200		80		5		9000		0.4		0.2	
Well ID	Sample Date																						
MW-25	9/14/1988	NA		**100.0**		ND		ND		ND		**4.8**		**5.4**		ND		**3.5**		**790**		ND	
	8/19/1997	NA		**17.0**		0.20	U	0.20	U	0.10	U	**2.5**		**3.8**		0.30	U	**1.1**		**80.0**		**35.0**	
	10/22/1997	NA		**26.0**		0.20	U	0.20	U	0.10	U	**2.3**		**8.4**		4.0	U	**5.7**		**120**		**7.3**	
	4/9/1998	NA		**15.0**		0.20	U	0.20	U	0.10	U	0.3	U	**3.8**		NA		**0.4**		**99.0**		0.3	U
	7/1/1998	NA		**NA**		5.0	U	5.0	U	NA		NA		NA		NA		NA		NA		NA	
	10/19/1999	NA		**16.4**		1.0	U	1.0	U	1.0	U	**2.0**		**4.8**		1.0	U	**1.5**		**117**		**17.2**	
	5/2/2000	NA		**14.4**		2.0	U	2.0	U	2.0	U	**2.0**		**4.8**		2.0	U	**2.0**		**109**		**17.2**	
	7/19/2000	NA		**13.4**		1.0	U	1.0	U	1.0	U	**2.1**		**3.8**		1.0	U	**1.0**		**105**		**21.4**	
	9/19/2000	NA		**15.9**		2.0	U	2.0	U	2.0	U	**2.6**		**4.8**		2.0	U	**4.9**		**110**		**14.6**	
	4/26/2001	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**1.0**		**8.4**		**1.0**	
	7/12/2001	NA		2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	**7.1**		2.0	U	**1.6**		**86.7**		**22.7**	
	3/20/2005	NA		**11.0**		1.0	U	1.0	U	1.0	U	**1.7**		**3.3**		1.0	U	**1.4**		**113**		**7.0**	
	9/20/2008	NA		**14.4**		1.0	U	1.0	U	1.0	U	**1.9**		**4.4**		1.0	U	**1.3**		**96.3**		**16.7**	
	9/14/2009	NA		**10.7**		1.0	U	1.0	U	1.0	U	0.5	U	**3.8**		1.0	U	**1.0**		**84.4**		**12.9**	
	11/9/2009	NA		**10.3**		1.0	U	1.0	U	1.0	U	0.5	U	**3.6**		1.0	U	**1.0**		**84.4**		**11.4**	
	9/17/2010	NA		**9.4**		1.0	U	1.0	U	1.0	U	**1.1**		**3.1**		1.0	U	**1.0**		**64.0**		**11.0**	
	11/5/2010	19.0	U	**2.7**		1.0	U	1.0	U	1.0	U	**0.3**	J	**0.9**		1.0	U	**2.0**		**24.0**		**2.3**	
	5/19/2011	NA		**8.4**		1.0	U	1.0	U	1.0	U	**1.0**	J	**2.7**		0.7	U	**0.6**		**71.0**		**12.0**	
	8/8/2011	0.6	U	**9.2**		0.3	U	0.3	U	0.6	U	**1.0**	J	**3.2**		2.5	U	**2.5**		**69.0**		**12.0**	
	11/9/2011	1.0	J	**8.8**		2.5	U	2.5	U	2.5	U	**1.0**	J	**3.3**		3.3	U	**0.8**		**64.0**		**9.8**	
	5/11/2012	NA		**7.8**		3.3	U	3.3	U	3.3	U	**1.0**	J	**2.7**		1.0	U	**0.6**	J	**64.0**	B	**12.0**	
	8/6/2012	NA		**10.0**		1.0	U	1.0	U	1.0	U	**1.1**	J	**3.6**		2.5	U	**0.7**	J	**64.0**		**14.0**	
	11/7/2012	1.0	U	**11.0**		2.5	U	2.5	U	2.5	U	**1.4**	J	**3.6**		2.0	U	**0.7**	J	**60.0**		**13.0**	
	11/6/2013	1.0	U	**12.0**		2.0	U	2.0	U	2.0	U	**1.3**	J	**4.0**		0.5	U	**0.6**	J	**57.0**		**10.0**	
	4/10/2014	1.0	U	0.5	U	2.5	U	0.50	U	0.50	U	0.5	U	0.5	U	0.5	U	0.5	U	**0.9**	J	**0.50**	
	5/6/2015	2.5	U	**8.7**		0.6	U	0.60	U	0.60	U	**1.4**		**3.7**		0.6	U	**0.59**	**J**	**64.0**		**11.0**	
	6/30/2015	2.5	U	**11.0**		0.6	U	0.60	U	0.60	U	**1.5**		**3.8**		0.69	J	0.6	U	**69.0**		**11.0**	
	8/18/2015	2.5	U	**10.0**		0.6	U	0.60	U	0.60	U	**1.5**		**4.5**		0.60	U	0.6	U	**72.0**		**14.0**	
	4/20/2016	0.19	U	**8.0**		0.6	U	0.60	U	0.60	U	**1.1**		**3.2**		0.60	U	0.6	U	**60.0**		**10.0**	
	12/5/2016	0.19	U	**11.0**		0.6	U	0.60	U	0.60	U	**1.3**	J	**3.9**		0.60	U	0.6	U	**59.0**		**11.0**	
	12/12/2017	0.19	U	**10.0**		0.6	U	0.60	U	0.60	U	**1.4**	J	**4.1**		0.60	U	0.6	U	**59.0**		**7.0**	
	7/29/2019	0.40	U	**4.9**		1.0	U	1.0	U	1.0	U	**1.6**		**3.5**		1.0	U	1.0	U	**3.1**		**6.2**	
	6/22/2021	50.0	**U**	**12.0**		0.50	**U**	0.50	**U**	**0.19**	J	**2.0**		**3.0**		0.5	U	**0.39**	**J**	**41.4**		**8.0**	
	9/29/2021	50.0	**U**	**18.1**		0.50	**U**	0.50	**U**	0.50	**U**	**2.2**		**2.4**		0.5	**U**	0.50	**U**	**18.1**		**7.5**	
	12/13/2021	**0.2**	**J**	**24.4**		0.50	**U**	0.50	**U**	0.50	**U**	**2.4**		**4.1**		0.5	**U**	**0.3**	**J**	**29.5**		**7.3**	
	5/24/2022	1.0	**U**	**16.0**		0.40	**U**	0.40	**U**	**0.27**	**J**	**1.7**		**3.0**		0.40	**U**	**0.26**	**J**	**25.0**		**7.6**	
	12/30/2022	1.0	**U**	**28.0**		0.40	**U**	0.80	**U**	0.80	**U**	**2.2**		**3.3**		0.80	**U**	0.50	**U**	**20.0**		**9.9**	
	5/22/2023	1.0	**U**	**19.0**		0.40	**U**	0.80	**U**	0.80	**U**	**1.4**		**3.2**		0.80	**U**	0.50	**U**	**24.0**		**11.0**	
	12/13/2023	**0.2**	J	**18.0**		0.40	**U**	0.80	**U**	0.80	**U**	**2.2**		**2.3**		0.80	**U**	0.50	**U**	**10.0**		**8.8**	
	6/6/2024	**8.7**		**2.1**		0.40	**U**	0.80	**U**	0.50	**U**	0.8	**U**	**0.54**	**J**	0.80	**U**	0.50	**U**	**3.7**		**1.3**	

Table 3-2. Summary of Groundwater Analytical Results

Site 3 Long-Term Monitoring Report 8 (June 2024), 148th Fighter Wing, Duluth Air National Guard Base, Duluth International Airport

		Concentration (µg/L) - Constituents of Interest						Concentration (µg/L) - Constituents of Concern															
	COC CAS No.	1,4-Dioxane 123-91-1	Q	cis-1,2-DCE 156-59-2	Q	Toluene 108-88-3	Q	Benzene 71-43-2	Q	1,2-DCA 107-06-02	Q	1,1-DCA 75-34-3	Q	1,1-DCE 75-35-4	Q	PCE 127-18-4	Q	1,1,1-TCA 71-55-6	Q	TCE 79-01-6	Q	Vinyl Chloride 75-01-4	Q
Cleanup Level Identified in the ROD (ANG 2010)		NS		NS		NS		5		4		70		6		5		200		5		0.2	
MDH Groundwater HRLs[a], HBVs[b], or RAAs[c]		1		50		200		2		1		200		80		5		9000		0.4		0.2	
Well ID	**Sample Date**																						
MW-29	9/12/1988	NA		**1.7**		NA		ND		ND		**1.3**		**0.7**		**3.1**		**11.0**		**13.0**		NA	
	8/19/1997	NA		0.2	U	0.2	U	0.2	U	0.1	U	0.3	U	0.4	U	0.9	J R	0.4	U	**2.1**		0.30	U
	10/22/1997	NA		0.2	U	0.2	U	0.2	U	0.1	U	0.3	U	0.4	U	0.7		0.4	U	**4.6**		0.30	U
	4/9/1998	NA		0.2	U	0.2	U	0.2	U	0.1	U	0.3	U	0.4	U	NA		0.4	U	NA		0.30	U
	7/1/1998	NA		NA	U	NA		5.0	U	NA		NA	U	NA	U	NA		NA		NA		NA	
	10/19/1999	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
	5/2/2000	NA		2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
	7/19/2000	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
	9/19/2000	NA		2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
	4/26/2001	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
	7/12/2001	NA		2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
	4/27/2005	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.40	U
	9/14/2006	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.40	U
	9/18/2008	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.40	U
	9/15/2009	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.40	U
	11/12/2009	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.40	U
	9/15/2010	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.5	U	0.20	U
	11/4/2010	NA		1.0	U	1.0	U	1.0	U	**1.0**		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	5/13/2011	NA		0.2	U	0.1	U	0.1	U	0.2	U	0.2	U	0.2	U	0.3	U	0.2	U	0.2	U	0.20	U
	8/18/2011	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	11/9/2011	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**0.5**		1.0	U	1.0	U	0.20	U
	5/11/2012	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**0.7**	J B	0.20	U
	8/7/2012	NA		1.0	U	0.2	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	11/7/2012	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.2	J	0.20	U
	11/6/2013	1.0	U	0.5	U	2.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.50	U
	4/10/2014	1.0	U	0.5	U	2.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.50	U
	12/12/2017	0.2	U	0.6	U	0.6	U	0.6	U	0.6	U	1.0	U	0.6	U	0.6	U	0.6	U	0.6	U	0.60	U
	6/25/2021	50.0	U	0.50	U	0.50	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.50	U	0.5	U	0.50	U
	9/29/2021	50.0	U	0.50	U	0.50	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.50	U	0.5	U	0.50	U
	12/13/2021	0.2	U	0.50	U	0.50	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.50	U	0.5	U	0.50	U
	5/24/2022	1.0	U	0.40	U	0.40	U	0.40	U	**0.14**	J	0.80	U	0.80	U	0.40	U	0.40	U	1.0	U	0.20	U
	12/30/2022	1.0	U	0.40	U	0.40	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.4	U	1.00	U
	5/18/2023	1.0	U	0.40	U	0.40	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	1.00	U
	12/14/2023	1.0	U	0.40	U	0.40	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	1.00	U
	6/4/2024	1.0	U	0.40	U	0.40	U	0.80	U	0.50	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	0.40	U

Table 3-2. Summary of Groundwater Analytical Results

Site 3 Long-Term Monitoring Report 8 (June 2024), 148th Fighter Wing, Duluth Air National Guard Base, Duluth International Airport

		Concentration (µg/L) - Constituents of Interest						Concentration (µg/L) - Constituents of Concern															
	COC CAS No.	1,4-Dioxane 123-91-1	Q	cis-1,2-DCE 156-59-2	Q	Toluene 108-88-3	Q	Benzene 71-43-2	Q	1,2-DCA 107-06-02	Q	1,1-DCA 75-34-3	Q	1,1-DCE 75-35-4	Q	PCE 127-18-4	Q	1,1,1-TCA 71-55-6	Q	TCE 79-01-6	Q	Vinyl Chloride 75-01-4	Q
Cleanup Level Identified in the ROD (ANG 2010)		NS		NS		NS		5		4		70		6		5		200		5		0.2	
MDH Groundwater HRLs[a], HBVs[b], or RAAs[c]		1		50		200		2		1		200		80		5		9000		0.4		0.2	
Well ID	Sample Date																						
MW-33	9/15/1988	NA		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
	8/19/1997	NA		0.2	U	0.2	U	0.2	U	1.0	U	0.3	U	0.4	U	0.3	U	0.4	U	0.3	U	0.30	U
	10/22/1997	NA		0.2	U	0.2	U	0.2	U	1.0	U	0.3	U	0.4	U	NA		0.4	U	4.6		0.30	U
	4/9/1998	NA		0.2	U	0.2	U	0.2	U	1.0	U	0.3	U	0.4	U	4.2		0.4	U	NA		0.30	U
	7/1/1998	NA		NA		NA		5.0	U	NA		NA		NA		NA		NA		NA		NA	
	10/19/1999	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
	5/2/2000	NA		2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
	7/19/2000	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
	9/19/2000	NA		2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
	4/26/2001	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
	7/12/2001	NA		2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
	7/28/2005	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.40	U
	9/17/2008	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.40	U
	9/15/2009	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.40	U
	11/13/2009	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.40	U
	9/16/2010	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	11/3/2010	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	5/13/2011	NA		0.2	U	1.3	U	0.1	U	0.2	U	0.2	U	0.2	U	0.3	U	0.2	U	1.7	U	0.20	U
	8/18/2011	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	11/8/2011	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	5/10/2012	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	8/6/2012	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	11/7/2012	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	11/5/2013	1.0	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	**0.5**		0.5	U	0.5	U	0.50	U
	4/8/2014	1.0	U	0.5	U	2.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.50	U
	12/13/2017	0.19	UJ	0.6	U	0.6	U	0.6	U	0.6	U	1	U	0.6	U	0.6	U	0.6	U	0.6	U	0.60	U
	6/24/2021	50.0	U	0.50	U	0.50	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.50	U	0.5	U	0.50	U
	9/28/2021	50.0	U	0.50	U	0.50	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.50	U	0.5	U	0.50	U
	12/9/2021	0.2	U	0.50	U	0.50	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.50	U	0.5	U	0.50	U
	5/26/2022	1.0	U	0.40	U	0.40	U	0.40	U	0.4	U	0.80	U	0.80	U	0.40	U	0.40	U	0.40	U	0.20	U
	12/28/2022	1.0	U	0.40	U	0.40	U	0.80	U	0.8	U	0.80	U	0.80	U	0.80	U	0.80	U	0.40	U	1.00	U
	5/17/2023	1.0	U	0.40	U	0.40	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	1.00	U
	12/12/2023	1.0	U	0.40	U	0.40	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.40	U	1.00	U
	6/4/2024	1.0	U	0.40	U	0.40	U	0.80	U	0.50	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	0.40	U

Table 3-2. Summary of Groundwater Analytical Results

Site 3 Long-Term Monitoring Report 8 (June 2024), 148th Fighter Wing, Duluth Air National Guard Base, Duluth International Airport

		Concentration (µg/L) - Constituents of Interest						Concentration (µg/L) - Constituents of Concern															
	COC CAS No.	1,4-Dioxane 123-91-1	Q	cis-1,2-DCE 156-59-2	Q	Toluene 108-88-3	Q	Benzene 71-43-2	Q	1,2-DCA 107-06-02	Q	1,1-DCA 75-34-3	Q	1,1-DCE 75-35-4	Q	PCE 127-18-4	Q	1,1,1-TCA 71-55-6	Q	TCE 79-01-6	Q	Vinyl Chloride 75-01-4	Q
Cleanup Level Identified in the ROD (ANG 2010)		NS		NS		NS		5		4		70		6		5		200		5		0.2	
MDH Groundwater HRLs[a], HBVs[b], or RAAs[c]		1		50		200		2		1		200		80		5		9000		0.4		0.2	
Well ID	Sample Date																						
MW-35	9/19/1988	NA		ND		ND		ND		ND		8.9		1.0		ND		1.8		0.9		ND	
	8/19/1997	NA		1.7		0.3	U	0.2	U	0.1	U	82.0		**26.0**		0.3	U	13.0		0.3	U	0.30	U
	10/22/1997	NA		2.0		0.2	U	0.2	U	0.1	U	170.0		**46.0**		2.1		13.0		NA		0.30	U
	4/9/1998	NA		0.2	U	0.2	U	0.2	U	0.1	U	13.0		3.7		NA		0.4	U	1.6		0.30	U
	7/1/1998	NA		NA		NA		5.0	U	NA		NA		NA		NA		NA		NA		NA	
	10/19/1999	NA		2.4		1.0	U	1.0	U	1.0	U	183.0		**52.4**		1.0	U	9.2		1.0	U	1.0	U
	5/2/2000	NA		2.0	U	0.2	U	0.2	U	2.0	U	17.0		4.6		2.0	U	2.0	U	2.0	U	2.0	U
	7/19/2000	NA		1.0	U	1.0	U	1.0	U	0.5		39.0		**8.9**		1.0	U	3.3		1.0	U	1.0	U
	9/19/2000	NA		2.2		2.0	U	2.0	U	1.7		193.0		**49.3**		2.0	U	11.7		2.0	U	2.0	U
	4/26/2001	NA		1.0	U	1.0	U	1.0	U	1.0	U	93.1		**26.0**		1.0	U	3.3		1.0	U	1.0	U
	7/12/2001	NA		2.9		2.0	U	2.0	U	2.0	U	191.0		**54.6**		2.0	U	7.2		2.0	U	**1.2**	
	4/27/2005	NA		**4.1**		1.0	U	1.0	U	**1.1**		**150.0**		**56.2**		1.0	U	**6.4**		1.0	U	**1.0**	
	9/18/2008	NA		**5.7**		1.0	U	1.0	U	1.0	U	**100.0**		**39.3**		1.0	U	**1.4**		1.0	U	**0.7**	
	9/14/2009	NA		**5.4**		1.0	U	1.0	U	1.0	U	**90.5**		**39.5**		1.0	U	**1.4**		1.0	U	**3.0**	
	11/9/2009	NA		**5.6**		1.0	U	1.0	U	1.0	U	**87.5**		**37.4**		1.0	U	**1.4**		1.0	U	**0.60**	
	9/16/2010	NA		**5.7**		1.0	U	1.0	U	1.0	U	**62.0**		**28.0**		1.0	U	1.0	U	**0.8**		**0.20**	
	11/5/2010	NA		**5.6**		2.5	U	2.5	U	**0.6**	**J**	**58.0**		**25.0**		2.5	U	**0.7**	**J**	**0.7**	**J**	2.5	U
	5/16/2011	NA		**7.5**		0.3	U	2.6	U	**0.6**	**J**	**67.0**		**24.0**		0.6	U	**1.0**		**0.9**		0.4	U
	8/10/2011	NA		**7.8**		2.0	U	2.0	U	**0.5**	**J**	**52.0**		**25.0**		2.0	U	0.6	J	**1.0**	**J**	0.40	U
	11/9/2011	NA		**7.6**		3.3	U	3.3	U	3.3	U	**56.0**		**20.0**		3.3	U	3.3	U	**0.9**	**J**	0.70	U
	5/10/2012	NA		**7.1**		1.0	U	1.0	U	**0.5**	**J**	**54.0**		**22.0**		1.0	U	**0.6**	**J**	**1.0**	**J**	**0.50**	**J**
	8/6/2012	NA		**7.8**		1.7	U	1.7	U	**0.4**	**J**	**45.0**		**21.0**		1.7	U	**0.5**	**J**	**1.1**	**J**	**0.40**	**J**
	11/8/2012	**4.60**		**7.2**		1.8	U	1.5	U	**0.5**	**J**	**51.0**		**21.0**		1.8	U	**0.4**	**J**	**0.9**	**J**	**0.40**	
	11/7/2013	**2.20**		**9.1**		2.5	U	0.5	U	**0.5**	**J**	**47.0**		**23.0**		0.5	U	**0.5**	**J**	**1.4**		**0.50**	**J**
	4/9/2014	1.0	U	0.5	U	2.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.50	U
	5/6/2015	2.5	U	0.6	U	0.6	U	0.6	U	0.6	U	**29**		**15**		**2.3**		0.6	U	**1.3**		**0.64**	**J**
	12/13/2017	0.2	U	**3.8**		0.6	U	0.6	U	0.6	U	**20**		**10**		**1.0**	**J**	0.6	U	**3.4**		0.60	U
	7/29/2019	**1.80**		**5.1**		1.0	U	1.0	U	1.0	U	**18.5**		**10.8**		**1.20**		1.0	U	**4.2**		1.0	U
	6/23/2021	50.0	U	**4.3**		0.50	U	0.5	U	0.5	U	**13.2**		**7.8**		**0.98**	**J**	**0.23**	**J**	**5.5**		**0.27**	**J**
	9/28/2021	50.0	U	**1.9**		0.50	U	0.5	U	0.5	U	**7.1**		**3.9**		**0.63**	**J**	0.50	U	**3.3**		0.50	U
	12/9/2021	**0.76**		**3.9**		0.50	U	0.5	U	0.5	U	**13.6**		**7.6**		**0.93**	**J**	0.50	U	**5.3**		0.50	U
	5/26/2022	1.0	U	**3.7**		0.40	U	0.40	U	0.40	U	**11.0**		**6.3**		**0.69**	**J**	0.40	U	**4.8**		0.20	U
	12/30/2022	**0.6**	**J**	**4.8**		0.40	U	0.80	U	0.80	U	**14.0**		**7.7**		**1.0**		0.50	U	**6.6**		1.00	U
	5/16/2023	1.0	U	**3.4**		0.40	U	0.80	U	0.80	U	**8.1**		**4.9**		**0.86**	**J**	**0.50**	**J**	**5.3**		**0.74**	**J**
	12/13/2023	**0.7**	**J**	**5.1**		0.40	U	0.80	U	0.80	U	**11.0**		**6.0**		**0.81**	**J**	0.50	U	**5.8**		1.00	U
	6/5/2024	1.0	U	**3.7**		0.40	U	0.80	U	0.50	U	**7.9**		**4.2**		**0.72**	**J**	0.50	U	**5.4**		0.40	U

Table 3-2. Summary of Groundwater Analytical Results

Site 3 Long-Term Monitoring Report 8 (June 2024), 148th Fighter Wing, Duluth Air National Guard Base, Duluth International Airport

		Concentration (µg/L) - Constituents of Interest						Concentration (µg/L) - Constituents of Concern															
	COC CAS No.	1,4-Dioxane 123-91-1	Q	cis-1,2-DCE 156-59-2	Q	Toluene 108-88-3	Q	Benzene 71-43-2	Q	1,2-DCA 107-06-02	Q	1,1-DCA 75-34-3	Q	1,1-DCE 75-35-4	Q	PCE 127-18-4	Q	1,1,1-TCA 71-55-6	Q	TCE 79-01-6	Q	Vinyl Chloride 75-01-4	Q
Cleanup Level Identified in the ROD (ANG 2010)		NS		NS		NS		5		4		70		6		5		200		5		0.2	
MDH Groundwater HRLs[a], HBVs[b], or RAAs[c]		1		50		200		2		1		200		80		5		9000		0.4		0.2	
Well ID	**Sample Date**																						
MW-38	10/19/1999	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
	5/2/2000	NA		2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
	7/19/2000	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
	9/19/2000	NA		2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
	4/26/2001	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
	7/12/2001	NA		2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
	3/21/2005	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
	9/18/2008	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.40	U
	11/13/2009	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.40	U
	9/17/2010	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	11/5/2010	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	5/13/2011	NA		0.2	U	0.1	U	0.1	U	0.2	U	0.2	U	0.2	U	0.3	U	0.2	U	0.2	U	0.20	U
	8/18/2011	NA		1.0	U	**14.0**		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	11/9/2011	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	5/11/2012	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	8/7/2012	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	11/7/2012	NA		2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	1.2	U
	11/6/2013	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.2	U
MW-41	3/21/2005	NA		1.0	U	1.0	U	**1.2**		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
	9/14/2006	NA		1.0	U	1.0	U	**1.3**		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.40	U
	9/17/2008	NA		1.0	U	**6.8**		**1.3**		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.40	U
	9/9/2009	NA		1.0	U	**6.8**		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.40	U
	11/12/2009	NA		1.0	U	**6.8**		**1.0**		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.40	U
	9/23/2010	NA		1.0	U	**6.8**		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.5	U	0.20	U
	11/3/2010	NA		1.0	U	1.0	U	1.0	U	**1.0**		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	5/13/2011	NA		0.2	U	0.1	U	**0.6**	**J**	22.0	U	0.2	U	0.2	U	0.3	U	0.2	U	0.2	U	0.20	U
	8/10/2011	NA		0.2	J	1.0	U	**0.8**	**J**	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**2.1**		0.20	U
	11/8/2011	NA		2.5	U	2.5	U	**0.7**	**J**	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	0.20	U
	5/10/2012	NA		1.0	U	1.0	U	**0.6**	**J**	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	8/6/2012	NA		1.0	U	**0.6**		**0.4**	**J**	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	11/8/2012	1.00	U	0.2	J	1.0	U	**0.6**	**J**	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	11/5/2013	1.00	U	0.5	U	2.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.10	U
	4/9/2014	1.0	U	0.5	U	2.5	U	**0.4**	**J**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.50	U
	12/12/2017	0.19	U	0.6	U	0.6	U	0.6	U	0.6	U	1	U	0.6	U	0.6	U	0.6	U	0.6	U	0.60	U
	6/24/2021	50.0	U	0.50	U	0.50	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.50	U	0.5	U	0.5	U
	9/30/2021	50.0	U	0.50	U	0.50	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.50	U	0.5	U	0.5	U
	12/8/2021	0.2	U	0.50	U	0.50	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.50	U	0.5	U	0.5	U
	5/23/2022	1.0	U	0.40	U	0.40	U	0.40	U	0.40	U	0.80	U	0.80	U	0.40	U	0.40	U	0.40	U	0.20	U
	12/13/2022	1.0	UJ	0.40	UJ	0.40	UJ	0.80	UJ	0.80	UJ	0.80	UJ	0.80	UJ	0.80	UJ	0.50	UJ	0.40	UJ	1.00	UJ
	5/17/2023	1.0	U	0.40	U	0.40	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	1.00	U
	12/13/2023	NA		0.40	U	0.40	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	1.00	U
	6/5/2024	1.0	U	0.40	U	0.40	U	0.80	U	0.50	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	0.40	U

Table 3-2. Summary of Groundwater Analytical Results

Site 3 Long-Term Monitoring Report 8 (June 2024), 148th Fighter Wing, Duluth Air National Guard Base, Duluth International Airport

		Concentration (µg/L) - Constituents of Interest						Concentration (µg/L) - Constituents of Concern															
	COC CAS No.	1,4-Dioxane 123-91-1	Q	cis-1,2-DCE 156-59-2	Q	Toluene 108-88-3	Q	Benzene 71-43-2	Q	1,2-DCA 107-06-02	Q	1,1-DCA 75-34-3	Q	1,1-DCE 75-35-4	Q	PCE 127-18-4	Q	1,1,1-TCA 71-55-6	Q	TCE 79-01-6	Q	Vinyl Chloride 75-01-4	Q
Cleanup Level Identified in the ROD (ANG 2010)		NS		NS		NS		5		4		70		6		5		200		5		0.2	
MDH Groundwater HRLs[a], HBVs[b], or RAAs[c]		1		50		200		2		1		200		80		5		9000		0.4		0.2	
Well ID	Sample Date																						
MW-42	3/21/2005	NA		1.0	U	**5.1**		1.0	U	1.0	U	1.0	U	1.0	U	**13.5**		1.0	U	1.0	U	1.0	U
	9/14/2006	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**4.5**		1.0	U	1.0	U	0.40	U
	9/17/2008	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**2.2**		1.0	U	**1.3**		0.40	U
	9/15/2009	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**1.7**		1.0	U	1.0	U	0.40	U
	11/12/2009	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**2.1**		1.0	U	**1.2**		0.40	U
	9/15/2010	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**2.0**		1.0	U	**1.1**		0.20	U
	11/3/2010	NA		1.0	U	1.0	U	1.0	U	1.0	U	**0.2**		1.0	U	**2.0**		1.0	U	**1.2**		0.20	U
	5/13/2011	NA		0.2	U	0.1	U	0.1	U	0.2	U	0.2	U	0.2	U	**1.9**		0.2	U	**0.9**	J	0.20	U
	8/10/2011	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**2.9**		1.0	U	**1.5**		0.20	U
	11/8/2011	NA		1.0	U	1.0	U	1.0	U	1.0	U	0.2	J	1.0	U	**2.1**		1.0	U	**1.1**		0.20	U
	5/10/2012	NA		1.0	U	0.2	J	1.0	U	1.0	U	0.2	J	1.0	U	**2.2**		1.0	U	**1.1**		0.20	U
	8/6/2012	NA		1.0	U	1.0	U	1.0	U	1.0	U	0.2	J	1.0	U	**1.9**		1.0	U	**1.2**		0.20	U
	11/8/2012	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.2	J	1.0	U	**2.2**		1.0	U	**1.3**		0.20	U
	11/5/2013	1.0	U	0.5	U	2.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.50	U
	4/9/2014	1.0	U	0.5	U	2.5	U	0.5	U	0.5	U	0.5	U	0.5	U	**1.8**		0.5	U	**0.8**		0.50	U
	5/5/2015	2.5	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	**2.6**		0.4	J	**1.2**		0.60	U
	12/12/2017	2.5	UJ	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	**2.3**		0.4	J	**1.2**		0.60	U
	7/30/2019	0.4	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**5.0**		1.0	U	**2.2**		1.0	U
	6/24/2021	50.0	U	0.50	U	0.50	U	0.5	U	0.5	U	**0.11**	**J**	0.5	U	**4.0**		**0.18**	**J**	**1.6**		0.50	U
	9/30/2021	50.0	U	0.50	U	0.50	U	0.5	U	0.5	U	**0.13**		0.5	U	**3.4**		0.50	U	**1.3**		0.50	U
	12/8/2021	0.2	U	0.50	U	0.50	U	0.50	U	0.50	U	**0.15**	**J**	0.50	U	**1.6**		**0.21**	**J**	**1.4**		0.50	U
	5/25/2022	1.0	U	0.40	U	0.40	U	0.40	U	0.40	U	0.80	U	0.80	U	**1.9**		0.40	U	**1.2**		0.20	U
	12/13/2022	1.0	UJ	0.40	UJ	0.40	UJ	0.80	UJ	0.80	UJ	0.80	UJ	0.80	UJ	**1.8**	**J**	0.50	UJ	**1.5**	**J**	1.00	UJ
	5/17/2023	1.0	U	0.40	U	0.40	U	0.80	U	0.80	U	0.80	U	0.80	U	**3.8**		0.50	U	**1.0**		1.00	U
	12/14/2023	1.0	U	0.40	U	0.40	U	0.80	U	0.80	U	0.80	U	0.80		**5.2**		0.50	U	**1.0**		1.00	U
	6/5/2024	1.0	U	0.40	U	0.40	U	0.80	U	0.50	U	0.80	U	0.80	U	**1.8**		0.50	U	**0.94**	**J**	0.40	U

Table 3-2. Summary of Groundwater Analytical Results

Site 3 Long-Term Monitoring Report 8 (June 2024), 148th Fighter Wing, Duluth Air National Guard Base, Duluth International Airport

		Concentration (µg/L) - Constituents of Interest						Concentration (µg/L) - Constituents of Concern															
	COC CAS No.	1,4-Dioxane 123-91-1	Q	cis-1,2-DCE 156-59-2	Q	Toluene 108-88-3	Q	Benzene 71-43-2	Q	1,2-DCA 107-06-02	Q	1,1-DCA 75-34-3	Q	1,1-DCE 75-35-4	Q	PCE 127-18-4	Q	1,1,1-TCA 71-55-6	Q	TCE 79-01-6	Q	Vinyl Chloride 75-01-4	Q
Cleanup Level Identified in the ROD (ANG 2010)		NS		NS		NS		5		4		70		6		5		200		5		0.2	
MDH Groundwater HRLs[a], HBVs[b], or RAAs[c]		1		50		200		2		1		200		80		5		9000		0.4		0.2	
Well ID	Sample Date																						
MW-43	3/1/2005	NA		NA		1.0	U	1.0	U	1.0	U	**176.0**		**87.0**		**350**		**117.0**		**14.2**		**2.8**	
	9/15/2006	NA		NA		1.0	U	1.0	U	1.0	U	**30.1**		**18.6**		**190**		**18.9**		**10.2**		**0.9**	
	9/18/2008	NA		NA		1.0	U	1.0	U	1.0	U	**44.2**		**29.5**		**331**		**18.5**		**14.3**		**1.3**	
	9/11/2009	NA		NA		1.0	U	2.0	U	1.0	U	**34.6**		**21.5**		**276**		**13.2**		**12.3**		**1.9**	
	11/12/2009	NA		NA		1.0	U	2.0	U	1.0	U	**46.1**		**24.9**		**314**		**14.2**		**12.8**		**1.0**	
	9/16/2010	NA		NA		1.0	U	1.0	U	1.0	U	**41.0**		**25.0**		**330**		**14.0**		**16.0**		0.20	U
	11/5/2010	210	U	NA		11.0	U	11.0	U	11.0	U	**74.0**		**39.0**		**310**		**14.0**		**15.0**		11.0	U
	5/26/2011	**4.3**		NA		1.4	U	1.4	U	2.4	U	**50.0**		**28.0**		**350**		**13.0**		**15.0**		0.80	U
	8/10/2011	**4.3**		NA		11.0	U	11.0	U	11.0	U	**43.0**		**26.0**		**330**		**15.0**		**18.0**		2.4	U
	11/9/2011	NA		NA		18.0	U	18.0	U	18.0	U	**37.0**		**24.0**		**360**		**11.0**	**J**	**17.0**	**J**	4.0	U
	5/10/2012	NA		NA		6.7	U	6.7	U	6.7	U	**35.0**		**19.0**		**240**		**12.0**		**12.0**		1.5	U
	8/6/2012	NA		NA		10.0	U	10.0	U	10.0	U	**33.0**		**20.0**		**320**		**12.0**		**20.0**		2.2	U
	11/8/2012	**2.6**		NA		8.0	U	8.0	U	8.0	U	**19.0**		**16.0**		**210**		**5.2**	**J**	**13.0**		1.8	U
	11/7/2013	**1.4**	**J**	NA		2.5	U	0.5	U	0.5	U	**16.0**		**9.5**		**140**		**2.8**		**11.0**		**0.30**	**J**
	4/10/2014	**1.6**	**J**	0.50	U	2.50	U	0.50	U	0.50	U	0.50	U	0.50	U	**1.4**		0.50	U	0.50	U	0.50	U
	5/6/2015	2.5	U	**25.0**		0.6	U	0.6	U	0.39	J	**39.0**		**20.0**		**160**		4.9		**13.0**		**1.8**	
	7/6/2015	2.6	U	**33.0**		0.6	U	0.6	U	0.6	U	**11.0**		**5.4**		**19.0**		0.6	U	**6.8**		**2.4**	
	8/18/2015	2.8	U	**56.0**	**J**	0.6	U	0.6	U	0.6	U	**8.2**		**4.2**		**1.1**		0.6	U	**1.1**		**0.73**	**J**
	4/20/2016	0.19	U	**16.0**		0.6	U	0.6	U	0.6	U	**7.8**		**3.5**		**23.0**		0.6	U	**7.8**		**2.9**	
	12/5/2016	0.19	U	**47.0**		0.6	U	0.6	U	0.6	U	**3.4**		**3.1**		**0.7**	**J**	0.6	U	**1.2**		**5.7**	
	12/13/2017	0.19	U	**55.0**		0.6	U	0.6	U	0.6	U	**9.4**		**3.4**		0.6	U	0.6	U	**1.4**		**32.0**	
	7/30/2019	**0.80**		**40.0**		1.0	U	1.0	U	1.0	U	**11.2**		1.0	U	**1.1**		1.0	U	1.0	U	**24.7**	
	6/25/2021	50.0	U	**33.2**		0.50	U	0.5	U	0.5	U	**10.2**		**1.6**		**1.2**		**0.32**	**J**	**1.1**		**16.0**	
	9/30/2021	50.0	U	**16.1**		0.50	U	0.5	U	0.5	U	**6.2**		**0.4**	**J**	0.5	U	0.5	U	**0.25**	J	**11.0**	
	12/14/2021	**0.65**		**27.1**		0.50	U	0.5	U	0.5	U	**10.3**		**1.0**	**J**	0.5	U	**0.5**	**J**	**0.49**	J	**18.7**	
	5/25/2022	1.0	U	**35.0**		0.40	U	0.40	U	0.40	U	**13.0**		**3.9**		**16.0**		0.59	J	**5.5**		**12.0**	
	12/29/2022	**0.5**	**J**	**13.0**		0.40	U	0.80	U	0.80	U	**4.2**		**0.8**	**J**	**1.2**		0.50	U	**1.0**	**J**	**11.0**	
	5/18/2023	**0.50**	**J**	**52.0**		0.40	U	0.80	U	0.80	U	**16.0**		**5.7**		**20.0**		0.91	J	**10.0**		**17.0**	
	12/14/2023	**0.61**	**J**	**29.0**				0.80	U	0.80	U	**8.6**		**2.8**		**7.6**		0.49	J	**4.7**		**14.0**	
	12/14/2023 (D)	**0.70**	**J**	**31.0**		0.40	U	0.80	U	0.80	U	**9.2**		**3.1**	**U**	**8.1**		0.50	U	**5.0**		**15.0**	
	6/6/2024	**0.79**	**J**	**33.0**		0.40	U	0.80	U	0.50	U	**14.0**		**3.1**		**7.5**		0.50	U	**5.1**		**15.0**	
	6/6/2024 (D)	**0.76**	**J**	**35.0**		0.40	U	0.80	U	0.50	U	**14.0**		**2.9**		**7.5**		0.50	U	**5.4**		**13.0**	

Table 3-2. Summary of Groundwater Analytical Results

Site 3 Long-Term Monitoring Report 8 (June 2024), 148th Fighter Wing, Duluth Air National Guard Base, Duluth International Airport

		Concentration (µg/L) - Constituents of Interest						Concentration (µg/L) - Constituents of Concern															
	COC CAS No.	1,4-Dioxane 123-91-1	Q	cis-1,2-DCE 156-59-2	Q	Toluene 108-88-3	Q	Benzene 71-43-2	Q	1,2-DCA 107-06-02	Q	1,1-DCA 75-34-3	Q	1,1-DCE 75-35-4	Q	PCE 127-18-4	Q	1,1,1-TCA 71-55-6	Q	TCE 79-01-6	Q	Vinyl Chloride 75-01-4	Q
Cleanup Level Identified in the ROD (ANG 2010)		NS		NS		NS		5		4		70		6		5		200		5		0.2	
MDH Groundwater HRLs[a], HBVs[b], or RAAs[c]		1		50		200		2		1		200		80		5		9000		0.4		0.2	
Well ID	Sample Date																						
MW-44	3/21/2005	NA		**11**		1.0	U	**63.8**		1.0	U	**11.2**		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
	9/14/2006	NA		**9.0**		1.0	U	**6.0**		**7.9**		**33.0**		**5.4**		1.0	U	1.0	U	1.0	U	**0.6**	
	11/29/2006	NA		5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	2.0	U
	4/5/2007	NA		1.0	U	1.0	U	**13.2**		**4.5**		**10.6**		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
	6/12/2007	NA		1.0	U	1.0	U	**15.8**		**4.7**		**29.9**		**4.7**		1.0	U	1.0	U	1.0	U	1.0	U
	9/18/2007	NA		**4.0**		1.0	U	**22.0**		**6.5**		**24.0**		3.8	U	1.0	U	1.0	U	1.0	U	1.0	U
	12/6/2007	NA		**6.0**		1.0	U	**37.4**		1.0	U	**1.4**		1.0	U	1.0	U	1.0	U	1.0	U	**0.60**	
	9/17/2008	NA		**5.0**		**1.2**		**38.7**		**2.1**		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.40	U
	9/14/2009	NA		**2.0**		**1.2**		**8.4**		**2.1**		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**0.30**	
	11/9/2009	NA		**2.0**		**1.2**		**12.5**		**2.1**		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**0.30**	J
	9/16/2010	NA		1.0	U	**1.2**		**7.4**		**2.1**		1.0	U	1.0	U	1.0	U	1.0	U	0.5	U	0.20	U
	11/4/2010	NA		**1.0**	**J**	**0.4**	**J**	**5.9**		**0.8**		**1.9**		1.0	U	0.5	J	1.0	U	1.0	U	0.20	U
	5/11/2011	NA		0.0	U	**0.3**	**J**	2.1	U	**0.4**	**J**	**0.9**	**J**	0.4	U	0.6	U	0.4	U	0.3	U	0.40	U
	8/10/2011	NA		**0.0**	**J**	1.0	U	**3.0**		1.0	U	**2.6**		1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	11/8/2011	NA		3.0	U	2.5	U	**6.8**		2.2	U	**4.1**		2.5	U	2.5	U	2.5	U	2.5	U	0.60	U
	5/10/2012	NA		**0.0**	**J**	**0.4**	**J**	**3.7**		0.6	U	**2.3**		1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	8/7/2012	NA		2.0	U	**0.5**	**J**	**9..3**		**1.8**	**J**	**17.0**		2.0	U	2.0	U	2.0	U	2.0	U	4.0	U
	11/8/2012	**25.0**		**1.0**	**J**	**0.4**	**J**	**12.0**		**1.7**	**J**	**9.0**		1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	11/7/2013	**21.0**		**1.0**	**J**	2.5	U	**12.0**		**2.0**		**16.0**		0.5	U	0.2	U	0.5	U	0.5	U	0.50	U
	4/10/2014	**37.0**		**0.51**	**J**	2.5	U	**12.0**		**2.2**		**9.50**		0.50	U	0.5	U	0.50	U	0.50	U	0.50	U
	5/6/2015	**2.7**	**J**	**0.62**	**J**	0.6	U	**6.6**		**0.98**	**J**	**8.1**		0.6	U	0.6	U	0.6	U	**0.5**	**J**	**0.29**	**J**
	6/30/2015	14	U	0.6	U	**0.35**	**J**	**14.0**		**2.4**		**19.0**		0.6	U	**2.2**		0.6	U	**0.61**	**J**	0.60	U
	8/25/2015	**8.6**		**1.5**		**0.59**	**J**	**24.0**		**3.7**		**12.0**		**0.42**	**J**	**4**		0.6	U	**1.2**		**0.55**	**J**
	4/18/2016	0.19	U	0.6	U	**7.1**		**0.23**	**J**	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.60	U
	12/6/2016	0.19	U	0.6	U	**16.0**		**0.44**	**J**	0.6	U	1.0	U	0.6	U	0.6	U	0.6	U	0.6	U	0.60	U
	12/11/2017	0.00	U	0.6	U	1.0	U	0.60	U	0.6	U	1.0	U	0.6	U	0.6	U	0.6	U	0.6	U	0.60	U
	7/30/2019	**1.8**		1.0	U	**2.6**		1.0	U	1.0	U	1	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
	6/25/2021	50.0	U	0.50	U	**0.39**	**J**	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
	9/30/2021	50.0	U	0.50	U	0.50	U	0.88	J	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
	12/14/2021	**1.10**		0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
	5/25/2022	1.0	U	0.40	U	0.40	U	0.40	U	0.40	U	0.80	U	0.80	U	0.40	U	0.40	U	0.40	U	0.20	U
	12/29/2022	**0.91**	**J**	0.40	U	0.40	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	1.00	U
	5/18/2023	**0.24**	**J**	0.40	U	0.40	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	1.00	U
	5/18/2023 (D)	1.00	U	0.40	U	0.40	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	1.00	U
	12/14/2023	**1.10**	**J**	0.40	U	0.40	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	1.00	U
	6/5/2024	1.0	U	0.40	U	0.40	U	0.80	U	0.50	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	0.40	U

Table 3-2. Summary of Groundwater Analytical Results

Site 3 Long-Term Monitoring Report 8 (June 2024), 148th Fighter Wing, Duluth Air National Guard Base, Duluth International Airport

		Concentration (µg/L) - Constituents of Interest						Concentration (µg/L) - Constituents of Concern															
	COC CAS No.	1,4-Dioxane 123-91-1	Q	cis-1,2-DCE 156-59-2	Q	Toluene 108-88-3	Q	Benzene 71-43-2	Q	1,2-DCA 107-06-02	Q	1,1-DCA 75-34-3	Q	1,1-DCE 75-35-4	Q	PCE 127-18-4	Q	1,1,1-TCA 71-55-6	Q	TCE 79-01-6	Q	Vinyl Chloride 75-01-4	Q
Cleanup Level Identified in the ROD (ANG 2010)		NS		NS		NS		5		4		70		6		5		200		5		0.2	
MDH Groundwater HRLs[a], HBVs[b], or RAAs[c]		1		50		200		2		1		200		80		5		9000		0.4		0.2	
Well ID	Sample Date																						
MW-45	9/14/2006	NA		**19.9**		1.0	U	1.0	U	1.0	U	**19.0**		**12.3**		**347**		**98.6**		**8.7**		**1.7**	
	11/29/2006	NA		**18.3**		2.0	U	2.0	U	2.0	U	**17.0**		**10.3**		**293**		**61.5**		**7.7**		**0.8**	
	3/21/2005	NA		**26.4**		7.1		1.5		1.0	U	**27.0**		**15.6**		**425**		**153.0**		**7.6**		**3.3**	
	4/6/2007	NA		**15.5**		1.0	U	1.0	U	1.0	U	**18.0**		**9.1**		**296**		**48.6**		**6.3**		1.0	U
	6/12/2007	NA		**11.8**		1.0	U	1.0	U	1.0	U	**16.0**		**8.6**		**259**		**49.9**		**5.0**		**0.4**	**J**
	9/18/2007	NA		**13.7**		1.0	U	1.0	U	1.0	U	**16.0**		**7.9**		**326**		**51.3**		**5.9**		1.0	U
	12/6/2007	NA		**10.1**		1.0	U	1.0	U	1.0	U	**12.0**		**7.7**		**207**		**28.6**		**4.3**		1.0	U
	9/18/2008	NA		**11.6**		2.0	U	2.0	U	2.0	U	**20.0**		**13.6**		**259**		**52.7**		**5.2**		**1.0**	
	9/14/2009	NA		**9.7**		2.0	U	1.0	U	2.0	U	**1.0**	**U**	**12.5**		**262**		**59.3**		**5.4**		**0.70**	
	11/9/2009	NA		**7.6**		2.0	U	1.0	U	2.0	U	**16.0**		**9.1**		**234**		**43.6**		**4.1**		**0.30**	**J**
	9/16/2010	NA		**12.0**		2.0	U	1.0	U	2.0	U	**19.0**		**12.0**		**220**		**49.0**		**4.7**		0.20	U
	11/4/2010	NA		**17.0**		10.0	U	13.0	U	10.0	U	**11.0**		**8.4**		**200**		**46.0**		**4.4**		10.0	U
	5/11/2011	NA		**120**	**H**	0.9	U H	0.9	U H	1.5	U H	**20.0**	**H**	**16.0**	**H**	**190**	**H**	**69.0**	**H**	**7.2**	**H**	1.5	U H
	8/10/2011	**1.8**	**J**	**170**		8.0	U	8.0	U	8.0	U	**16.0**		**15.0**		**220**		**74.0**		**12.0**		1.8	U
	11/8/2011	**2.1**		**140**		8.0	U	8.0	U	8.0	U	**15.0**		**18.0**		**160**		**57.0**		**14.0**		1.8	U
	5/10/2012	NA		**190**		10.0	U	10.0	U	10.0	U	**16.0**		**11.0**		**190**		**54.0**		**14.0**		2.2	U
	8/6/2012	NA		**170**		6.3	U	6.3	U	6.3	U	**12.0**		**9.5**		**130**		**45.0**		**12.0**		**2.4**	**J**
	11/8/2012	**1.9**		**160**		5.0	U	5.0	U	5.0	U	**15.0**		**10.0**		**130**		**39.0**		**14.0**		**6.2**	
	11/7/2013	**1.2**	**J**	**180**		2.5	U	0.5	U	0.5	U	**15.0**		**7.9**		**65.0**		**31.0**		**10.0**		**12.0**	
	4/9/2014	**1.3**	**J**	**120**		2.5	U	0.5	U	0.5	U	**12.0**		**6.7**		**73.0**		**22.0**		**6.2**		**8.4**	
	11/8/2012	**1.9**		**160**		**5.0**		**5.0**		**5.0**		**15.0**		**10.0**		**130**		**39.0**		**14.0**		**6.2**	
	11/7/2013	**1.2**	**J**	**180**		**2.5**		0.50		0.50		**15.0**		**7.9**		**65.0**		**31.0**		**10.0**		**12.0**	
	4/10/2014	**1.3**	**J**	**120**		**2.5**		0.50		0.50		**12.0**		**6.7**		**73.0**		**22.0**		**6.2**		**8.4**	
	5/5/2015	2.5	U	**84.0**		0.60	U	0.60	U	0.60	U	**28.0**		**9.1**		**95.0**		**14.0**		**9.6**		**4.4**	
	12/13/2017	0.96	**U**	**120**		0.60	**U**	**1.2**		0.60	**U**	**26.0**		**2.8**		**4.4**		0.60	U	**6.3**		**42.0**	
	6/25/2021	Not Sampled Due to Residual EISB Amendment																					
	9/28/2021	Not Sampled Due to Residual EISB Amendment																					
	12/13/2021	Not Sampled Due to Residual EISB Amendment																					
	5/26/2022	Not Sampled Due to Residual EISB Amendment																					
	12/30/2022	Not Sampled Due to Residual EISB Amendment																					
	5/18/2023	Not Sampled Due to Residual EISB Amendment																					
	12/14/2023	Not Sampled Due to Residual EISB Amendment																					
	6/6/2024	1.0	U	**12**		**0.68**	**J**	**0.14**	**J**	0.50	U	**5.6**		**0.52**	**J**	**3.9**		0.50	U	**4.8**		**3.3**	

Table 3-2. Summary of Groundwater Analytical Results

Site 3 Long-Term Monitoring Report 8 (June 2024), 148th Fighter Wing, Duluth Air National Guard Base, Duluth International Airport

		Concentration (µg/L) - Constituents of Interest						Concentration (µg/L) - Constituents of Concern															
	COC CAS No.	1,4-Dioxane 123-91-1	Q	cis-1,2-DCE 156-59-2	Q	Toluene 108-88-3	Q	Benzene 71-43-2	Q	1,2-DCA 107-06-02	Q	1,1-DCA 75-34-3	Q	1,1-DCE 75-35-4	Q	PCE 127-18-4	Q	1,1,1-TCA 71-55-6	Q	TCE 79-01-6	Q	Vinyl Chloride 75-01-4	Q
Cleanup Level Identified in the ROD (ANG 2010)		NS		NS		NS		5		4		70		6		5		200		5		0.2	
MDH Groundwater HRLs[a], HBVs[b], or RAAs[c]		1		50		200		2		1		200		80		5		9000		0.4		0.2	
Well ID	Sample Date																						
MW-46	3/21/2005	NA		**6.8**		1.0	U	1.0	U	1.0	U	**1.4**		1.0	U	1.0	U	1.0	U	**8.8**		**11.1**	
	9/19/2008	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.40	U
	9/18/2009	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**0.40**	
	11/12/2009	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**0.40**	
	9/15/2010	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.5	U	0.20	U
	11/4/2010	NA		1.0	U	1.0	U	1.0	U	0.22	U	0.2	U	0.2	U	1.0	U	1.0	U	1.0	U	0.20	U
	5/3/2011	NA		0.2	U	0.1	U	0.1	U	1.0	U	1.0	U	1.0	U	0.3	U	0.2	U	0.2	U	0.20	U
	8/18/2011	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	11/9/2011	NA		0.9	J	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**1.2**		**1.2**	
	5/11/2012	NA		1.0	U	0.6	J B	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	8/7/2012	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	11/7/2012	1.0		0.7	J	1.0	U	1.00	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.2	U	**0.70**	**J**
	11/6/2013	1.0		0.5	U	2.5	U	0.50	U	0.50	U	0.5	U	0.5	U	0.50	U	0.50	U	0.5	U	0.50	U
	4/10/2014	1.0		0.77	J	2.5	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	**1.0**	**J**	**0.95**	**J**
	5/6/2015	2.5	U	0.60	U	0.60	U	0.60	U	0.60	U	0.6	U	0.60	U	0.60	U	0.60	U	**0.68**	**J**	0.60	U
	7/6/2015	2.6	U	0.60	U	0.60	U	0.60	U	0.60	U	0.6	U	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U
	8/18/2015	2.6	U	0.60	U	0.60	U	0.60	U	0.60	U	0.6	U	0.60	U	0.60	U	0.60	U	**0.36**	**J**	0.60	U
	4/20/2016	0.19	U	0.60	U	0.60	U	0.60	U	0.60	U	0.6	U	0.60	U	0.60	U	0.60	U	**0.74**	**J**	0.60	U
	12/5/2016	0.19	U	0.60	U	0.60	U	0.60	U	0.60	U	1.0	U	0.60	U	0.60	U	0.60	U	**1.2**		0.60	U
	12/12/2017	0.19	U	**0.60**	**J**	0.60	U	0.60	U	0.60	U	1.0	U	0.60	U	0.60	U	0.60	U	**0.6**	**J**	0.60	U
	7/29/2019	0.40	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
	6/22/2021	50.0	**U**	0.50	**U**	0.50	**U**	0.50	**U**	0.50	**U**	0.50	**U**	0.50	**U**	0.50	**U**	0.50	**U**	0.50	**U**	0.50	**U**
	9/29/2021	50.0	**U**	0.50	**U**	0.50	**U**	0.50	**U**	0.50	**U**	0.50	**U**	0.50	**U**	0.50	**U**	0.50	**U**	0.50	**U**	0.50	**U**
	12/13/2021	0.2	**U**	**0.20**	**J**	0.50	**U**	0.50	**U**	0.50	**U**	0.50	**U**	0.50	**U**	0.50	**U**	0.50	**U**	**0.22**	**J**	0.50	**U**
	5/24/2022	1.0	**U**	0.40	**U**	0.40	**U**	0.40	**U**	0.40	**U**	0.80	**U**	0.80	**U**	0.40	**U**	0.40	**U**	0.40	**U**	0.20	**U**
	12/29/2022	Not sampled due to snow and ice depth																					
	5/22/2023	1.0	**U**	0.40	**U**	0.40	**U**	0.80	**U**	0.80	**U**	0.80	**U**	0.80	**U**	0.80	**U**	0.50	**U**	0.40	**U**	1.00	**U**
	12/14/2023	Not sampled due to well damage																					
	6/6/2024	NA		0.4	U	0.4	U	0.8	U	0.5	U	0.8	U	0.8	U	0.8	U	0.5	U	0.4	U	0.4	U

Table 3-2. Summary of Groundwater Analytical Results

Site 3 Long-Term Monitoring Report 8 (June 2024), 148th Fighter Wing, Duluth Air National Guard Base, Duluth International Airport

		Concentration (µg/L) - Constituents of Interest						Concentration (µg/L) - Constituents of Concern															
	COC CAS No.	1,4-Dioxane 123-91-1	Q	cis-1,2-DCE 156-59-2	Q	Toluene 108-88-3	Q	Benzene 71-43-2	Q	1,2-DCA 107-06-02	Q	1,1-DCA 75-34-3	Q	1,1-DCE 75-35-4	Q	PCE 127-18-4	Q	1,1,1-TCA 71-55-6	Q	TCE 79-01-6	Q	Vinyl Chloride 75-01-4	Q
Cleanup Level Identified in the ROD (ANG 2010)		NS		NS		NS		5		4		70		6		5		200		5		0.2	
MDH Groundwater HRLs[a], HBVs[b], or RAAs[c]		1		50		200		2		1		200		80		5		9000		0.4		0.2	
Well ID	Sample Date																						
MW-47	3/21/2005	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
	9/19/2008	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.40	U
	9/18/2009	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.40	U
	11/19/2009	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.40	U
	9/15/2010	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	11/4/2010	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	5/19/2011	NA		0.2	U	0.1	U	0.10	U	0.2	U	0.2	U	0.2	U	0.3	U	0.2	U	0.2	U	0.20	U
	8/18/2011	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	11/9/2011	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	5/11/2012	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	8/7/2012	NA		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	11/7/2012	1.00	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U
	11/6/2013	1.00	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
	4/10/2014	1.0	U	0.50	U	2.5	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
	12/12/2017	0.19	UJ	0.60	U	0.60	U	0.60	U	0.60	U	1.0	U	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U
	6/25/2021	50.0	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
	9/29/2021	50.0	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
	9/29/2021 (D)	50.0	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
	12/13/2021	0.2	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
	12/13/2021 (D)	0.2	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
	5/24/2022	1.0	U	0.40	U	0.40	U	0.40	U	0.40	U	0.80	U	0.80	U	0.40	U	0.40	U	1.00	U	0.20	U
	12/30/2022	1.0	U	0.40	U	0.40	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	1.00	U
	12/30/2022	1.0	U	0.40	U	0.40	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	1.00	U
	5/22/2023	1.0	U	0.40	U	0.40	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	1.00	U
	5/22/2023 (D)	1.0	U	0.40	U	0.40	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	1.00	U
	12/13/2023	NA		0.40	U	0.40	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	1.00	U
	6/6/2024	1.0	U	0.40	U	0.40	U	0.80	U	0.50	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	0.40	U

Table 3-2. Summary of Groundwater Analytical Results

Site 3 Long-Term Monitoring Report 8 (June 2024), 148th Fighter Wing, Duluth Air National Guard Base, Duluth International Airport

		Concentration (µg/L) - Constituents of Interest						Concentration (µg/L) - Constituents of Concern															
	COC CAS No.	1,4-Dioxane 123-91-1	Q	cis-1,2-DCE 156-59-2	Q	Toluene 108-88-3	Q	Benzene 71-43-2	Q	1,2-DCA 107-06-02	Q	1,1-DCA 75-34-3	Q	1,1-DCE 75-35-4	Q	PCE 127-18-4	Q	1,1,1-TCA 71-55-6	Q	TCE 79-01-6	Q	Vinyl Chloride 75-01-4	Q
Cleanup Level Identified in the ROD (ANG 2010)		NS		NS		NS		5		4		70		6		5		200		5		0.2	
MDH Groundwater HRLs[a], HBVs[b], or RAAs[c]		1		50		200		2		1		200		80		5		9000		0.4		0.2	
Well ID	Sample Date																						
MW-48	9/15/2006	NA		**13.2**		1.0	U	1.0	U	1.0	U	**17**		**9.0**		**273**		**74.3**		**5.5**		**2.0**	
	11/29/2006	NA		**259**		2.0	U	2.0	U	2.0	U	**33**		**10.8**		**6.6**		**22.7**		**5.4**		**6.3**	
	6/12/2007	NA		**234**		1.0	U	1.0	U	1.0	U	**26**		**9.0**		1.0	U	**34.3**		1.0	U	**2.5**	
	9/19/2007	NA		**301**		1.0	U	1.0	U	1.0	U	**30.0**		**10.8**		1.0	U	**12.1**		1.0	U	**2.7**	
	12/6/2007	NA		**180**		1.0	U	1.0	U	1.0	U	**19.0**		**7.5**		**2.4**		**4.9**		1.0	U	**3.7**	
	9/18/2008	NA		**16.2**		1.0	U	1.0	U	1.0	U	**22.0**		**1.1**		1.0	U	**13.7**		1.0	U	**9.7**	
	9/11/2009	NA		**2.5**		1.0	U	1.0	U	1.0	U	**25.0**		1.0	U	**3.2**		**17.0**		1.0	U	**2.4**	
	11/13/2009	NA		**9.6**		1.0	U	1.0	U	1.0	U	**26.0**		1.0	U	**7.5**		**19.4**		**6.7**		**4.5**	
	9/16/2010	NA		**92.0**		1.0	U	**1.6**		1.0	U	**22.0**		**3.0**		1.0	U	**30.0**		0.50	U	**37.0**	
	11/8/2010	3.8	U	**66.0**		2.0	U	2.0	U	2.0	U	**24.0**		**4.9**		**5.4**		**30.0**		**13.0**		**24.0**	
	5/19/2011	**3.2**		**230**		1.0	U	1.0	U	1.8	U	**27.0**		**11.0**		**11.0**		**58.0**		**24.0**		**37.0**	
	8/10/2011	NA		**190**		6.7	U	6.7	U	6.7	U	**24.0**		**7.5**		6.7	U	**42.0**		6.7	U	**49.0**	
	11/8/2011	NA		**84.0**		4.0	U	4.0	U	4.0	U	**23.0**		**4.9**		4.0	U	**24.0**		4.0	U	**36.0**	
	5/10/2012	NA		**140**		4.0	U	4.0	U	4.0	U	**22.0**		**8.8**		**17.0**		**37.0**		**29.0**		**42.0**	
	8/7/2012	NA		**140**		5.0	U	5.0	U	4.0	U	**22.0**		**5.2**		5.0	U	**24.0**		**2.5**	J	**40.0**	
	11/8/2012	**2.6**		**12.0**		1.0	U	**0.24**	J	1.00	U	**23.0**		**0.61**	J	1.00	U	**6.0**		**0.42**	J	**8.5**	
	11/7/2013	**2.4**	J	**34.0**		2.5	U	**0.50**		0.50	U	**20.0**		**0.72**	J	0.50	U	**4.1**		**3.5**		**14.0**	
	4/9/2014	**2.2**	J	**17.0**		2.5	U	**0.50**		0.50	U	**19.0**		**0.74**	J	0.50	U	**2.3**		**1.9**		**6.7**	
	5/6/2015	2.5	U	**49.0**		0.60	U	**0.24**	J	0.60	U	**27.0**		**4.1**		**7.4**		**5.6**		**37.0**		**21.0**	
	12/11/2017	0.2	U	**82.0**		0.60	U	**0.24**		0.60	U	**40.0**		**3.0**		0.60	U	**1.4**	J	**1.0**	J	**78.0**	
	7/30/2019	**4.1**		**141**		1.0	U	1.0	U	1.0	U	**37.0**		**49.7**		1.0	U	**2.9**		**2.4**		**4.0**	
	6/25/2021	Not sampled due to damaged well casing																					
	9/30/2021	50.0	U	**8.9**		0.5	U	**0.4**	J	0.5	U	**19.2**		**0.35**	J	0.50	U	0.5	U	**0.5**	J	**5.7**	
	12/14/2021	**1.29**		**4.7**		0.50	U	0.5	U	0.5	U	**15.7**		0.5	U	0.5	U	**0.3**	J	**0.4**	J	**3.8**	
	12/14/2021 (D)	**1.27**		**4.7**		0.50	U	0.5	U	0.5	U	**15.9**		0.5	U	0.50	U	**0.3**	J	**0.4**	J	**4.2**	
	5/25/2022	**0.53**	J	**35.0**		0.40	U	0.40	U	0.4	U	**20.0**		**1.7**		**1.0**		0.40	U	**7.90**		**23.0**	
	12/29/2022	0.5	UJ	**6.3**		0.40	U	**0.51**	J	0.8	U	**14.0**		**0.4**	J	0.8	U	0.50	U	**0.52**	J	**4.7**	
	12/29/2022 (D)	**1.0**	J	**4.9**		0.40	U	**0.45**	J	0.8	U	**14.0**		0.8	U	0.8	U	0.50	U	**0.49**	J	**3.8**	
	5/18/2023	**0.7**	J	**23.0**		0.40	U	**0.37**	J	0.8	U	**16.0**		**1.5**		0.8	U	0.50	U	**8.50**		**19.0**	
	12/14/2023	**0.9**	J	**4.6**		0.40	U	**0.35**	J	**0.6**	J	**12.0**		**0.4**	J	0.80	U	0.50	U	**0.59**	J	**4.7**	
	6/6/2024	**0.49**	J	**15**		0.40	U	**0.36**	J	0.5	U	**13.0**		**0.86**	J	0.80	U	0.50	U	**2.9**		**16**	
MW-49	4/11/2014	1.00	U	1	U	2.5	U	**0.46**	J	0.50	U	1	U	0.50	U	0.50	U	0.50	U	0.50	U	1.0	U
	12/12/2017	0.19	U	0.60	U	0.60	U	0.6	U	0.60	U	1	U	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U
	6/25/2021	50.0	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
	9/30/2021	50.0	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
	12/13/2021	0.2	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
	5/24/2022	1.0	U	0.40	U	0.40	U	**0.44**	J	0.40	U	0.80	U	0.80	U	0.40	U	0.40	U	0.40	U	0.20	U
	12/29/2022	1.0	U	0.40	U	0.40	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	1.00	U
	5/18/2023	1.0	U	0.40	U	0.40	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	1.00	U
	12/13/2023	NA		0.40	U	0.40	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	1.00	U
	6/4/2024	1.0	U	0.40	U	0.40	U	0.80	U	0.50	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	0.40	U

Table 3-2. Summary of Groundwater Analytical Results

Site 3 Long-Term Monitoring Report 8 (June 2024), 148th Fighter Wing, Duluth Air National Guard Base, Duluth International Airport

		Concentration (µg/L) - Constituents of Interest						Concentration (µg/L) - Constituents of Concern															
	COC CAS No.	1,4-Dioxane 123-91-1	Q	cis-1,2-DCE 156-59-2	Q	Toluene 108-88-3	Q	Benzene 71-43-2	Q	1,2-DCA 107-06-02	Q	1,1-DCA 75-34-3	Q	1,1-DCE 75-35-4	Q	PCE 127-18-4	Q	1,1,1-TCA 71-55-6	Q	TCE 79-01-6	Q	Vinyl Chloride 75-01-4	Q
Cleanup Level Identified in the ROD (ANG 2010)		NS		NS		NS		5		4		70		6		5		200		5		0.2	
MDH Groundwater HRLs[a], HBVs[b], or RAAs[c]		1		50		200		2		1		200		80		5		9000		0.4		0.2	
Well ID	Sample Date																						
MW-50	4/9/2014	1.00	U	**3.1**		**1.4**		0.50	U	0.50	U	**2.8**		**3.1**		**17.0**		**64.0**		**0.72**	J	**1.9**	J
	5/6/2015	2.5	U	**1.2**		0.60	U	0.60	U	0.60	U	**3.6**		**0.50**	J	**10.0**		**13.0**		**0.60**	J	0.60	U
	6/30/2015	2.6	U	**2.3**		0.60	U	0.60	U	0.60	U	**0.94**	J	**1.4**		**31.0**		**15.0**		**1.2**		0.60	U
	8/25/2015	2.6	U	**1.6**		0.60	U	0.60	U	0.60	U	0.60	U	**1.0**		**30.0**		**11.0**		**0.82**	J	0.60	U
	4/21/2016	0.19	U	**0.54**	J	0.60	U	0.60	U	0.60	U	**0.81**	J	**0.32**	J	**8.4**		0.60	U	0.60	U	0.60	U
	12/6/2016	0.19	U	**26.0**		0.60	U	0.60	U	0.60	U	**3.2**		**0.69**	J	**1.5**		0.60	U	0.60	U	0.60	U
	12/13/2017	0.20	UJ	**1.4**		0.60	U	0.60	U	0.60	U	1.0	U	0.60	U	**0.72**	J	0.60	U	0.60	U	0.60	U
	6/23/2021	50.0	U	**2.0**		0.50	U	0.50	U	0.50	U	**1.7**		**0.30**	J	0.50	U	0.50	U	**0.46**	J	0.50	U
	9/29/2021	50.0	U	**2.3**		0.50	U	0.50	U	0.50	U	**2.2**		**0.43**	J	0.50	U	0.50	U	**0.56**	J	0.50	U
	9/29/2021 (D)	50.0	U	**2.8**		0.50	U	0.50	U	0.50	U	**2.4**		**0.50**	J	0.50	U	0.50	U	**0.61**	J	0.50	U
	12/9/2021	0.2	U	**4.0**		0.50	U	0.50	U	0.50	U	**2.6**		**0.56**	J	0.50	U	0.50	U	**0.50**	J	0.50	U
	5/25/2022	1.0	U	**0.38**	J	0.40	U	0.40	U	0.40	U	0.80	U	0.80	U	0.40	U	0.40	U	0.40	U	0.20	U
	12/28/2022	1.0	UJ	**6.0**		0.40	U	0.80	U	0.80	U	**2.90**		**0.46**	J	0.80	U	0.50	U	**0.32**	J	**0.75**	J
	5/16/2023	1.0	U	**0.43**	J	0.40	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	1.00	U
	12/12/2023	1.0	U	**1.80**		0.40	U	0.80	U	0.80	U	**0.88**	J	0.80	U	0.80	U	0.50	U	0.40	U	1.00	U
	6/5/2024	1.0	U	**1.4**		0.40	U	0.80	U	0.50	U	**0.51**	J	0.80	U	0.80	U	0.50	U	0.40	U	0.40	U
	6/5/2024 (D)	1.0	U	**1.40**		0.40	U	0.80	U	0.50	U	**0.49**	J	0.80	U	0.80	U	0.50	U	0.40	U	0.40	U
MW-51	5/6/2015	2.5	U	**0.34**	J	0.60	U	0.60	U	0.60	U	**1.4**		**4.1**		**0.59**	J	**24.0**		0.60	U	0.60	U
	6/30/2015	2.5	U	**0.38**	J	0.60	U	0.60	U	0.60	U	**1.6**		**5.2**		**0.32**	J	**26.0**		0.60	U	0.60	U
	8/25/2015	2.6	U	**0.23**	J	0.60	U	0.60	U	0.60	U	**1.6**		**5.2**		**0.62**	J	**26.0**		0.60	U	0.60	U
	4/21/2016	0.19	U	**0.19**	J	0.60	U	0.60	U	0.60	U	**1.4**		**3.6**		0.60	U	**21.0**		0.60	U	0.60	U
	12/6/2016	0.19	U	0.60	U	0.60	U	0.60	U	0.60	U	**1.5**	J	**3.6**		0.60	U	**24.0**		0.60	U	0.60	U
	12/13/2017	0.19	UJ	**0.51**	J	0.60	U	0.60	U	0.60	U	**1.4**	J	**2.9**		0.60	U	**17.0**		0.60	U	0.60	U
	6/23/2021	50.0	U	**1.83**		0.50	U	0.50	U	**0.11**	J	**3.9**		**2.6**		0.50	U	**9.1**		0.50	U	0.50	U
	9/28/2021	50.0	U	**2.19**		0.50	U	0.50	U	**0.50**	U	**4.8**		**4.4**		0.50	U	**14.1**		0.50	U	0.50	U
	12/9/2021	**0.34**	J	**2.20**		0.50	U	0.50	U	0.50	U	**5.4**		**4.2**		0.50	U	**13.9**		0.50	U	0.50	U
	5/26/2022	1.0	U	**1.90**		0.40	U	0.40	U	0.40	U	**6.9**		**3.0**		0.40	U	**6.3**		0.40	U	0.20	U
	12/28/2022	**0.3**	J	**2.2**		0.40	U	0.80	U	0.80	U	**8.8**		**3.1**		0.80	U	**3.4**		0.40	U	1.00	U
	5/16/2023	1.0	U	**1.8**		0.40	U	0.80	U	0.80	U	**7.1**		**2.5**		0.80	U	**2.1**		0.40	U	1.00	U
	12/12/2023	**0.3**	J	**1.7**		0.40	U	0.80	U	0.80	U	**8.5**		**2.9**		0.80	U	**2.2**		0.40	U	1.00	U
	6/5/2024	1.0	U	**1.5**		0.40	U	0.80	U	0.50	U	**6.6**		**2.2**		0.80	U	**1.1**		0.40	U	0.40	U

Table 3-2. Summary of Groundwater Analytical Results

Site 3 Long-Term Monitoring Report 8 (June 2024), 148th Fighter Wing, Duluth Air National Guard Base, Duluth International Airport

		Concentration (µg/L) - Constituents of Interest						Concentration (µg/L) - Constituents of Concern															
	COC CAS No.	1,4-Dioxane 123-91-1	Q	cis-1,2-DCE 156-59-2	Q	Toluene 108-88-3	Q	Benzene 71-43-2	Q	1,2-DCA 107-06-02	Q	1,1-DCA 75-34-3	Q	1,1-DCE 75-35-4	Q	PCE 127-18-4	Q	1,1,1-TCA 71-55-6	Q	TCE 79-01-6	Q	Vinyl Chloride 75-01-4	Q
Cleanup Level Identified in the ROD (ANG 2010)		NS		NS		NS		5		4		70		6		5		200		5		0.2	
MDH Groundwater HRLs[a], HBVs[b], or RAAs[c]		1		50		200		2		1		200		80		5		9000		0.4		0.2	
Well ID	**Sample Date**																						
MW-52	5/6/2015	2.5	U	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U	0.30	J	0.60	U	0.60	U	0.60	U
	6/30/2015	2.5	U	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U
	8/25/2015	2.6	U	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U	0.27	J	0.60	U	0.60	U	0.60	U
	4/21/2016	0.19	U	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U
	12/6/2016	0.19	U	0.60	U	0.60	U	0.60	U	0.60	U	1.0	U	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U
	12/13/2017	0.19	U	0.60	U	0.60	U	0.60	U	0.60	U	1.0	U	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U
	6/23/2021	50.0	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
	9/28/2021	50.0	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
	12/9/2021	0.2	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
	5/26/2022	1.0	U	0.40	U	0.40	U	0.40	U	0.40	U	0.80	U	0.80	U	0.40	U	0.40	U	0.40	U	0.20	U
	12/28/2022	1.0	UJ	0.40	U	0.40	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	1.00	U
	5/16/2023	1.0	U	0.40	U	0.40	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	1.00	U
	12/12/2023	NA		0.40	U	0.40	U	0.80	U	0.80	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	1.00	U
	6/5/2024	1.0	U	0.40	U	0.40	U	0.80	U	0.50	U	0.80	U	0.80	U	0.80	U	0.50	U	0.40	U	0.40	U

Notes:

The applicable cleanup criteria for the site is the ROD cleanup level. In the absence of a promulgated cleanup level, the cleanup criteria is the Minnesota Department of Health (MDH) - Health-based Values (HBV) or the Risk Assessment Advice (RAA).

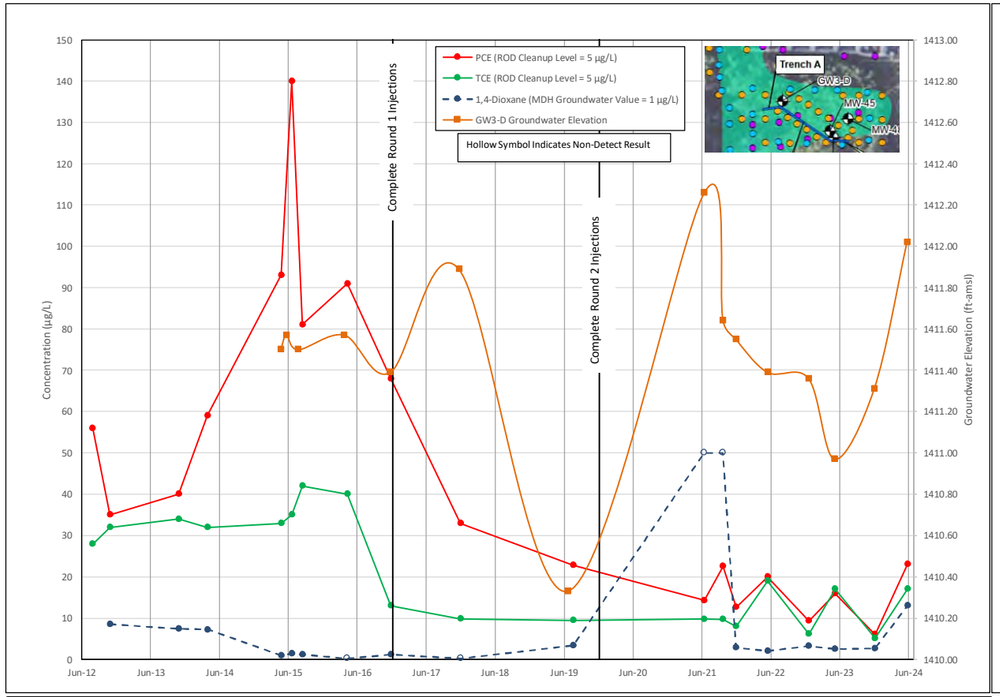
[a] Minnesota Department of Health (MDH) Health Risk Level (HRL)

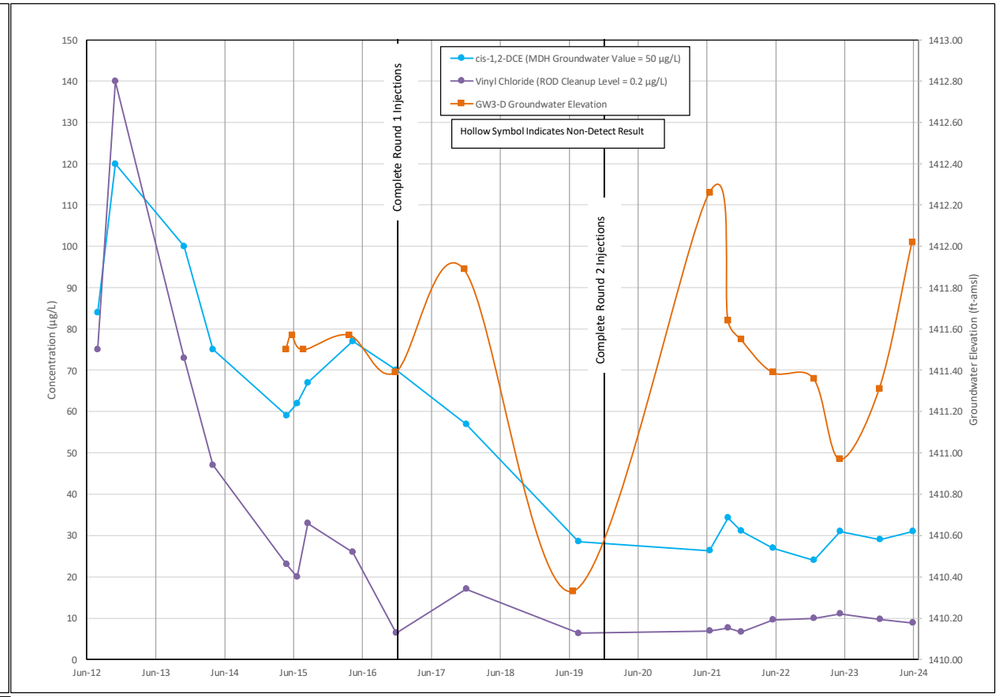
[b] Minnesota Department of Health (MDH) Health-Based Value (HBV). The MDH develops HBVs when Minnesota agencies need guidance for chemicals that do not have Health Risk Limits (HRLs).

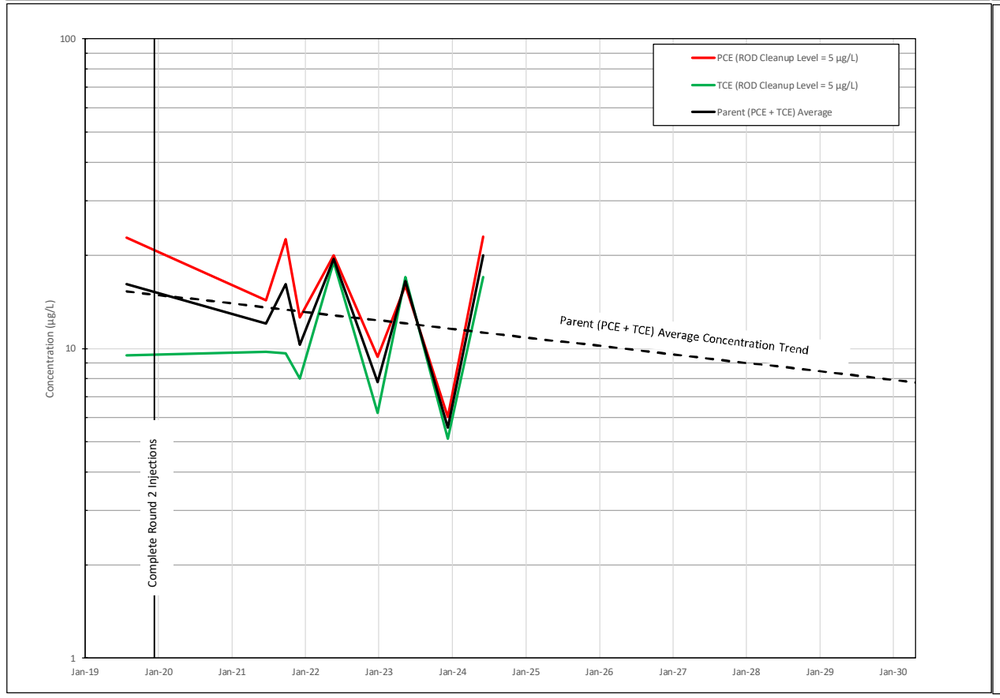
[c] MDH Risk Assessment Advice (RAA). The MDH provides RAA to assist the agencies in evaluating potential health risks to humans from exposures to a chemical. Generally, RAA contains greater uncertainty than HRLs, HRVs, and HBVs because the available information is more limited.

µg/L = microgram(s) per liter
COC = constituent of concern
DCA = dichloroethane
DCE = dichloroethene
ID = identification
NA = not analyzed
ND = non-detect
NS = not specified
PCE = tetrachloroethene
ROD = record of decision
TCA = trichloroethane
TCE = trichloroethene
(D) = field duplicate

Laboratory Qualifiers (Q):
J = result is less than the RL, but greater than or equal to the MDL and the concentration is an approximate value
H = Sample was prepped and analyzed beyond the specified hlod time
B = For organic analyses, the parmeter was detected in the laboratory lank, as well as the sample
U = Less then the indicated laboratory RL
Shaded = Results exceeds the ROD cleanup level or MDH groundwater HRL







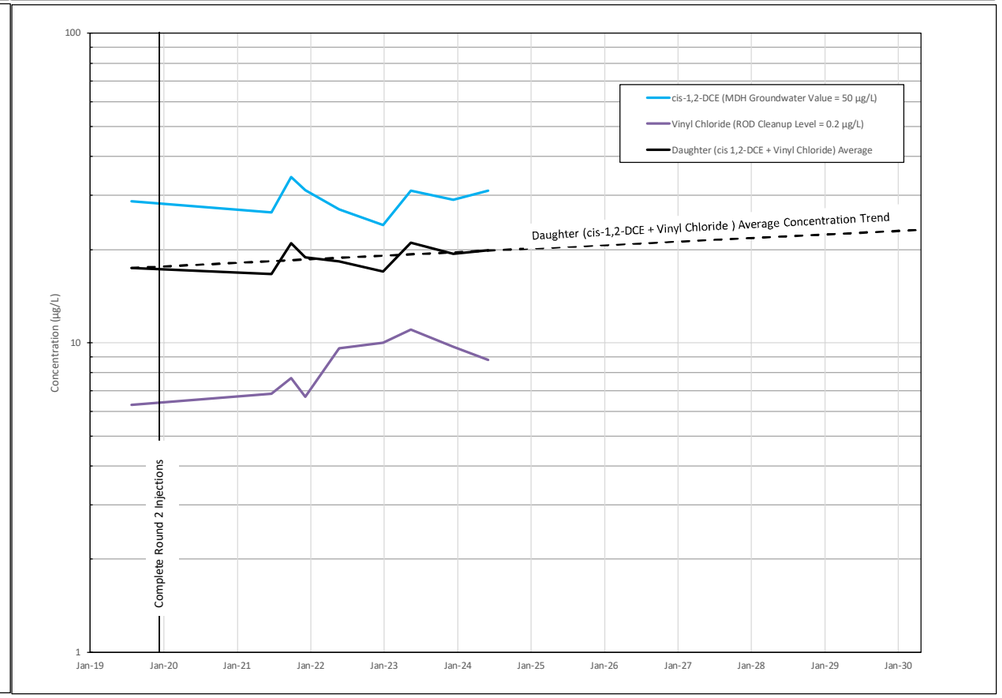
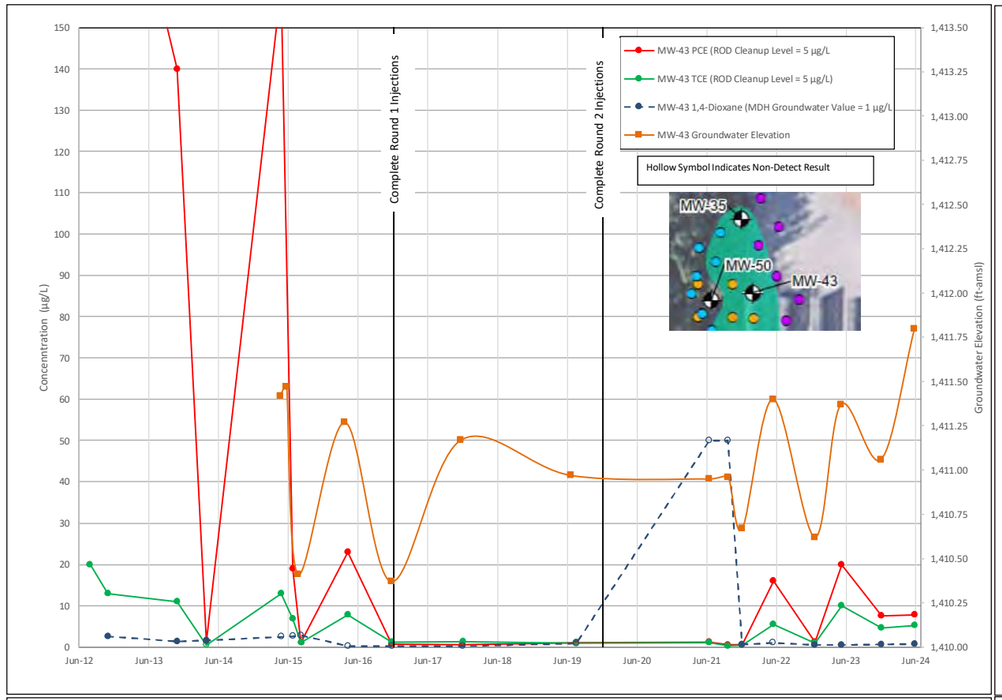
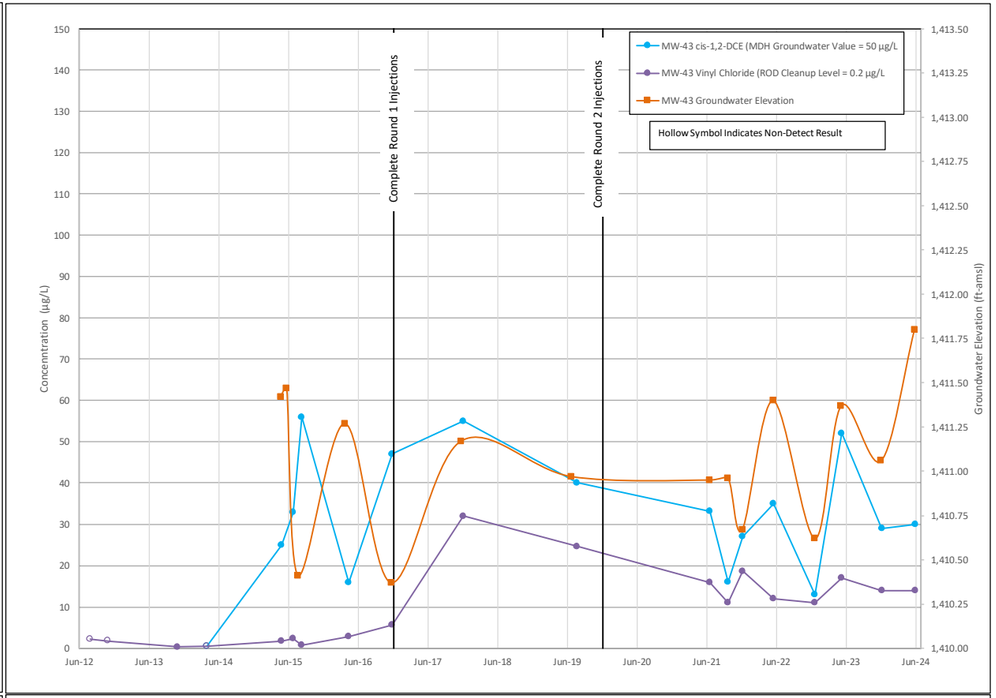
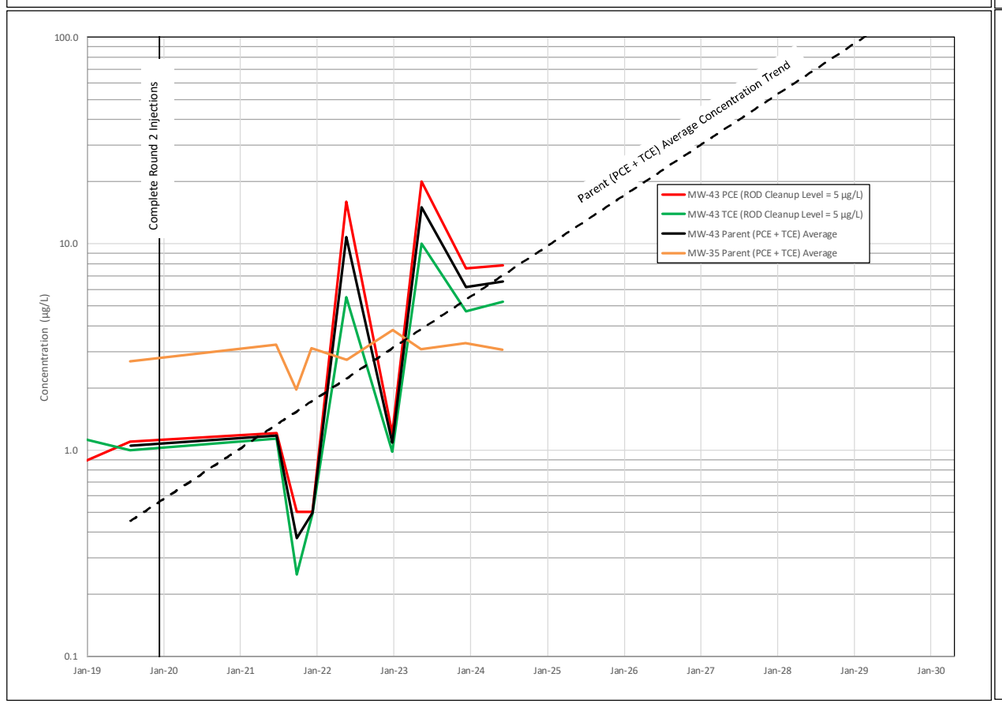


Figure 3-3
GW3-D COC and COI Concentration Trends
Duluth Air National Guard
Duluth, MN







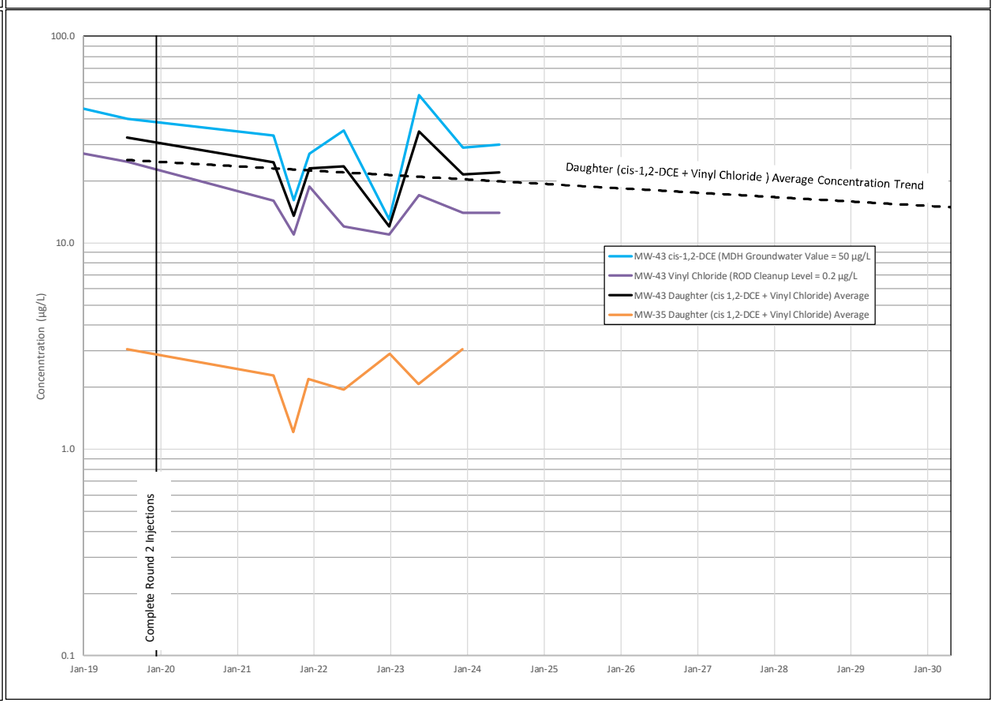
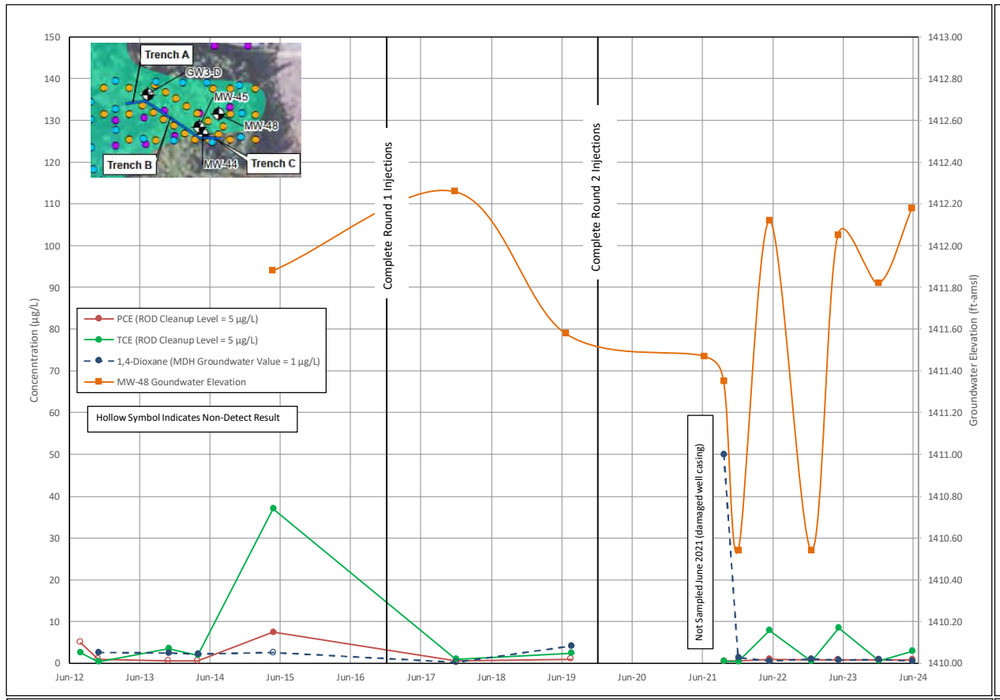
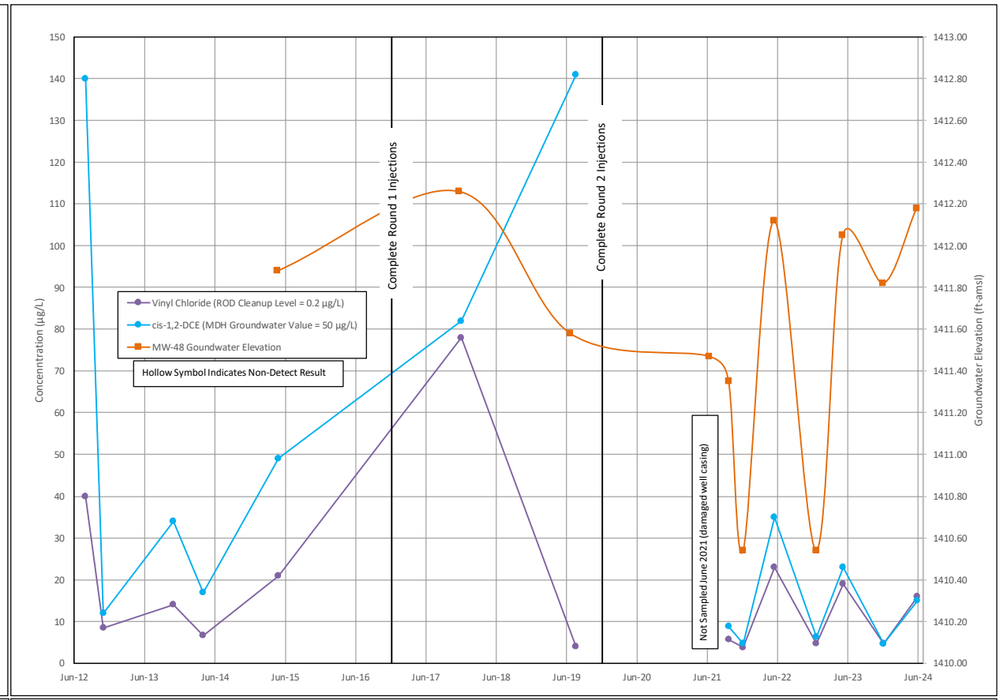
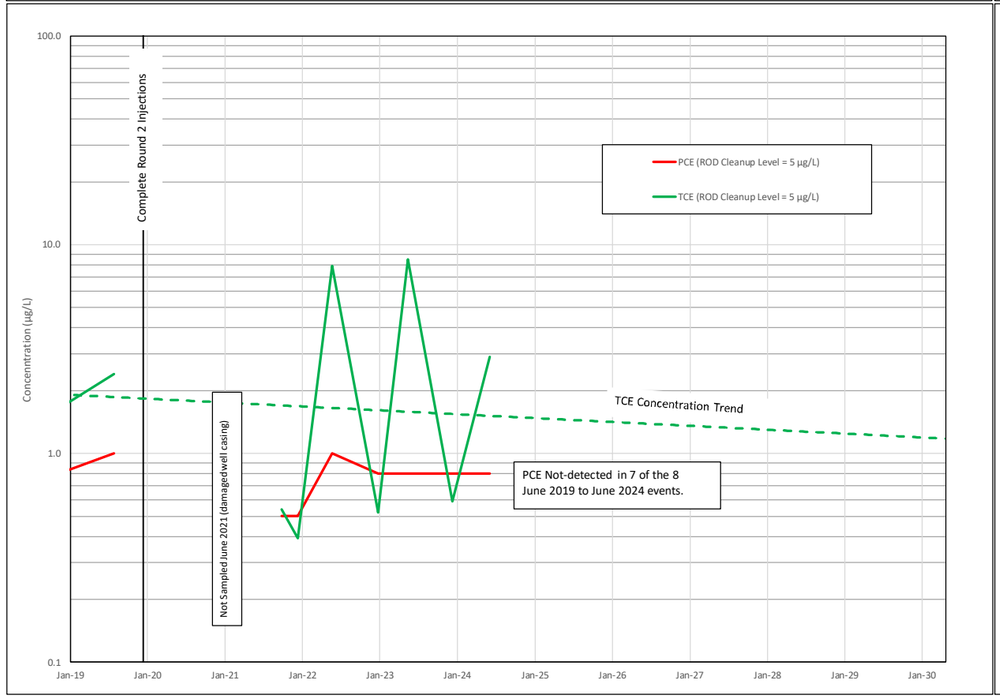


Figure 3-4
MW-43 COC and COI Concentration Trends
Duluth Air National Guard
Duluth, MN







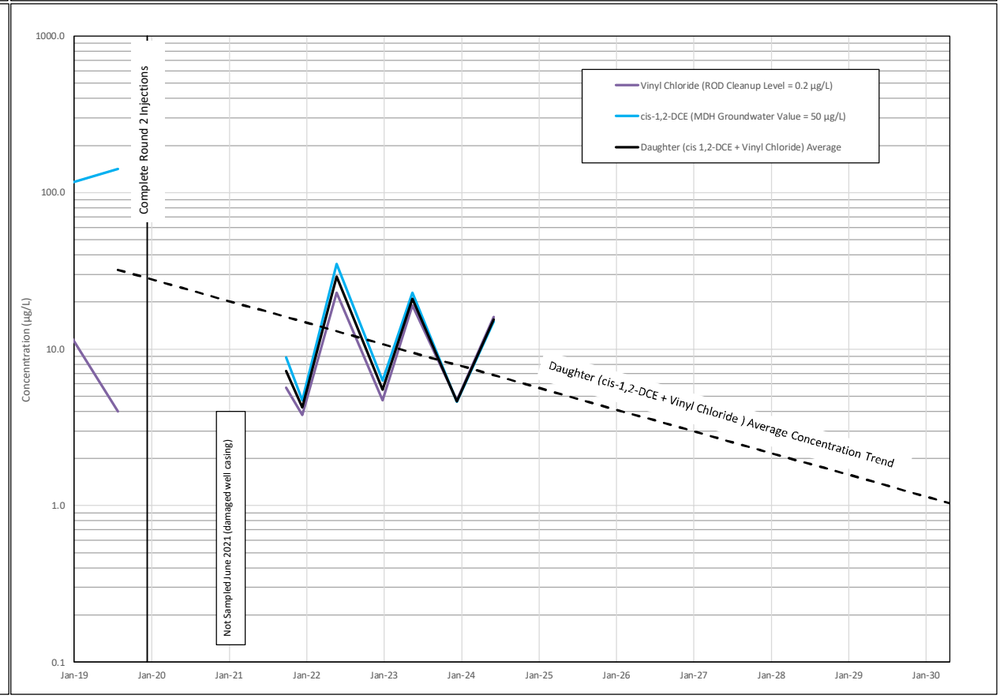
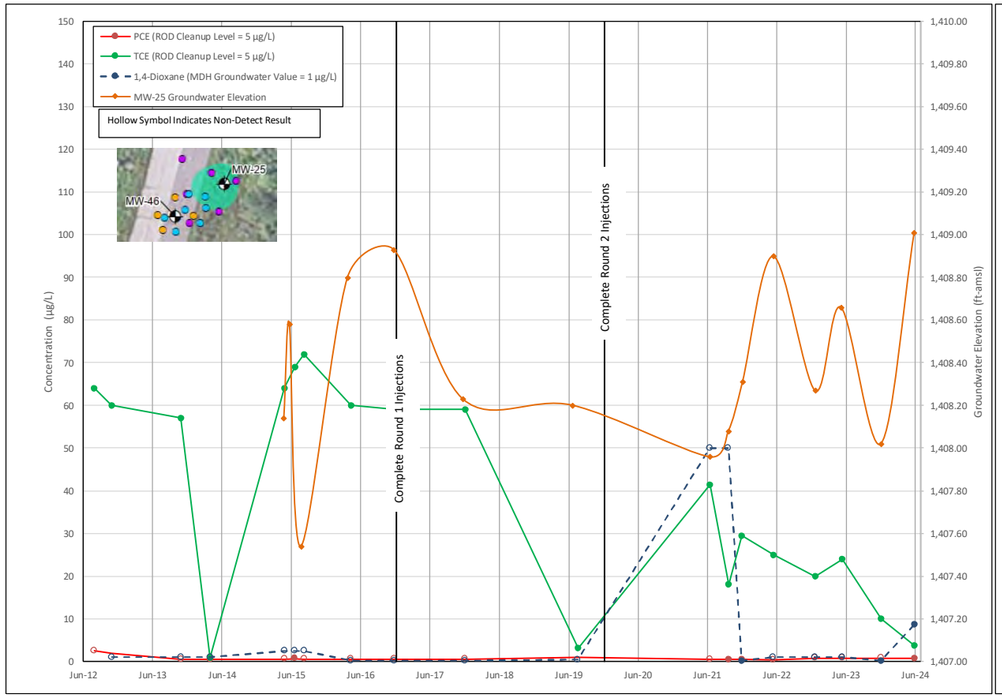
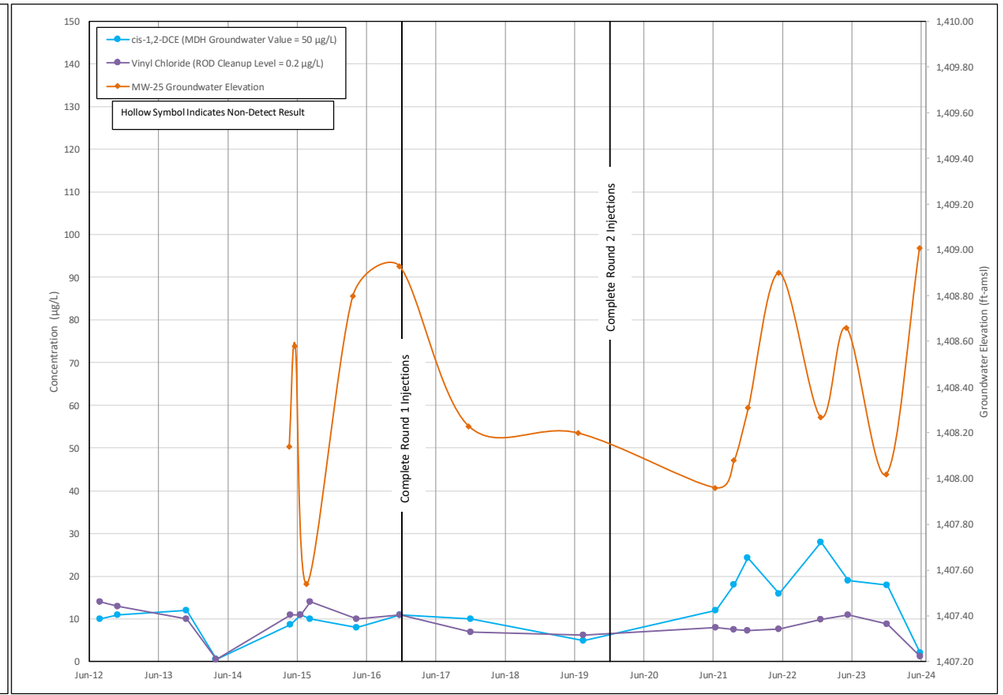
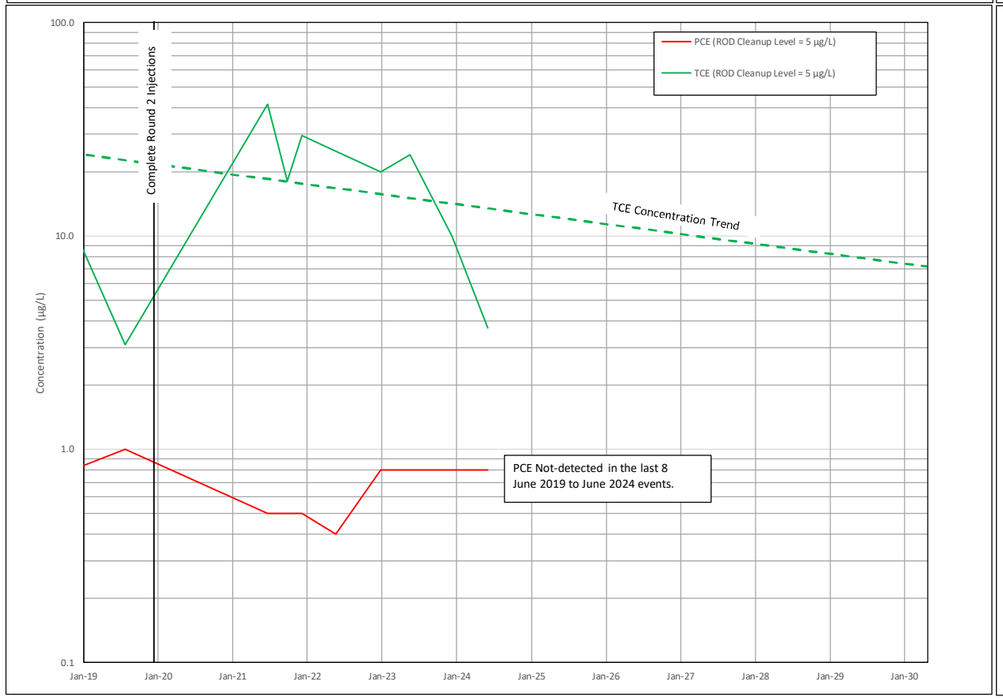


Figure 3-5
MW-48 COC and COI Concentration Trends
Duluth Air National Guard
Duluth, MN







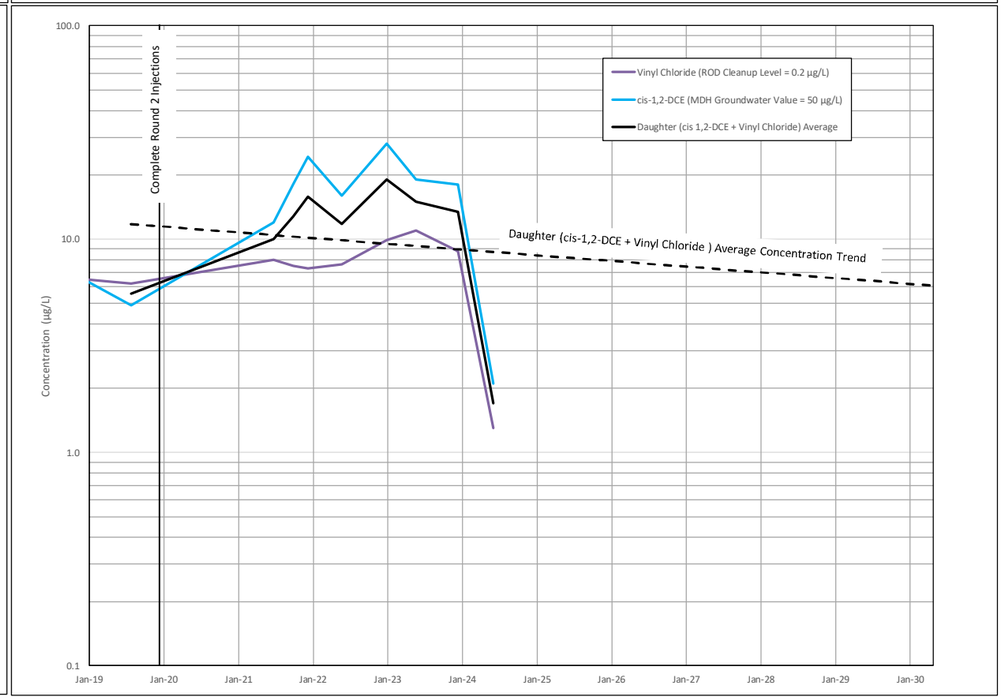


Figure 3-6
MW-25 COC and COI Concentration Trends
Duluth Air National Guard
Duluth, MN

APPENDIX E – SITE 4 SUPPORTING INFORMATION

Table 1
Groundwater Elevations
IRP Site 4, Duluth ANGB

Well ID	[1]Well Casing Elevation (feet amsl)	Depth to Water (feet)	Groundwater Elevation (feet amsl)	Depth to Water (feet)	Groundwater Elevation (feet amsl)	Depth to Water (feet)	Groundwater Elevation (feet amsl)	Depth to Water (feet)	Groundwater Elevation (feet amsl)
		June 2020		**October 2019**		**November 2020**		**April 2021**	
GW4-DD	1410.13	[2]NM	[3]NA	[2]NM	[3]NA	[2]NM	[3]NA	[2]NM	[3]NA
GW4-EE	1411.85	5.43	1406.42	4.45	1407.40	5.86	1405.99	5.28	1406.57
GW4-FF	1416.30	8.28	1408.02	7.74	1408.56	9.20	1407.10	8.36	1407.94
GW4-GG	1413.03	5.20	1407.83	4.71	1408.32	6.08	1406.95	5.11	1407.92
GW4-HH	1415.92	7.81	1408.11	7.56	1408.36	8.89	1407.03	7.98	1407.94
GW4-II	1417.74	9.55	1408.19	9.24	1408.50	10.50	1407.24	9.59	1408.15
GW4-JJ	1419.89	11.00	1408.89	10.43	1409.46	11.96	1407.93	10.72	1409.17
GW4-KK	1420.94	11.90	1409.04	11.46	1409.48	12.91	1408.03	11.61	1409.33
GW4-LL	1413.14	4.09	1409.05	3.11	1410.03	4.63	1408.51	3.77	1409.37
MW-21	1414.47	7.15	1407.32	6.57	1407.90	7.39	1407.08	6.75	1407.72
MW-24	1413.84	4.84	1409.00	4.28	1409.56	5.60	1408.24	4.70	1409.14
MW-40	1414.03	5.08	1408.95	4.43	1409.60	5.45	1408.58	4.90	1409.13

Created by: JR 4/7/21
Checked by: KF 4/13/2021

Notes:

amsl - above mean sea level
NA - not applicable
NM - not measured
[1]Well Casing Elevations taken from 2015 survey completed by ERM
[2]Depth to water not measured, due to obstruction in well
[3]Groundwater elevation was not calculated

Table 2
Groundwater Field Parameters
IRP Site 4, Duluth ANGB

Groundwater Sample ID	Date	Temperature (ºC)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Well Volume (gallons)	Well Volume Purged (gallons)
Site 4									
GW4-DD	4/7/2021	4.6	7.84	1.345	0.30	-153.6	N/A	0.0	9.0
GW4-EE	4/6/2021	5.4	8.07	1.716	0.62	-18.5	N/A	1.7	6.0
GW4-FF	4/7/2021	6.9	8.48	0.866	0.22	-110.6	N/A	2.7	8.5
GW4-GG	4/6/2021	5.0	7.30	1.003	0.50	23.4	N/A	2.0	6.5
GW4-HH	4/6/2021	7.1	7.44	1.564	0.21	-53.7	6.43	2.6	5.5
GW4-II	4/6/2021	7.1	7.09	5.301	0.30	-1.8	99.7	2.3	5.0
[1]GW4-JJ	4/7/2021	6.6	7.10	1.829	5.01	-54.2	N/A	2.1	4.5
[1]GW4-KK	4/7/2021	7.2	7.43	1.447	1.95	-120.7	N/A	2.1	3.0
GW4-LL	4/6/2021	6.1	6.14	3.674	0.54	11.4	38.4	1.8	6.0
MW-21	4/6/2021	7.3	7.98	0.981	0.22	-20.2	4.31	2.5	5.0
MW-24	4/7/2021	7.4	9.15	1.601	0.17	-159.1	N/A	5.4	17.0
MW-40	4/6/2021	7.2	8.1	690.8	0.39	-153.3	2.34	3.3	7.0

Created by: JR 4/12/21
Checked by: KF 4/13/2021

Notes:

[1] Indicates that sample was collected after monitoring well was purged dry
°C - degrees Celsius
mg/L - milligram per liter
mS/cm - milliSiemens per centimeter
mV - millivolt
N/A: data not available, turbdity meter not functioning properly
NTU - nephelometric turbidity unit
ORP - oxidation reduction potential
- : no value due to detection limit of DO meter

Table 3
Groundwater Analytical Table
IRP Site 4, Duluth ANGB

Monitoring Well ID	CAS #	Units	Minnesota Department of Health (HRL, HBV and/or RAA)	GW4-DD				GW4-EE					
Date Collected				11/11/16	[1]11/11/16	11/4/20	4/7/21	11/13/16	6/10/19	10/15/19	[1]10/15/19	11/4/20	4/6/21
Volatile Organic Compounds													
1,1,2-Trichloroethane	79-00-5	ug/L	3	<0.4 U	<0.4 U	<0.6 U	<0.6 U	<0.4 U	<0.26 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
1,2,4-Trimethylbenzene	95-63-6	ug/L	30	**0.1** J	**0.28** J	<0.6 U	<0.6 U	**0.28** J	<0.2 U	**0.32** J	<0.6 U	**1.2**	**7.8**
1,2-Dibromo 3-Chloropropane	96-12-8	ug/L	NC	<0.8 U	<0.8 U	<0.6 U	<0.6 U	<0.8 U	<0.4 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
1,2-Dichloroethane (EDC)	107-06-2	ug/L	1	<0.15 U	<0.15 U	<0.6 U	<0.6 U	<0.15 U	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
1,2-Dichloropropane	78-87-5	ug/L	5	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.2 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
1,3,5-Trimethylbenzene	108-67-8	ug/L	100	<0.2 U	**0.13** J	<0.6 U	<0.6 U	<0.2 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	**0.63** J
2-Butanone (MEK)	78-93-3	ug/L	4,000	<4 U	<4 U	<6 U	<6 U	<4 U	<2.4 U	<6 U	<6 U	<6 U	<6 U
2-Chlorotoluene	95-49-8	ug/L	NC	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.2 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
2-Hexanone	591-78-6	ug/L	NC	<10 U	<10 U	<6 U	<6 U	<10 U	<4 U	<6 U	<6 U	<6 U	<6 U
4-Chlorotoluene	106-43-4	ug/L	NC	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.2 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
4-Isopropyltoluene	99-87-6	ug/L	NC	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.2 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Acetone	67-64-1	ug/L	4,000	<10 U	<10 U	<10 U	<10 U	<10 U	<5 U	<10 UZ	<10 UZ	<10 U	<10 U
Benzene	71-43-2	ug/L	2	**12**	**13**	<1 U	**0.98** J	<0.1 U	<0.19 U	<1 U	<1 U	<1 U	<1 U
Bromodichloromethane	75-27-4	ug/L	6	<0.3 U	<0.3 U	<0.6 U	<0.6 U	<0.3 U	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Bromomethane	74-83-9	ug/L	10	<0.3 U	<0.3 U	<2 U	<2 U	<0.3 U	<0.5 U	<2 U	<2 U	<2 U	<2 U
Carbon Disulfide	75-15-0	ug/L	700	<0.2 U	<0.2 U	<2 U	<2 U	<0.2 U	<0.5 U	<2 U	<2 U	<2 U	<2 U
Chloroethane	75-00-3	ug/L	NC	<0.2	<0.2 U	<1 U	<1 U	<0.2 U	<0.4 U	<1 U	<1 U	<1 U	<1 U
Chloroform	67-66-3	ug/L	20	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.2 U	<0.15 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Chloromethane	74-87-3	ug/L	NC	<0.2 U	**0.11** J	<1 U	<1 U	<0.2 U	<0.4 U	<1 U	<1 U	<1 U	<1 U
cis-1,2-Dichloroethene	156-59-2	ug/L	6	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.2 U	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Dichloromethane (Methylene Chloride)	75-09-2	ug/L	5	<0.2 U	<0.2 U	<1 U	<1 U	<0.2 U	<0.4 U	<1 U	<1 U	<1 U	<1 U
Ethylbenzene	100-41-4	ug/L	40	<0.1 U	<0.1 U	<0.6 U	<0.6 U	**0.06** J	<0.22 U	<0.6 U	<0.6 U	<0.6 U	**0.84** J
Isopropylbenzene	98-82-8	ug/L	300	<0.2 U	**0.08** J	<0.6 U	<0.6 U	<0.2 U	<0.18 U	<0.6 U	<0.6 U	<0.6 U	**0.48** J
m,p-Xylenes	179601-23-1	ug/L	300	**1.9**	**2.2** B	<1.2 U	<1.2 U	**0.18** BJ	<0.5 U	<1.2 U	<1.2 U	<1.2 U	**2**
Methyl tert-Butyl Ether	1634-04-4	ug/L	60	**0.19** J	**0.19** J	<0.6 U	<0.6 U	<0.3 U	<0.29 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Naphthalene	91-20-3	ug/L	70	<0.3 U	<0.3 U	<0.6 U	<0.6 U	<0.3 U	<0.4 U	<0.6 U	<0.6 U	<0.6 U	**0.40** J
n-Butylbenzene	104-51-8	ug/L	NC	<0.1 U	<0.1 U	<0.6 U	<0.6 U	<0.1 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
n-Propylbenzene	103-65-1	ug/L	NC	<0.2 U	<0.2 U	<0.6 U	<0.6 U	**0.06** J	<0.2 U	<0.6 U	<0.6 U	<0.6 U	**0.57** J
o-Xylene	95-47-6	ug/L	300	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.2 U	<0.24 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
sec-Butylbenzene	135-98-8	ug/L	NC	<0.1 U	<0.1 U	<1 U	<1 U	<0.1 U	<0.21 U	<1 U	<1 U	<1 U	<1 U
Styrene	100-42-5	ug/L	NC	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
tert-Butylbenzene	98-06-6	ug/L	NC	<0.2 U	<0.2 U	<1 U	<1 U	<0.2 U	<0.2 U	<1 U	<1 U	<1 U	<1 U
Toluene	108-88-3	ug/L	70	**0.07** J	**0.08** J	<0.6 U	<0.6 U	<0.1 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Total Xylenes	1330-20-7	ug/L	300	**1.9** U	**2.2** B	<1.2 U	<1.2 U	**0.18** BJ	<0.2 U	<1.2 U	<1.2 U	<1.2 U	**2**
Trichloroethene (TCE)	79-01-6	ug/L	0.4	<0.1 U	<0.1 U	<0.6 U	<0.6 U	<0.1 U	<0.21 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Vinyl Chloride	75-01-4	ug/L	0.2	<0.1 U	<0.1 U	<0.3 U	<0.3 U	<0.1 U	<0.18 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U
Total Phase Hydrocarbons													
Gasoline Range Organics (GRO)		ug/L	NC	**58** J	<40 U	NS	<40 U	<40 U	NS	<40 U	<40 U	NS	**30** J
Diesel Range Organics (DRO)		ug/L	NC	**280**	**330**	NS	**170** J	**37** J	NS	<100 U	<110 U	NS	**170** J
Optimization Parameters													
Alkalinity		mg/L	NC	**556**	NS	NS	NS	NS	NS	NS	NS	NS	NS
BOD 5-Day		mg/L	NC	<4.0 U	NS	NS	NS	NS	NS	NS	NS	NS	NS
COD		mg/L	NC	**21.8**	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dissolved Iron		ug/L	NC	**6620**	NS	NS	NS	NS	NS	NS	NS	NS	NS
Total Iron		ug/L	NC	**8860**	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dissolved Manganese		ug/L	NC	**254**	NS	NS	NS	NS	NS	NS	NS	NS	NS
Total Manganese		ug/L	NC	**306**	NS	NS	NS	NS	NS	NS	NS	NS	NS
Nitrate Nitrogen		mg/L	NC	<0.04 U	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfate		mg/L	NC	**1.27**	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methane		mg/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Total Organic Carbon		mg/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dissolved Organic Carbon		mg/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfide		mg/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Created by: JR 4/20/2021
Checked by: ZM 4/22/21

Monitoring Well ID	CAS #	Units	Minnesota Department of Health (HRL, HBV and/or RAA)	GW4-FF						GW4-GG					
Date Collected				11/13/16	6/10/19	10/15/19	11/4/20	[1]11/04/20	4/7/21	11/11/16	1/18/18	3/21/18	6/10/19	10/14/19 11/4/20	4/6/21
Volatile Organic Compounds															
1,1,2-Trichloroethane	79-00-5	ug/L	3	<0.4 U	<0.26 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.4 U	NS	NS	<0.26 U	<0.6 U	<0.6 U	<0.6 U
1,2,4-Trimethylbenzene	95-63-6	ug/L	30	<0.2 U	<0.2 U	<0.6 UY	<0.6 U	<0.6 U	<0.6 U	**0.19** J	NS	NS	<0.2 U	<0.6 U	<0.6 U	<0.6 U
1,2-Dibromo 3-Chloropropane	96-12-8	ug/L	NC	<0.8 U	<0.4 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.8 U	NS	NS	<0.4 U	<0.6 U	<0.6 U	<0.6 U
1,2-Dichloroethane (EDC)	107-06-2	ug/L	1	<0.15 U	<0.3 U	<0.6 UY	<0.6 U	<0.6 U	<0.6 U	<0.15 U	NS	NS	<0.3 U	<0.6 U	<0.6 U	<0.6 U
1,2-Dichloropropane	78-87-5	ug/L	5	<0.2 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	NS	NS	<0.22 U	<0.6 U	<0.6 U	<0.6 U
1,3,5-Trimethylbenzene	108-67-8	ug/L	100	<0.2 U	<0.23 U	<0.6 UY	<0.6 U	<0.6 U	<0.6 U	<0.2 U	NS	NS	<0.23 U	<0.6 U	<0.6 U	<0.6 U
2-Butanone (MEK)	78-93-3	ug/L	4,000	<4 U	<2.4 U	<6 U	<6 U	<6 U	<6 U	<4 U	NS	NS	<2.4 U	<6 U	<6 U	<6 U
2-Chlorotoluene	95-49-8	ug/L	NC	<0.2 U	<0.22 U	<0.6 UY	<0.6 U	<0.6 U	<0.6 U	<0.2 U	NS	NS	<0.22 U	<0.6 U	<0.6 U	<0.6 U
2-Hexanone	591-78-6	ug/L	NC	<10 U	<4 U	<6 U	<6 U	<6 U	<6 U	<10 U	NS	NS	<4 U	<6 U	<6 U	<6 U
4-Chlorotoluene	106-43-4	ug/L	NC	<0.2 U	<0.22 U	<0.6 UY	<0.6 U	<0.6 U	<0.6 U	<0.2 U	NS	NS	<0.22 U	<0.6 U	<0.6 U	<0.6 U
4-Isopropyltoluene	99-87-6	ug/L	NC	<0.2 U	<0.23 U	<0.6 UY	<0.6 U	<0.6 U	<0.6 U	<0.2 U	NS	NS	<0.23 U	<0.6 U	<0.6 U	<0.6 U
Acetone	67-64-1	ug/L	4,000	<10 U	<5 U	<10 UZ	<10 U	<10 U	<10 U	**4.2** J	NS	NS	<5 U	<10 UZ	<10 U	<10 U
Benzene	71-43-2	ug/L	2	<0.1 U	<0.19 U	<1 UY	<1 U	<1 U	<1 U	**0.29** J	NS	NS	<0.19 U	<1 U	<1 U	<1 U
Bromodichloromethane	75-27-4	ug/L	6	<0.3 U	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.3 U	NS	NS	<0.2 U	<0.6 U	<0.6 U	<0.6 U
Bromomethane	74-83-9	ug/L	10	<0.3 U	<0.5 U	<2 UY	<2 U	<2 U	<2 U	<0.3 U	NS	NS	<0.5 U	<2 U	<2 U	<2 U
Carbon Disulfide	75-15-0	ug/L	700	<0.2 U	<0.5 U	<2 UY	<2 U	<2 U	<2 U	**0.12** J	NS	NS	<0.5 U	<2 U	<2 U	<2 U
Chloroethane	75-00-3	ug/L	NC	<0.2 U	<0.4 U	<1 U	<1 U	<1 U	<1 U	<0.2 U	NS	NS	<0.4 U	<1 U	<1 U	<1 U
Chloroform	67-66-3	ug/L	20	<0.2 U	<0.15 U	<0.6 UY	<0.6 U	<0.6 U	<0.6 U	<0.2 U	NS	NS	<0.15 U	<0.6 U	<0.6 U	<0.6 U
Chloromethane	74-87-3	ug/L	NC	<0.2 U	<0.4 U	<1 U	<1 U	<1 U	<1 U	<0.2 U	NS	NS	<0.4 U	<1 U	<1 U	<1 U
cis-1,2-Dichloroethene	156-59-2	ug/L	6	<0.2 U	<0.25 U	<0.6 UY	<0.6 U	<0.6 U	<0.6 U	<0.2 U	NS	NS	<0.25 U	<0.6 U	<0.6 U	<0.6 U
Dichloromethane (Methylene Chloride)	75-09-2	ug/L	5	<0.2 U	<0.4 U	<1 U	<1 U	<1 U	<1 U	<0.2 U	NS	NS	<0.4 U	<1 U	<1 U	<1 U
Ethylbenzene	100-41-4	ug/L	40	<0.1 U	<0.22 U	<0.6 UY	<0.6 U	<0.6 U	<0.6 U	**0.05** J	NS	NS	<0.22 U	<0.6 U	<0.6 U	<0.6 U
Isopropylbenzene	98-82-8	ug/L	300	<0.2 U	<0.18 U	<0.6 UY	<0.6 U	<0.6 U	<0.6 U	<0.2 U	NS	NS	<0.18 U	<0.6 U	<0.6 U	<0.6 U
m,p-Xylenes	179601-23-1	ug/L	300	<0.2 U	<0.5 U	<1.2 UY	<1.2 U	<1.2 U	<1.2 U	**0.31** J	NS	NS	<0.5 U	<1.2 U	<1.2 U	<1.2 U
Methyl tert-Butyl Ether	1634-04-4	ug/L	60	<0.3 U	<0.29 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.3 U	NS	NS	<0.29 U	<0.6 U	<0.6 U	<0.6 U
Naphthalene	91-20-3	ug/L	70	<0.3 U	<0.4 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.3 U	NS	NS	<0.4 U	<0.6 U	<0.6 U	<0.6 U
n-Butylbenzene	104-51-8	ug/L	NC	<0.1 U	<0.23 U	<0.6 UY	<0.6 U	<0.6 U	<0.6 U	<0.1 U	NS	NS	<0.23 U	<0.6 U	<0.6 U	<0.6 U
n-Propylbenzene	103-65-1	ug/L	NC	<0.2 U	<0.2 U	<0.6 UY	<0.6 U	<0.6 U	<0.6 U	<0.2 U	NS	NS	<0.2 U	<0.6 U	<0.6 U	<0.6 U
o-Xylene	95-47-6	ug/L	300	<0.2 U	<0.24 U	<0.6 UY	<0.6 U	<0.6 U	<0.6 U	**0.08** J	NS	NS	<0.24 U	<0.6 U	<0.6 U	<0.6 U
sec-Butylbenzene	135-98-8	ug/L	NC	<0.1 U	<0.21 U	<1 UY	<1 U	<1 U	<1 U	<0.1 U	NS	NS	<0.21 U	<1 U	<1 U	<1 U
Styrene	100-42-5	ug/L	NC	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	NS	NS	<0.2 U	<0.6 U	<0.6 U	<0.6 U
tert-Butylbenzene	98-06-6	ug/L	NC	<0.2 U	<0.2 U	<1 UY	<1 U	<1 U	<1 U	<0.2 U	NS	NS	<0.2 U	<1 U	<1 U	<1 U
Toluene	108-88-3	ug/L	70	<0.1 U	<0.22 U	<0.6 UY	<0.6 U	<0.6 U	<0.6 U	**0.07** J	NS	NS	<0.22 U	<0.6 U	<0.6 U	<0.6 U
Total Xylenes	1330-20-7	ug/L	300	<0.2 U	<0.2 U	<1.2 U	<1.2 U	<1.2 U	<1.2	**0.39** J	NS	NS	<0.2 U	<1.2 U	<1.2 U	<1.2 U
Trichloroethene (TCE)	79-01-6	ug/L	0.4	<0.1 U	<0.21 U	<0.6 UY	<0.6 U	<0.6 U	<0.6 U	<0.1 U	NS	NS	<0.21 U	<0.6 U	<0.6 U	<0.6 U
Vinyl Chloride	75-01-4	ug/L	0.2	<0.1 U	<0.18 U	<0.3 UY	<0.3 U	<0.3 U	<0.3 U	<0.1 U	NS	NS	<0.18 U	<0.3 U	<0.3 U	<0.3 U
Total Phase Hydrocarbons															
Gasoline Range Organics (GRO)		ug/L	NC	<40 U	NS	<40 UM	NS	NS	**36** J	<40 U	NS	**400** U	NS	<40 U	NS	<40 U
Diesel Range Organics (DRO)		ug/L	NC	**30** J	NS	<120 U	NS	NS	<100 U	**1400**	NS	**870**	NS	**52** J	NS	**99** J
Optimization Parameters															
Alkalinity		mg/L	NC	NS	NS	NS	NS	NS	NS	**330** M	**330** M	**290**	NS	NS	NS	NS
BOD 5-Day		mg/L	NC	NS	NS	NS	NS	NS	NS	**6** UN	**6** UN	**6.5**	NS	NS	NS	NS
COD		mg/L	NC	NS	NS	NS	NS	NS	NS	**23** JM	**23** JM	**16** J	NS	NS	NS	NS
Dissolved Iron		ug/L	NC	NS	NS	NS	NS	NS	NS	**774**	**774**	**689**	NS	NS	NS	NS
Total Iron		ug/L	NC	NS	NS	NS	NS	NS	NS	**3500** M	**3500** M	**2000**	NS	NS	NS	NS
Dissolved Manganese		ug/L	NC	NS	NS	NS	NS	NS	NS	**2110** M	**2110** M	**2040**	NS	NS	NS	NS
Total Manganese		ug/L	NC	NS	NS	NS	NS	NS	NS	**2050** M	**2050** M	**2210**	NS	NS	NS	NS
Nitrate Nitrogen		mg/L	NC	NS	NS	NS	NS	NS	NS	<0.04 U	**0.15** UM	**0.15** U	NS	NS	NS	NS
Sulfate		mg/L	NC	NS	NS	NS	NS	NS	NS	**89**	**47** M	**41** M	NS	NS	NS	NS
Methane		mg/L	NC	NS	NS	NS	NS	NS	NS	NS	**110** MY	**190**	NS	NS	NS	NS
Total Organic Carbon		mg/L	NC	NS	NS	NS	NS	NS	NS	NS	**13** M	**10**	NS	NS	NS	NS
Dissolved Organic Carbon		mg/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	**9.1**	NS	NS	NS	NS
Sulfide		mg/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	**1** U	NS	NS	NS	NS

Created by: JR 4/20/2021
Checked by: ZM 4/22/21

Table 3
Groundwater Analytical Table
IRP Site 4, Duluth ANGB

Monitoring Well ID / Date Collected	CAS #	Units	Minnesota Department of Health (HRL, HBV and/or RAA)	GW4-HH 11/13/16	1/17/18	3/21/18	6/10/19	10/15/19	11/4/20	4/6/21
Volatile Organic Compounds										
1,1,2-Trichloroethane	79-00-5	ug/L	3	<0.8 U	**0.96** J	**0.64** J	<0.26 U	<0.6 U	<0.6 U	<0.6 U
1,2,4-Trimethylbenzene	95-63-6	ug/L	30	**69**	**76**	**35**	**190**	<0.6 U	<0.6 U	**6.9**
1,2-Dibromo 3-Chloropropane	96-12-8	ug/L	NC	<0.8 U	<0.5 U	<0.4 U	<0.4 U	<0.6 U	<0.6 U	<0.6 U
1,2-Dichloroethane (EDC)	107-06-2	ug/L	1	<0.15 U	**1.5**	**0.83** J	**1.7**	**0.24** J	<0.6 U	<0.6 U
1,2-Dichloropropane	78-87-5	ug/L	5	<0.2 U	<0.5 U	<0.22 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U
1,3,5-Trimethylbenzene	108-67-8	ug/L	100	**15**	**36**	**16**	**25**	<0.6 U	<0.6 U	**0.49** J
2-Butanone (MEK)	78-93-3	ug/L	4,000	<4 U	**4.1** J	<2.4 U	<2.4 U	<6 U	<6 U	<6 U
2-Chlorotoluene	95-49-8	ug/L	NC	<0.2 U	<0.5 U	<0.22 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U
2-Hexanone	591-78-6	ug/L	NC	<20 U	<10 U	<4 U	<4 U	<6 U	<6 U	<6 U
4-Chlorotoluene	106-43-4	ug/L	NC	<0.2 U	<0.5 U	<0.22 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U
4-Isopropyltoluene	99-87-6	ug/L	NC	**1.4** J	**2.6**	**1.1**	**3.1**	<0.6 U	<0.6 U	<0.6 U
Acetone	67-64-1	ug/L	4,000	<10 U	**7.4** J	<5 U	<5 U	<10 U	<10 U	<10 U
Benzene	71-43-2	ug/L	2	**55**	**54**	**32**	**59**	**9.1**	**1.3** J	**5.5**
Bromodichloromethane	75-27-4	ug/L	6	<0.3 U	<0.5 U	<0.2 U	<0.2 U	<0.6 U	**0.3** J	**0.41** J
Bromomethane	74-83-9	ug/L	10	<0.3 U	<1 U	<0.5 U	<0.5 U	<2 U	<2 U	<2 U
Carbon Disulfide	75-15-0	ug/L	700	<0.2 U	<1 U	<0.5 U	<0.5 U	<2 U	<2 U	<2 U
Chloroethane	75-00-3	ug/L	NC	<0.2 U	<1 U	<0.4 U	<0.4 U	<1 U	<1 U	<1 U
Chloroform	67-66-3	ug/L	20	<0.2 U	<0.25 U	<0.15 U	<0.15 U	<0.6 U	<0.6 U	<0.6 U
Chloromethane	74-87-3	ug/L	NC	<0.2 U	<1 U	<0.4 U	<0.4 U	<1 U	<1 U	<1 U
cis-1,2-Dichloroethene	156-59-2	ug/L	6	<0.2 U	<0.5 U	<0.25 U	<0.25 U	<0.6 U	<0.6 U	<0.6 U
Dichloromethane (Methylene Chloride)	75-09-2	ug/L	5	<0.2 U	<1 U	<0.4 UZ	<0.4 U	<1 U	<1 U	<1 U
Ethylbenzene	100-41-4	ug/L	40	**17** D	**11**	**0.64** J	**25**	<0.6 U	<0.6 U	**0.35** J
Isopropylbenzene	98-82-8	ug/L	300	**8.4** D	**7.9**	**3.2**	**19**	<0.6 U	<0.6 U	**0.85** J
m,p-Xylenes	179601-23-1	ug/L	300	**20** D	**19**	**0.98** J	**12**	<1.2 U	<1.2 U	<1.2 U
Methyl tert-Butyl Ether	1634-04-4	ug/L	60	<0.3 U	<0.5 U	<0.29 U	<0.29 U	<0.6 U	<0.6 U	<0.6 U
Naphthalene	91-20-3	ug/L	70	**2.9**	**3.6**	**1.3** J	**11**	<0.6 U	<0.6 U	**0.32** J
n-Butylbenzene	104-51-8	ug/L	NC	<2.6 U	**3.9**	<0.23 U	**5.4**	<0.6 U	<0.6 U	<0.6 U
n-Propylbenzene	103-65-1	ug/L	NC	**10**	**6.1**	**1.1**	**17**	<0.6 U	<0.6 U	**0.58** J
o-Xylene	95-47-6	ug/L	300	<0.4 U	<0.5 U	<0.24 U	<0.24 U	<0.6 U	<0.6 U	<0.6 U
sec-Butylbenzene	135-98-8	ug/L	NC	**4.1**	**3.5**	**2.4**	**6.4**	<1 U	<1 U	<1 U
Styrene	100-42-5	ug/L	NC	<0.4 U	<0.5 U	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.6 U
tert-Butylbenzene	98-06-6	ug/L	NC	**0.55** J	**0.51** J	**0.41** J	**0.67** J	**0.42** J	<1 U	<1 U
Toluene	108-88-3	ug/L	70	**0.1** J	<0.5 U	<0.22 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U
Total Xylenes	1330-20-7	ug/L	300	**20** D	**19**	**0.98**	**12**	<1.2 U	<1.2 U	<1.2 U
Trichloroethene (TCE)	79-01-6	ug/L	0.4	<0.1 U	<0.5 U	<0.21 U	<0.21 U	<0.6 U	<0.6 U	<0.6 U
Vinyl Chloride	75-01-4	ug/L	0.2	<0.1 U	<0.5 U	<0.18 U	<0.18 U	<0.3 U	<0.3 U	<0.3 U
Total Phase Hydrocarbons										
Gasoline Range Organics (GRO)		ug/L	NC	**500** L	NS	NS	NS	**160**	NS	**150**
Diesel Range Organics (DRO)		ug/L	NC	**1000**	NS	NS	NS	**1200**	NS	**850**
Optimization Parameters										
Alkalinity		mg/L	NC	NS	NS	NS	NS	NS	NS	NS
BOD 5-Day		mg/L	NC	NS	NS	NS	NS	NS	NS	NS
COD		mg/L	NC	NS	NS	NS	NS	NS	NS	NS
Dissolved Iron		ug/L	NC	NS	NS	NS	NS	NS	NS	NS
Total Iron		ug/L	NC	NS	NS	NS	NS	NS	NS	NS
Dissolved Manganese		ug/L	NC	NS	NS	NS	NS	NS	NS	NS
Total Manganese		ug/L	NC	NS	NS	NS	NS	NS	NS	NS
Nitrate Nitrogen		mg/L	NC	NS	NS	NS	NS	NS	NS	NS
Sulfate		mg/L	NC	NS	NS	NS	NS	NS	NS	NS
Methane		mg/L	NC	NS	NS	NS	NS	NS	NS	NS
Total Organic Carbon		mg/L	NC	NS	NS	NS	NS	NS	NS	NS
Dissolved Organic Carbon		mg/L	NC	NS	NS	NS	NS	NS	NS	NS
Sulfide		mg/L	NC	NS	NS	NS	NS	NS	NS	NS

Created by: JR 4/20/2021
Checked by: ZM 4/22/21

Table 3
Groundwater Analytical Table
IRP Site 4, Duluth ANGB

Monitoring Well ID / Date Collected	CAS #	Units	Minnesota Department of Health (HRL, HBV and/or RAA)	GW4-II											
				11/11/16	1/17/18	[1]3/21/18	3/21/18	6/10/19	[2]10/15/19	[2]11/3/20	4/6/21
Volatile Organic Compounds											
1,1,2-Trichloroethane	79-00-5	ug/L	3	<20 U	<10 U	<0.26 UT	<0.26 UT	<52 U	<120 UT	<120 U	<120 U
1,2,4-Trimethylbenzene	95-63-6	ug/L	30	**170** D	**36**	**78** J	**75** J	**160** J	**120** JT	**120** J	**110** J
1,2-Dibromo 3-Chloropropane	96-12-8	ug/L	NC	<40 U	<10 U	<0.4 UT	<0.4 UT	<80 U	<120 UT	<120 U	<120 U
1,2-Dichloroethane (EDC)	107-06-2	ug/L	1	<7.5 U	<10 U	**5** T	**5** T	<60 U	<120 UT	<120 U	<120 U
1,2-Dichloropropane	78-87-5	ug/L	5	<10 U	<10 U	<0.22 UT	**0.59** JT	<44 U	<120 UT	<120 U	<120 U
1,3,5-Trimethylbenzene	108-67-8	ug/L	100	**51** JD	<10 U	**17** T	**19** T	**50** J	<120 UT	<120 U	<120 U
2-Butanone (MEK)	78-93-3	ug/L	4,000	<200 U	**250**	**220** T	**220** T	<480 U	<1200 UT	<1200 U	<1200 U
2-Chlorotoluene	95-49-8	ug/L	NC	<10 U	<10 U	<0.22 UT	**6.3** T	<44 U	<120 UT	<120 U	<120 U
2-Hexanone	591-78-6	ug/L	NC	<500 U	<200 U	<4 UT	**7.3** JT	<800 U	<1200 UT	<1200 U	<1200 U
4-Chlorotoluene	106-43-4	ug/L	NC	<10 U	<10 U	<0.22 UT	**2.2** T	<44 U	<120 UT	<120 U	<120 U
4-Isopropyltoluene	99-87-6	ug/L	NC	<10 U	<10 U	**2.7** T	**2.9** T	<46 U	<120 UT	<120 U	<120 U
Acetone	67-64-1	ug/L	4,000	<500 U	**1400**	**800**	**760** T	<1000 U	<2000 UZT	<2000 U	<2000 U
Benzene	71-43-2	ug/L	2	**1100** D	**49**	**190** J	**180** J	**97** J	**160** JT	**290** J	**240** J
Bromodichloromethane	75-27-4	ug/L	6	<15 U	<10 U	<0.2 UT	<0.2 UT	<40 U	<120 UT	<120 U	<120 U
Bromomethane	74-83-9	ug/L	10	<15 U	<20 U	**4.2** T	**4.4** T	<100 U	<400 UT	<400 U	<400 U
Carbon Disulfide	75-15-0	ug/L	700	<10 U	**27** J	**31** T	**29** T	<100 U	<400 UT	<400 U	<400 U
Chloroethane	75-00-3	ug/L	NC	<10 U	<20 U	**0.48** JT	**0.41** JT	<80 U	<200 UT	<200 U	<200 U
Chloroform	67-66-3	ug/L	20	**4** JD	<5 U	**0.4** JT	**0.38** JT	<30 U	<120 UT	<120 U	<120 U
Chloromethane	74-87-3	ug/L	NC	<10 U	**12** J	**10** T	**9.3** T	<80 U	<200 UT	<200 U	<200 U
cis-1,2-Dichloroethene	156-59-2	ug/L	6	<10 U	<10 U	<0.25 UT	<0.25 UT	<50 U	<120 UT	<120 U	<120 U
Dichloromethane (Methylene Chloride)	75-09-2	ug/L	5	**12** JD	<20 U	**1** UZT	**1** UZT	<80 U	<200 UT	<200 U	<200 U
Ethylbenzene	100-41-4	ug/L	40	**160** D	**17** J	**31** T	**31** T	**140** J	**92** JT	**100** J	<120 U
Isopropylbenzene	98-82-8	ug/L	300	**25** JD	<10 U	**10** T	**11** T	<36 U	<120 UT	<120 U	<120 U
m,p-Xylenes	179601-23-1	ug/L	300	**1300** D	**70**	**100** J	**150** T	**230** J	<240 UT	<240 U	<240 U
Methyl tert-Butyl Ether	1634-04-4	ug/L	60	<15 U	<10 U	<0.29 UT	<0.29 UT	<58 U	<120 UT	<120 U	<120 U
Naphthalene	91-20-3	ug/L	70	**15000** D	**3000**	**9000**	**9200**	**5400**	**5800** T	**6200**	**5000**
n-Butylbenzene	104-51-8	ug/L	NC	**3** JD	<10 U	<0.23 UT	**1.5** T	<46 U	<120 UT	<120 U	<120 U
n-Propylbenzene	103-65-1	ug/L	NC	**18** JD	<10 U	**8.7** T	**9.7** T	<40 U	<120 UT	<120 U	<120 U
o-Xylene	95-47-6	ug/L	300	**110** D	**15** J	**23** T	**22** T	**80** J	**53** JT	<120 U	<120 U
sec-Butylbenzene	135-98-8	ug/L	NC	<5 U	<10 U	**1.3** T	**1.6** T	<42 U	<200 UT	<200 U	<200 U
Styrene	100-42-5	ug/L	NC	**8** JD	<10 U	<0.2 UT	**0.88** JT	<40 U	<120 UT	<120 U	<120 U
tert-Butylbenzene	98-06-6	ug/L	NC	<10 U	<10 U	<0.2 UT	<0.2 UT	<40 U	<200 UT	<200 U	<200 U
Toluene	108-88-3	ug/L	70	**100** D	**9.2** J	**11** T	**12** T	<44 U	<120 UT	<120 U	<120 U
Total Xylenes	1330-20-7	ug/L	300	**1410** D	**85**	**123**	**172**	**310**	**53** JT	<240 U	<240 U
Trichloroethene (TCE)	79-01-6	ug/L	0.4	<5 U	<10 U	<0.21 UT	<0.21 UT	**74** J	<120 UT	<120 U	<120 U
Vinyl Chloride	75-01-4	ug/L	0.2	<5 U	<10 U	**0.26** JT	**0.23** JT	<0.18 U	<60 UT	<60 U	<60 U
Total Phase Hydrocarbons											
Gasoline Range Organics (GRO)		ug/L	NC	**13000** L	NS	**5200**	**8300**	NS	**5400** LT	NS	**4400**
Diesel Range Organics (DRO)		ug/L	NC	**32000** D	NS	**10000**	**9400**	NS	**3100**	NS	**11000**
Optimization Parameters											
Alkalinity		mg/L	NC	**750**	**1300**	NS	**1400**	NS	NS	NS	NS
BOD 5-Day		mg/L	NC	**93**	<8 U	NS	**190**	NS	NS	NS	NS
COD		mg/L	NC	**239**	**1200**	NS	**500**	NS	NS	NS	NS
Dissolved Iron		ug/L	NC	**13600**	**1190**	NS	**237**	NS	NS	NS	NS
Total Iron		ug/L	NC	**20000**	**6980**	NS	**4940**	NS	NS	NS	NS
Dissolved Manganese		ug/L	NC	**3010**	**14700**	NS	**9510**	NS	NS	NS	NS
Total Manganese		ug/L	NC	**3080**	**16300**	NS	**10600**	NS	NS	NS	NS
Nitrate Nitrogen		mg/L	NC	<0.04 U	**0.64** H	NS	**0.38** J	NS	NS	NS	NS
Sulfate		mg/L	NC	**0.21**	**20000**	NS	**12000**	NS	NS	NS	NS
Methane		mg/L	NC	NS	**170**	NS	**1100** T	NS	NS	NS	NS
Total Organic Carbon		mg/L	NC	NS	**360**	NS	**180**	NS	NS	NS	NS
Dissolved Organic Carbon		mg/L	NC	NS	NS	NS	**170**	NS	NS	NS	NS
Sulfide		mg/L	NC	NS	NS	NS	**1** U	NS	NS	NS	NS

Created by: JR 4/20/2021
Checked by: ZM 4/22/21

Table 3
Groundwater Analytical Table
IRP Site 4, Duluth ANGB

Monitoring Well ID	CAS #	Units	Minnesota Department of Health (HRL, HBV and/or RAA)	GW4-JJ								
Date Collected				11/11/16	1/17/18	[1]1/17/18	3/20/18	6/10/19	[1]6/10/19	10/15/19	11/5/20	4/7/21
Volatile Organic Compounds												
1,1,2-Trichloroethane	79-00-5	ug/L	3	<0.4 U	**1.5**	**1.1**	**0.56** J	<0.26 U	<0.26 UT	<0.6 U	<0.6 U	**0.46** J
1,2,4-Trimethylbenzene	95-63-6	ug/L	30	**5.4**	**2.5**	**2.5**	**2.9**	**3.8**	**3.3** T	**2.7**	**2.2**	**11.0**
1,2-Dibromo 3-Chloropropane	96-12-8	ug/L	NC	<0.8 U	<0.5 U	<0.5	<0.4 U	<0.4 U	<0.4 UT	<0.6 U	<0.6 U	<0.6 U
1,2-Dichloroethane (EDC)	107-06-2	ug/L	1	<0.15 U	**0.93** J	<0.15	**0.82** J	<0.3 U	<0.3 UT	<0.6 U	<0.6 U	**0.45** J
1,2-Dichloropropane	78-87-5	ug/L	5	<0.2 U	<0.5 U	<0.5 U	<0.22 U	<0.22 U	<0.22 UT	<0.6 U	<0.6 U	<0.6 U
1,3,5-Trimethylbenzene	108-67-8	ug/L	100	**0.68** J	**0.95** J	**0.96** J	**1.2**	**1.8**	**1.6** T	**1.3**	**0.82** J	**7.1**
2-Butanone (MEK)	78-93-3	ug/L	4,000	<4 U	**4.7** J	**5.2**	<2.4 U	<2.4 U	<2.4 UT	<6 U	<6 U	<6 U
2-Chlorotoluene	95-49-8	ug/L	NC	<0.2 U	<0.5 U	<0.5 U	<0.22 U	<0.22 U	<0.22 UT	<0.6 U	<0.6 U	<0.6 U
2-Hexanone	591-78-6	ug/L	NC	<10 U	<10 U	<10 U	<4 U	<4 U	<4 UT	<6 U	<6 U	<6 U
4-Chlorotoluene	106-43-4	ug/L	NC	<0.2 U	<0.5 U	<0.5 U	<0.22 U	<0.22 U	<0.22 UT	<0.6 U	<0.6 U	**0.78** J
4-Isopropyltoluene	99-87-6	ug/L	NC	**0.2** J	**0.33** J	**0.33** J	**0.3** J	<0.23 U	<0.23 UT	<0.6 U	<0.6 U	**0.74** J
Acetone	67-64-1	ug/L	4,000	**3.8** J	**31**	**31**	**13** J	**6.5** J	**8.1** JT	<10 UZ	<10 U	<10 U
Benzene	71-43-2	ug/L	2	**5.1**	**29**	**29**	**28**	**6.3**	**5.4** T	**6.9**	**12**	**17**
Bromodichloromethane	75-27-4	ug/L	6	<0.3 U	<0.5 U	<0.5 U	<0.2 U	**0.46** J	**0.48** JT	<0.6 U	**0.4** J	**0.5** J
Bromomethane	74-83-9	ug/L	10	<0.3 U	**2.1**	**1.7** J	<0.5 U	<0.5 U	<0.5 UT	<2 U	<2 U	<2 U
Carbon Disulfide	75-15-0	ug/L	700	<0.2 U	**5.4**	**5.3**	**1.5** J	<0.5 U	<0.5 UT	<2 U	<2 U	<2 U
Chloroethane	75-00-3	ug/L	NC	<0.2 U	**1** J	**0.95** J	**0.62** J	<0.4 U	<0.4 UT	<1 U	<1 U	<1 U
Chloroform	67-66-3	ug/L	20	**0.45** J	<0.25 U	<0.25 U	<0.15 U	<0.15 U	<0.15 UT	<0.6 U	<0.6 U	<0.6 U
Chloromethane	74-87-3	ug/L	NC	<0.2 U	**2.3**	**2**	<0.4 U	<0.4 U	<0.4 UT	<1 U	<1 U	<1 U
cis-1,2-Dichloroethene	156-59-2	ug/L	6	**0.15** J	**0.89** J	**0.85** J	**1.1**	<0.25 U	<0.25 UT	<0.6 U	<0.6 U	<0.6 U
Dichloromethane (Methylene Chloride)	75-09-2	ug/L	5	<0.2 U	<1 U	<1	**1** UZ	<0.4 U	<0.4 UT	<1 U	<1 U	<1 U
Ethylbenzene	100-41-4	ug/L	40	**4**	**12**	**12**	**7.7**	**4.5**	**3.9** T	**4**	**3.8**	**15.0**
Isopropylbenzene	98-82-8	ug/L	300	**1.4** J	**2.3**	**2.4**	**1.1**	**1.6**	**1.6** T	**1**	**0.91** J	**3.5**
m,p-Xylenes	179601-23-1	ug/L	300	**4**	**9.1**	NS	**6.1**	**2.6**	**2.4** T	**2.4**	**2.4**	**8.0**
Methyl tert-Butyl Ether	1634-04-4	ug/L	60	<0.3 U	<0.5 U	<0.5 U	<0.29 U	<0.29 U	<0.29 UT	<0.6 U	<0.6 U	<0.6 U
Naphthalene	91-20-3	ug/L	70	**0.38** J	**1.1** J	**1.1** J	**0.43** J	<0.4 U	<0.4 UT	<0.6 U	<0.6 U	**0.45** J
n-Butylbenzene	104-51-8	ug/L	NC	**0.25** J	**0.65** J	**0.63** J	<0.23 U	<0.23 U	<0.23 UT	<0.6 U	<0.6 U	<0.6 U
n-Propylbenzene	103-65-1	ug/L	NC	**1.4** J	**3**	**2.9**	**1.4**	**1.8**	**1.7** T	**1.2**	**0.87** J	**4.4**
o-Xylene	95-47-6	ug/L	300	**0.73**	**0.42** J	**0.36** J	<0.24 U	<0.24 U	<0.24 UT	<0.6 U	<0.6 U	<0.6 U
sec-Butylbenzene	135-98-8	ug/L	NC	**2.8**	**1.3**	**1.3**	**0.82** J	**1.5**	**1.3** T	**0.98** J	**0.59** J	**1.4** J
Styrene	100-42-5	ug/L	NC	<0.2 U	<0.5 U	<0.5 U	<0.2 U	<0.2 U	<0.2 UT	<0.6 U	<0.6 U	<0.6 U
tert-Butylbenzene	98-06-6	ug/L	NC	**0.29** J	<0.5 U	<0.5 U	<0.2 U	<0.2 U	<0.2 UT	<1 U	<1 U	<1 U
Toluene	108-88-3	ug/L	70	**0.07** J	<0.5 U	<0.5 U	<0.22 U	<0.22 U	<0.22 UT	<0.6 U	<0.6 U	<0.6 U
Total Xylenes	1330-20-7	ug/L	300	**4.73**	**9.52**	**0.36**	**6.1**	**2.6** U	**2.4** UT	**2.4**	**2.4**	**8.0**
Trichloroethene (TCE)	79-01-6	ug/L	0.4	<0.1 U	<0.5 U	<0.5	<0.21 U	<0.21 U	<0.21 UT	<0.6 U	<0.6 U	<0.6 U
Vinyl Chloride	75-01-4	ug/L	0.2	**0.12** J	**0.63** J	**0.65** J	**1.5**	<0.18 U	<0.18 UT	<0.3 U	<0.3 U	<0.3 U
Total Phase Hydrocarbons												
Gasoline Range Organics (GRO)		ug/L	NC	**150** L	NS	NS	**260** LM	NS	NS	**150**	NS	**260**
Diesel Range Organics (DRO)		ug/L	NC	**3300**	NS	NS	**2400** M	NS	NS	**700**	NS	**610**
Optimization Parameters												
Alkalinity		mg/L	NC	**890**	**840**	NS	**740**	NS	NS	NS	NS	NS
BOD 5-Day		mg/L	NC	<4.0 U	**6** UN	NS	**7.7** U	NS	NS	NS	NS	NS
COD		mg/L	NC	**60**	**180**	NS	**100** M	NS	NS	NS	NS	NS
Dissolved Iron		ug/L	NC	**2330**	**17.4** J	<50 U	**447**	NS	NS	NS	NS	NS
Total Iron		ug/L	NC	**16100**	**23800** M	**22600**	**22000** M	NS	NS	NS	NS	NS
Dissolved Manganese		ug/L	NC	**11500**	**30900** M	**31400**	**24900** M	NS	NS	NS	NS	NS
Total Manganese		ug/L	NC	**10800**	**33400** M	**32000**	**26400** M	NS	NS	NS	NS	NS
Nitrate Nitrogen		mg/L	NC	<0.04 U	**0.15** UH	NS	**0.15** U	NS	NS	NS	NS	NS
Sulfate		mg/L	NC	**4.65**	**21**	NS	**1100** M	NS	NS	NS	NS	NS
Methane		mg/L	NC	NS	**1100**	NS	**420** M	NS	NS	NS	NS	NS
Total Organic Carbon		mg/L	NC	NS	**42**	NS	**26**	NS	NS	NS	NS	NS
Dissolved Organic Carbon		mg/L	NC	NS	NS	NS	**24**	NS	NS	NS	NS	NS
Sulfide		mg/L	NC	NS	NS	NS	**1** UM	NS	NS	NS	NS	NS

Created by: JR 4/20/2021
Checked by: ZM 4/22/21

Table 3
Groundwater Analytical Table
IRP Site 4, Duluth ANGB

Monitoring Well ID	CAS #	Units	Minnesota Department of Health (HRL, HBV and/or RAA)	GW4-KK							GW4-LL						
Date Collected				11/11/16	1/17/18	3/21/18	6/10/19	10/14/19	11/3/20	4/7/21	11/11/16	1/18/18	3/20/18	6/10/19	10/14/19	11/5/20	4/6/21
Volatile Organic Compounds																	
1,1,2-Trichloroethane	79-00-5	ug/L	3	<0.4 U	<0.5 U	<0.26 U	<0.26 U	<0.6 U	<0.6 U	<0.6 U	<8 U	**0.63** J	<0.26 U	<0.26 U	<6 U	<0.6 U	<0.6 U
1,2,4-Trimethylbenzene	95-63-6	ug/L	30	**0.12** J	<0.5 U	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.6 U	**440** DJ	**8.7**	**10**	**410**	**440**	<0.6 U	**240**
1,2-Dibromo 3-Chloropropane	96-12-8	ug/L	NC	<0.8 U	<0.5 U	<0.4 U	<0.4 U	<0.6 U	<0.6 U	<0.6 U	<0.8 U	<0.5 U	<0.4 U	<0.4 U	<6 U	<0.6 U	<0.6 U
1,2-Dichloroethane (EDC)	107-06-2	ug/L	1	<0.15 U	<0.5 U	<0.3 U	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.15 U	<0.5 U	<0.3 U	<0.3 U	<6 U	<0.6 U	**0.32** J
1,2-Dichloropropane	78-87-5	ug/L	5	<0.2 U	<0.5 U	<0.22 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.5 U	<0.22 U	<0.22 U	<6 U	<0.6 U	**1.1**
1,3,5-Trimethylbenzene	108-67-8	ug/L	100	<0.2 U	<0.5 U	<0.23 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	**130** DJ	**9.3**	**7.9**	**54**	**84**	<0.6 U	**74**
2-Butanone (MEK)	78-93-3	ug/L	4,000	<4 U	<5 U	<2.4 U	<2.4 U	<6 U	<6 U	<6 U	<4 U	<5 U	<2.4 U	<2.4 U	<60 U	**26**	<6 U
2-Chlorotoluene	95-49-8	ug/L	NC	<0.2 U	<0.5 U	<0.22 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	**43** J	<0.5 U	<0.22 U	<0.22 U	<6 U	<0.6 U	<0.6 U
2-Hexanone	591-78-6	ug/L	NC	<10 U	<10 U	<4 U	<4 U	<6 U	<6 U	<6 U	<200 U	<10 U	<4 U	<4 U	<60 U	<6 U	<6 U
4-Chlorotoluene	106-43-4	ug/L	NC	<0.2 U	<0.5 U	<0.22 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.5 U	<0.22 U	<0.22 U	<6 U	<0.6 U	**14**
4-Isopropyltoluene	99-87-6	ug/L	NC	<0.2 U	<0.5 U	<0.23 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	**10** J	**0.85** J	**0.58** J	**9.3**	**6.3** J	<0.6 U	**7.1**
Acetone	67-64-1	ug/L	4,000	<10 U	<10 U	<5 U	<5 U	<10 UZ	**4.2** J	<10 U	<10 U	**7.2** J	**7.3** J	<5 U	<100 UZ	**190**	**15** J
Benzene	71-43-2	ug/L	2	**2.5**	**0.54** J	**2.4**	**4.4**	**3.5**	**2.8**	**2.8**	**14** J	**0.47** J	**0.73** J	**21**	**21**	**4.1**	**12**
Bromodichloromethane	75-27-4	ug/L	6	<0.3 U	<0.5 U	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.3 U	<0.5 U	<0.2 U	**1.2**	<6 U	**0.43** J	**1**
Bromomethane	74-83-9	ug/L	10	<0.3 U	<1 U	<0.5 U	<0.5 U	<2 U	<2 U	<2 U	<0.3 U	<1 U	<0.5 U	<0.5 U	<20 U	**0.92** J	<2 U
Carbon Disulfide	75-15-0	ug/L	700	<0.2 U	<1 U	<0.5 U	<0.5 U	<2 U	<2 U	<2 U	**0.11** J	<1 U	<0.5 U	<0.5 U	<20 U	**25**	**4.6**
Chloroethane	75-00-3	ug/L	NC	<0.2 U	<1 U	<0.4 U	<0.4 U	<1 U	<1 U	<1 U	<0.2 U	<1 U	<0.4 U	<0.4 U	<10 U	**3**	<1 U
Chloroform	67-66-3	ug/L	20	<0.2 U	<0.25 U	<0.15 U	<0.15 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.25 U	<0.15 U	<0.15 U	<6 U	<0.6 U	<0.6 U
Chloromethane	74-87-3	ug/L	NC	<0.2 U	<1 U	<0.4 U	<0.4 U	<1 U	<1 U	<1 U	<0.2 U	<1 U	<0.4 U	<0.4 U	<10 U	**29**	<1 U
cis-1,2-Dichloroethene	156-59-2	ug/L	6	**0.2** J	<0.5 U	<0.25 U	<0.25 U	**0.41** J	<0.6 U	<0.6 U	<0.2 U	<0.5 U	<0.25 U	<0.25 U	<6 U	<0.6 U	<0.6 U
Dichloromethane (Methylene Chloride)	75-09-2	ug/L	5	<0.2 U	<1 U	<0.4 UZ	<0.4 U	<1 U	<1 U	<1 U	<0.2 U	<1 U	**1** UZ	<0.4 U	**6.3** J	<1 U	<1 U
Ethylbenzene	100-41-4	ug/L	40	<0.1 U	<0.5 U	<0.22 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	**48** DJ	**1.1**	**1.1**	**150**	**150**	**0.91** J	<0.6 U
Isopropylbenzene	98-82-8	ug/L	300	<0.2 U	<0.5 U	<0.18 U	<0.18 U	<0.6 U	<0.6 U	<0.6 U	**61** DJ	**3.1**	**2.3**	**78**	**87**	**1.1**	**46**
m,p-Xylenes	179601-23-1	ug/L	300	**0.16** J	<1 U	<0.5 U	<0.5 U	<1.2 U	<1.2 U	<1.2 U	**440** DJ	**4**	**5.3**	**370**	**520**	<1.2 U	**150**
Methyl tert-Butyl Ether	1634-04-4	ug/L	60	<0.3 U	<0.5 U	<0.29 U	<0.29 U	<0.6 U	<0.6 U	<0.6 U	<0.3 U	<0.5 U	<0.29 U	<0.29 U	<6 U	<0.6 U	<0.6 U
Naphthalene	91-20-3	ug/L	70	<0.3 U	<1 U	<0.4 U	<0.4 U	<0.6 U	**1.3**	<0.6 U	**8.5**	<1 U	<0.4 U	**9**	**8.7** J	<0.6 U	**5.8**
n-Butylbenzene	104-51-8	ug/L	NC	<0.1 U	<0.5 U	<0.23 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	**7**	<0.5 U	<0.23 U	<0.23 U	<6 U	<0.6 U	<0.6 U
n-Propylbenzene	103-65-1	ug/L	NC	<0.2 U	<0.5 U	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.6 U	**68** DJ	**4**	**2.9**	**80**	**94**	**0.83** J	**43**
o-Xylene	95-47-6	ug/L	300	<0.2 U	<0.5 U	<0.24 U	<0.24 U	<0.6 U	<0.6 U	<0.6 U	<4 U	<0.5 U	<0.24 U	<0.24 U	<6 U	<0.6 U	<0.6 U
sec-Butylbenzene	135-98-8	ug/L	NC	<0.1 U	<0.5 U	<0.21 U	<0.21 U	<1 U	<1 U	<1 U	**11** J	**0.61** J	**0.52** J	**15**	**13** J	<1 U	**9**
Styrene	100-42-5	ug/L	NC	<0.2 U	<0.5 U	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<4 U	<0.5 U	<0.2 U	<0.2 U	<6 U	<0.6 U	<0.6 U
tert-Butylbenzene	98-06-6	ug/L	NC	<0.2 U	<0.5 U	<0.2 U	<0.2 U	<1 U	<1 U	<1 U	**0.98** J	<0.5 U	<0.2 U	**1.2**	<10 U	<1 U	**0.85** J
Toluene	108-88-3	ug/L	70	<0.1 U	<0.5 U	<0.22 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	**0.22** J	<0.5 U	<0.22 U	<0.22 U	<6 U	<0.6 U	**0.24** J
Total Xylenes	1330-20-7	ug/L	300	**0.16** J	<0.2 U	<0.2 U	<0.2 U	<1.2 U	<1.2 U	<1.2 U	**440** DJ	**4** U	**5.3** U	**370**	**520**	<1.2 U	**150**
Trichloroethene (TCE)	79-01-6	ug/L	0.4	<0.1 U	<0.5 U	<0.21 U	<0.21 U	<0.6 U	<0.6 U	<0.6 U	<0.1 U	<0.5 U	<0.21 U	<0.21 U	<6 U	<0.6 U	<0.6 U
Vinyl Chloride	75-01-4	ug/L	0.2	**0.78**	<0.5 U	**1.4**	<0.18 U	**2.9**	**2.1**	**1**	<0.1 U	<0.5 U	<0.18 U	<0.18 U	<3 U	<0.3 U	<0.3 U
Total Phase Hydrocarbons																	
Gasoline Range Organics (GRO)		ug/L	NC	<40 U	NS NS	**35** J	NS	<40 U	NS	<40 U	**2300** L	NS NS	**160** L	NS	**2500** H	NS	**2100**
Diesel Range Organics (DRO)		ug/L	NC	**230**	NS NS	**1600**	NS	**720**	NS	**460**	**990**	NS NS	**1000**	NS	**3400**	NS	**4600**
Optimization Parameters																	
Alkalinity		mg/L	NC	**317**	**420**	**450**	NS	NS	NS	NS	**315**	**510**	**490**	NS	NS	NS	NS
BOD 5-Day		mg/L	NC	<4.0 U	**6** UN	**5.3** UN	NS	NS	NS	NS	**9.9**	**0.41** UN	**2** N	NS	NS	NS	NS
COD		mg/L	NC	**32.9**	**260**	**63** J	NS	NS	NS	NS	**29.2**	**34** J	**26** J	NS	NS	NS	NS
Dissolved Iron		ug/L	NC	**8330**	**4450**	**6030**	NS	NS	NS	NS	**28600**	**17.1** J	<50 U	NS	NS	NS	NS
Total Iron		ug/L	NC	**11400**	**24900**	**18100**	NS	NS	NS	NS	**31300**	**3900**	**2190**	NS	NS	NS	NS
Dissolved Manganese		ug/L	NC	**3990**	**5730**	**5880**	NS	NS	NS	NS	**628**	**884**	**857**	NS	NS	NS	NS
Total Manganese		ug/L	NC	**4230**	**6060**	**5860**	NS	NS	NS	NS	**629**	**1040**	**913**	NS	NS	NS	NS
Nitrate Nitrogen		mg/L	NC	<0.04 U	<0.15 U	**0.15** U	NS	NS	NS	NS	<0.04 U	<0.15 U	<0.15 U	NS	NS	NS	NS
Sulfate		mg/L	NC	**12.1**	**9.6**	**9.6**	NS	NS	NS	NS	**4.51**	**1200**	**1400**	NS	NS	NS	NS
Methane		mg/L	NC	NS	**450**	**690**	NS	NS	NS	NS	NS	**390**	**340**	NS	NS	NS	NS
Total Organic Carbon		mg/L	NC	NS	**24**	**20**	NS	NS	NS	NS	NS	**14**	**14**	NS	NS	NS	NS
Dissolved Organic Carbon		mg/L	NC	NS	NS	**17**	NS	NS	NS	NS	NS	NS	**11**	NS	NS	NS	NS
Sulfide		mg/L	NC	NS	NS	**1** U	NS	NS	NS	NS	NS	NS	<1 U	NS	NS	NS	NS

Created by: JR 4/20/2021
Checked by: ZM 4/22/21

Monitoring Well ID	CAS #	Units	Minnesota Department of Health (HRL, HBV and/or RAA)	MW-21						MW-24					
Date Collected				11/13/16	6/10/19	10/15/19	11/4/20	[1]11/04/20	4/6/21	11/13/16	6/10/19	10/14/19	11/4/20	4/7/21	[1]4/7/21
Volatile Organic Compounds															
1,1,2-Trichloroethane	79-00-5	ug/L	3	<0.4 U	<0.26 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.4 U	<0.26 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
1,2,4-Trimethylbenzene	95-63-6	ug/L	30	**0.1** J	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	**0.08** J	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
1,2-Dibromo 3-Chloropropane	96-12-8	ug/L	NC	<0.8 U	<0.4 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.8 U	<0.4 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
1,2-Dichloroethane (EDC)	107-06-2	ug/L	1	<0.15 U	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.15 U	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
1,2-Dichloropropane	78-87-5	ug/L	5	<0.2 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
1,3,5-Trimethylbenzene	108-67-8	ug/L	100	<0.2 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
2-Butanone (MEK)	78-93-3	ug/L	4,000	<4 U	<2.4 U	<6 U	<6 U	<6 U	<6 U	<4 U	<2.4 U	<6 U	<6 U	<6 U	<6 U
2-Chlorotoluene	95-49-8	ug/L	NC	<0.2 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
2-Hexanone	591-78-6	ug/L	NC	<10 U	<4 U	<6 U	<6 U	<6 U	<6 U	<10 U	<4 U	<6 U	<6 U	<6 U	<6 U
4-Chlorotoluene	106-43-4	ug/L	NC	<0.2 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
4-Isopropyltoluene	99-87-6	ug/L	NC	<0.2 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Acetone	67-64-1	ug/L	4,000	<10 U	<5 U	<10 UZ	<10 U	<10 U	<10 U	<10 U	<5 U	<10 UZ	<10 U	<10 U	<10 U
Benzene	71-43-2	ug/L	2	<0.1 U	**0.25** J	<1 U	<1 U	<1 U	<1 U	<0.1 U	<0.19 U	<1 U	<1 U	<1 U	<1 U
Bromodichloromethane	75-27-4	ug/L	6	<0.3 U	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.3 U	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Bromomethane	74-83-9	ug/L	10	<0.3 U	<0.5 U	<2 U	<2 U	<2 U	<2 U	<0.3 U	<0.5 U	<2 U	<2 U	<2 U	<2 U
Carbon Disulfide	75-15-0	ug/L	700	<0.2 U	<0.5 U	<2 U	<2 U	<2 U	<2 U	<0.2 U	<0.5 U	<2 U	<2 U	<2 U	<2 U
Chloroethane	75-00-3	ug/L	NC	<0.2 U	<0.4 U	<1 U	<1 U	<1 U	<1 U	<0.2 U	<0.4 U	<1 U	<1 U	<1 U	<1 U
Chloroform	67-66-3	ug/L	20	<0.2 U	<0.15 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.15 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Chloromethane	74-87-3	ug/L	NC	<0.2 U	<0.4 U	<1 U	<1 U	<1 U	<1 U	<0.2 U	<0.4 U	<1 U	<1 U	<1 U	<1 U
cis-1,2-Dichloroethene	156-59-2	ug/L	6	<0.2 U	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Dichloromethane (Methylene Chloride)	75-09-2	ug/L	5	<0.2 U	<0.4 U	<1 U	<1 U	<1 U	<1 U	<0.2 U	<0.4 U	<1 U	<1 U	<1 U	<1 U
Ethylbenzene	100-41-4	ug/L	40	<0.1 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.1 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Isopropylbenzene	98-82-8	ug/L	300	<0.2 U	<0.18 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.18 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
m,p-Xylenes	179601-23-1	ug/L	300	<0.2 U	<0.5 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U	<0.2 U	<0.5 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U
Methyl tert-Butyl Ether	1634-04-4	ug/L	60	<0.3 U	<0.29 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.3 U	<0.29 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Naphthalene	91-20-3	ug/L	70	<0.3 U	<0.4 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.3 U	<0.4 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
n-Butylbenzene	104-51-8	ug/L	NC	<0.1 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.1 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
n-Propylbenzene	103-65-1	ug/L	NC	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
o-Xylene	95-47-6	ug/L	300	<0.2 U	<0.24 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.24 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
sec-Butylbenzene	135-98-8	ug/L	NC	<0.1 U	<0.21 U	<1 U	<1 U	<1 U	<1 U	<0.1 U	<0.21 U	<1 U	<1 U	<1 U	<1 U
Styrene	100-42-5	ug/L	NC	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
tert-Butylbenzene	98-06-6	ug/L	NC	<0.2 U	<0.2 U	<1 U	<1 U	<1 U	<1 U	<0.2 U	<0.2 U	<1 U	<1 U	<1 U	<1 U
Toluene	108-88-3	ug/L	70	**0.06** J	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	**0.11** J	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Total Xylenes	1330-20-7	ug/L	300	<0.2 U	<0.2 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U	<0.2 U	<0.2 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U
Trichloroethene (TCE)	79-01-6	ug/L	0.4	<0.1 U	<0.21 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.1 U	<0.21 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Vinyl Chloride	75-01-4	ug/L	0.2	<0.1 U	<0.18 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.1 U	<0.18 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U
Total Phase Hydrocarbons															
Gasoline Range Organics (GRO)		ug/L	NC	<40 U	NS	<40 U	NS	NS	<40 UJ	<40 U	NS	<40 U	NS	<40 U	<40 U
Diesel Range Organics (DRO)		ug/L	NC	**86** J	NS	**130** J	NS	NS	**61** J	**27** J	NS	<110 U	NS	<99 U	<99 U
Optimization Parameters															
Alkalinity		mg/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
BOD 5-Day		mg/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
COD		mg/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dissolved Iron		ug/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Total Iron		ug/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dissolved Manganese		ug/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Total Manganese		ug/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Nitrate Nitrogen		mg/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfate		mg/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methane		mg/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Total Organic Carbon		mg/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dissolved Organic Carbon		mg/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfide		mg/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Created by: JR 4/20/2021
Checked by: ZM 4/22/21

Monitoring Well ID	CAS #	Units	Minnesota Department of Health (HRL, HBV and/or RAA)	MW-40									
Date Collected				11/13/16	[1]11/13/16	1/18/18	3/20/18	6/10/19	10/14/19	[1]10/14/19	11/3/20	4/6/21	[1]4/6/21
Volatile Organic Compounds													
1,1,2-Trichloroethane	79-00-5	ug/L	3	<0.4 U	<0.4 U	<0.5 U	<0.26 U	<0.26 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
1,2,4-Trimethylbenzene	95-63-6	ug/L	30	**0.08** J	**0.23** J	<0.5 U	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
1,2-Dibromo 3-Chloropropane	96-12-8	ug/L	NC	<0.8 U	<0.8 U	<0.5 U	<0.4 U	**0.5** UY	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
1,2-Dichloroethane (EDC)	107-06-2	ug/L	1	<0.15 U	<0.15 U	<0.5 U	<0.3 U	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
1,2-Dichloropropane	78-87-5	ug/L	5	<0.2 U	<0.2 U	<0.5 U	<0.22 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
1,3,5-Trimethylbenzene	108-67-8	ug/L	100	<0.2 U	<0.2 U	<0.5 U	<0.23 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
2-Butanone (MEK)	78-93-3	ug/L	4,000	<4 U	<4 U	<5 U	<2.4 U	<2.4 U	<6 U	<6 U	<6 U	<6 U	<6 U
2-Chlorotoluene	95-49-8	ug/L	NC	<0.2 U	<0.2 U	<0.5 U	<0.22 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
2-Hexanone	591-78-6	ug/L	NC	<10 U	<10 U	<10 U	<4 U	<4 U	<6 U	<6 U	<6 U	<6 U	<6 U
4-Chlorotoluene	106-43-4	ug/L	NC	<0.2 U	<0.2 U	<0.5 U	<0.22 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
4-Isopropyltoluene	99-87-6	ug/L	NC	<0.2 U	<0.2 U	<0.5 U	<0.23 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Acetone	67-64-1	ug/L	4,000	<10 U	<10 U	<10 U	<5 U	<5 U	<10 UZ	<10 UZ	<10 U	<10 U	<10 U
Benzene	71-43-2	ug/L	2	<0.1 U	<0.1 U	<0.5 U	<0.19 U	<0.19 U	<1 U	<1 U	<1 U	<1 U	<1 U
Bromodichloromethane	75-27-4	ug/L	6	<0.3 U	<0.3 U	<0.5 U	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Bromomethane	74-83-9	ug/L	10	<0.3 U	<0.3 U	<1 U	<0.5 U	<0.5 U	<2 U	<2 U	<2 U	<2 U	<2 U
Carbon Disulfide	75-15-0	ug/L	700	<0.2 U	<0.2 U	<1 U	<0.5 U	<0.5 U	<2 U	<2 U	<2 U	<2 U	<2 U
Chloroethane	75-00-3	ug/L	NC	<0.2 U	<0.2 U	<1 U	<0.4 U	<0.4 U	<1 U	<1 U	<1 U	<1 U	<1 U
Chloroform	67-66-3	ug/L	20	<0.2 U	<0.2 U	<0.25 U	<0.15 U	<0.15 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Chloromethane	74-87-3	ug/L	NC	<0.2 U	<0.2 U	<1 U	<0.4 U	<0.4 U	<1 U	<1 U	<1 U	<1 U	<1 U
cis-1,2-Dichloroethene	156-59-2	ug/L	6	<0.2 U	<0.2 U	<0.5 U	<0.25 U	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Dichloromethane (Methylene Chloride)	75-09-2	ug/L	5	<0.2 U	<0.2 U	<1 U	**1** UZ	**1** UY	<1 U	<1 U	<1 U	<1 U	<1 U
Ethylbenzene	100-41-4	ug/L	40	<0.1 U	**0.05** J	<0.5 U	<0.22 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Isopropylbenzene	98-82-8	ug/L	300	<0.2 U	<0.2 U	<0.5 U	<0.18 U	<0.18 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
m,p-Xylenes	179601-23-1	ug/L	300	<0.2 U	**0.11** BJ	<1 U	<0.5 U	<0.5 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U
Methyl tert-Butyl Ether	1634-04-4	ug/L	60	<0.3 U	<0.3 U	<0.5 U	<0.29 U	<0.29 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Naphthalene	91-20-3	ug/L	70	<0.3 U	<0.3 U	<1 U	<0.4 U	<0.4 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
n-Butylbenzene	104-51-8	ug/L	NC	<0.1 U	<0.1 U	<0.5 U	<0.23 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
n-Propylbenzene	103-65-1	ug/L	NC	<0.2 U	<0.2 U	<0.5 U	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
o-Xylene	95-47-6	ug/L	300	<0.2 U	<0.2 U	<0.5 U	<0.24 U	<0.24 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
sec-Butylbenzene	135-98-8	ug/L	NC	<0.1 U	<0.1 U	<0.5 U	<0.21 U	<0.21 U	<1 U	<1 U	<1 U	<1 U	<1 U
Styrene	100-42-5	ug/L	NC	<0.2 U	<0.2 U	<0.5 U	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
tert-Butylbenzene	98-06-6	ug/L	NC	<0.2 U	<0.2 U	<0.5 U	<0.2 U	<0.2 U	<1 U	<1 U	<1 U	<1 U	<1 U
Toluene	108-88-3	ug/L	70	**0.46** J	**0.26** J	<0.5 U	<0.22 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Total Xylenes	1330-20-7	ug/L	300	<0.2 U	**0.11** BJ	<0.2 U	<0.2 U	<0.2 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U
Trichloroethene (TCE)	79-01-6	ug/L	0.4	<0.1 U	<0.1 U	<0.5 U	<0.21 U	<0.21 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Vinyl Chloride	75-01-4	ug/L	0.2	<0.1 U	<0.1 U	<0.5 U	<0.18 U	<0.18 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U
Total Phase Hydrocarbons													
Gasoline Range Organics (GRO)		ug/L	NC	<40 U	<40 U	NS	NS	NS	<40 U	<40 U	NS	<40 U	**39** J
Diesel Range Organics (DRO)		ug/L	NC	**98** J	**100** J	NS	NS	NS	**76** J	**83** J	NS	**61** J	**60** J
Optimization Parameters													
Alkalinity		mg/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
BOD 5-Day		mg/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
COD		mg/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dissolved Iron		ug/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Total Iron		ug/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dissolved Manganese		ug/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Total Manganese		ug/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Nitrate Nitrogen		mg/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfate		mg/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methane		mg/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Total Organic Carbon		mg/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dissolved Organic Carbon		mg/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfide		mg/L	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Created by: JR 4/20/2021
Checked by: ZM 4/22/21

Notes

Shaded value indicates exceedance of criteria.
Bolded values indicate concentrations above detection limits
Criteria from the Minnesota Department of Health (MDH) "Human Health-Based Water Guidance Table"
Only compounds that have values detected above laboratory detection limit is shown
mg/L: milligrams per liter
µg/L: micrograms per liter
< : not detected at or above value
B: The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the
relative to the sample result as defined by theDOD or NELAC standards.
D: The reported result is from a dilution.
DRO: Diesel Range Organics
DUP: Field duplicate sample
GRO: Gasoline Range Organics
HBV: Health-Based Value
HRL: Human Risk Limit
J: The analyte was positively identified; the associated number value is the approximate concentration of the analyte in the sample
L: The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
NS: Not Sampled
NC: No Criteria
T: Sample received with improper preservation or temperature.
U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as
[1]Indicates duplicate sample collected
[2]Indicates sample was diluted by a dilution factor due to groundwater exceedances of naphthalene. Non detected values are compared to the diluted Limit of Detection. See Level IV for more details.

Table 4
Surface Water Analytical Table
IRP Site 4
Duluth ANGB

Surface Water	Minnesota Pollution Control Agency (MPCA) SRV	**Eastern Drainage Ditch**			**Northern Drainage Ditch**		
		11/17/16	10/23/19	4/7/21	11/17/16	10/23/19	4/7/21
1,1,1,2-Tetrachloroethane	70	<0.2 ND	<1 U	<1 U	<0.2 ND	<1 U	<1 U
1,1,1-Trichloroethane (TCA)	9,000	<0.2 ND	<0.6 U	<0.6 U	<0.2 ND	<0.6 U	<0.6 U
1,1,2,2-Tetrachloroethane	2	<0.2 ND	<0.6 U	<0.6 U	<0.2 ND	<0.6 U	<0.6 U
1,1,2-Trichloroethane	3	<0.4 ND	<0.6 U	<0.6 U	<0.4 ND	<0.6 U	<0.6 U
1,1-Dichloroethane (1,1-DCA)	80	<0.2 ND	<0.6 U	<0.6 U	<0.2 ND	<0.6 U	<0.6 U
1,1-Dichloroethene (1,1-DCE)	200	<0.2 ND	<1 U	<1 U	<0.2 ND	<1 U	<1 U
1,1-Dichloropropene	NC	<0.2 ND	<0.6 U	<0.6 U	<0.2 ND	<0.6 U	<0.6 U
1,2,3-Trichlorobenzene	NC	<0.4 ND	<0.6 U	<0.6 U	<0.4 ND	<0.6 U	<0.6 U
1,2,3-Trichloropropane	0.003	<0.5 ND	<0.6 U	<0.6 U	<0.5 ND	<0.6 U	<0.6 U
1,2,4-Trichlorobenzene	4	<0.3 ND	<0.6 U	<0.6 U	<0.3 ND	<0.6 U	<0.6 U
1,2,4-Trimethylbenzene	100	**0.08** =,J	<0.6 U	<0.6 U	<0.2 ND	**0.85** J	<0.6 U
1,2-Dibromo 3-Chloropropane	NC	<0.8 ND	**0.6** UZ	<0.6 U	<0.8 ND	<0.6 U	<0.6 U
1,2-Dibromoethane (EDB)	0.004	<0.2 ND	<0.6 U	<0.6 U	<0.2 ND	<0.6 U	<0.6 U
1,2-Dichlorobenzene	600	<0.2 ND	<0.6 U	<0.6 U	<0.2 ND	<0.6 U	<0.6 U
1,2-Dichloroethane (EDC)	1	<0.15 ND	<0.6 U	<0.6 U	<0.15 ND	<0.6 U	<0.6 U
1,2-Dichloropropane	5	<0.2 ND	<0.6 U	<0.6 U	<0.2 ND	<0.6 U	<0.6 U
1,3,5-Trimethylbenzene	100	<0.2 ND	<0.6 U	<0.6 U	<0.2 ND	<0.6 U	<0.6 U
1,3-Dichlorobenzene	NC	<0.2 ND	<0.6 U	<0.6 U	<0.2 ND	<0.6 U	<0.6 U
1,3-Dichloropropane	NC	<0.3 ND	<0.3 U	<0.3 U	<0.3 ND	<0.3 U	<0.3 U
1,4-Dichlorobenzene	10	<0.2 ND	<0.6 U	<0.6 U	<0.2 ND	<0.6 U	<0.6 U
2,2-Dichloropropane	NC	<0.2 ND	<0.6 U	<0.6 U	<0.2 ND	<0.6 U	<0.6 U
2-Butanone (MEK)	4,000	<4 ND	**6** UY	<6 U	<4 ND	<0.6 UY	<6 U
2-Chlorotoluene	NC	<0.2 ND	<0.6 U	<0.6 U	<0.2 ND	**0.32** J	<0.6 U
2-Hexanone	NC	<10 ND	<6 U	<6 U	<10 ND	<6 U	<6 U
4-Chlorotoluene	NC	<0.2 ND	<0.6 U	<0.6 U	<0.2 ND	<0.6 U	<0.6 U
4-Isopropyltoluene	NC	<0.2 ND	<0.6 U	<0.6 U	<0.2 ND	<0.6 U	<0.6 U
4-Methyl-2-pentanone (MIBK)	700	<10 ND	<6 U	<6 U	<10 ND	<6 U	<6 U
Acetone	4,000	**6.1** =,J	<10 U	<10 U	**6** =,J	<10 U	<10 U
Benzene	2	<0.1 ND	<1 U	<1 U	<0.1 ND	<1 U	<1 U
Bromobenzene	NC	<0.2 ND	<1 U	<1 U	<0.2 ND	<1 U	<1 U
Bromochloromethane	NC	<0.2 ND	<0.6 U	<0.6 U	<0.2 ND	<0.6 U	<0.6 U
Bromodichloromethane	6	**1.5** =	<0.6 U	<0.6 U	**1.5** =	<0.6 U	<0.6 U
Bromoform	40	<0.5 ND	**1** UZ	<1 U	<0.5 ND	<1 U	<1 U
Bromomethane	10	<0.3 ND	**2** UZ	<2 U	<0.3 ND	**2** UZ	<2 U
Carbon Disulfide	700	**0.07** =,J	<2 U	<2 U	<0.2 ND	<2 U	<2 U
Carbon Tetrachloride	100.0	<0.2 ND	<0.6 U	<0.6 U	<0.2 ND	<0.6 U	<0.6 U
Chlorobenzene	100	<0.2 ND	<0.6 U	<0.6 U	<0.2 ND	<0.6 U	<0.6 U
Chloroethane	NC	<0.2 ND	<1 U	<1 U	<0.2 ND	<1 U	<1 U
Chloroform	30	**2.1** =	<0.6 U	<0.6 U	**2.1** =	<0.6 U	<0.6 U
Chloromethane	NC	<0.2 ND	<1 U	<1 U	<0.2 ND	<1 U	<1 U
cis-1,2-Dichloroethene	6	<0.2 ND	<0.6 U	<0.6 U	<0.2 ND	<0.6 U	<0.6 U
cis-1,3-Dichloropropene	NC	<0.2 ND	<0.3 U	<0.3 U	<0.2 ND	<0.3 U	<0.3 U
Dibromochloromethane	10	**0.76** =	<0.6 U	<0.6 U	**0.73** =	<0.6 U	<0.6 U
Dibromomethane	NC	<0.5 ND	<0.6 U	<0.6 U	<0.5 ND	<0.6 U	<0.6 U
Dichlorodifluoromethane (CFC 12)	700	<0.2 ND	<1 U	<1 U	<0.2 ND	<1 U	<1 U
Dichloromethane (Methylene Chloride)	5	<0.2 ND	<1 U	<1 U	<0.2 ND	<1 U	<1 U
Ethylbenzene	50	**0.13** =,J	<0.6 U	<0.6 U	**0.12** =,J	<0.6 U	<0.6 U
Hexachlorobutadiene	1	<0.3 ND	<1 U	<1 U	<0.3 ND	<1 U	<1 U
Isopropylbenzene	300	<0.2 ND	<0.6 U	<0.6 U	<0.2 ND	<0.6 U	<0.6 U
m,p-Xylenes	NC	**0.48** =,BJ	<1.2 U	<1.2 U	**0.4** =,BJ	<1.2 U	<1.2 U
Methyl tert-Butyl Ether	60	<0.3 ND	<0.6 U	<0.6 U	<0.3 ND	<0.6 U	<0.6 U
Naphthalene	70	<0.3 ND	<0.6 U	<0.6 U	<0.3 ND	<0.6 U	<0.6 U
n-Butylbenzene	NC	<0.1 ND	<0.6 U	<0.6 U	<0.1 ND	<0.6 U	<0.6 U
n-Propylbenzene	NC	<0.2 ND	<0.6 U	<0.6 U	<0.2 ND	<0.6 U	<0.6 U
o-Xylene	NC	**0.27** =,J	<0.6 U	<0.6 U	**0.25** =,J	<0.6 U	<0.6 U
sec-Butylbenzene	NC	<0.1 ND	<1 U	<1 U	<0.1 ND	<1 U	<1 U
Styrene	NC	<0.2 ND	<0.6 U	<0.6 U	<0.2 ND	<0.6 U	<0.6 U
tert-Butylbenzene	NC	<0.2 ND	<1 U	<1 U	<0.2 ND	<1 U	<1 U
Tetrachloroethene (PCE)	4	<0.2 ND	<0.6 U	<0.6 U	<0.2 ND	<0.6 U	<0.6 U
Toluene	200	**0.2** =,J	<0.6 U	<0.6 U	**0.24** =,J	<0.6 U	<0.6 U
trans-1,2-Dichloroethene	40	<0.2 ND	<0.6 U	<0.6 U	<0.2 ND	<0.6 U	<0.6 U
trans-1,3-Dichloropropene	NC	<0.2 ND	<0.6 U	<0.6 U	<0.2 ND	<0.6 U	<0.6 U
Trichloroethene (TCE)	0.4	<0.1 ND	<0.6 U	<0.6 U	<0.1 ND	<0.6 U	<0.6 U
Trichlorofluoromethane (CFC 11)	2,000	<0.2 ND	<1 U	<1 U	<0.2 ND	<1 U	<1 U
Vinyl Chloride	0.2	<0.1 ND	<0.3 U	<0.3 U	<0.1 ND	<0.3 U	<0.3 U
Total Phase Hydrocarbons							
Diesel Range Organics (DRO)	100	**31** =,J	NS	NS	**28** =,J	NS	NS
Gasoline Range Organics (GRO)	100	**40** UMY	NS	NS	**40** U	NS	NS

Notes:
Criteria from the Minnesota Department of Health (MDH) "Human Health-Based Water Guidance Table"
µg/L: micrograms per Liter
< : not detected at or above value
B: The analyte was found in the associated method blank at a level that is significant relative to the sample result as
D: The reported result is from a dilution.
DRO: Diesel Range Organics
DUP: Field duplicate sample
GRO: Gasoline Range Organics
HBV: Health-Based Value
HRL: Human Risk Limit
J: Estimated detected concentration.
NS: Not Sampled
NC: No Criteria
Bolded values indicate concentrations above detection limits
Shaded value indicates exceedance of criteria.
U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project.
Created by: JR 4/21/21
Checked by: ZM 4/22/21

APPENDIX F – SITE 21 SUPPORTING INFORMATION

Table 1
Groundwater Elevations
IRP Site 21, Duluth ANGB

Well ID	[1]Well Casing Elevation (feet amsl)	Depth to Water (feet)	Groundwater Elevation (feet amsl)	Depth to Water (feet)	Groundwater Elevation (feet amsl)	Depth to Water (feet)	Groundwater Elevation (feet amsl)	Depth to Water (feet)	Groundwater Elevation (feet amsl)
		June 2019		**October 2019**		**June 2020**		**September 2020**	
021-014MW	1396.55	4.51	1392.04	3.83	1392.72	5.61	1390.94	5.86	1390.69
021-026MW	1396.00	7.31	1388.69	6.76	1389.24	7.84	1388.16	7.83	1388.17
021-027MW	1394.40	7.33	1387.07	7.04	1387.36	7.55	1386.85	7.55	1386.85
021-029MW	1399.26	6.21	1393.05	5.54	1393.72	7.02	1392.24	7.39	1391.87
021-030MW	1396.03	2.77	1393.26	2.25	1393.78	3.80	1392.23	4.00	1392.03
021-031MW	1393.73	3.98	1389.75	3.12	1390.61	5.35	1388.38	5.22	1388.51
021-032MW	1394.30	3.23	1391.07	2.45	1391.85	4.71	1389.59	4.87	1389.43
021-033MW	1395.12	5.27	1389.85	4.82	1390.30	5.95	1389.17	5.59	1389.53
021-034MW	1395.55	[2]NM	[3]NA	[2]NM	[3]NA	[2]NM	[3]NA	[2]NM	[3]NA
021-035MW	1393.89	5.17	1388.72	4.75	1389.14	5.88	1388.01	5.73	1388.16
021-036MW	1396.50	[2]NM	[3]NA	[2]NM	[3]NA	[2]NM	[3]NA	[2]NM	[3]NA
021-038MW	1391.78	4.1	1387.68	3.59	1388.19	5.46	1386.32	5.22	1386.56
021-039MW	1389.43	4.87	1384.56	4.64	1384.79	5.76	1383.67	5.49	1383.94
021-040MW	1388.89	2.2	1386.69	2.06	1386.83	2.93	1385.96	2.80	1386.09
021-041MW	1388.20	0.8	1387.40	0.60	1387.60	1.96	1386.24	1.59	1386.61
021-042MW	1391.43	4.45	1386.98	4.32	1387.11	5.09	1386.34	5.02	1386.41
021-043MW	1391.68	3.41	1388.27	2.87	1388.81	4.95	1386.73	4.66	1387.02
021-044MW	1393.10	7.01	1386.09	6.53	1386.57	7.99	1385.11	7.85	1385.25
021-045MW	1393.56	3.67	1389.89	2.95	1390.61	4.99	1388.57	5.08	1388.48
021-046MW	1396.79	4.78	1392.01	4.12	1392.67	5.72	1391.07	6.94	1389.85
021-047MW	1396.70	3.1	1393.60	2.54	1394.16	4.16	1392.54	4.49	1392.21

Notes:
amsl - above mean sea level
NA - not applicable
NM - not measured
[1]Well Casing Elevations taken from 2015 survey completed by ERM
[2]Depth to water not measured, monitoring well not located during initial gauging event or well casing damaged
[3]Groundwater elevation was not calculated

Table 2
Groundwater Parameters
IRP Site 21, Duluth ANGB
Duluth, MN

Groundwater Sample ID	Date	Temperature (ºC)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Well Volume (gallons)	Well Purged (gallons)
Site 21									
SITE21-021-014MW-093020	9/30/2020	13.5	6.93	0.83	0.15	-109.9	4.62	1.5	3
SITE21-021-026MW-100120	10/1/2020	10	8.09	0.46	0.18	35.8	8.79	2	4
SITE21-021-027MW-100220	10/2/2020	11.8	7.09	0.75	0.15	-108.2	8.81	1.5	3
SITE21-021-029MW-100120	10/1/2020	12.5	6.81	1.11	0.16	-118.2	19.9	1.5	3
SITE21-021-030MW-100220	10/2/2020	8.5	8.04	0.44	0.13	-117.9	8	5.9	12
SITE21-021-031MW-093020	9/30/2020	11.6	7.51	0.91	0.39	-14.9	5.54	1.9	4
SITE21-021-032MW-093020	9/30/2020	12.1	7.26	1.49	0.24	67.2	69	1.2	2.5
SITE21-021-033MW-100120	10/1/2020	13.2	6.98	1.26	0.1	-116.4	9.06	1.2	2.5
SITE21-021-034MW-100120	10/1/2020	9.5	7.27	0.56	0.07	-156.9	45.1	4.4	10.5
SITE21-021-035MW-100120	10/1/2020	9.8	7.32	0.89	0.2	210.9	9.07	1.5	3
SITE21-021-036MW-100120	10/1/2020	11.3	6.78	1.28	0.18	-8.1	34.2	2	5.5
SITE21-021-038MW-093020	9/30/2020	9.4	7.19	1.42	0.12	-141.2	70.6	2.4	5
SITE21-021-039MW-100120	10/1/2020	8.7	8.1	0.45	0.26	-64.2	7.1	2.7	5.75
SITE21-021-040MW-100120	10/1/2020	7.4	7	1.2	0.17	-25.6	8.99	2.5	5
SITE21-021-041MW-100120	10/1/2020	7.3	7.33	0.99	0.09	-98.9	49.6	3.9	8
SITE21-021-042MW-100220	10/2/2020	8	7.09	0.85	0.14	-86.7	8.96	1.9	4
SITE21-021-043MW-093020	9/30/2020	10.5	7.54	0.91	0.19	-87	4.45	1.9	4
SITE21-021-044MW-100120	10/1/2020	9.7	7.06	1.24	0.19	-128.6	37.9	1.4	3
SITE21-021-045MW-100120	10/1/2020	9.6	6.92	1.39	0.16	-127.4	Over Range	2.8	8
[1]SITE21-021-046MW-100120	10/1/2020	10.6	6.95	1.13	0.09	-25.7	Over Range	2.6	2.5
SITE21-021-047MW-100120	10/1/2020	10	6.77	1.17	0.1	-119.6	624	3.9	8

Created by: JR 10/20/2020 - Checked by:

Notes:

°C - degrees Celsius
mS/cm - milliSiemens per centimeter
mg/L - milligram per liter
mV - millivolt
NA - Not Applicable. Well volume was not calculated due to obstruction in well casing.
NTU - nephelometric turbidity unit
ORP - oxidation reduction potential
[1] Indicates that sample was collected after monitoring well was purged dry
Over Range - NTUs greater than the meter detection limit

Table 3
Groundwater Analytical Table
IRP Site 21, Duluth ANGB
Duluth, MN

Monitoring Well ID	Units	Health-Based Water Guidance Values, MDH (HRL, HBV and/or RAA)	Health-Based Water Guidance Values, MDH (HRL, HBV and/or RAA) Most Updated Criteria**	021-014MW						021-026MW					021-027MW				
Date Collected				11/18/16	6/14/19	10/18/19	6/24/20	9/30/20	[1]9/30/20	11/15/16	6/13/19	10/17/19	6/24/20	10/1/20	11/15/16	6/14/19	10/17/19	6/24/20	10/2/20
Volatile Organic Compounds																			
1,1,1-Trichloroethane (TCA)	ug/L	9000	5,000	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
1,1-Dichloroethane (1,1-DCA)	ug/L	80	80	**0.08** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
1,1-Dichloroethene (1,1-DCE)	ug/L	200	200	<0.2	<0.5 U	<1 U	<1 U	<1 U	<1 U	<0.2	<0.5 U	<1 U	<1 U	<1 U	<0.2	<0.5 U	<1 U	<1 U	<1 U
1,2,4-Trimethylbenzene*	ug/L	70	30	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
1,2-Dichlorobenzene	ug/L	600	600	**0.18** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
1,3,5-Trimethylbenzene	ug/L	100	30	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
2-Butanone (MEK)	ug/L	4000	4,000	<4	<10 U	<6 U	<6 U	<6 U	<6 U	<4	<10 U	<6 U	<6 U	<6 U	<4	<10 U	<6 U	<6 U	<6 U
2-Hexanone	ug/L	NC	NC	<10	<10 U	<6 U	<6 U	<6 U	<6 U	<10	<10 U	<6 U	<6 U	<6 U	<10	<10 U	<6 U	<6 U	<6 U
4-Isopropyltoluene	ug/L	NC	NC	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
Acetone	ug/L	4000	3,000	<10	<10 U	<10 U	<10 U	<10 U	<10 U	<10	<10 U	<10 U	<10 U	<10 U	<10	<10 U	<10 U	<10 U	<10 U
Benzene*	ug/L	2	2	<0.1	<0.5 U	<1 U	<1 U	<1 U	<1 U	<0.1	<0.5 U	<1 U	<1 U	<1 U	<0.1	<0.5 U	<1 U	<1 U	<1 U
Carbon Disulfide	ug/L	700	700	**0.07** J	<1 U	<2 U	<2 U	<2 U	<2 U	<0.2	<1 U	<2 U	<2 U	<2 U	<0.2	<1 U	<2 U	<2 U	<2 U
Chlorobenzene	ug/L	100	100	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
Chloroethane	ug/L	NC	NC	<0.2	<1 U	<1 U	<1 U	<1 U	<1 U	<0.2	<1 U	<1 U	<1 U	<1 U	<0.2	<1 U	<1 U	<1 U	<1 U
Chloroform	ug/L	30	20	<0.2	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.25 U	<0.6 U	<0.6 U	<0.6 U
Chloromethane	ug/L	NC	NC	<0.2	<1 U	<1 U	<1 U	<1 U	<1 U	<0.2	<1 U	<1 U	<1 U	<1 U	<0.2	<1 U	<1 U	<1 U	<1 U
cis-1,2-Dichloroethene*	ug/L	50	6	**0.57**	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
Dichlorodifluoromethane (CFC 12)	ug/L	700	500	<0.2	<0.5 U	<1 U	<1 U	<1 U	<1 U	<0.2	<0.5 U	<1 U	<1 U	<1 U	<0.2	<0.5 U	<1 U	<1 U	<1 U
Dichloromethane (Methylene Chloride)	ug/L	5	5	<0.2	<1 U	<1 U	<1 U	<1 U	<1 U	<0.2	<1 U	<1 U	<1 U	<1 U	<0.2	<1 U	<1 U	<1 U	<1 U
Ethylbenzene	ug/L	50	40	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U
Hexachlorobutadiene	ug/L	1	1	<0.3	<0.5 U	<1 U	<1 U	<1 U	<1 U	<0.3	<0.5 U	<1 U	<1 U	<1 U	<0.3	<0.5 U	<1 U	<1 U	<1 U[2]
Isopropylbenzene	ug/L	300	300	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
m,p-Xylenes	ug/L	NC	NC	<0.2	<1 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U	<0.2	<1 U	<1.2 U	<1.2 U	<1.2 U	<0.2	<1 U	<1.2 U	<1.2 U	<1.2 U
n-Butylbenzene	ug/L	NC	NC	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U
n-Propylbenzene	ug/L	NC	NC	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
o-Xylene	ug/L	NC	NC	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
sec-Butylbenzene	ug/L	NC	NC	<0.1	<0.5 U	<1 U	<1 U	<1 U	<1 U	<0.1	<0.5 U	<1 U	<1 U	<1 U	<0.1	<0.5 U	<1 U	<1 U	<1 U[2]
tert-Butylbenzene	ug/L	NC	NC	<0.2	<0.5 U	<1 U	<1 U	<1 U	<1 U	<0.2	<0.5 U	<1 U	<1 U	<1 U	<0.2	<0.5 U	<1 U	<1 U	<1 U
Toluene	ug/L	200	70	**0.06** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	**0.1** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U
Total Xylene	ug/L	300	300	<0.2 U	<0.5 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U	<0.5 U	<0.5 U	<1.2 U	<1.2 U	<1.2 U	<0.5 U	<0.5 U	<1.2 U	<1.2 U	<1.2 U
trans-1,2-Dichloroethene	ug/L	40	9	**0.11** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
Trichloroethene (TCE)*	ug/L	5	0.4	**1.3**	**0.47** J	<0.6 U	**0.34** J	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U
Vinyl Chloride*	ug/L	0.2	0.2	**0.52**	**0.75** J	**1.3**	**0.83**	**1.1**	**1.3**	**0.09** J	<0.5 U	<0.3 U	<0.3 U	<0.3 U	<0.1	<0.5 U	<0.3 U	<0.3 U	<0.3 U
All Other Analytes Non-Detect																			
Total Phase Hydrocarbons																			
Diesel Range Organics (DRO)	ug/L	NC	NC	**340**	NS	**64** J	NS	**420**	**74** J	**21** J	NS	<110 U	NS	<97 U	**71** J	NS	<110 U	NS	**62** J
Gasoline Range Organics (GRO)	ug/L	NC	NC	<40 U	NS	<40 U	NS	**82**	**21** J	<40 U	NS	<40 U	NS	<40 U	<40 U	NS	<40 U	NS	<40 U
Optimization Parameters																			
Alkalinity, Total as CaCO3	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Biochemical Oxygen Demand (BOD)	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Carbon, Dissolved Organic (DOC)	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Carbon, Total Organic	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chemical Oxygen Demand (COD)	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Iron, Dissolved	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Iron, Total	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Manganese, Dissolved	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Manganese, Total	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Nitrate as Nitrogen	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfate	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfide, Total	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethane	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethene	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methane	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ammonia	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

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Checked by:

Table 3
Groundwater Analytical Table
IRP Site 21, Duluth ANGB
Duluth, MN

Monitoring Well ID	Units	Health-Based Water Guidance Values, MDH (HRL, HBV and/or RAA)	Health-Based Water Guidance Values, MDH (HRL, HBV and/or RAA) Most Updated Criteria**	021-029MW							021-030MW						021-031MW				
Date Collected				11/8/16	11/29/17	1/15/18	6/14/19	10/18/19	6/24/20	10/1/20	11/16/16	6/14/19	10/18/19	[1]10/18/19	6/24/20	10/2/20	11/17/16	6/13/19	10/17/19	6/23/20	9/30/20
Volatile Organic Compounds																					
1,1,1-Trichloroethane (TCA)	ug/L	9000	5,000	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
1,1-Dichloroethane (1,1-DCA)	ug/L	80	80	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	**0.17** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	**0.2** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U
1,1-Dichloroethene (1,1-DCE)	ug/L	200	200	**0.25** J	<0.5 U	<0.5 U	<0.5 U	<1 U	<1 U	<1 U	<0.2	<0.5 U	<1 U	<1 U	<1 U	<1 U	**0.14** J	<0.5 U	<1 U	<1 U	<1 U
1,2,4-Trimethylbenzene*	ug/L	70	30	**11**	**11**	**0.59** J	**9.4**	<0.6 U	**5.1** 0	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
1,2-Dichlorobenzene	ug/L	600	600	**0.33** J	<0.5 U	<0.5 U	<0.5 U	<0.6 U	**0.73** J	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
1,3,5-Trimethylbenzene	ug/L	100	30	**2.2**	**4.2**	**0.48** J	**11**	<0.6 U	**0.48** J	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
2-Butanone (MEK)	ug/L	4000	4,000	<4	<5 U	<5 U	<10 U	<6 U	<6 U	<6 U	<4	<10 U	<6 U	<6 U	<6 U	<6 U	<4	<10 U	<6 U	<6 U	<6 U
2-Hexanone	ug/L	NC	NC	<10	**4.6** J	<10 U	<10 U	<6 U	<6 U	<6 U	<10	<10 U	<6 U	<6 U	<6 U	<6 U	<10	<10 U	<6 U	<6 U	<6 U
4-Isopropyltoluene	ug/L	NC	NC	**0.11** J	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
Acetone	ug/L	4000	3,000	<10	<10 U	<10 U	<10 U	**13** J	<10 U	<10 U	<10	<10 U	<10 U	<10 U	<10 U	<10 U	<10	<10 U	<10 U	<10 U	<10 U
Benzene*	ug/L	2	2	**25**	**18**	**1.5**	**2.9**	**2.6**	**1** J	<1 U	<0.1	<0.5 U	<1 U	<1 U	<1 U	<1 U	**0.12** J	<0.5 U	<1 U	<1 U	<1 U
Carbon Disulfide	ug/L	700	700	<0.2	**2.1**	**1.1** J	<1 U	<2 U	<2 U	<2 U	<0.2	<1 U	<2 U	<2 U	<2 U	<2 U	<0.2	<1 U	<2 U	<2 U	<2 U
Chlorobenzene	ug/L	100	100	**0.17** J	<0.5 U	<0.5 U	<0.5 U	<0.6 U	**0.74** J	**1.8**	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
Chloroethane	ug/L	NC	NC	<0.2	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.2	<1 U	<1 U	<1 U	**1** UM	<1 U	<0.2	<1 U	<1 U	<1 U	<1 U
Chloroform	ug/L	30	20	<0.2	<0.25 U	<0.25 U	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.25 U	<0.6 U	<0.6 U	<0.6 U
Chloromethane	ug/L	NC	NC	<0.2	<1 UZ	<1 U	<1 U	<1 U	<1 U	<1 U	<0.2	<1 U	<1 U	<1 U	**1** UM	<1 U	<0.2	<1 U	<1 U	<1 U	<1 U
cis-1,2-Dichloroethene*	ug/L	50	6	**1.8**	**0.74** J	**0.71** J	**0.39** J	**0.61** J	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	**10**	**9**	**9**	**7.2**	**11** 0
Dichlorodifluoromethane (CFC 12)	ug/L	700	500	**0.26** J	**0.3** J	**0.37** J	<0.5 U	<1 U	<1 U	<1 U	<0.2	<0.5 U	<1 U	<1 U	<1 U	<1 U	**0.25** J	**0.28** J	<1 U	<1 U	<1 U
Dichloromethane (Methylene Chloride)	ug/L	5	5	<0.2	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.2	<1 U	<1 U	<1 U	<1 U	<1 U	<0.2	<1 U	<1 U	<1 U	<1 U
Ethylbenzene	ug/L	50	40	**0.29** J	**8**	**0.66** J	**0.25** J	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U
Hexachlorobutadiene	ug/L	1	1	<0.3	<0.5 U	<0.5 U	<0.5 U	<1 U	<1 U	<1 U	<0.3	<0.5 U	<1 U	<1 U	<1 U	<1 UZ	<0.3	<0.5 U	<1 U	<1 U	<1 U
Isopropylbenzene	ug/L	300	300	**1.3** J	**1.8**	**0.19** J	**0.58** J	<0.6 U	**0.66** J	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
m,p-Xylenes	ug/L	NC	NC	**18**	**14**	**1.3** J	**1.9** J	<1.2 U	<1.2 U	<1.2 U	<0.2	<1 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U	<0.2	<1 U	<1.2 U	<1.2 U	<1.2 U
n-Butylbenzene	ug/L	NC	NC	**0.11** J	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U
n-Propylbenzene	ug/L	NC	NC	**1.2** J	**2**	**0.23** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
o-Xylene	ug/L	NC	NC	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
sec-Butylbenzene	ug/L	NC	NC	**0.43** J	**0.25** J	<0.5 U	**0.5** J	<1 U	**0.48** J	<1 U	<0.1	<0.5 U	<1 U	<1 U	<1 U	<1 UZ	<0.1	<0.5 U	<1 U	<1 U	<1 U
tert-Butylbenzene	ug/L	NC	NC	**0.43** J	<0.5 U	<0.5 U	**0.5** J	<1 U	**0.76** J	**0.55** J	<0.2	<0.5 U	<1 U	<1 U	<1 U	<1 U	<0.2	<0.5 U	<1 U	<1 U	<1 U
Toluene	ug/L	200	70	**0.09** J	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	**0.11** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U
Total Xylene	ug/L	300	300	**18**	**14**	**1.3**	**1.9**	<1.2 U	<1.2 U	<1.2 U	<0.2	<0.5 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U	<0.2	<0.5 U	<1.2 U	<1.2 U	<1.2 U
trans-1,2-Dichloroethene	ug/L	40	9	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	**0.18** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U
Trichloroethene (TCE)*	ug/L	5	0.4	**8.3**	**6.6**	**6.1**	**2.8**	**4.3**	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	**0.13** J	<0.5 U	<0.6 U	<0.6 U	**0.45** J
Vinyl Chloride*	ug/L	0.2	0.2	<0.1	<0.5 U	<0.5 U	<0.5 U	<0.3 U	<0.3 U	<0.3 U	<0.1	<0.5 U	<0.3 U	<0.3 U	<0.3 UM	<0.3 U	**0.08** J	<0.5 U	<0.3 U	<0.3 U	<0.3 U
All Other Analytes Non-Detect																					
Total Phase Hydrocarbons																					
Diesel Range Organics (DRO)	ug/L	NC	NC	**270**	NS	<110 U	NS	**110** J	NS	**170** J	**28** J	NS	<120 U	<110 U	NS	<100 U	**52** J	NS	**88** J	NS	<100 U
Gasoline Range Organics (GRO)	ug/L	NC	NC	**170** L	NS	**28** J	NS	<40 U	NS	<200 UV	<40 U	NS	<40 U	<40 U	NS	<40 U	<40 U	NS	<40 U	NS	<40 U
Optimization Parameters																					
Alkalinity, Total as CaCO3	mg/L	NC	NC	**350**	**300**	**320**	NS	NS	NS	NS	**221**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Biochemical Oxygen Demand (BOD)	mg/L	NC	NC	<2.0	**2.4**	**6.2**	NS	NS	NS	NS	<2.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Carbon, Dissolved Organic (DOC)	mg/L	NC	NC	**13.7**	**4.1**	**5.1**	NS	NS	NS	NS	**1.03**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Carbon, Total Organic	mg/L	NC	NC	**14.4**	**4.3**	**7.7**	NS	NS	NS	NS	**1.12**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chemical Oxygen Demand (COD)	mg/L	NC	NC	**39.2**	**61** J	**22** J	NS	NS	NS	NS	**3.2** J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Iron, Dissolved	ug/L	NC	NC	**36000**	**5020**	**5500** M	NS	NS	NS	NS	**96.9**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Iron, Total	ug/L	NC	NC	**36000**	**5880**	**5500** M	NS	NS	NS	NS	**3180**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Manganese, Dissolved	ug/L	NC	NC	**6080**	**11700**	**9340** M	NS	NS	NS	NS	**81** J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Manganese, Total	ug/L	NC	NC	**6080**	**11300**	**9340** M	NS	NS	NS	NS	**157** J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Nitrate as Nitrogen	mg/L	NC	NC	<0.04 U	<0.15 U	<0.15 U	NS	NS	NS	NS	<0.04	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfate	mg/L	NC	NC	**9.55**	**1400**	**700**	NS	NS	NS	NS	**12.1**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfide, Total	mg/L	NC	NC	<0.04 U	<1 U	<1 U	NS	NS	NS	NS	**0.046** J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethane	ug/L	NC	NC	<0.24 U	<0.7 U	<0.7 U	NS	NS	NS	NS	<0.24 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethene	ug/L	NC	NC	<0.22 U	<1 U	<1 U	NS	NS	NS	NS	<0.22 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methane	ug/L	NC	NC	**360**	**220**	**1500**	NS	NS	NS	NS	<0.63 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ammonia	mg/L	NC	NC	NS	NS	**0.87**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Created by: JR 10/20/20
Checked by:

Table 3
Groundwater Analytical Table
IRP Site 21, Duluth ANGB
Duluth, MN

Monitoring Well ID				021-032MW						021-033MW							021-034MW					
Date Collected	Units	Health-Based Water Guidance Values, MDH (HRL, HBV and/or RAA)	Health-Based Water Guidance Values, MDH (HRL, HBV and/or RAA) Most Updated Criteria**	11/16/16	6/13/19	10/17/19	6/24/20	[1]6/24/20	9/30/20	11/7/16	11/28/17	1/15/18	6/14/19	10/18/19	6/23/20	10/1/20	11/7/16	[1]11/7/16	6/14/19	10/17/19	6/23/20	10/1/20
Volatile Organic Compounds																						
1,1,1-Trichloroethane (TCA)	ug/L	9000	5,000	**0.2** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<1	<1	<0.5 U	NS	<0.6 U	<0.6 U
1,1-Dichloroethane (1,1-DCA)	ug/L	80	80	**0.15** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	**0.11** J	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<1	<1	<0.5 U	NS	<0.6 U	<0.6 U
1,1-Dichloroethene (1,1-DCE)	ug/L	200	200	**0.37** J	**0.31** J	<1 U	<1 U	<1 U	<1 U	**1.2**	**0.37** J	<0.5 U	<0.5 U	<1 UY	<1 U	<1 U	<1	<1	<0.5 U	NS	<1 U	<1 U
1,2,4-Trimethylbenzene*	ug/L	70	30	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	**0.1** J	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<1	<1	<0.5 U	NS	<0.6 U	<0.6 U
1,2-Dichlorobenzene	ug/L	600	600	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	**0.25** J	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<1	<1	<0.5 U	NS	<0.6 U	<0.6 U
1,3,5-Trimethylbenzene	ug/L	100	30	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<1	<1	<0.5 U	NS	<0.6 U	<0.6 U
2-Butanone (MEK)	ug/L	4000	4,000	<4	<10 U	<6 U	<6 U	<6 U	<6 U	<4	**17**	**11**	<10 U	<6 U	<6 U	<6 U	<20	<20	<10 U	NS	<6 U	<6 U
2-Hexanone	ug/L	NC	NC	<10	<10 U	<6 U	<6 U	<6 U	<6 U	<10	<10 U	<10 U	<10 U	<6 U	<6 U	<6 U	<50	<50	<10 U	NS	<6 U	<6 U
4-Isopropyltoluene	ug/L	NC	NC	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<1	<1	<0.5 U	NS	<0.6 U	<0.6 U
Acetone	ug/L	4000	3,000	<10	<10 U	<10 U	<10 U	<10 U	<10 U	<10	<10 U	<10 U	<10 U	**4** J	<10 U	<10 U	<50	<50	<10 U	NS	<10 U	<10 U
Benzene*	ug/L	2	2	**0.08** J	<0.5 U	<1 U	<1 U	<1 U	<1 U	**0.24** J	**0.23** J	<0.5 U	<0.5 U	<1 U	<1 U	<1 U	<0.5	<0.5	<0.5 U	NS	<1 U	<1 U
Carbon Disulfide	ug/L	700	700	<0.2	<1 U	<2 U	<2 U	<2 U	<2 U	<0.2	<1 U	<1 U	<1 U	<2 U	<2 U	<2 U	<1	<1	<1 U	NS	<2 U	<2 U
Chlorobenzene	ug/L	100	100	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	**0.4** J	**0.32** J	**0.25** J	<0.5 U	**0.32** J	**0.31** J	<0.6 U	<1	<1	<0.5 U	NS	<0.6 U	<0.6 U
Chloroethane	ug/L	NC	NC	<0.2	<1 U	<1 U	<1 U	<1 U	<1 U	<0.2	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1	<1	<1 U	NS	<1 U	<1 U
Chloroform	ug/L	30	20	<0.2	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.25 U	<0.25 U	<0.25 U	<0.6 U	<0.6 U	<0.6 U	**0.7** JD	**0.7** JD	<0.25 U	NS	<0.6 U	<0.6 U
Chloromethane	ug/L	NC	NC	<0.2	<1 U	<1 U	<1 U	<1 U	<1 U	<0.2	<1 UZ	<1 U	<1 U	<1 U	<1 U	<1 U	<1	<1	<1 U	NS	<1 U	<1 U
cis-1,2-Dichloroethene*	ug/L	50	6	**2.4**	**7.6**	**3.9**	**5.1**	**5.1**	**5.7**	**5**	**6.3**	**0.97** J	**0.91** J	**0.32** JY	**1**	<0.6 U	<1	<1	<0.5 U	NS	<0.6 U	<0.6 U
Dichlorodifluoromethane (CFC 12)	ug/L	700	500	**0.2** J	<0.5 U	<1 U	<1 U	<1 U	<1 U	**0.84**	**0.44** J	**0.35** J	**0.35** J	<1 U	<1 U	<1 U	<1	<1	<0.5 U	NS	<1 U	<1 U
Dichloromethane (Methylene Chloride)	ug/L	5	5	<0.2	<1 U	<1 U	<1 U	<1 U	<1 U	<0.2	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	**0.9** JD	**0.85** JD	<1 U	NS	<1 U	<1 U
Ethylbenzene	ug/L	50	40	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.5	<0.5	<0.5 U	NS	<0.6 U	<0.6 U
Hexachlorobutadiene	ug/L	1	1	<0.3	<0.5 U	<1 U	<1 U	<1 U	<1 U	<0.3	<0.5 U	<0.5 U	<0.5 U	<1 U	<1 U	<1 U	<1.5	<1.5	<0.5 U	NS	<1 U	<1 U
Isopropylbenzene	ug/L	300	300	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<1	<1	<0.5 U	NS	<0.6 U	<0.6 U
m,p-Xylenes	ug/L	NC	NC	<0.2	<1 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U	**0.11** J	<1 U	<1 U	<1 U	<1.2 UN	<1.2 U	<1.2 U	<1	<1	<1 U	NS	<1.2 U	<1.2 U
n-Butylbenzene	ug/L	NC	NC	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.5	<0.5	<0.5 U	NS	<0.6 U	<0.6 U
n-Propylbenzene	ug/L	NC	NC	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<1	<1	<0.5 U	NS	<0.6 U	<0.6 U
o-Xylene	ug/L	NC	NC	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.6 UY	<0.6 U	<0.6 U	<1	<1	<0.5 U	NS	<0.6 U	<0.6 U
sec-Butylbenzene	ug/L	NC	NC	<0.1	<0.5 U	<1 U	<1 U	<1 U	<1 U	<0.1	<0.5 U	<0.5 U	<0.5 U	<1 U	<1 U	<1 U	<0.5	<0.5	<0.5 U	NS	<1 U	<1 U
tert-Butylbenzene	ug/L	NC	NC	<0.2	<0.5 U	<1 U	<1 U	<1 U	<1 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<1 U	<1 U	<1 U	<1	<1	<0.5 U	NS	<1 U	<1 U
Toluene	ug/L	200	70	**0.1** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	**0.06** J	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.5	<0.5	<0.5 U	NS	<0.6 U	<0.6 U
Total Xylene	ug/L	300	300	<0.5 U	<0.5 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U	**0.11** J	<0.5 U	<0.5 U	<0.5 U	<1.2 U	<1.2 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	NS	<1.2 U	<1.2 U
trans-1,2-Dichloroethene	ug/L	40	9	**0.15** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	**0.45** J	**0.43** J	**0.26** J	**0.35** J	<0.6 U	<0.6 U	<0.6 U	<1	<1	<0.5 U	NS	<0.6 U	<0.6 U
Trichloroethene (TCE)*	ug/L	5	0.4	**29**	**20**	**13**	**16**	**14**	**17**	**36**	**1.6**	**0.51** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.5	<0.5	<0.5 U	NS	<0.6 U	<0.6 U
Vinyl Chloride*	ug/L	0.2	0.2	**0.08** J	**1.6**	**0.88**	**2.1**	**1.9**	**1.2**	**1.7**	**7.4**	**1.5**	**1.2**	**0.63**	**2.4**	<0.3 U	<0.5	<0.5	<0.5 U	NS U	<0.3 U	<0.3 U
All Other Analytes Non-Detect																						
Total Phase Hydrocarbons																						
Diesel Range Organics (DRO)	ug/L	NC	NC	**63** J	NS	**49** J	NS	NS	**91** J	**81** J	NS	**70** J	NS	**84** J	NS	<110 U	**20000** D	**41000** D	NS	NS	NS	**15000**
Gasoline Range Organics (GRO)	ug/L	NC	NC	**23** J	NS	<40 U	NS	NS	**58** J	**18** J	NS	ND U	NS	<40 U	NS	<40 U	**350** L	**520** L	NS	NS	NS	<40 U
Optimization Parameters																						
Alkalinity, Total as CaCO3	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	**740**	**720**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Biochemical Oxygen Demand (BOD)	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	**41**	**75**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Carbon, Dissolved Organic (DOC)	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	**47**	**40**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Carbon, Total Organic	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	**47**	**42**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chemical Oxygen Demand (COD)	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	**160**	**120**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Iron, Dissolved	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	**7100** M	**6990**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Iron, Total	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	**7090**	**6990**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Manganese, Dissolved	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	**4420** M	**4800**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Manganese, Total	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	**4530**	**4800**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Nitrate as Nitrogen	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	<0.15 U	<0.15 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfate	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	<2.5 U	<1.3 UM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfide, Total	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	<1 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethane	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	**1.2**	**1.3**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethene	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	**1.8**	**1.1**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methane	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	**350**	**1600**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ammonia	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	<0.1 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Created by: JR 10/20/20
Checked by:

Table 3
Groundwater Analytical Table
IRP Site 21, Duluth ANGB
Duluth, MN

Monitoring Well ID				021-035MW							021-036MW						021-038MW								
Date Collected	Units	Health-Based Water Guidance Values, MDH (HRL, HBV and/or RAA)	Health-Based Water Guidance Values, MDH (HRL, HBV and/or RAA) Most Updated Criteria**	11/8/16	6/13/19	10/18/19	6/23/20	[1]6/23/20	10/1/20	[1]10/1/20	11/8/16	11/29/17	6/13/19	10/17/19	6/24/20	10/1/20	11/8/16	11/28/17	1/16/18	11/16/18	6/14/19	10/17/19	[1]10/17/19	6/23/20	9/30/20
Volatile Organic Compounds																									
1,1,1-Trichloroethane (TCA)	ug/L	9000	5,000	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	**0.19** J	<0.5 U	<0.5 U	NS	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
1,1-Dichloroethane (1,1-DCA)	ug/L	80	80	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	NS	<0.6 U	<0.6 U	**0.11** J	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
1,1-Dichloroethene (1,1-DCE)	ug/L	200	200	<0.2	<0.5 U	<1 U	<1 U	<1 U	<1 U	<1 U	**0.13** J	<0.5 U	**0.36** J	NS	<1 U	<1 U	**0.16** J	<0.5 U	<0.5 U	<0.5 U	<0.5 U	**0.43** J	<1 U	<1 U	<1 U
1,2,4-Trimethylbenzene*	ug/L	70	30	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	NS	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
1,2-Dichlorobenzene	ug/L	600	600	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	NS	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
1,3,5-Trimethylbenzene	ug/L	100	30	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	NS	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
2-Butanone (MEK)	ug/L	4000	4,000	<4	<10 U	<6 U	<6 U	<6 U	<6 U	<6 U	<4	<5 U	<10 U	NS	<6 U	<6 U	<4	<5 U	<5 U	<5 U	<10 U	<6 U	<6 U	<6 U	<6 U
2-Hexanone	ug/L	NC	NC	<10	<10 U	<6 U	<6 U	<6 U	<6 U	<6 U	<10	<10 U	<10 U	NS	<6 U	<6 U	<10	<10 U	<10 U	<10 U	<10 U	<6 U	<6 U	<6 U	<6 U
4-Isopropyltoluene	ug/L	NC	NC	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	NS	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Acetone	ug/L	4000	3,000	<10	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10	<10 U	<10 U	NS	<10 U	<10 U	<10	<10 U	<10 U	<10 U	<10 U	**8.4** J	**8.1** J	<10 U	<10 U
Benzene*	ug/L	2	2	<0.1	<0.5 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.1	<0.5 U	<0.5 U	NS	<1 U	<1 U	**0.14** J	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<1 U	<1 U	<1 U
Carbon Disulfide	ug/L	700	700	<0.2	<1 U	<2 U	<2 U	<2 U	<2 U	<2 U	<0.2	<1 U	<1 U	NS	<2 U	<2 U	<0.2	<1 U	<1 U	<1 U	<1 U	<2 U	<2 U	<2 U	<2 U
Chlorobenzene	ug/L	100	100	**0.14** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	NS	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Chloroethane	ug/L	NC	NC	<0.2	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.2	<1 U	<1 U	NS	<1 U	<1 U	<0.2	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Chloroform	ug/L	30	20	<0.2	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	**0.12** J	<0.25 U	<0.25 U	NS	<0.6 U	<0.6 U	<0.2	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Chloromethane	ug/L	NC	NC	**0.09** J	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	**0.09** J	<1 UZ	<1 U	NS	<1 U	<1 U	<0.2	<1 UZ	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
cis-1,2-Dichloroethene*	ug/L	50	6	**0.07** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	**3.4**	**4.9**	**7.5**	NS	**7.8**	**3.3**	**8.2**	**7**	**8.9**	**8.5**	<0.5 U	**7.3**	**7.2**	**5.1**	**15**
Dichlorodifluoromethane (CFC 12)	ug/L	700	500	**0.93**	**0.42** J	**0.41** J	<1 U	<1 U	<1 U	<1 U	**0.46** J	**0.33** J	<0.5 U	NS	<1 U	<1 U	**0.38** J	**0.4** J	**0.42** J	**0.44** J	<0.5 U	<1 U	<1 U	<1 U	<1 U
Dichloromethane (Methylene Chloride)	ug/L	5	5	<0.2	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.2	<1 U	<1 U	NS	<1 U	<1 U	<0.2	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Ethylbenzene	ug/L	50	40	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.5 U	NS	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Hexachlorobutadiene	ug/L	1	1	<0.3	<0.5 U	<1 U	<1 U	<1 UZ	<1 UZ	<0.3	<0.5 U	<0.5 U	NS	<1 U	<1 UZ	<0.3	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<1 U	<1 U	<1 U	
Isopropylbenzene	ug/L	300	300	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	NS	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
m,p-Xylenes	ug/L	NC	NC	<0.2	<1 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U	<0.2	<1 U	<1 U	NS	<1.2 U	<1.2 U	<0.2	<1 U	<1 U	<1 U	<1 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U
n-Butylbenzene	ug/L	NC	NC	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.5 U	NS	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
n-Propylbenzene	ug/L	NC	NC	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	NS	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
o-Xylene	ug/L	NC	NC	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	NS	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
sec-Butylbenzene	ug/L	NC	NC	<0.1	<0.5 U	<1 U	<1 U	<1 UZ	<1 UZ	<0.1	<0.5 U	<0.5 U	NS	<1 U	<1 UZ	<0.1	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<1 U	<1 U	<1 U	
tert-Butylbenzene	ug/L	NC	NC	<0.2	<0.5 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.2	<0.5 U	<0.5 U	NS	<1 U	<1 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<1 U	<1 U	<1 U
Toluene	ug/L	200	70	**0.07** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.5 U	NS	<0.6 U	<0.6 U	**0.06** J	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Total Xylene	ug/L	300	300	<0.5 U	<0.5 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	NS	<1.2 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U
trans-1,2-Dichloroethene	ug/L	40	9	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	**0.17** J	<0.5 U	<0.5 U	NS	<0.6 U	<0.6 U	**0.25** J	<0.5 U	**0.25** J	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Trichloroethene (TCE)*	ug/L	5	0.4	**0.89**	**0.51** J	**0.54** J	**0.42** J	**0.4** J	**0.53** J	**0.46** J	**61**	**48**	**26**	NS	**6.8**	**12**	**34**	**19**	**24**	**22**	**12** J	**1.2**	**1.4**	**4.8**	**11**
Vinyl Chloride*	ug/L	0.2	0.2	<0.1	<0.5 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U	**0.18** J	**1.9**	**2.3**	NS	**4.5**	**0.98**	**0.14** J	**0.22** J	**1.7**	**1.4**	<0.5 U	**9.8**	**10**	**13**	**7.3**
All Other Analytes Non-Detect																									
Total Phase Hydrocarbons																									
Diesel Range Organics (DRO)	ug/L	NC	NC	**42** J	NS	**74** J	NS	NS	<100 U	<100 U	**74** J	NS	NS	NS	NS	<100 U	**48** J	NS	ND U	NS	NS	**53** J	**53** J	NS	**140** J
Gasoline Range Organics (GRO)	ug/L	NC	NC	**21** J	NS	<40 U	NS	NS	**37** J	<40 U	**38** JL	NS	NS	NS	NS	<40 U	**25** J	NS	ND U	NS	NS	<40 U	<40 U	NS	**36** J
Optimization Parameters																									
Alkalinity, Total as CaCO3	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	**432**	**760**	NS	NS	NS	NS	**389**	**470**	**550**	NS	NS	NS	NS	NS	NS
Biochemical Oxygen Demand (BOD)	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	**10.7**	**7.1**	NS	NS	NS	NS	<2.0	<2 U	**3.6** UN	NS	NS	NS	NS	NS	NS
Carbon, Dissolved Organic (DOC)	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	**2.57**	**1.6** J	NS	NS	NS	NS	**2.51**	**1.4** J	**7.4**	NS	NS	NS	NS	NS	NS
Carbon, Total Organic	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	**2.84**	**1.7** J	NS	NS	NS	NS	**2.88**	**1.3** J	**3.8**	NS	NS	NS	NS	NS	NS
Chemical Oxygen Demand (COD)	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	<3	**35** J	NS	NS	NS	NS	**7.2**	**30** J	<35 U	NS	NS	NS	NS	NS	NS
Iron, Dissolved	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	<8	**169**	NS	NS	NS	NS	**1560**	**5250**	**2500**	**1780**	NS	NS	NS	NS	NS
Iron, Total	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	<8	**223**	NS	NS	NS	NS	**1560**	**6320**	**2500**	**1780**	NS	NS	NS	NS	NS
Manganese, Dissolved	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	**545**	**1500**	NS	NS	NS	NS	**487**	**672**	**586**	**589**	NS	NS	NS	NS	NS
Manganese, Total	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	**545**	**1490**	NS	NS	NS	NS	**487**	**671**	**586**	**589**	NS	NS	NS	NS	NS
Nitrate as Nitrogen	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	**0.38**	<0.15 U	NS	NS	NS	NS	<0.04	<0.15 U	<0.15 U	NS	NS	NS	NS	NS	NS
Sulfate	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	**12.8**	**6.2**	NS	NS	NS	NS	**15.4**	**18**	**10**	NS	NS	NS	NS	NS	NS
Sulfide, Total	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	<0.04	NS	NS	NS	NS	NS	<0.04	NS	<1 U	NS	NS	NS	NS	NS	NS
Ethane	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	<0.24	<0.7 U	NS	NS	NS	NS	**0.094** J	<0.7 U	<0.7 U	NS	NS	NS	NS	NS	NS
Ethene	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	<0.22	<1 U	NS	NS	NS	NS	<0.22	<1 U	<1 U	NS	NS	NS	NS	NS	NS
Methane	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	**2200**	**1300**	NS	NS	NS	NS	**140**	**56**	**290**	NS	NS	NS	NS	NS	NS
Ammonia	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.1 U	NS	NS	NS	NS	NS	NS

Created by: JR 10/20/20
Checked by:

Table 3
Groundwater Analytical Table
IRP Site 21, Duluth ANGB
Duluth, MN

Monitoring Well ID	Units	Health-Based Water Guidance Values, MDH (HRL, HBV and/or RAA)	Health-Based Water Guidance Values, MDH (HRL, HBV and/or RAA) Most Updated Criteria**	021-039MW					021-040MW					021-041MW				
Date Collected				11/14/16	6/14/19	10/17/19	6/23/20	10/1/20	11/16/16	6/13/19	10/17/19	6/24/20	10/1/20	11/17/16	6/13/19	10/17/19	6/24/20	10/1/20
Volatile Organic Compounds																		
1,1,1-Trichloroethane (TCA)	ug/L	9000	5,000	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	**0.11** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<30 UV	<0.6 U	<0.6 U
1,1-Dichloroethane (1,1-DCA)	ug/L	80	80	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<30 UV	<0.6 U	<0.6 U
1,1-Dichloroethene (1,1-DCE)	ug/L	200	200	<0.2	<0.5 U	<1 U	<1 U	<1 U	**0.13** J	<0.5 U	<1 U	<1 U	<1 U	<0.2	<0.5 U	<50 UV	<1 U	<1 U
1,2,4-Trimethylbenzene*	ug/L	70	30	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<30 UV	<0.6 U	<0.6 U
1,2-Dichlorobenzene	ug/L	600	600	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<30 UV	<0.6 U	<0.6 U
1,3,5-Trimethylbenzene	ug/L	100	30	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<30 UV	<0.6 U	<0.6 U
2-Butanone (MEK)	ug/L	4000	4,000	<4	<10 U	<6 U	<6 U	<6 U	<4	<10 U	<6 U	<6 U	<6 U	<4	<10 U	<300 UV	<6 U	<6 U
2-Hexanone	ug/L	NC	NC	<10	<10 U	<6 U	<6 U	<6 U	<10	<10 U	<6 U	<6 U	<6 U	<10	<10 U	<300 UV	<6 U	<6 U
4-Isopropyltoluene	ug/L	NC	NC	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<30 UV	<0.6 U	<0.6 U
Acetone	ug/L	4000	3,000	<10	<10 U	<10 U	<10 U	<10 U	<10	<10 U	<10 U	<10 U	<10 U	<10	<10 U	<500 UV	<10 U	<10 U
Benzene*	ug/L	2	2	<0.1	<0.5 U	<1 U	<1 U	<1 U	<0.1	<0.5 U	<1 U	<1 U	<1 U	<0.1	**0.21** J	<50 UV	<1 U	<1 U
Carbon Disulfide	ug/L	700	700	<0.2	<1 U	<2 U	<2 U	<2 U	<0.2	<1 U	<2 U	<2 U	<2 U	<0.2	<1 U	<100 UV	<2 U	<2 U
Chlorobenzene	ug/L	100	100	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<30 UV	<0.6 U	<0.6 U
Chloroethane	ug/L	NC	NC	<0.2	<1 U	<1 U	<1 U	<1 U	<0.2	<1 U	<1 UM	<1 U	**0.55** J	<0.2	<1 U	<50 UV	<1 U	<1 U
Chloroform	ug/L	30	20	<0.2	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.25 U	<30 UV	<0.6 U	<0.6 U
Chloromethane	ug/L	NC	NC	<0.2	<1 U	<1 U	<1 U	<1 U	**0.11** J	<1 U	<1 U	<1 U	<1 U	<0.2	<1 U	<50 UV	<1 U	<1 U
cis-1,2-Dichloroethene*	ug/L	50	6	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	**3.8**	**5.5**	**5**	**6.4**	**3.7**	**0.8**	**1.3**	<30 UV	**1.7**	**1.6**
Dichlorodifluoromethane (CFC 12)	ug/L	700	500	<0.2	<0.5 U	<1 U	<1 U	<1 U	**0.15** J	<0.5 U	<1 U	<1 U	<1 U	<0.2	<0.5 U	<50 UV	<1 U	<1 U
Dichloromethane (Methylene Chloride)	ug/L	5	5	**0.1** J	<1 U	<1 U	<1 U	<1 U	<0.2	<1 U	<1 U	<1 U	<1 U	<0.2	<1 U	<50 UV	<1 U	<1 U
Ethylbenzene	ug/L	50	40	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5 U	<30 UV	<0.6 U	<0.6 U
Hexachlorobutadiene	ug/L	1	1	<0.3	<0.5 U	<1 U	<1 U	<1 U	<0.3	<0.5 U	<1 JYN	<1 U	<1 UZ	<0.3	<0.5 U	<50 UV	<1 U	<1 UZ
Isopropylbenzene	ug/L	300	300	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<30 UV	<0.6 U	<0.6 U
m,p-Xylenes	ug/L	NC	NC	<0.2	<1 U	<1.2 U	<1.2 U	<1.2 U	<0.2	<1 U	<1.2 U	<1.2 U	<1.2 U	<0.2	<1 U	<60 UV	<1.2 U	<1.2 U
n-Butylbenzene	ug/L	NC	NC	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5 U	<30 UV	<0.6 U	<0.6 U
n-Propylbenzene	ug/L	NC	NC	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<30 UV	<0.6 U	<0.6 U
o-Xylene	ug/L	NC	NC	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<30 UV	<0.6 U	<0.6 U
sec-Butylbenzene	ug/L	NC	NC	<0.1	<0.5 U	<1 U	<1 U	<1 U	<0.1	<0.5 U	<1 U	<1 U	<1 UZ	<0.1	<0.5 U	<50 UV	<1 U	<1 UZ
tert-Butylbenzene	ug/L	NC	NC	<0.2	<0.5 U	<1 U	<1 U	<1 U	<0.2	<0.5 U	<1 U	<1 U	<1 U	<0.2	<0.5 U	<50 UV	<1 U	<1 U
Toluene	ug/L	200	70	**0.07** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U	**0.07** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U	**0.1** J	**0.29** J	<30 UV	<0.6 U	<0.6 U
Total Xylene	ug/L	300	300	<0.5 U	<0.5 U	<1.2 U	<1.2 U	<1.2 U	<0.5 U	<0.5 U	<1.2 U	<1.2 U	<1.2 U	<0.5 U	<0.5 U	<60 UV	<1.2 U	<1.2 U
trans-1,2-Dichloroethene	ug/L	40	9	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	**0.15** J	<0.5 U	**1.1**	**2.2**	**0.95** J	<0.2	<0.5 U	<30 UV	<0.6 U	<0.6 U
Trichloroethene (TCE)*	ug/L	5	0.4	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U	**26**	**23**	**18**	**12**	**12**	**0.12** J	<0.5 U	<30 UV	<0.6 U	<0.6 U
Vinyl Chloride*	ug/L	0.2	0.2	<0.1	<0.5 U	<0.3 U	<0.3 U	<0.3 U	**1.1**	**1.2**	**1.9**	**1.4**	**0.72**	<0.1	<0.5 U	<15 UV	**0.38** J	**0.46** J
All Other Analytes Non-Detect																		
Total Phase Hydrocarbons																		
Diesel Range Organics (DRO)	ug/L	NC	NC	**23** J	NS	**63** J	NS	<98 U	**72** J	NS	**58** JM	NS	<98 U	**15000** D	NS	**300000**	NS	**18000**
Gasoline Range Organics (GRO)	ug/L	NC	NC	<40 U	NS	<40 U	NS	**160**	**29** J	NS	<40 U	NS	<40 U	**82**	NS	**810**	NS	<40 U
Optimization Parameters																		
Alkalinity, Total as CaCO3	mg/L	NC	NC	NS	NS	NS	NS	NS	**630**	NS	NS	NS	NS	NS	NS	NS	NS	NS
Biochemical Oxygen Demand (BOD)	mg/L	NC	NC	NS	NS	NS	NS	NS	**11.4**	NS	NS	NS	NS	NS	NS	NS	NS	NS
Carbon, Dissolved Organic (DOC)	mg/L	NC	NC	NS	NS	NS	NS	NS	**3.12**	NS	NS	NS	NS	NS	NS	NS	NS	NS
Carbon, Total Organic	mg/L	NC	NC	NS	NS	NS	NS	NS	**3.29**	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chemical Oxygen Demand (COD)	mg/L	NC	NC	NS	NS	NS	NS	NS	**8**	NS	NS	NS	NS	NS	NS	NS	NS	NS
Iron, Dissolved	ug/L	NC	NC	NS	NS	NS	NS	NS	**430**	NS	NS	NS	NS	NS	NS	NS	NS	NS
Iron, Total	ug/L	NC	NC	NS	NS	NS	NS	NS	**547**	NS	NS	NS	NS	NS	NS	NS	NS	NS
Manganese, Dissolved	ug/L	NC	NC	NS	NS	NS	NS	NS	**270** J	NS	NS	NS	NS	NS	NS	NS	NS	NS
Manganese, Total	ug/L	NC	NC	NS	NS	NS	NS	NS	**254** J	NS	NS	NS	NS	NS	NS	NS	NS	NS
Nitrate as Nitrogen	mg/L	NC	NC	NS	NS	NS	NS	NS	<0.04	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfate	mg/L	NC	NC	NS	NS	NS	NS	NS	**4.07**	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfide, Total	mg/L	NC	NC	NS	NS	NS	NS	NS	<0.04	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethane	ug/L	NC	NC	NS	NS	NS	NS	NS	<0.24 U	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethene	ug/L	NC	NC	NS	NS	NS	NS	NS	**0.12** J	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methane	ug/L	NC	NC	NS	NS	NS	NS	NS	**2000**	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ammonia	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Created by: JR 10/20/20
Checked by:

Table 3
Groundwater Analytical Table
IRP Site 21, Duluth ANGB
Duluth, MN

Monitoring Well ID	Units	Health-Based Water Guidance Values, MDH (HRL, HBV and/or RAA)	Health-Based Water Guidance Values, MDH (HRL, HBV and/or RAA) Most Updated Criteria**	021-042MW						021-043MW					021-044MW							
Date Collected				11/16/16	11/29/17	6/13/19	10/17/19	6/24/20	10/2/20	11/14/16	6/14/19	10/17/19	6/23/20	9/30/20	11/8/16	11/29/17	[1]11/29/17	1/16/18	6/14/19	10/17/19	6/23/20	10/1/20
Volatile Organic Compounds																						
1,1,1-Trichloroethane (TCA)	ug/L	9000	5,000	<0.2	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U
1,1-Dichloroethane (1,1-DCA)	ug/L	80	80	<0.2	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U
1,1-Dichloroethene (1,1-DCE)	ug/L	200	200	<0.2	<0.5 U	<0.5 U	<1 U	<1 U	<1 U	<0.2	<0.5 U	<1 U	<1 U	<1 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<1 U	<1 U
1,2,4-Trimethylbenzene*	ug/L	70	30	<0.2	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U
1,2-Dichlorobenzene	ug/L	600	600	**0.15** J	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U
1,3,5-Trimethylbenzene	ug/L	100	30	<0.2	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U
2-Butanone (MEK)	ug/L	4000	4,000	<4	<5 U	<10 U	<6 U	<6 U	<6 U	<4	<10 U	<6 U	<6 U	<6 U	<4	<5 U	<5 U	<5 U	<10 U	<6 U	<6 U	<6 U
2-Hexanone	ug/L	NC	NC	<10	<10 U	<10 U	<6 U	<6 U	<6 U	<10	<10 U	<6 U	<6 U	<6 U	<10	<10 U	<10 U	<10 U	<10 U	<6 U	<6 U	<6 U
4-Isopropyltoluene	ug/L	NC	NC	<0.2	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U
Acetone	ug/L	4000	3,000	<10	**10** UMY	<10 U	<10 U	<10 U	<10 U	<10	<10 U	<10 U	<10 U	<10 U	<10	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Benzene*	ug/L	2	2	<0.1	<0.5 U	<0.5 U	<1 U	<1 U	<1 U	<0.1	<0.5 U	<1 U	<1 U	<1 U	<0.1	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<1 U	<1 U
Carbon Disulfide	ug/L	700	700	<0.2	<1 U	<1 U	<2 U	<2 U	<2 U	**0.07** J	<1 U	<2 U	<2 U	<2 U	<0.2	<1 U	<1 U	<1 U	<1 U	<2 U	<2 U	<2 U
Chlorobenzene	ug/L	100	100	<0.2	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U
Chloroethane	ug/L	NC	NC	<0.2	<1 U	<1 U	<1 U	<1 U	<1 U	<0.2	<1 U	<1 U	<1 U	<1 U	<0.2	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Chloroform	ug/L	30	20	<0.2	<0.25 U	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.6 U	<0.6 U	<0.6 U
Chloromethane	ug/L	NC	NC	<0.2	<1 UZ	<1 U	<1 U	<1 U	<1 U	<0.2	<1 U	<1 U	<1 U	<1 U	<0.2	<1 UZ	**1** UZ	**2.6**	**1.6** J	**4.3**	<1 U	<1 U
cis-1,2-Dichloroethene*	ug/L	50	6	**0.48** J	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	**0.26** J	**0.36** J	**0.34** J	**0.31** J	**0.49** J	**0.82**	**0.33** J	**0.27** J	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U
Dichlorodifluoromethane (CFC 12)	ug/L	700	500	<0.2	<0.5 U	<0.5 U	<1 U	<1 U	<1 U	**0.17** J	**0.29** J	<1 U	<1 U	<1 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<1 U	<1 U
Dichloromethane (Methylene Chloride)	ug/L	5	5	<0.2	<1 U	<1 U	<1 U	<1 U	<1 U	<0.2	<1 U	<1 U	<1 U	<1 U	<0.2	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Ethylbenzene	ug/L	50	40	<0.1	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U
Hexachlorobutadiene	ug/L	1	1	<0.3	<0.5 U	<0.5 U	<1 U	<1 U	<1 UZ	<0.3	<0.5 U	<1 U	<1 U	<1 U	**0.13** J	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<1 U	<1 UZ
Isopropylbenzene	ug/L	300	300	<0.2	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U
m,p-Xylenes	ug/L	NC	NC	<0.2	<1 U	<1 U	<1.2 U	<1.2 U	<1.2 U	<0.2	<1 U	<1.2 U	<1.2 U	<1.2 U	<0.2	<1 U	<1 U	<1 U	<1 U	<1.2 U	<1.2 U	<1.2 U
n-Butylbenzene	ug/L	NC	NC	<0.1	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U	**0.06** J	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U
n-Propylbenzene	ug/L	NC	NC	<0.2	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U
o-Xylene	ug/L	NC	NC	<0.2	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U
sec-Butylbenzene	ug/L	NC	NC	<0.1	<0.5 U	<0.5 U	<1 U	<1 U	<1 UZ	<0.1	<0.5 U	<1 U	<1 U	<1 U	<0.1	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<1 U	<1 UZ
tert-Butylbenzene	ug/L	NC	NC	<0.2	<0.5 U	<0.5 U	<1 U	<1 U	<1 U	<0.2	<0.5 U	<1 U	<1 U	<1 U	<0.2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<1 U	<1 U
Toluene	ug/L	200	70	**0.19** J	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	**0.1** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U	**0.31** J	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U
Total Xylene	ug/L	300	300	<0.5 U	<0.5 U	<0.5 U	<1.2 U	<1.2 U	<1.2 U	<0.5 U	<0.5 U	<1.2 U	<1.2 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.2 U	<1.2 U	<1.2 U
trans-1,2-Dichloroethene	ug/L	40	9	<0.2	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	**0.1** J	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.6 U	<0.6 U	<0.6 U
Trichloroethene (TCE)*	ug/L	5	0.4	**0.27** J	**0.28** J	**0.26** J	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U	**0.12** J	<0.5 U	<0.5 U	**0.27** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U
Vinyl Chloride*	ug/L	0.2	0.2	**4.1**	**0.48** J	<0.5 U	**0.21** J	<0.3 U	**0.15** J	<0.1	<0.5 U	<0.3 U	<0.3 U	<0.3 U	**0.68**	**0.36** J	**0.37** J	**0.25** J	**0.18** J	**0.16** J	<0.3 U	**0.18** J
All Other Analytes Non-Detect																						
Total Phase Hydrocarbons																						
Diesel Range Organics (DRO)	ug/L	NC	NC	**100** J	NS	NS	**140** J	NS	**67** J	<21 U	NS	**49** J	NS	<100 U	**230**	NS	NS	**130** J	NS	**110** J	NS	**130** J
Gasoline Range Organics (GRO)	ug/L	NC	NC	<40 U	NS	NS	<40 U	NS	<40 U	**82**	NS	<40 U	NS	**33** J	**19** J	NS	NS	<40 U	NS	<40 U	NS	<40 U
Optimization Parameters																						
Alkalinity, Total as CaCO3	mg/L	NC	NC	**425**	**480** M	NS	NS	NS	NS	NS	NS	NS	NS	NS	**638**	**710**	NS	**670** M	NS	NS	NS	NS
Biochemical Oxygen Demand (BOD)	mg/L	NC	NC	**28**	**9.7**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**10.7**	**14**	NS	**23**	NS	NS	NS	NS
Carbon, Dissolved Organic (DOC)	mg/L	NC	NC	**16.7**	**2.6** J	NS	NS	NS	NS	NS	NS	NS	NS	NS	**9.06**	**6.1**	NS	**5.8**	NS	NS	NS	NS
Carbon, Total Organic	mg/L	NC	NC	**16.5**	**2.8** J	NS	NS	NS	NS	NS	NS	NS	NS	NS	**10.2**	**6.1**	NS	**7.6**	NS	NS	NS	NS
Chemical Oxygen Demand (COD)	mg/L	NC	NC	**44.5**	**49** JM	NS	NS	NS	NS	NS	NS	NS	NS	NS	**25.4**	**50** J	NS	**37** J	NS	NS	NS	NS
Iron, Dissolved	ug/L	NC	NC	**15800**	**6880**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**34300**	**27900**	NS	**19600** M	NS	NS	NS	NS
Iron, Total	ug/L	NC	NC	**15900**	**6810**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**34300**	**27800**	NS	**19600** M	NS	NS	NS	NS
Manganese, Dissolved	ug/L	NC	NC	**6590** J	**4230**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**2420**	**1780**	NS	**1690** M	NS	NS	NS	NS
Manganese, Total	ug/L	NC	NC	**6640** J	**3960**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**2420**	**1770**	NS	**1690** M	NS	NS	NS	NS
Nitrate as Nitrogen	mg/L	NC	NC	**0.23**	**0.15** UM	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.04 U	<0.15 U	NS	<0.15 U	NS	NS	NS	NS
Sulfate	mg/L	NC	NC	<0.04 ND	**2.5** UM	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.04 U	<2.5 U	NS	<2.5 U	NS	NS	NS	NS
Sulfide, Total	mg/L	NC	NC	<0.04 ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.04 U	NS	NS	**1.0** UM	NS	NS	NS	NS
Ethane	ug/L	NC	NC	**0.29** J	**1.2** M	NS	NS	NS	NS	NS	NS	NS	NS	NS	**0.18** J	<0.7 U	NS	<0.7 U	NS	NS	NS	NS
Ethene	ug/L	NC	NC	**0.42** J	**1.0** UM	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.22 U	**0.83** J	NS	<1 U	NS	NS	NS	NS
Methane	ug/L	NC	NC	**4900**	**1700** M	NS	NS	NS	NS	NS	NS	NS	NS	NS	**3600**	**1500**	NS	**11000**	NS	NS	NS	NS
Ammonia	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**0.46**	NS	NS	NS	NS

Created by: JR 10/20/20
Checked by:

Table 3
Groundwater Analytical Table
IRP Site 21, Duluth ANGB
Duluth, MN

Monitoring Well ID	Units	Health-Based Water Guidance Values, MDH (HRL, HBV and/or RAA)	Health-Based Water Guidance Values, MDH (HRL, HBV and/or RAA) Most Updated Criteria**	021-045MW					021-046MW					021-047MW				
Date Collected				11/17/16	6/13/19	10/17/19	6/24/20	10/1/20	11/9/16	6/13/19	10/18/19	6/24/20	10/1/20	11/7/16	6/14/19	10/18/19	6/23/20	10/1/20
Volatile Organic Compounds																		
1,1,1-Trichloroethane (TCA)	ug/L	9000	5,000	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
1,1-Dichloroethane (1,1-DCA)	ug/L	80	80	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	**0.3** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U
1,1-Dichloroethene (1,1-DCE)	ug/L	200	200	<0.2	<0.5 U	<1 U	<1 U	<1 U	<0.2	<0.5 U	<1 U	<1 U	<1 U	<0.2	<0.5 U	<1 U	<1 U	<1 U
1,2,4-Trimethylbenzene*	ug/L	70	30	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	**0.19** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U	**0.08** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U
1,2-Dichlorobenzene	ug/L	600	600	**0.3** J	<0.5 U	**0.32** J	**0.36** J	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
1,3,5-Trimethylbenzene	ug/L	100	30	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	**0.09** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
2-Butanone (MEK)	ug/L	4000	4,000	<4	<10 U	<6 U	<6 U	<6 U	**420**	**4.8** J	<6 U	**2.7** J	<6 U	**2.5** J	<10 U	<6 U	<6 U	<6 U
2-Hexanone	ug/L	NC	NC	<10	<10 U	<6 U	<6 U	<6 U	**13** J	<10 U	<6 U	<6 U	<6 U	<10	<10 U	<6 U	<6 U	<6 U
4-Isopropyltoluene	ug/L	NC	NC	**0.54** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U	**0.1** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U	**1.1** J	**0.57** J	**0.7** J	**0.49** J	**0.41** J
Acetone	ug/L	4000	3,000	<10	<10 U	<10 U	<10 U	<10 U	**120**	**14** J	**21**	<10 U	<10 U	**9.8** J	<10 U	<10 U	<10 U	<10 U
Benzene*	ug/L	2	2	<0.1	<0.5 U	<1 U	<1 U	<1 U	**0.17** J	<0.5 U	<1 U	<1 U	<1 U	<0.1	<0.5 U	<1 U	<1 U	<1 U
Carbon Disulfide	ug/L	700	700	<0.2	<1 U	<2 U	<2 U	<2 U	**0.1** J	<1 U	<2 U	<2 U	<2 U	<0.2	<1 U	<2 U	<2 U	<2 U
Chlorobenzene	ug/L	100	100	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
Chloroethane	ug/L	NC	NC	<0.2	<1 U	<1 U	<1 U	<1 U	**3.7**	<1 U	<1 U	<1 U	<1 U	**0.35** J	**0.52** J	<1 U	**0.71** J	<1 U
Chloroform	ug/L	30	20	<0.2	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.25 U	<0.6 U	<0.6 U	<0.6 U
Chloromethane	ug/L	NC	NC	<0.2	<1 U	<1 U	<1 U	<1 U	**0.14** J	<1 U	<1 U	<1 U	<1 U	<0.2	<1 U	<1 U	<1 U	<1 U
cis-1,2-Dichloroethene*	ug/L	50	6	**3.2**	**0.56** J	**0.91** J	**1**	**2.7**	**6.4**	**1.7**	**0.85** J	**2.2**	**1.8**	**0.84**	<0.5 U	<0.6 U	<0.6 U	**0.81** J
Dichlorodifluoromethane (CFC 12)	ug/L	700	500	<0.2	<0.5 U	<1 U	<1 U	<1 U	<0.2	<0.5 U	<1 U	<1 U	<1 U	<0.2	<0.5 U	<1 U	<1 U	<1 U
Dichloromethane (Methylene Chloride)	ug/L	5	5	<0.2	<1 U	<1 U	<1 U	<1 U	<0.2	<1 U	<1 U	<1 U	<1 U	**0.11** J	<1 U	<1 U	<1 U	<1 U
Ethylbenzene	ug/L	50	40	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U	**0.09** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U
Hexachlorobutadiene	ug/L	1	1	<0.3	<0.5 U	<1 U	<1 U	<1 U	<0.3	<0.5 U	<1 U	<1 U	<1 UZ	<0.3	<0.5 U	<1 U	<1 U	<1 U
Isopropylbenzene	ug/L	300	300	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
m,p-Xylenes	ug/L	NC	NC	<0.2	<1 U	<1.2 U	<1.2 U	<1.2 U	**0.3** J	<1 U	<1.2 U	<1.2 U	<1.2 U	<0.2	<1 U	<1.2 U	<1.2 U	<1.2 U
n-Butylbenzene	ug/L	NC	NC	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5 U	<0.6 U	<0.6 U	<0.6 U
n-Propylbenzene	ug/L	NC	NC	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
o-Xylene	ug/L	NC	NC	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	**0.13** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
sec-Butylbenzene	ug/L	NC	NC	<0.1	<0.5 U	<1 U	<1 U	<1 U	<0.1	<0.5 U	<1 U	<1 U	<1 UZ	<0.1	<0.5 U	<1 U	<1 U	<1 U
tert-Butylbenzene	ug/L	NC	NC	<0.2	<0.5 U	<1 U	<1 U	<1 U	<0.2	<0.5 U	<1 U	<1 U	<1 U	<0.2	<0.5 U	<1 U	<1 U	<1 U
Toluene	ug/L	200	70	**0.07** J	<0.5 U	**0.26** J	**0.4** J	<0.6 U	**0.88**	**0.24** J	<0.6 U	<0.6 U	<0.6 U	**0.74**	**0.25** J	<0.6 U	<0.6 U	<0.6 U
Total Xylene	ug/L	300	300	<0.5 U	<0.5 U	<1.2 U	<1.2 U	<1.2 U	**0.16** J	<0.5 U	<1.2 U	<1.2 U	<1.2 U	<0.5 U	<0.5 U	<1.2 U	<1.2 U	<1.2 U
trans-1,2-Dichloroethene	ug/L	40	9	**0.22** J	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5 U	<0.6 U	<0.6 U	<0.6 U
Trichloroethene (TCE)*	ug/L	5	0.4	**1.1**	**1.7**	**3.8**	**3**	**9.7**	**3**	**0.62** J	**0.51** J	**2.2**	**3.2**	**2.4**	<0.5 U	<0.6 U	**0.52** J	**1.3**
Vinyl Chloride*	ug/L	0.2	0.2	**0.66**	<0.5 U	<0.3 U	**0.49** J	**0.65**	**0.23** J	**0.43** J	**0.5** J	**0.67**	**0.61**	<0.1	<0.5 U	<0.3 U	<0.3 U	<0.3 U
All Other Analytes Non-Detect																		
Total Phase Hydrocarbons																		
Diesel Range Organics (DRO)	ug/L	NC	NC	**130**	NS	**130** J	NS	**92** J	**320000** D	NS	**11000**	NS	**410**	**500**	NS	**160** J	NS	**260**
Gasoline Range Organics (GRO)	ug/L	NC	NC	<40 U	NS	<40 U	NS	**29** J	**1900** L	NS	<40 U	NS	<40 U	<40 U	NS	<40 U	NS	**40** J
Optimization Parameters																		
Alkalinity, Total as CaCO3	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Biochemical Oxygen Demand (BOD)	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Carbon, Dissolved Organic (DOC)	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Carbon, Total Organic	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chemical Oxygen Demand (COD)	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Iron, Dissolved	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Iron, Total	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Manganese, Dissolved	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Manganese, Total	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Nitrate as Nitrogen	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfate	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfide, Total	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethane	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethene	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methane	ug/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ammonia	mg/L	NC	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Created by: JR 10/20/20
Checked by:

Notes:
Shaded value indicates exceedance of criterion.
Bolded values indicate concentrations above detection limits
Criteria from Minnesota Pollution Control Agency (MPCA) 2015
mg/L: milligrams per liter
µg/L: micrograms per liter
*: ANG Target Remedial Objective as set in the Site 21 2011 ROD. Current MPCA HRL is 0.4 ug/L
[1]Indicates duplicate sample collected
< : not detected at or above value
MDH: Minnesota Department of Health
HRL: Health risk Limit
HBV: Health Based Value
RAA: risk assessment advice
U: The analyte concentration is less than the Detection Limit
ND: Non Detect
Y: Replicate/Duplicate precision outside acceptance limits
Z: Specified calibration criteria was not met
M: Manually integration used to determine area response
J: Estimated detected concentration.
NC: No Criteria
NS: Not Sampled
Q: % REC exceeded control Limits. When applied to
UJ: Estimated detection limit concentration.

APPENDIX G – SITE 23 SUPPORTING INFORMATION

INSTALLATION RESTORATION PROGRAM

FINAL

NO FURTHER RESPONSE ACTION DECISION DOCUMENT FOR SITE 23

MINNESOTA AIR NATIONAL GUARD BASE
DULUTH, MINNESOTA

Prepared For:

ANG/CEVR
Andrews AFB, Maryland

January 2002

RECEIVED
JAN 10 2002
MN POLLUTION CONTROL AGENCY
DULUTH, MN

6.0 DECISION

On the basis of the findings at IRP Site 23 at the 148th FW, MNANG, Duluth, Minnesota, the groundwater at IRP Site 23 does not pose an unacceptable threat to human health or the environment for the current industrial land use. Adequate institutional controls are in place, through the base Master Plan, for both current land use, and for the future, in the event of a change in land use. No remedial action is necessary for groundwater at this site to ensure protection of human health and the environment, as long as the current land use is maintained and controlled. In accordance with National Oil and Hazardous Substances Pollution Contingency Plan (NCP) Section 300.430 (f)(4)(ii), a review will be conducted within five years after finalization of this Decision to ensure that this decision provides continued protection of human health and the environment.

Chief, Environmental Division — Date

--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---

Minnesota Pollution Control Agency

[✓] Concur

[ ] Non-Concur (Please provide reason)

Signature — Title — Date

Table 5-5. Aircraft Parking Apron Sample Results (PRL 11)

		Groundwater
Sample ID	PAL[a] (ng/L)	DU-APA-MW02
Sample Date		5/25/2018
Perfluorinated Compounds US EPA Method 537 Rev 1.1 modified		
Perfluorobutanesulfonate (PFBS)	***2,000***	5.7 J+
Perfluoroheptanoic acid (PFHpA)	NA	5.4
Perfluorohexanesulfonate (PFHxS)	***27***	**38**
Perfluorononanoic acid (PFNA)	NA	1.0 J
Perfluoro-octanesulfonate (PFOS)	***27***	**120**
Perfluorooctanoic acid (PFOA)	***35***	7.5
PFOS + PFOA [b]	***62***	**127.5**

		Soil										
Sample ID	PAL[c, d] (ng/g)	DU-APA-SB01-01	DU-APA-SB01-5	DU-APA-SB02-01	DU-APA-SB02-5	DU-APA-SB03-01	DU-APA-SB03-5	DU-APA-SB04-01	DU-APA-SB04-5	DU-APA-SB05-01	DU-APA-SB05-5	DU-APA-SB05-5-Dup 1
Sample Date		1/8/2018	1/8/2018	1/8/2018	1/8/2018	1/8/2018	1/8/2018	1/8/2018	1/8/2018	1/8/2018	1/8/2018	1/8/2018
Sample Depth (ft bgs)		1	5	1	5	1	5	1	5	1	5	5
Perfluorinated Compounds US EPA Method 537 Rev 1.1 Modified												
Perfluorobutanesulfonate (PFBS)	***30,000***	0.54 U	0.62 U	0.61 U	0.48 U	0.64 U	0.72 U	0.55 U	0.63 U	0.63 U	0.55 U	0.60 U
Perfluoroheptanoic acid (PFHpA)	NA	0.54 U	0.62 U	0.61 U	0.48 U	0.64 U	0.72 U	0.55 U	0.63 U	0.63 U	0.55 U	0.60 U
Perfluorohexanesulfonate (PFHxS)	NA	0.20 J	0.62 U	0.21 J	0.48 U	1.9	1.2	1.7	0.30 J	0.57 J	0.42 J	0.38 J
Perfluorononanoic acid (PFNA)	NA	0.18 J+	0.22 J+	0.61 U	0.48 U	0.64 U	0.72 U	0.55 U	0.63 U	0.23 J+	0.26 J+	0.60 U
Perfluoro-octanesulfonate (PFOS)	***1,260***	8.3	4.4	2.1	1.4	11	15	5.8	3.4	7.8	23	20
Perfluorooctanoic acid (PFOA)	***330***	0.54 U	0.62 U	0.61 U	0.48 U	0.64 U	0.72 U	0.55 U	0.63 U	0.25 J	0.33 J	0.23 J

PAL = project action level ng/L = nanogram per liter ng/g = nanogram per gram NA = Not applicable Dup = duplicate

ft = feet bgs = below ground surface HBV=Health-Based Value SRV= Soil Reference Value

Bold value indicates analyte detected above screening level Italicized and bolded value indicates screening criterion used

(a) Minnesota Department of Health (MDH) 2018. Human Health-Based Water Guidance Table dated September 2018. Chronic residential health-based values (HBVs) http://www.health.state.mn.us/divs/eh/risk/guidance/gw/table.html.

(b) For combined PFOS+PFOS concentrations, only detected concentrations were summed.

(c) Minnesota Pollution Control Agency (MPCA) 2016. SRV Spreadsheet (c-r1-06). Table dated September 2016. Final Residential Soil Reference Values (SRVs) https://www.pca.state.mn.us/waste/risk-based-site-evaluation-guidance

(d) US EPA May 2018. Regional Screening Levels (RSL) – Generic Tables Dated May 2018, Residential – Direct Contact Soil RSLs based on a target hazard quotient of 1.0.

Data Qualifiers:

J = Estimated concentration

J+ = Reported value may not be accurate or precise, but the result may be biased high.

U = Not detected at concentration shown

APPENDIX H – SITE 25 SUPPORTING INFORMATION

Table 1. Groundwater Cleanup Standards
148th Fighter Wing, Duluth Air National Guard Base, Duluth, Minnesota

Chemical	CAS Number	MDH Groundwater Value (µg/L)	MDH Groundwater Value Last Updated
Benzene	71-43-2	2	2009
Ethylbenzene	100-41-4	50	2011
Xylenes	1330-20-7	300	2020
1,2,4-TMB	95-63-6	30	2020
1,3,5-TMB	108-67-8	30	2020
1,2-DCA	107-06-2	1	2013
TCE	79-01-6	0.4	2015
TPH-DRO	NA	NE	NA

Note: MDH groundwater value includes the HRLs, HBVs, and RAAs. MDH develops HBVs when Minnesota agencies need guidance for chemicals that do not have HRLs. RAA is advice that MDH issues to Minnesota agencies. MDH provides RAA to assist the agencies in evaluating potential health risks to humans from exposures to a chemical. Generally, RAA contains greater uncertainty than HRLs and HBVs because the available information is more limited.

The applicable cleanup criterion for the site is the HRL. In the absence of a promulgated HRL, the cleanup criterion is the HBV. In the absence of an established HBV, the cleanup criterion is the RAA.

µg/L = Micrograms per Liter
1,2-DCA = 1,2-Dichloroethane
1,2,4-TMB = 1,2,4-Trimethylbenzene
1,3,5-TMB = 1,3,5-Trimethylbenzene
CAS = Chemical Abstract Service
HBV = Health-Based Value
HRL = Health Risk Limit
MDH = Minnesota Department of Health
NA = Not Available
NE = Not Established
RAA = Risk Assessment Advice
TCE = Trichloroethene
TPH-DRO = Total Petroleum Hydrocarbons-Diesel Range Organics

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Table 2. Water Level Measurements
148th Fighter Wing, Duluth Air National Guard Base, Duluth, Minnesota

Site	Well Identification	Diameter (inches)	Well Construction (e.g., PVC, SS)	Completion Method (e.g., Flush-mount, Stick-up)	Total Well Depth (feet BTOC)	TOC Elevation (feet amsl)	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)
							June 2020		December 2020		June 2021		November/ December 2021		June 2022		December 2022		June 2023		December 2023	
21	021-010MW	2	SS	Stick-up	17.54	1398.68	7.25	1391.43	NA	NA	6.34	1392.34	NA	NA	5.97	1392.71	NA	NA	7.15	1391.53	NA	NA
21	021-012PM	2	PVC	Stick-up	16.89	1399.5	7.34	1392.16	NA	NA	7.31	1392.19	NA	NA	6.44	1393.06	NA	NA	Not Accessible	NA	NA	NA
25	025-001MW	2	PVC	Flush-mount	37.52	1422.01	20.84	1401.17	21.01	1401.00	20.97	1401.04	19.89	1402.12	35.61	1386.4	26.85	1395.16	20.68	1401.33	20.42	1401.59
25	025-002MW	2	PVC	Stick-up	17.68	1400.32	7.85	1392.47	NA	NA	7.90	1392.42	NA	NA	6.75	1393.57	NA	NA	7.72	1392.6	NA	NA
25	025-003MW	2	PVC	Stick-up	22.31	1405.47	9.75	1395.72	8.00	1397.47	9.53	1395.94	8.26	1397.21	7.82	1397.65	7.78	1397.69	9.36	1396.11	7.98	1397.49
25	025-003MWD	2	PVC	Stick-up	29.76	1405.03	11.56	1393.47	10.20	1394.83	11.54	1393.49	11.27	1393.76	10.35	1394.68	7.96	1397.07	11.38	1393.65	10.60	1394.43
25	025-004MW	2	PVC	Stick-up	16.51	1397.82	8.15	1389.67	NA	NA	7.48	1390.34	NA	NA	6.76	1391.06	NA	NA	7.82	1390	NA	NA
25	025-005MW	2	PVC	Flush-mount	26.02	1421.76	20.74	1401.02	NA	NA	21.09	1400.67	NA	NA	19.14	1402.62	NA	NA	11.68	1410.08	NA	NA
25	025-006MW	2	PVC	Stick-up	38.86	1398.66	4.82	1393.84	4.67	1393.99	4.88	1393.78	4.74	1393.92	4.96	1393.7	4.43	1394.23	4.68	1393.98	4.12	1394.54
25	025-007MW	2	PVC	Flush-mount	12.66	1396.61	5.22	1391.39	NA	NA	5.52	1391.09	NA	NA	5.35	1391.26	NA	NA	5.5	1391.11	NA	NA
25	025-008MW	2	PVC	Stick-up	17.59	1399.55	9.31	1390.24	NA	NA	9.23	1390.32	NA	NA	9.01	1390.54	NA	NA	9.6	1389.95	NA	NA
25	025-009MW	2	PVC	Stick-up	19.53	1408.28	11.37	1396.91	10.84	1397.44	4.19	1404.09	10.73	1397.55	9.75	1398.53	10.08	1398.20	11.1	1397.18	10.07	1398.21
25	025-010MW	2	PVC	Stick-up	17.01	1398.75	6.24	1392.51	4.88	1393.87	6.11	1392.64	5.34	1393.41	5.01	1393.74	5.24	1393.51	6.09	1392.66	5.15	1393.6
25	025-011MW	2	PVC	Stick-up	16.21	1398.59	6.39	1392.20	4.29	1394.30	3.78	1394.81	4.64	1393.95	3.94	1394.65	4.21	1394.38	6.22	1392.37	4.21	1394.38
25	025-012MW	2	PVC	Stick-up	32.35	1423.96	24.47	1399.49	NA	NA	24.81	1399.15	NA	NA	23.73	1400.23	NA	NA	20.43	1403.53	NA	NA
25	025-013MW	2	PVC	Stick-up	NA	1407.12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
25	025-014MW	2	PVC	Stick-up	18.32	1398.1	5.66	1392.44	NA	NA	5.54	1392.56	NA	NA	4.85	1393.25	NA	NA	5.55	1392.55	NA	NA
25	025-015MW	2	PVC	Flush-mount	NA	1420.59	NA	NA	NA	NA	NA	NA	NA	NA	22.14	1398.45	NA	NA	22.95	1397.64	NA	NA
25	025-016MW	2	PVC	Stick-up	15.96	1412.3	14.00	1398.30	NA	NA	14.09	1398.21	NA	NA	14.42	1397.88	NA	NA	13.9	1398.4	NA	NA
25	025-017MW	2	PVC	Stick-up	25.40	1419.25	19.26	1399.99	19.22	1400.03	19.58	1399.67	19.89	1399.36	18.72	1400.53	19.26	1399.99	19.14	1400.11	18.39	1400.86
25	025-018MW	2	PVC	Stick-up	20.50	1414.24	15.53	1398.71	NA	NA	NA	NA	NA	NA	14.4	1399.84	NA	NA	15.18	1399.06	NA	NA
25	025-019MW	2	PVC	Stick-up	31.40	1424.46	23.29	1401.17	23.62	1400.84	23.50	1400.96	23.77	1400.69	22.88	1401.58	21.95	1402.51	23.2	1401.26	22.30	1402.16
25	025-020MW	2	PVC	Stick-up	27.35	1419.85	23.78	1396.07	NA	NA	23.88	1395.97	NA	NA	22.56	1397.29	NA	NA	6.08	1413.77	NA	NA
25	025-021MW	2	PVC	Stick-up	19.59	1401.55	8.51	1393.04	7.91	1393.64	4.19	1397.36	8.19	1393.36	7.46	1394.09	7.85	1393.70	8.4	1393.15	7.73	1393.82
25	025-022MW	2	PVC	Flush-mount	27.19	1421.25	19.95	1401.30	20.32	1400.93	20.73	1400.52	20.53	1400.72	19.73	1401.52	19.36	1401.89	Dry	NA	18.65	1402.6
25	025-023MW	2	PVC	Flush-mount	27.50	1421.51	21.06	1400.45	21.20	1400.31	21.42	1400.09	20.76	1400.75	20.84	1400.67	20.42	1401.09	20.72	1400.79	19.68	1401.83
25	025-024MW	2	PVC	Stick-up	34.04	1425.29	23.97	1401.32	NA	NA	24.09	1401.20	NA	NA	24.26	1401.03	NA	NA	23.92	1401.37	NA	NA
25	025-025MW	2	PVC	Flush-mount	28.16	1421.29	19.73	1401.56	NA	NA	20.24	1401.05	NA	NA	19.39	1401.9	NA	NA	20	1401.29	NA	NA
25	025-026MW	2	PVC	Stick-up	27.14	1419.20	18.83	1400.37	NA	NA	19.25	1399.95	NA	NA	18.17	1401.03	NA	NA	18.62	1400.58	NA	NA
25	025-027MW	2	PVC	Flush-mount	27.88	1421.84	21.59	1400.25	22.20	1399.64	23.13	1398.71	20.67	1401.17	21.33	1400.51	20.15	1401.69	20.15	1401.69	18.99	1402.85
25	025-028MW	2	PVC	Flush-mount	27.24	1422.34	21.26	1401.08	NA	NA	9.52	1412.82	20.56	1401.78	20.89	1401.45	NA	NA	12.8	1409.54	NA	NA
25	025-029MW	2	PVC	Stick-up	31.83	1423.79	23.14	1400.65	23.47	1400.32	23.49	1400.30	23.36	1400.43	22.7	1401.09	23.28	1400.51	23.18	1400.61	22.70	1401.09
25	025-030MW	2	PVC	Stick-up	20.26	1405.91	11.66	1394.25	10.29	1395.62	11.64	1394.27	11.21	1394.70	10.41	1395.5	10.21	1395.70	11.34	1394.57	10.48	1395.43

amsl = Above Mean Sea Level
btoc = Below Top of Casing
NA = Not Available
PVC = Polyvinyl Chloride
SS = Stainless Steel
TOC = Top of Casing

Table 3. Field Parameter Measurements
148th Fighter Wing, Duluth Air National Guard Base, Duluth, Minnesota

Parameter	025-001MW	025-003MW	025-003MWD	025-006MW	025-009MW	025-010MW	025-011MW	025-017MW	025-019MW	025-021MW	025-022MW	025-023MW	025-027MW	025-029MW	025-030MW
Dissolved oxygen (mg/L)	1.26	0.98	1.20	3.43	1.42	1.70	3.00	1.14	7.41	1.57	0.97	1.42	0.90	1.11	1.18
ORP (mV)	71	-18	11	70	-17	25	14	20	13	89	-12	-20	31	17	-9
pH (S.U.)	5.58	4.81	4.61	5.95	5.28	4.40	4.60	4.22	4.59	4.39	4.99	4.84	5.11	4.70	4.86
Conductivity (mS/cm)	0.867	0.647	1.59	0.697	1.21	1.72	0.690	1.90	1.40	1.12	1.16	3.48	1.39	1.55	1.55
Temperature (ºC)	7.85	5.92	5.94	5.45	4.77	3.80	6.90	7.31	9.71	4.52	9.22	6.41	9.61	7.50	6.58
Turbidity (NTU)	40.3	8.4	11.2	40	77	58.6	100	0	0	40	40	2.8	2.8	170	29.6

Note: Field parameters were measured from December 4 through 7, 2023, for each monitoring well.

°C = Degrees Celsius
mg/L = Milligrams per Liter
mS/cm = Millisiemens per Centimeter
mV = Millivolt
NA = Not Available
NTU = Nephelometric Turbidity Unit
ORP = Oxygen Reduction Potential
S.U. = Standard Unit

Table 4. Groundwater Analytical Results Summary
148th Fighter Wing, Duluth Air National Guard Base, Duluth, Minnesota

Parameter / Location ID / Sample ID / Sample Type / Sample Date	Units	MDH Groundwater Value	025-001MW 025-001MW-08-00 WELL 12/05/2023	025-003MW 025-003MW-08-00 WELL 12/06/2023	025-003MWD 025-003MWD-08-00 WELL 12/06/2023	025-006MW 025-006MW-08-00 WELL 12/04/2023	025-009MW 025-009MW-08-00 WELL 12/06/2023	025-010MW 025-010MW-08-00 WELL 12/05/2023	025-011MW 025-011MW-08-00 WELL 12/07/2023	025-017MW 025-017MW-08-00 WELL 12/07/2023
TPH-DRO										
PETROLEUM HYDROCARBONS C10-C28	mg/L	NE	**0.0550 J**	**1.10**	**0.0440 J**	**0.0450 J**	**0.0900 J**	**0.0420 J**	0.120 U	**0.160 J**
VOCs										
1,2,4-Trimethylbenzene	µg/L	30	0.400 U	**510**	**2.60**	0.400 U	**0.540 J**	0.400 U	**0.220 J**	**0.340 J**
1,2-Dichloroethane	µg/L	1	0.800 U	4.00 U	**1.30**	0.800 U	0.800 U	0.800 U	0.800 U	**4.10**
1,3,5-Trimethylbenzene	µg/L	30	0.500 U	**170**	**0.440 J**	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Benzene	µg/L	2	0.800 U	**8.80**	**5.70**	0.800 U	**2.20**	0.800 U	**0.670 J**	**24.0**
cis-1,2-Dichloroethene	µg/L	6	0.400 U	2.00 U	0.400 U	**0.420 J**	0.400 U	0.400 U	0.400 U	0.400 U
Ethylbenzene	µg/L	50	0.400 U	**180**	**3.00**	0.400 U	0.400 U	0.400 U	0.400 U	0.400 U
m-and/or p-Xylene	µg/L	300	0.800 U	**370**	**3.10**	0.800 U	0.800 U	0.800 U	0.800 U	0.800 U
o-xylene	µg/L	300	0.400 U	**6.40**	0.400 U	0.400 U	0.400 U	0.400 U	0.400 U	**1.40 J+**
Trichloroethene	µg/L	0.4	0.400 U	2.00 U	0.400 U	**1.20**	0.400 U	0.400 U	0.400 U	0.400 U
Vinyl Chloride	µg/L	0.2	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 UJ	0.200 UJ
Xylene, Total	µg/L	300	0.800 U	**380**	**3.10**	0.800 U	0.800 U	0.800 U	0.800 U	**1.40 J+**

Parameter / Location ID / Sample ID / Sample Type / Sample Date	Units	MDH Groundwater Value	025-019MW 025-019MW-08-00 WELL 12/07/2023	025-021MW 025-021MW-08-00 WELL 12/05/2023	025-022MW 025-022MW-08-00 WELL 12/07/2023	025-023MW 025-023MW-08-00 WELL 12/05/2023	025-023MW 025-023MW-08-01 WELL 12/05/2023	025-027MW 025-027MW-08-00 WELL 12/06/2023	025-029MW 025-029MW-08-00 WELL 12/07/2023	025-030MW 025-030MW-08-00 WELL 12/06/2023	025-030MW 025-030MW-08-01 WELL 12/06/2023
TPH-DRO											
PETROLEUM HYDROCARBONS C10-C28	mg/L	NE	**0.150 J**	**0.0560 J**	**2.20**	**0.630**	**1.20**	**0.0650 J**	**0.130 J**	**0.570**	**0.420**
VOCs											
1,2,4-Trimethylbenzene	µg/L	30	**44.0**	0.400 U	**1300**	**200 J+**	**150**	**0.570 J**	**0.190 J**	**24.0**	**27.0**
1,2-Dichloroethane	µg/L	1	0.800 U	0.800 U	32.0 U	3.20 U	1.60 U	0.800 U	0.800 U	1.60 U	1.60 U
1,3,5-Trimethylbenzene	µg/L	30	**7.00**	0.500 U	**400**	**42.0 J+**	**20.0**	0.500 U	0.500 U	**6.30**	**9.60**
Benzene	µg/L	2	**6.80**	0.800 U	**35.0 J**	**14.0**	**38.0**	**2.10**	**1.30**	**160**	**230**
cis-1,2-Dichloroethene	µg/L	6	0.400 U	0.400 U	16.0 U	**13.0**	**11.0**	0.400 U	**1.40**	0.800 U	0.800 U
Ethylbenzene	µg/L	50	**76.0**	0.400 U	**360**	**250**	**240**	**0.330 J**	0.400 U	**73.0**	**140**
m-and/or p-Xylene	µg/L	300	**50.0**	0.800 U	**5300**	**150 J+**	**130**	0.800 U	0.800 U	**11.0**	**13.0**
o-xylene	µg/L	300	**14.0**	0.400 U	**2400**	**10.0**	**6.90**	0.40 U	0.400 U	**2.10 J+**	**2.40**
Trichloroethene	µg/L	0.4	0.400 U	0.400 U	16.0 U	**1.20 J**	0.800 U	0.400 U	**4.00**	0.800 U	0.800 U
Vinyl Chloride	µg/L	0.2	0.200 UJ	0.200 U	0.200 UJ	**1.80**	**1.40**	0.200 UJ	0.200 UJ	0.200 U	0.200 U
Xylene, Total	µg/L	300	**64.0**	0.800 U	**7700**	**160**	**140**	0.80 U	0.800 U	**13.0**	**15.0**

Bold denotes detected concentration.
Bold highlighted denotes concentration that exceeds MDH groundwater value.

Note: 025-023MW-07-01 and 025-030MW-07-01 are field duplicates.

Data Qualifiers:

J = Estimated: The analyte was positively identified; the quantitation is an estimation
U = Undetected at the Limit of Detection
UJ = Not detected and associated value estimated

µg/L = Micrograms per Liter
DRO = Diesel Range Organics
ft = Feet
ID = Identifier
MDH = Minnesota Department of Health
mg/L = Milligrams per Liter
NE = Not Established
TPH = Total Petroleum Hydrocarbons
VOC = Volatile Organic Compound

Table 5. MNA Parameter Results Summary
148th Fighter Wing, Duluth Air National Guard Base, Duluth, Minnesota

Parameter / Location ID / Sample ID / Sample Type / Sample Date	Units	025-001MW 025-001MW-08-00 WELL 12/05/2023	025-003MW 025-003MW-08-00 WELL 12/06/2023	025-009MW 025-009MW-08-00 WELL 12/06/2023	025-023MW 025-023MW-08-00 WELL 12/05/2023	025-023MW 025-023MW-08-01 WELL 12/05/2023	025-030MW 025-030MW-08-00 WELL 12/06/2023	025-030MW 025-030MW-08-01 WELL 12/06/2023
Metals								
Iron	µg/L	34.0 U	**150 J+**	34 U	**360**	**210 J+**	**53.0 J+**	**61.0 J+**
Manganese	µg/L	1.8 U	**5900**	**7300**	**15000**	**15000**	**10000**	**14000**
Alkalinity								
Alkalinity	mg/L	**160**	**200**	**500**	**620**	**630**	**610**	**640**
Sulfide								
Sulfide	mg/L	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
TOC								
Total Organic Carbon	mg/L	**2.20 J+**	**11.0**	**14.0**	**17.0**	**17.0**	**32.0**	**46.0**
Anions								
Chloride	mg/L	**98.0**	**60.0**	**63.0**	**820**	**690**	**85.0**	**87.0**
Nitrate	mg/L	**4.00**	0.20 U	**0.340 J+**	0.200 U	0.200 U	**0.260 J+**	**0.260 J+**
Nitrite	mg/L	0.100 U	0.100 UJ	0.100 UJ	0.100 U	0.100 U	0.100 UJ	0.100 UJ
Sulfate	mg/L	**54.0**	2.50 U	**5.60**	**9.20**	**9.20**	**12.0**	**5.00**
Dissolved Gases								
Ethane	µg/L	1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.50 U
Ethylene	µg/L	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Methane	µg/L	1.30 U	**4500**	**490**	**3200**	**3400**	**4500**	**3400**

Data Qualifiers:

J = Estimated: The analyte was positively identified; the quantitation is an estimation
U = Undetected at the Limit of Detection
UJ = Not detected and associated value estimated

µg/L = Micrograms per Liter
ft = Feet
ID = Identifier
mg/L= Milligrams per Liter
MNA = Monitored Natural Attenuation
NA = Not Available

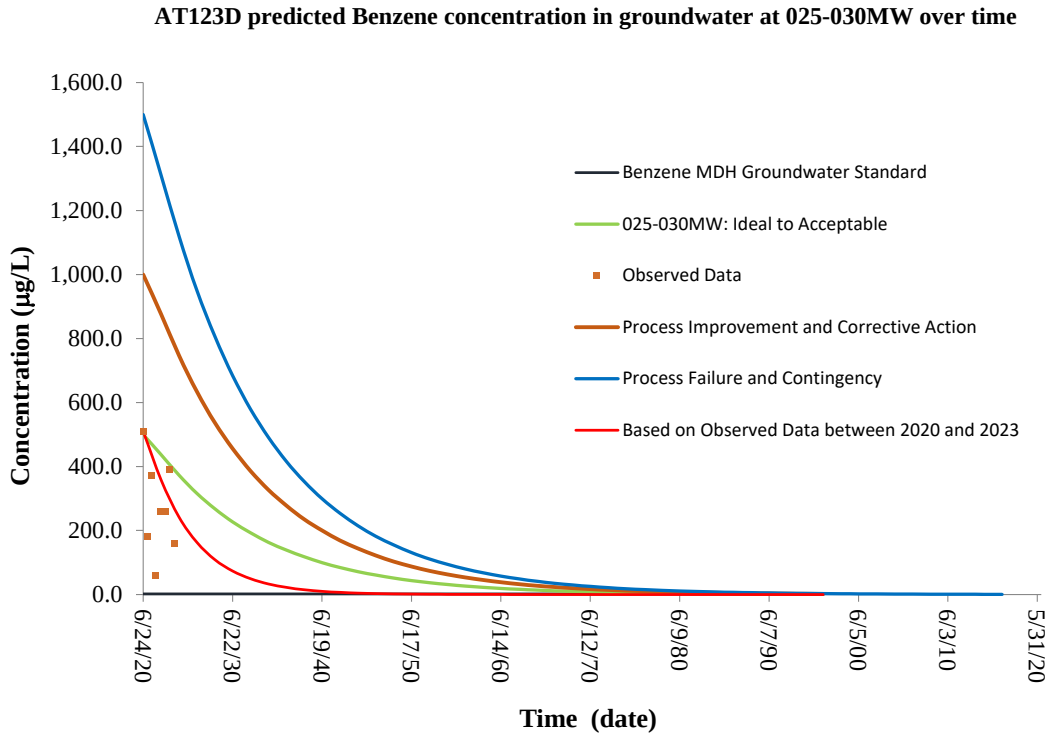


Figure 5. AT123D Predicted Benzene Concentration in Groundwater at 025-030MW Over Time

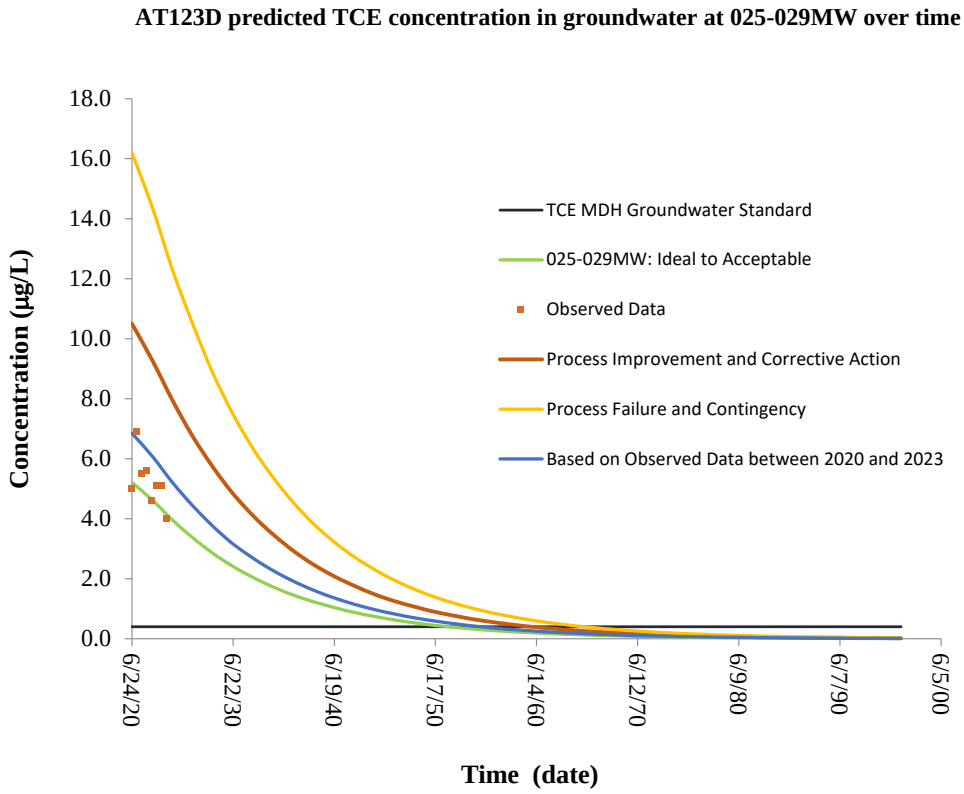


Figure 6. AT123D Predicted TCE Concentration in Groundwater at 025-029MW Over Time

TABLE 1
GROUNDWATER CONTAMINANTS OF CONCERN – SITE 25

		Diesel Range Organics	Benzene	1,2-DCA	Ethyl-benzene	TCE	1, 2, 4-TMB	1, 3, 5-TMB	Xylenes
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	CAS No.	**NA**	**71-43-2**	**107-06-2**	**100-41-4**	**79-01-6**	**95-63-6**	**108-67-8**	**1330-20-7**
MDH Groundwater HRLs*, HBVs**, or RAAs***		NE	2	1	50	0.4	30	30	300
Well Location	**Sample Date**								
021-010MW	10/20/1999	NA	ND	ND	ND	ND	NA	NA	ND
	5/4/2000	NA	ND	ND	ND	ND	NA	NA	ND
	7/18/2000	NA	ND	ND	ND	ND	NA	NA	ND
	9/18/2000	NA	ND	ND	ND	ND	NA	NA	ND
	4/25/2001	NA	ND	ND	ND	ND	NA	NA	ND
	7/11/2001	NA	ND	ND	ND	ND	NA	NA	ND
	4/27/2005	ND	ND	ND	ND	ND	NA	NA	ND
	11/19/2008	NA	ND	ND	ND	ND	NA	NA	ND
	9/9/2009	ND	ND	ND	ND	ND	NA	NA	ND
	11/11/2009	120	ND	ND	ND	ND	NA	NA	ND
	9/21/2010	NA	ND	ND	ND	ND	NA	NA	ND
	11/2/2010	NA	ND	ND	ND	ND	NA	NA	ND
	5/25/2011	ND	ND	ND	ND	ND	NA	NA	ND
	8/8/2011	NA	0.64	0.41	ND	ND	NA	NA	ND
	11/10/2011	NA	ND	0.47	ND	ND	NA	NA	ND
	7/31/2012	NA	ND	0.36	ND	ND	NA	NA	ND
	11/9/2012	ND	ND	0.34	ND	ND	NA	NA	ND
	11/1/2013	180	ND	0.5	ND	ND	NA	NA	ND
	4/2/2014	NA	ND	ND	ND	ND	NA	NA	ND
	5/7/2015	39	0.98	ND	ND	ND	ND	ND	ND
	9/18/2018	240	ND	ND	ND	ND	ND	ND	ND
021-012PM	11/10/2011	NA	NA	1	ND	ND	NA	NA	ND
	5/8/2012	NA	NA	0.51J	ND	ND	NA	NA	ND
	7/31/2012	220	NA	1.3	ND	ND	NA	NA	ND
	11/9/2012	NA	NA	1.5	ND	ND	NA	NA	ND
	11/4/2013	330	NA	1.3	ND	ND	NA	NA	ND
	4/3/2014	NA	ND	1.6	ND	ND	NA	NA	ND
	5/11/2015	93	0.22	ND	0.3	ND	ND	ND	ND
	9/21/2018	27	ND	ND	ND	ND	ND	ND	ND
025-001MW	5/9/2012	NA	ND	ND	ND	ND	NA	NA	ND
	8/1/122	33	ND	ND	ND	ND	NA	NA	ND
	11/12/2012	NA	ND	ND	ND	ND	NA	NA	ND
	11/4/2013	140	ND	ND	ND	ND	NA	NA	ND
	4/5/2014	NA	ND	ND	ND	ND	NA	NA	ND
	5/11/2015	29	NA	ND	ND	ND	ND	ND	ND
	9/21/2018	ND	NA	ND	0.6	ND	ND	ND	ND
	6/26/2020	ND	ND	ND	ND	ND	ND	ND	ND
	12/7/2020	ND	ND	ND	ND	ND	ND	ND	ND
	6/21/2021	ND	ND	ND	ND	ND	ND	ND	ND
	12/1/2021	48	ND	ND	ND	ND	ND	ND	ND
	6/16/2022	ND	ND	ND	ND	ND	ND	ND	ND
	12/8/2022	ND	ND	ND	0.61 J	ND	ND	ND	4
	6/21/2023	57 J	ND	ND	ND	ND	ND	ND	ND
	12/5/2023	0.0550 J	ND	ND	ND	ND	ND	ND	ND

TABLE 1
GROUNDWATER CONTAMINANTS OF CONCERN – SITE 25

		Diesel Range Organics	Benzene	1,2-DCA	Ethyl-benzene	TCE	1, 2, 4-TMB	1, 3, 5-TMB	Xylenes
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	CAS No.	**NA**	**71-43-2**	**107-06-2**	**100-41-4**	**79-01-6**	**95-63-6**	**108-67-8**	**1330-20-7**
MDH Groundwater HRLs*, HBVs**, or RAAs***		NE	2	1	50	0.4	30	30	300
Well Location	**Sample Date**								
025-002MW	5/19/1995	NA	1	ND	NA	NA	NA	NA	ND
	10/20/1999	NA	ND	4.7	NA	ND	NA	NA	ND
	5/4/2000	NA	ND	5.9	NA	ND	NA	NA	ND
	7/18/2000	NA	ND	0.4	NA	ND	NA	NA	ND
	9/18/2000	NA	ND	ND	NA	ND	NA	NA	ND
	4/25/2001	NA	ND	ND	NA	ND	NA	NA	ND
	7/11/2001	NA	0.9	ND	NA	ND	NA	NA	ND
	4/17/2003	300	ND	ND	NA	ND	NA	NA	ND
	9/16/2003	100	ND	ND	NA	ND	NA	NA	ND
	4/27/2005	ND	ND	ND	NA	ND	NA	NA	ND
	5/2/2005	150	ND	1.8	NA	ND	NA	NA	ND
	9/22/2008	NA	ND	2.4	NA	ND	NA	NA	ND
	11/19/2008	NA	ND	1.8	NA	ND	NA	NA	ND
	9/9/2009	ND	ND	3.3	NA	ND	NA	NA	ND
	11/13/2009	150	ND	2.9	NA	ND	NA	NA	ND
	9/22/2010	NA	0.86	3.4	NA	ND	NA	NA	ND
	11/2/2010	NA	0.86	2.7	NA	ND	NA	NA	ND
	5/24/2011	120	1.1	5.5	NA	ND	NA	NA	ND
	8/10/2011	NA	ND	1.5	NA	ND	NA	NA	ND
	11/10/2011	NA	ND	3.3	NA	ND	NA	NA	ND
	5/8/2012	NA	ND	1	NA	ND	NA	NA	ND
	7/31/2012	88	0.24	2.3	NA	ND	NA	NA	ND
	11/9/2012	NA	ND	1.7	NA	ND	NA	NA	ND
	11/4/2013	180	ND	1.4	NA	ND	NA	NA	ND
	7/1/2015	150	0.41	3	ND	ND	ND	3	ND
	8/26/2015	220	ND	1.8	ND	ND	ND	1.8	ND
	4/22/2016	97	0.37	3	ND	ND	ND	3	ND

TABLE 1
GROUNDWATER CONTAMINANTS OF CONCERN – SITE 25

		Diesel Range Organics	Benzene	1,2-DCA	Ethyl-benzene	TCE	1, 2, 4-TMB	1, 3, 5-TMB	Xylenes
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	CAS No.	**NA**	**71-43-2**	**107-06-2**	**100-41-4**	**79-01-6**	**95-63-6**	**108-67-8**	**1330-20-7**
MDH Groundwater HRLs*, HBVs**, or RAAs***		NE	2	1	50	0.4	30	30	300
Well Location	**Sample Date**								
025-003MW	5/19/1995	NA	2,600	ND	1,300	NA	NA	NA	1,450
	10/20/1999	NA	1,200	6.1	1,070	ND	NA	NA	4,100
	5/4/2000	NA	966	4.6	820	ND	NA	NA	2,100
	7/18/2000	NA	758	3.7	708	ND	NA	NA	2,837
	9/18/2000	NA	1,060	ND	1,090	ND	NA	NA	4,040
	4/25/2001	NA	25.5	ND	28	ND	NA	NA	118
	7/11/2001	NA	1,310	4	1,480	ND	NA	NA	6,580
	4/17/2003	1,400	930	ND	1,300	ND	NA	NA	4,600
	9/16/2003	1,200	490	ND	770	ND	NA	NA	1,900
	3/18/2005	1,400	426	ND	898	ND	NA	NA	3,415
	5/2/2015	1,300	390	ND	890	ND	NA	NA	2,100
	11/30/2006	NA	269	ND	899	ND	NA	NA	2,120
	4/5/2007	NA	466	ND	1,070	ND	NA	NA	1,260
	6/13/2007	NA	466	ND	807	ND	NA	NA	1,060
	9/19/2007	2,500	304	ND	1,110	ND	NA	NA	1,410
	12/4/2007	1,500	504	ND	744	ND	NA	NA	1,080
	9/25/2008	NA	67	ND	100	ND	NA	NA	99
	11/20/2008	NA	56.2	ND	61.5	ND	NA	NA	63.3
	5/22/2009	NA	82.4	ND	138	ND	NA	NA	119.5
	9/17/2009	1,400	127	ND	210	ND	NA	NA	173
	11/17/2009	710	57.3	ND	51.5	ND	NA	NA	23.1
	9/20/2010	NA	70	ND	68	ND	NA	NA	4.1
	11/5/2010	NA	8.5	ND	3.5	ND	NA	NA	0.52
	5/25/2011	610	17	ND	58	ND	NA	NA	30
	8/16/2011	NA	19	ND	90	ND	NA	NA	55
	11/12/2011	NA	41	ND	130	ND	NA	NA	67
	5/11/2012	NA	11	ND	5.1	ND	NA	NA	0.69
	8/2/2012	300	8.4	ND	12	ND	NA	NA	1.8
	11/12/2012	NA	17	ND	18	ND	NA	NA	2
	10/29/2013	410	1.9	ND	19	ND	NA	NA	6.8
	4/2/2014	NA	9.3	ND	4.1	ND	NA	NA	2.2
	5/7/2015	540	18	ND	130	ND	49	16	41
	7/6/2015	930	10	ND	120	ND	93	18	79
	8/28/2015	850	17	ND	150	ND	47	9.6	53
	4/26/2016	500	7.4	ND	150	ND	98	26	98
	9/19/2018	730	12	ND	270	ND	440	160	500
	6/26/2020	860	8.2	1.2	210	ND	450	160	470
	12/8/2020	1400	14	ND	320	ND	600	210	630
	6/18/2021	930	13	ND	390	ND	810	270	870
	11/30/2021	970	11	ND	260	ND	640	210	530
	6/17/2022	ND	6.9	ND	220	ND	600	200	500

TABLE 1
GROUNDWATER CONTAMINANTS OF CONCERN – SITE 25

		Diesel Range Organics	Benzene	1,2-DCA	Ethyl-benzene	TCE	1, 2, 4-TMB	1, 3, 5-TMB	Xylenes
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	CAS No.	**NA**	**71-43-2**	**107-06-2**	**100-41-4**	**79-01-6**	**95-63-6**	**108-67-8**	**1330-20-7**
MDH Groundwater HRLs*, HBVs**, or RAAs***		NE	2	1	50	0.4	30	30	300
Well Location	**Sample Date**								
025-003MWD	12/8/2022	640	8.2	ND	140 J	ND	420 J	150 J	290 J
	6/21/2023	950	10	ND	189 J	ND	589 J	150	430
	12/6/2023	1.1	8.8	ND	180	ND	510	170	380
	3/18/2005	130	97.1	ND	9.7	NA	NA	NA	8
	9/15/2006	NA	176	ND	15.7	ND	NA	NA	7
	11/30/2006	170	182	ND	17.7	ND	NA	NA	21.1
	4/5/2007	NA	140	ND	20.9	ND	NA	NA	8.9
	6/12/2007	NA	112	ND	24.8	ND	NA	NA	8.7
	12/5/2007	NA	87.8	ND	11.6	ND	NA	NA	5.7
	9/25/2008	NA	12.3	6.1	2	ND	NA	NA	0
	11/20/2008	NA	14.8	6.3	2.5	ND	NA	NA	0
	5/22/2009	NA	135	ND	55.1	ND	NA	NA	46.7
	9/17/2009	330	232	ND	49.1	ND	NA	NA	53.9
	11/17/2009	270	111	ND	5	ND	NA	NA	3.1
	9/20/2010	NA	41	ND	3.9	ND	NA	NA	0.66
	11/5/2010	NA	59	ND	6.2	ND	NA	NA	ND
	5/24/2011	ND	18	4.9	0.7	ND	NA	NA	ND
	8/16/2011	NA	44	6.8	6	1.7	NA	NA	1.8
	11/12/2011	NA	6	3.1	0.77	ND	NA	NA	0.28
	5/11/2012	NA	9.7	3.9	2.8	0.41	NA	NA	1.7
	8/2/2012	490	12	3.1	1.6	ND	NA	NA	0.63
	11/12/2012	NA	5.1	ND	0.78	ND	NA	NA	0.4
	10/29/2013	292	20	3.3	3.3	ND	NA	NA	2.2
	4/2/2014	NA	23	2.6	8.1	ND	NA	NA	5.6
	5/11/2015	130	190	ND	160	ND	36	4.9	120.0
	9/19/2018	68	7.4	1.5	4.3	ND	0.5	ND	2.8
	6/28/2020	ND	3.8	1.2	1.5	ND	0.23J	ND	0.85
	12/4/2020	70	17.0	ND	8.6	ND	1.9	0.22	6.4
	6/16/2021	35	16.0	2.0	8.1	ND	1.6	0.25	5.6
	11/30/2021	68	3.3	1.2	1.3	ND	0.64	ND	1.1
	6/16/2022	ND	250	ND	120	ND	16	5	7.2
	12/6/2022	ND	4.9	1.9	2.6	ND	1.8	0.45 J	3.1
	6/21/2023	61 J	4.8	ND	1.8	ND	1.5	0.75 J	2.1
	12/6/2023	0.0440 J	5.7	1.3	3	ND	2.6	0.44	3.1

TABLE 1
GROUNDWATER CONTAMINANTS OF CONCERN – SITE 25

		Diesel Range Organics	Benzene	1,2-DCA	Ethyl-benzene	TCE	1, 2, 4-TMB	1, 3, 5-TMB	Xylenes
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	CAS No.	**NA**	**71-43-2**	**107-06-2**	**100-41-4**	**79-01-6**	**95-63-6**	**108-67-8**	**1330-20-7**
MDH Groundwater HRLs*, HBVs**, or RAAs***		NE	2	1	50	0.4	30	30	300
Well Location	**Sample Date**								
025-004MW	10/20/1999	NA	ND	ND	ND	ND	NA	NA	ND
	5/4/2000	NA	ND	ND	ND	ND	NA	NA	ND
	7/18/2000	NA	ND	ND	ND	ND	NA	NA	ND
	9/19/2000	NA	ND	ND	ND	ND	NA	NA	ND
	4/25/2001	NA	ND	ND	ND	ND	NA	NA	ND
	7/11/2001	NA	ND	ND	ND	ND	NA	NA	ND
	4/17/2003	240	ND	NA	ND	NA	NA	NA	ND
	9/15/2003	ND	ND	ND	ND	ND	NA	NA	ND
	3/17/2005	ND	ND	ND	ND	ND	NA	NA	ND
	5/2/2005	180	ND	ND	ND	ND	NA	NA	ND
	9/13/2006	100	ND	ND	ND	ND	NA	NA	ND
	9/22/2008	NA	ND	ND	ND	ND	NA	NA	ND
	11/19/2008	NA	ND	ND	ND	ND	NA	NA	ND
	9/16/2009	ND	ND	ND	ND	ND	NA	NA	ND
	11/11/2009	230	ND	ND	ND	ND	NA	NA	ND
	9/21/2010	NA	ND	ND	ND	ND	NA	NA	ND
	11/2/2010	NA	ND	ND	ND	ND	NA	NA	ND
	5/23/2011	140	ND	ND	ND	ND	NA	NA	ND
	8/8/2011	NA	ND	ND	ND	ND	NA	NA	ND
	11/10/2011	NA	ND	ND	ND	ND	NA	NA	ND
	5/8/2012	NA	ND	ND	ND	ND	NA	NA	ND
	7/31/2012	ND	ND	ND	ND	ND	NA	NA	ND
	11/9/2012	NA	ND	ND	ND	ND	NA	NA	ND
	11/1/2013	280	ND	ND	ND	ND	NA	NA	ND
	4/3/2014	NA	ND	ND	ND	ND	NA	NA	ND
	5/11/2015	120	ND	ND	ND	ND	ND	ND	ND
	9/19/2018	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 1
GROUNDWATER CONTAMINANTS OF CONCERN – SITE 25

		Diesel Range Organics	Benzene	1,2-DCA	Ethyl-benzene	TCE	1, 2, 4-TMB	1, 3, 5-TMB	Xylenes
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	CAS No.	**NA**	**71-43-2**	**107-06-2**	**100-41-4**	**79-01-6**	**95-63-6**	**108-67-8**	**1330-20-7**
MDH Groundwater HRLs*, HBVs**, or RAAs***		NE	2	1	50	0.4	30	30	300
Well Location	**Sample Date**								
025-005MW	10/20/1999	NA	4.1	ND	ND	ND	NA	NA	ND
	5/4/2000	NA	0	ND	ND	ND	NA	NA	ND
	7/18/2000	NA	1.1	ND	ND	ND	NA	NA	ND
	9/19/2000	NA	2.8	ND	ND	ND	NA	NA	ND
	4/25/2001	NA	ND	ND	ND	ND	NA	NA	ND
	7/11/2001	NA	16.1	ND	ND	ND	NA	NA	2.5J
	4/17/2003	430	ND	ND	ND	ND	NA	NA	ND
	9/15/2003	1	ND	ND	ND	ND	NA	NA	ND
	5/2/2005	280	ND	ND	ND	ND	NA	NA	1.8
	9/18/2005	150	ND	ND	ND	ND	NA	NA	ND
	9/26/2008	NA	ND	ND	ND	ND	NA	NA	ND
	11/20/2008	NA	ND	ND	ND	ND	NA	NA	ND
	9/10/2009	180	ND	ND	ND	ND	NA	NA	ND
	11/14/2009	3,800	ND	ND	ND	ND	NA	NA	ND
	9/22/2010	NA	ND	ND	ND	ND	NA	NA	ND
	11/3/2010	NA	ND	ND	ND	ND	NA	NA	ND
	5/24/2011	980	ND	ND	ND	ND	NA	NA	ND
	8/8/2011	NA	ND	ND	ND	ND	NA	NA	ND
	11/11/2011	NA	ND	ND	ND	ND	NA	NA	ND
	5/9/2012	NA	ND	ND	ND	ND	NA	NA	ND
	8/1/2012	ND	ND	ND	ND	ND	NA	NA	ND
	11/12/2012	NA	ND	ND	ND	ND	NA	NA	ND
	11/4/2013	670	ND	ND	ND	ND	NA	NA	ND
	4/5/2014	NA	ND	ND	ND	ND	NA	ND	ND
	5/11/2015	240	ND	ND	ND	ND	ND	ND	ND
	9/21/2018	120	0.72	ND	ND	0.42	2.5	ND	2.4

TABLE 1
GROUNDWATER CONTAMINANTS OF CONCERN – SITE 25

		Diesel Range Organics	Benzene	1,2-DCA	Ethyl-benzene	TCE	1, 2, 4-TMB	1, 3, 5-TMB	Xylenes
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	CAS No.	**NA**	**71-43-2**	**107-06-2**	**100-41-4**	**79-01-6**	**95-63-6**	**108-67-8**	**1330-20-7**
MDH Groundwater HRLs*, HBVs**, or RAAs***		NE	2	1	50	0.4	30	30	300
Well Location	**Sample Date**								
025-006MW	4/17/2003	ND	ND	ND	ND	ND	NA	NA	ND
	9/15/2003	ND	ND	ND	ND	ND	NA	NA	ND
	3/16/2005	ND	ND	ND	ND	ND	NA	NA	ND
	5/2/2005	ND	ND	ND	ND	ND	NA	NA	ND
	9/13/2006	ND	ND	ND	ND	ND	NA	NA	ND
	11/30/2006	ND	ND	ND	ND	ND	NA	NA	ND
	9/19/2007	ND	ND	ND	ND	ND	NA	NA	ND
	9/26/2008	NA	ND	ND	ND	ND	NA	NA	ND
	11/19/2008	NA	ND	ND	ND	ND	NA	NA	ND
	9/17/2009	ND	ND	ND	ND	ND	NA	NA	ND
	11/11/2009	100	ND	ND	ND	ND	NA	NA	ND
	9/21/2010	NA	ND	ND	ND	ND	NA	NA	ND
	11/3/2010	NA	ND	ND	ND	0.31	NA	NA	ND
	5/23/2011	38	0.35	ND	ND	0.23	NA	NA	ND
	8/9/2011	NA	0.75	ND	ND	0.28	NA	NA	ND
	11/11/2011	NA	ND	ND	ND	0.32	NA	NA	ND
	5/9/2012	NA	ND	ND	ND	0.23	NA	NA	ND
	8/1/2012	55	ND	ND	ND	ND	NA	NA	ND
	11/12/2012	NA	ND	ND	ND	0.21	NA	NA	ND
	10/31/2013	120	ND	ND	ND	ND	NA	NA	ND
	4/2/2014	NA	ND	ND	ND	0.46	NA	NA	ND
	5/7/2015	31	2	ND	ND	0.84	ND	ND	ND
	9/19/2018	18	ND	ND	ND	ND	ND	ND	ND
	6/25/2020	ND	ND	ND	ND	1.1	ND	ND	ND
	12/2/2020	ND	0.2	ND	ND	1.5	ND	ND	0.49
	6/15/2021	ND	0.22	ND	ND	1.6	ND	ND	ND
	11/29/2021	39	ND	ND	ND	1.5	0.22	ND	ND
	6/20/2022	ND	ND	ND	ND	1.4	ND	ND	ND
	12/6/2022	ND	ND	ND	ND	1.5	ND	ND	ND
	6/20/2023	36 J	ND	ND	ND	1.5	ND	ND	ND
	12/4/2023	0.045 J	ND	ND	ND	1.2	ND	ND	ND

TABLE 1
GROUNDWATER CONTAMINANTS OF CONCERN – SITE 25

		Diesel Range Organics	Benzene	1,2-DCA	Ethyl-benzene	TCE	1, 2, 4-TMB	1, 3, 5-TMB	Xylenes
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	CAS No.	**NA**	**71-43-2**	**107-06-2**	**100-41-4**	**79-01-6**	**95-63-6**	**108-67-8**	**1330-20-7**
MDH Groundwater HRLs*, HBVs**, or RAAs***		NE	2	1	50	0.4	30	30	300
Well Location	**Sample Date**								
025-007MW	7/10/2000	ND	ND	ND	ND	NA	NA	NA	ND
	4/17/2003	ND	ND	ND	NA	ND	NA	NA	ND
	9/16/2003	ND	ND	ND	NA	ND	NA	NA	ND
	4/28/2005	ND	ND	ND	NA	ND	NA	NA	ND
	9/26/2008	NA	ND	ND	NA	ND	NA	NA	ND
	11/20/2008	NA	ND	ND	NA	ND	NA	NA	ND
	9/10/2009	ND	ND	ND	NA	ND	NA	NA	ND
	11/13/2009	ND	ND	ND	NA	ND	NA	NA	ND
	9/22/2010	NA	ND	ND	NA	ND	NA	NA	ND
	11/2/2010	NA	ND	ND	NA	ND	NA	NA	ND
	5/20/2011	150	ND	ND	NA	ND	NA	NA	ND
	8/9/2011	NA	ND	ND	NA	ND	NA	NA	ND
	11/10/2011	NA	ND	ND	NA	ND	NA	NA	ND
	5/8/2012	NA	ND	ND	NA	ND	NA	NA	ND
	7/31/2012	39J	ND	ND	NA	ND	NA	NA	ND
	11/9/2012	NA	ND	ND	NA	ND	NA	NA	ND
	11/1/2013	140	ND	ND	NA	ND	NA	NA	ND
025-008MW	7/10/2000	NA	ND	NA	ND	NA	NA	NA	NA
	3/17/2005	ND	ND	ND	ND	ND	NA	NA	ND
	5/2/2005	ND	ND	ND	ND	NA	NA	NA	ND
	9/22/2008	ND	ND	1.2	ND	ND	NA	NA	ND
	11/19/2008	ND	ND	ND	ND	ND	NA	NA	ND
	9/16/2009	110	ND	ND	ND	ND	NA	NA	ND
	11/11/2009	150	ND	ND	ND	ND	NA	NA	ND
	9/21/2010	ND	ND	ND	ND	ND	NA	NA	ND
	11/2/2010	ND	ND	ND	ND	ND	NA	NA	ND
	5/23/2011	ND	ND	ND	ND	ND	NA	NA	ND
	8/8/2011	ND	ND	ND	ND	ND	NA	NA	ND
	11/10/2011	ND	ND	2	ND	ND	NA	NA	ND
	5/8/2012	ND	ND	ND	ND	ND	NA	NA	ND
	7/31/2012	ND	ND	ND	ND	ND	NA	NA	ND
	11/9/2012	ND	ND	ND	ND	ND	NA	NA	ND
	11/1/2013	190	ND	ND	ND	ND	NA	NA	ND
	4/3/2014	NA	ND	1.4	ND	ND	NA	NA	ND
	5/11/2015	120	ND	0.92	ND	ND	ND	ND	ND
	9/19/2018	18	ND	ND	ND	ND	ND	ND	ND

TABLE 1
GROUNDWATER CONTAMINANTS OF CONCERN – SITE 25

		Diesel Range Organics	Benzene	1,2-DCA	Ethyl-benzene	TCE	1, 2, 4-TMB	1, 3, 5-TMB	Xylenes
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	CAS No.	**NA**	**71-43-2**	**107-06-2**	**100-41-4**	**79-01-6**	**95-63-6**	**108-67-8**	**1330-20-7**
MDH Groundwater HRLs*, HBVs**, or RAAs***		NE	2	1	50	0.4	30	30	300
Well Location	**Sample Date**								
025-009MW	3/17/2005	130	178	ND	0	ND	NA	NA	ND
	9/15/2006	110	256	ND	7.7	ND	NA	NA	ND
	11/29/2006	NA	174	ND	3.8	ND	NA	NA	ND
	4/5/2007	NA	119	ND	1.9	ND	NA	NA	ND
	9/20/2007	ND	154	ND	4.6	ND	NA	NA	ND
	12/5/2007	170	192	ND	7.6	ND	NA	NA	ND
	9/25/2008	NA	200	ND	7.1	ND	NA	NA	ND
	11/20/2008	NA	44.3	ND	1.5	ND	NA	NA	ND
	5/22/2009	NA	43.3	ND	1.9	ND	NA	NA	ND
	9/17/2009	130	130	ND	3.2	ND	NA	NA	ND
	11/11/2009	250	65	ND	1.1	ND	NA	NA	ND
	9/20/2010	NA	160	ND	9.5	ND	NA	NA	0.59J
	11/5/2010	NA	19	ND	1.9	ND	NA	NA	ND
	5/25/2011	250	41	ND	1.9	ND	NA	NA	ND
	8/10/2011	NA	120	ND	3	ND	NA	NA	ND
	11/11/2011	NA	24	ND	0.9	ND	NA	NA	ND
	5/9/2012	NA	23	1.1	0.23	ND	NA	NA	ND
	8/3/2012	370	120	ND	1.1	ND	NA	NA	ND
	11/12/2012	NA	30	1.6	ND	ND	NA	NA	ND
	11/4/2013	300	40	1.1	ND	ND	NA	NA	ND
	4/3/2014	NA	21	0.67	ND	ND	NA	NA	ND
	5/7/2015	82 J	14	0.42	3.1	ND	2.3	0.76	1.5
	7/1/2015	220	45	0.64	ND	ND	ND	ND	ND
	8/26/2015	410	14	0.77	ND	ND	ND	ND	ND
	4/26/2016	85 J	12	ND	0.74	ND	0.38	ND	ND
	9/20/2018	ND	2.3	0.54	ND	ND	ND	ND	ND
	6/26/2020	ND	14	ND	ND	ND	ND	ND	ND
	12/8/2020	53	1.1	ND	ND	ND	0.59	ND	0.49
	6/21/2021	58	4.7	ND	ND	ND	ND	ND	ND
	11/30/2021	75	12	ND	ND	ND	ND	ND	ND
	6/17/2022	ND	23	ND	ND	ND	1.2	ND	0.61
	12/6/2022	ND	7.3	ND	0.99 J	ND	0.94 J	ND	2.3
	6/21/2023	63 J	12	ND	0.45 J	ND	0.56 J	ND	0.76 J
	12/6/2023	0.09 J	2.2	ND	ND	ND	0.54 J	ND	ND

TABLE 1
GROUNDWATER CONTAMINANTS OF CONCERN – SITE 25

		Diesel Range Organics	Benzene	1,2-DCA	Ethyl-benzene	TCE	1, 2, 4-TMB	1, 3, 5-TMB	Xylenes
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	CAS No.	**NA**	**71-43-2**	**107-06-2**	**100-41-4**	**79-01-6**	**95-63-6**	**108-67-8**	**1330-20-7**
MDH Groundwater HRLs*, HBVs**, or RAAs***		NE	2	1	50	0.4	30	30	300
Well Location	**Sample Date**								
025-010MW	7/10/2000	NA	ND	ND	ND	ND	NA	NA	ND
	3/16/2005	ND	ND	ND	ND	ND	NA	NA	ND
	4/27/2005	ND	NA	NA	ND	ND	NA	NA	NA
	9/14/2006	ND	ND	ND	ND	ND	NA	NA	ND
	11/30/2006	NA	ND	ND	ND	ND	NA	NA	ND
	6/13/2007	NA	ND	ND	ND	ND	NA	NA	ND
	9/19/2007	ND	1	ND	ND	ND	NA	NA	ND
	12/6/2007	NA	ND	ND	ND	ND	NA	NA	ND
	9/26/2008	NA	ND	ND	ND	ND	NA	NA	ND
	11/19/2008	NA	ND	ND	ND	ND	NA	NA	ND
	9/17/2009	ND	ND	ND	ND	ND	NA	NA	ND
	11/10/2009	140	ND	ND	ND	ND	NA	NA	ND
	9/21/2010	NA	ND	ND	ND	ND	NA	NA	ND
	11/3/2010	NA	ND	ND	ND	ND	NA	NA	ND
	5/23/2011	ND	0.25	ND	ND	ND	NA	NA	ND
	8/9/2011	NA	0.32	ND	ND	ND	NA	NA	ND
	11/11/2011	NA	ND	ND	ND	ND	NA	NA	ND
	5/8/2012	NA	0.16	ND	ND	ND	NA	NA	ND
	8/1/2012	200	0.75	ND	ND	ND	NA	NA	ND
	11/12/2012	NA	0.28	ND	ND	ND	NA	NA	ND
	10/31/2013	220	ND	ND	ND	ND	NA	NA	ND
	4/3/2014	NA	ND	ND	ND	ND	NA	NA	ND
	5/11/2015	61	ND	ND	ND	0.54	ND	ND	ND
	9/19/2018	29	ND	ND	ND	ND	ND	ND	ND
	6/24/2020	ND	ND	ND	ND	ND	ND	ND	ND
	12/2/2020	ND	ND	ND	ND	ND	ND	ND	0.38
	6/15/2021	ND	ND	ND	ND	ND	ND	ND	ND
	11/29/2021	51	ND	ND	ND	ND	ND	ND	ND
	6/20/2022	ND	ND	ND	ND	ND	ND	ND	ND
	12/6/2022	ND	ND	ND	ND	ND	ND	ND	ND
	6/20/2023	59 J	ND	ND	ND	ND	ND	ND	ND
	12/5/2023	0.042 J	ND	ND	ND	ND	ND	ND	ND

TABLE 1
GROUNDWATER CONTAMINANTS OF CONCERN – SITE 25

		Diesel Range Organics	Benzene	1,2-DCA	Ethyl-benzene	TCE	1, 2, 4-TMB	1, 3, 5-TMB	Xylenes
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	CAS No.	**NA**	**71-43-2**	**107-06-2**	**100-41-4**	**79-01-6**	**95-63-6**	**108-67-8**	**1330-20-7**
MDH Groundwater HRLs*, HBVs**, or RAAs***		NE	2	1	50	0.4	30	30	300
Well Location	**Sample Date**								
025-011MW	3/17/2005	230	25.2	ND	ND	ND	NA	NA	ND
	9/15/2006	ND	12.9	ND	ND	ND	NA	NA	ND
	11/29/2006	NA	2.4	ND	ND	ND	NA	NA	ND
	6/13/2007	NA	26.8	ND	ND	ND	NA	NA	ND
	9/19/2007	ND	11.4	ND	ND	ND	NA	NA	ND
	12/5/2007	NA	3.9	ND	ND	ND	NA	NA	ND
	9/26/2008	NA	32	ND	ND	ND	NA	NA	ND
	11/20/2008	NA	1	ND	ND	ND	NA	NA	ND
	5/23/2009	NA	1.8	ND	ND	ND	NA	NA	ND
	9/17/2009	ND	3.5	ND	ND	ND	NA	NA	ND
	11/11/2009	150	2.7	ND	ND	ND	NA	NA	ND
	9/21/2010	NA	15	ND	ND	ND	NA	NA	ND
	11/3/2010	NA	4.5	ND	ND	ND	NA	NA	ND
	5/23/2011	210	23	ND	ND	ND	NA	NA	ND
	8/9/2011	NA	16	ND	ND	ND	NA	NA	ND
	11/11/2011	NA	5.8	ND	ND	ND	NA	NA	ND
	5/9/2012	NA	13	ND	0.19	ND	NA	NA	ND
	8/1/2012	160	4.6	ND	ND	ND	NA	NA	ND
	11/12/2012	NA	0.76	ND	ND	ND	NA	NA	ND
	10/31/2013	230	0.64	ND	ND	ND	NA	NA	ND
	4/2/2014	NA	ND	ND	ND	ND	NA	NA	ND
	5/11/2015	56	3.6	ND	0.23	0.43	ND	ND	ND
	9/20/2018	ND	4.7	ND	ND	ND	ND	ND	ND
	6/24/2020	ND	ND	ND	ND	ND	ND	ND	ND
	12/3/2020	ND	0.95	ND	ND	ND	ND	ND	ND
	6/15/2021	37	3.4	ND	ND	ND	ND	ND	ND
	11/30/2021	57	0.93	ND	0.9	ND	4.8	1.6	2.3
	6/17/2022	ND	0.93	ND	ND	ND	ND	ND	ND
	12/7/2022	ND	ND	ND	ND	ND	ND	ND	ND
	6/20/2023	ND	ND	ND	ND	ND	ND	ND	ND
	12/7/2023	ND	0.67 J	ND	ND	ND	0.22 J	ND	ND

TABLE 1
GROUNDWATER CONTAMINANTS OF CONCERN – SITE 25

		Diesel Range Organics	Benzene	1,2-DCA	Ethyl-benzene	TCE	1, 2, 4-TMB	1, 3, 5-TMB	Xylenes
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	CAS No.	**NA**	**71-43-2**	**107-06-2**	**100-41-4**	**79-01-6**	**95-63-6**	**108-67-8**	**1330-20-7**
MDH Groundwater HRLs*, HBVs**, or RAAs***		NE	2	1	50	0.4	30	30	300
Well Location	**Sample Date**								
025-012MW	3/18/2005	3,500	4,850	ND	1,310	5.2	NA	NA	818
	9/18/2005	1,200	3,750	ND	600	ND	NA	NA	445
	9/15/2006	1,600	3,320	ND	748	ND	NA	NA	473
	11/20/2008	NA	749	58.5	49	ND	NA	NA	31.9
	5/23/2009	NA	1,240	ND	186	18.5	NA	NA	16.1
	9/10/2009	1,100	1,980	ND	299	23.3	NA	NA	0
	11/9/2009	1,200	1,840	ND	252	20.5	NA	NA	0
	9/17/2010	390	NA	NA	NA	NA	NA	NA	NA
	11/8/2010	680	NA	NA	NA	NA	NA	NA	NA
	5/25/2011	520	670	26	110	10	NA	NA	93
	8/15/2011	790	NA	NA	NA	NA	NA	NA	NA
	11/15/2011	690	NA	NA	NA	NA	NA	NA	NA
	11/17/2011	NA	NA	NA	NA	NA	NA	NA	NA
	5/14/2012	1,700	NA	NA	NA	NA	NA	NA	NA
	8/3/2012	1,000	180	ND	40	15	NA	NA	ND
	11/13/2012	1,000	NA	NA	NA	NA	NA	NA	NA
	10/30/2013	1,000	120	12	41	10	NA	NA	ND
025-013MW	3/17/2005	190	854	ND	111	ND	NA	NA	67
	9/15/2006	1,000	3,380	ND	452	ND	NA	NA	516
	11/20/2008	NA	197	ND	9.9	ND	NA	NA	13.7
	5/23/2009	NA	311	ND	36.3	ND	NA	NA	39.5
	9/16/2009	540	1,410	ND	76.6	ND	NA	NA	66.8
	11/17/2009	150	225	ND	10.2	ND	NA	NA	8.3
	9/17/2010	300	NA	NA	NA	NA	NA	NA	NA
	11/11/2010	ND	NA	NA	NA	NA	NA	NA	NA
	5/24/2011	510	440	ND	18	ND	NA	NA	13
	8/15/2011	100	NA	NA	NA	NA	NA	NA	NA
	11/14/2011	1,900	NA	NA	NA	NA	NA	NA	NA
	5/15/2012	1,000	NA	NA	NA	NA	NA	NA	NA
	8/2/2012	3,700	1,100	ND	190	ND	NA	NA	140
	11/12/2012	2,900	NA	NA	NA	NA	NA	NA	NA
	10/30/2013	320	33	ND	3.2	ND	NA	NA	ND
	10/30/2013	120	NA	NA	NA	NA	NA	NA	NA

TABLE 1
GROUNDWATER CONTAMINANTS OF CONCERN – SITE 25

		Diesel Range Organics	Benzene	1,2-DCA	Ethyl-benzene	TCE	1, 2, 4-TMB	1, 3, 5-TMB	Xylenes
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	CAS No.	**NA**	**71-43-2**	**107-06-2**	**100-41-4**	**79-01-6**	**95-63-6**	**108-67-8**	**1330-20-7**
MDH Groundwater HRLs*, HBVs**, or RAAs***		NE	2	1	50	0.4	30	30	300
Well Location	**Sample Date**								
025-014MW	9/16/2005	ND	NA	ND	ND	ND	NA	NA	ND
	11/19/2008	NA	ND	ND	ND	ND	NA	NA	ND
	9/16/2009	ND	ND	ND	ND	ND	NA	NA	ND
	11/11/2009	ND	ND	ND	ND	ND	NA	NA	ND
	9/21/2010	NA	ND	ND	ND	ND	NA	NA	ND
	11/2/2010	NA	ND	ND	ND	ND	NA	NA	ND
	5/23/2011	ND	ND	ND	ND	ND	NA	NA	ND
	8/8/2011	NA	ND	ND	ND	ND	NA	NA	ND
	11/1/2011	NA	ND	ND	ND	ND	NA	NA	ND
	5/8/2012	NA	ND	ND	ND	ND	NA	NA	ND
	7/31/2012	ND	ND	ND	ND	ND	NA	NA	ND
	11/9/2012	NA	ND	ND	ND	ND	NA	NA	ND
	11/1/2013	96	ND	ND	ND	ND	NA	NA	ND
	4/3/2014	ND	ND	ND	ND	ND	NA	NA	ND
	5/11/2015	33	ND	ND	ND	ND	NA	NA	ND
	9/11/2018	ND	ND	ND	ND	ND	NA	NA	ND
025-015MW	9/20/2005	ND	ND	ND	ND	ND	NA	NA	ND
	9/25/2008	NA	ND	ND	ND	ND	NA	NA	ND
	11/20/2008	NA	ND	ND	ND	ND	NA	NA	ND
	9/12/2009	140	ND	ND	ND	ND	NA	NA	ND
	11/12/2009	260	ND	ND	ND	ND	NA	NA	ND
	9/22/2010	NA	ND	ND	ND	ND	NA	NA	ND
	11/3/2010	NA	ND	ND	ND	0.3	NA	NA	ND
	5/24/2011	73	ND	ND	ND	0.37	NA	NA	ND
	8/9/2011	NA	ND	ND	ND	0.33	NA	NA	ND
	11/11/2011	NA	ND	ND	ND	0.44	NA	NA	ND
	5/9/2012	NA	ND	ND	ND	0.38	NA	NA	ND
	8/1/2012	NA	ND	ND	ND	ND	NA	NA	ND
	11/12/2012	NA	ND	ND	ND	0.47	NA	NA	ND
	11/4/2013	270	ND	ND	ND	ND	NA	NA	ND

TABLE 1
GROUNDWATER CONTAMINANTS OF CONCERN – SITE 25

		Diesel Range Organics	Benzene	1,2-DCA	Ethyl-benzene	TCE	1, 2, 4-TMB	1, 3, 5-TMB	Xylenes
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	CAS No.	**NA**	**71-43-2**	**107-06-2**	**100-41-4**	**79-01-6**	**95-63-6**	**108-67-8**	**1330-20-7**
MDH Groundwater HRLs*, HBVs**, or RAAs***		NE	2	1	50	0.4	30	30	300
Well Location	**Sample Date**								
025-016MW	5/26/2011	3,500	36	ND	270	ND	NA	NA	1800
	8/17/2011	NA	0.61	ND	3.5	ND	NA	NA	14
	11/12/2011	NA	8.3	ND	12	ND	NA	NA	78
	5/15/2012	NA	16	ND	30	ND	NA	NA	83
	8/2/2012	1,600	5	ND	4.9	ND	NA	NA	7.7
	11/14/2012	NA	17	ND	75	ND	NA	NA	87
	10/28/2013	350	ND	ND	ND	ND	NA	NA	ND
	4/7/2014	NA	ND	ND	0.86	ND	NA	NA	2.3
	5/11/2015	77	ND	ND	ND	ND	ND	ND	ND
	7/9/2015	92	ND	ND	ND	ND	ND	ND	ND
	8/27/2015	250	5.5	ND	ND	ND	ND	ND	ND
	4/26/2016	60	ND	ND	ND	ND	ND	ND	ND
	9/20/2018	ND	ND	0.61	ND	ND	0.44	ND	ND
025-017MW	5/26/2011	570	960	30	8.1	ND	NA	NA	46
	8/17/2011	NA	1,200	ND	ND	ND	NA	NA	ND
	11/15/2011	NA	ND	0.31	ND	ND	NA	NA	ND
	5/15/2012	NA	ND	ND	ND	ND	NA	NA	ND
	8/3/2012	1,300	ND	4	ND	ND	NA	NA	ND
	11/14/2012	NA	ND	ND	ND	ND	NA	NA	ND
	10/29/2013	1,100	5.4	15	ND	ND	NA	NA	ND
	4/5/2014	NA	6	0.68	ND	ND	NA	NA	ND
	5/7/2015	620	230	13	0.43	ND	ND	ND	1.1
	7/1/2015	970	490	22	0.52	ND	0.26	ND	2.5
	8/27/2015	1,500	490	20	0.25	ND	ND	ND	2.2
	4/25/2016	810	300	17	4.1	ND	6.2	2.4	9.6
	9/20/2018	160	61	13	7.4	ND	6.7	ND	46
	6/27/2020	ND	33	11	ND	ND	ND	ND	1.6
	12/4/2020	250	59	7.1	0.25	ND	0.17	ND	1.8
	6/16/2021	140	56	5.9	ND	ND	ND	ND	1.5
	12/1/2021	170	62	5.4	0.44	ND	0.38	ND	3.2
	6/15/2022	270	51	4.1	0.43	ND	0.68	ND	2.7
	12/9/2022	ND	38	4.6	0.82 J	ND	0.91 J	ND	2.2
	6/20/2023	200 J	50	3.6	ND	ND	ND	ND	1.9
	12/7/2023	0.16 J	24	4.1	ND	ND	0.34 J	ND	1.4 J+
025-018MW	5/26/2011	990	2.5	ND	0.5	ND	NA	NA	1.5
	8/17/2011	NA	0.3	ND	ND	ND	NA	NA	ND
	11/12/2011	NA	ND	ND	ND	ND	NA	NA	ND
	5/15/2012	NA	ND	ND	ND	ND	NA	NA	ND
	8/3/2012	270	ND	ND	ND	ND	NA	NA	ND
	11/15/2012	NA	ND	ND	ND	ND	NA	NA	ND
	11/4/2013	200	ND	ND	ND	ND	NA	NA	ND

TABLE 1
GROUNDWATER CONTAMINANTS OF CONCERN – SITE 25

		Diesel Range Organics	Benzene	1,2-DCA	Ethyl-benzene	TCE	1, 2, 4-TMB	1, 3, 5-TMB	Xylenes
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	CAS No.	**NA**	**71-43-2**	**107-06-2**	**100-41-4**	**79-01-6**	**95-63-6**	**108-67-8**	**1330-20-7**
MDH Groundwater HRLs*, HBVs**, or RAAs***		NE	2	1	50	0.4	30	30	300
Well Location	**Sample Date**								
025-019MW	5/11/2015	92	0.47	ND	0.73	ND	0.64	0.22	2.6
	7/1/2015	410	9.1	ND	5.4	ND	29	11	110
	8/26/2015	470	3.9	ND	0.2	ND	3.2	11	14
	4/25/2016	630	16	ND	200	ND	130	46	500
	9/21/2018	51	2.9	ND	2.2	ND	7.8	ND	5.1
	6/27/2020	ND	9.2	ND	8.4	ND	48	22	94
	12/1/2020	140	4.6	ND	1.9	ND	14	0.16	19
	6/16/2021	170	16	ND	9.1	ND	95	10	53
	12/1/2021	170	9.9	ND	7.2	ND	36	3	40
	6/14/2022	ND	15	ND	64	ND	96	20	60
	12/8/2022	ND	2.6	ND	2.1	ND	5	0.44 J	8.3
	6/22/2023	150 J	5.2	ND	7.8	ND	55	7.3	56
	12/7/2023	0.15 J	6.8	ND	76	ND	44	7.0	64
025-020MW	5/11/2015	610	ND	ND	ND	ND	ND	ND	ND
	7/1/2015	340	3	ND	0.46	ND	2	0.78	8.2
	8/27/2015	440	ND	ND	ND	ND	ND	ND	ND
	4/25/2016	200	0	ND	1.5	ND	ND	0.42	3.7
	9/20/2018	ND	ND	ND	ND	ND	ND	ND	ND
025-021MW	5/11/2015	150	ND	ND	ND	ND	ND	ND	ND
	7/1/2015	240	ND	ND	ND	ND	ND	ND	ND
	8/26/2015	310	ND	ND	ND	ND	ND	ND	ND
	4/22/2016	150	ND	ND	ND	ND	ND	ND	ND
	9/18/2018	42	ND	ND	ND	ND	ND	ND	ND
	6/27/2020	ND	ND	ND	ND	ND	ND	ND	ND
	12/3/2020	62	ND	ND	ND	ND	ND	ND	ND
	6/15/2021	43	ND	ND	ND	ND	ND	ND	ND
	11/30/2021	86	ND	ND	ND	ND	ND	ND	ND
	6/17/2022	ND	ND	ND	ND	ND	ND	ND	ND
	12/8/2022	ND	ND	ND	0.37 J	ND	ND	ND	2.3
	6/22/2023	81 J	ND	ND	ND	ND	ND	ND	ND
	12/5/2023	0.056 J	ND	ND	ND	ND	ND	ND	ND

TABLE 1
GROUNDWATER CONTAMINANTS OF CONCERN – SITE 25

		Diesel Range Organics	Benzene	1,2-DCA	Ethyl-benzene	TCE	1, 2, 4-TMB	1, 3, 5-TMB	Xylenes
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	CAS No.	**NA**	**71-43-2**	**107-06-2**	**100-41-4**	**79-01-6**	**95-63-6**	**108-67-8**	**1330-20-7**
MDH Groundwater HRLs*, HBVs**, or RAAs***		NE	2	1	50	0.4	30	30	300
Well Location	**Sample Date**								
025-022MW	8/17/2016	380	58	ND	4	ND	1	1.8	12
	9/21/2018	260	21	ND	130	ND	45	9.4	300
	6/27/2020	ND	21	ND	310	ND	150	45	1,300
	12/2/2020	130	19	ND	30	ND	97	37	690
	6/16/2021	99	15	ND	22	ND	13	9.3	76
	12/2/2021	190	16	ND	52	ND	69	26	630
	6/14/2022	730	40	ND	490	ND	550	200	3,000
	12/8/2022	ND	39	ND	80	ND	340	130	2,100
	6/22/2023	NS	NS	NS	NS	NS	NS	NS	NS
	12/7/2023	2.2	35 J	ND	360	ND	1300	400	7700
025-023MW	8/17/2016	1,700	74	0.8	180	7.4	210	220	1,200
	9/21/2018	270	61	ND	180	0.6	81	23	130
	6/25/2020	700	23	ND	370	0.76	230	68	350
	12/7/2020	340	39	ND	6	ND	200	ND	130
	6/18/2021	220	31	ND	170	1.2	120	ND	97
	12/2/2021	370	51	ND	120	0.45	65	5.8	46
	6/15/2022	530	33	ND	210	0.72	170	13.0	110
	12/8/2022	ND	48	ND	200	0.65 J	36	2.4	51
	6/22/2023	440 J	42 J	ND	260	0.81 J	48	2.0 J	71
	12/5/2023	0.63	14	ND	250	1.2 J	200 J+	42 J+	160
025-024MW	8/17/2016	240	0.75	ND	ND	ND	ND	ND	ND
	9/21/2018	32	ND	ND	ND	ND	1.1	ND	ND
025-025MW	9/24/2018	81	ND	ND	ND	ND	ND	ND	ND
025-026MW	9/24/2018	73	12	ND	8.3	ND	6.5	11	24
025-027MW	9/24/2018	47	32	0.3	0.74	ND	ND	ND	3.7
	6/27/2020	ND	2.9	ND	0.43	ND	ND	ND	0.56
	12/2/2020	ND	1.1	ND	ND	ND	ND	ND	ND
	6/16/2021	39	0.65	ND	ND	ND	ND	ND	ND
	12/2/2021	84	6.3	ND	0.39	ND	1.1	0.43	6.9
	6/15/2022	ND	9.2	ND	0.46	ND	1.3	0.42	2.5
	12/7/2022	ND	0.35 J	ND	ND	ND	ND	ND	1.2
	6/22/2023	75 J	ND	ND	ND	ND	0.60 J	ND	0.41 J
	12/6/2023	0.065 J	2.1	ND	0.33 J	ND	0.57 J	ND	ND
025-028MW	9/24/2018	100	ND	ND	ND	ND	ND	ND	ND
025-029MW	9/24/2018	87	1	1.5	ND	8.2	ND	ND	ND
	6/24/2020	ND	2.7	ND	ND	5	ND	ND	ND
	12/2/2020	ND	1.5	ND	ND	6.9	ND	ND	0.79
	6/16/2021	ND	1.4	ND	ND	5.5	ND	ND	ND
	12/1/2021	87	1.5	ND	ND	5.6	0.22	ND	0.2
	6/16/2022	ND	1.7	ND	ND	4.6	ND	ND	ND
	12/7/2022	ND	1.2	ND	ND	5.1	ND	ND	ND
	6/20/2023	120 J	1.5	ND	ND	5.1	ND	ND	ND
	12/7/2023	0.13 J	1.3	ND	ND	4.0	0.19 J	ND	ND

TABLE 1
GROUNDWATER CONTAMINANTS OF CONCERN – SITE 25

		Diesel Range Organics	Benzene	1,2-DCA	Ethyl-benzene	TCE	1, 2, 4-TMB	1, 3, 5-TMB	Xylenes
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	CAS No.	**NA**	**71-43-2**	**107-06-2**	**100-41-4**	**79-01-6**	**95-63-6**	**108-67-8**	**1330-20-7**
MDH Groundwater HRLs*, HBVs**, or RAAs***		NE	2	1	50	0.4	30	30	300
Well Location	**Sample Date**								
025-030MW	9/24/2018	710	200	3.6	32	ND	64	17	20
	6/25/2020	1300	450	ND	510	ND	4.2	33	22
	12/8/2020	590	250	ND	180	ND	9.8	3.1	2.4
	6/18/2021	640	470	ND	370	ND	34	23	17
	12/2/2021	560	120	ND	58	ND	14	3.4	5.6
	6/16/2022	ND	260	ND	130	ND	15	5.4	7.9
	12/9/2022	680	280	ND	180	ND	21	9.4	14
	6/21/2023	1200	390 J	ND	330 J	ND	31	17	16
	12/6/2023	0.57	160	ND	73	ND	24	6.3	13

Notes:

* Result exceeds the Class 2A Surface Water Standard

** Minnesota Department of Health (MDH) Health-Based Value (HBV) - MDH develops HBVs when Minnesota agencies need guidance for chemicals that do not have Health Risk Limits (HRLs).

*** MDH Risk Assessment Advice (RAA) - RAA is advice that MDH issues to Minnesota agencies. MDH provides RAA to assist the agencies in evaluating potential health risks to humans from exposures to a chemical. Generally, RAA contains greater uncertainty than HRLs, HRVs, and HBVs because the available information is more limited.

The applicable cleanup criteria for the site is the HRL. In the absence of a promulgated HRL, the cleanup criteria is the HBV. In the absence of an established HBV, the cleanup criteria is the RAA.

025-030MW Well Sampled in December 2023

Shaded = Result exceeds the applicable MDH Groundwater Value

µg/L = Micrograms per Liter

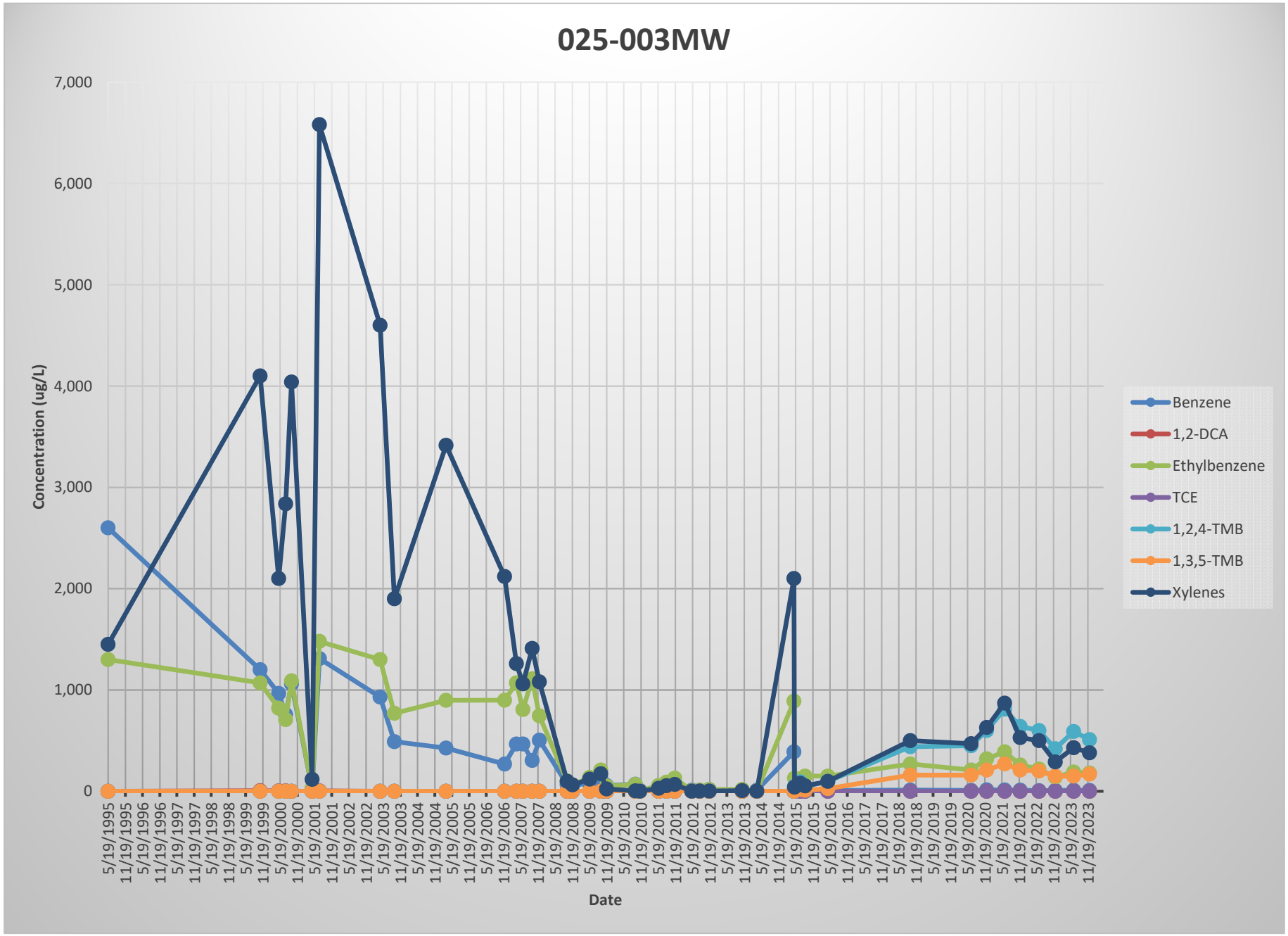
NA= Not Analyzed

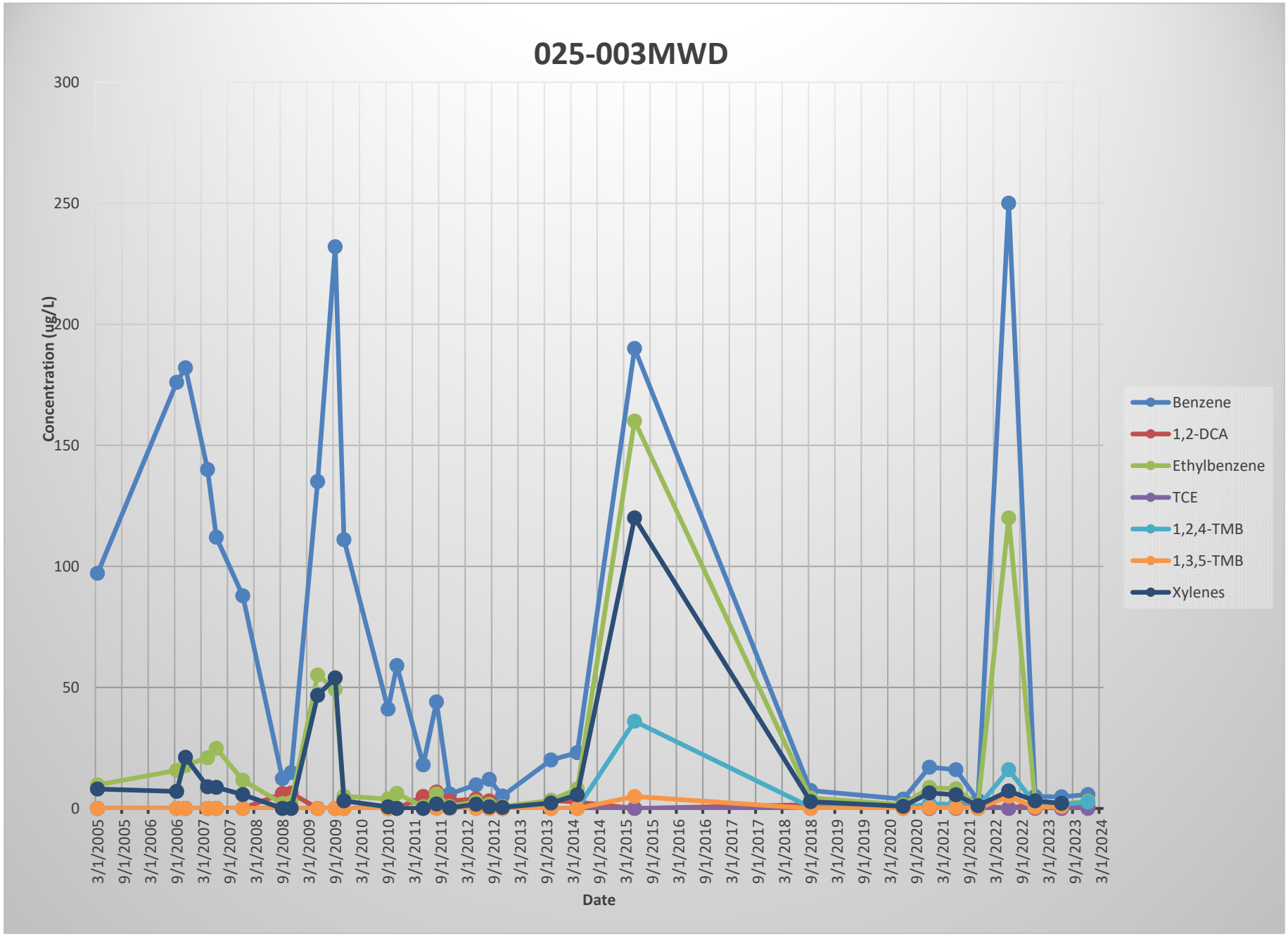
ND = Non-Detect

DCA = Dichloroethane

TCE = Trichloroethane

TMB = Trimethlybenzene


025-003MW
Concentration (ug/L)
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
Date
Benzene
1,2-DCA
Ethylbenzene
TCE
1,2,4-TMB
1,3,5-TMB
Xylenes


025-003MWD
Concentration (ug/L)
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250
200
150
100
50
0
3/1/2005
9/1/2005
3/1/2006
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3/1/2007
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3/1/2008
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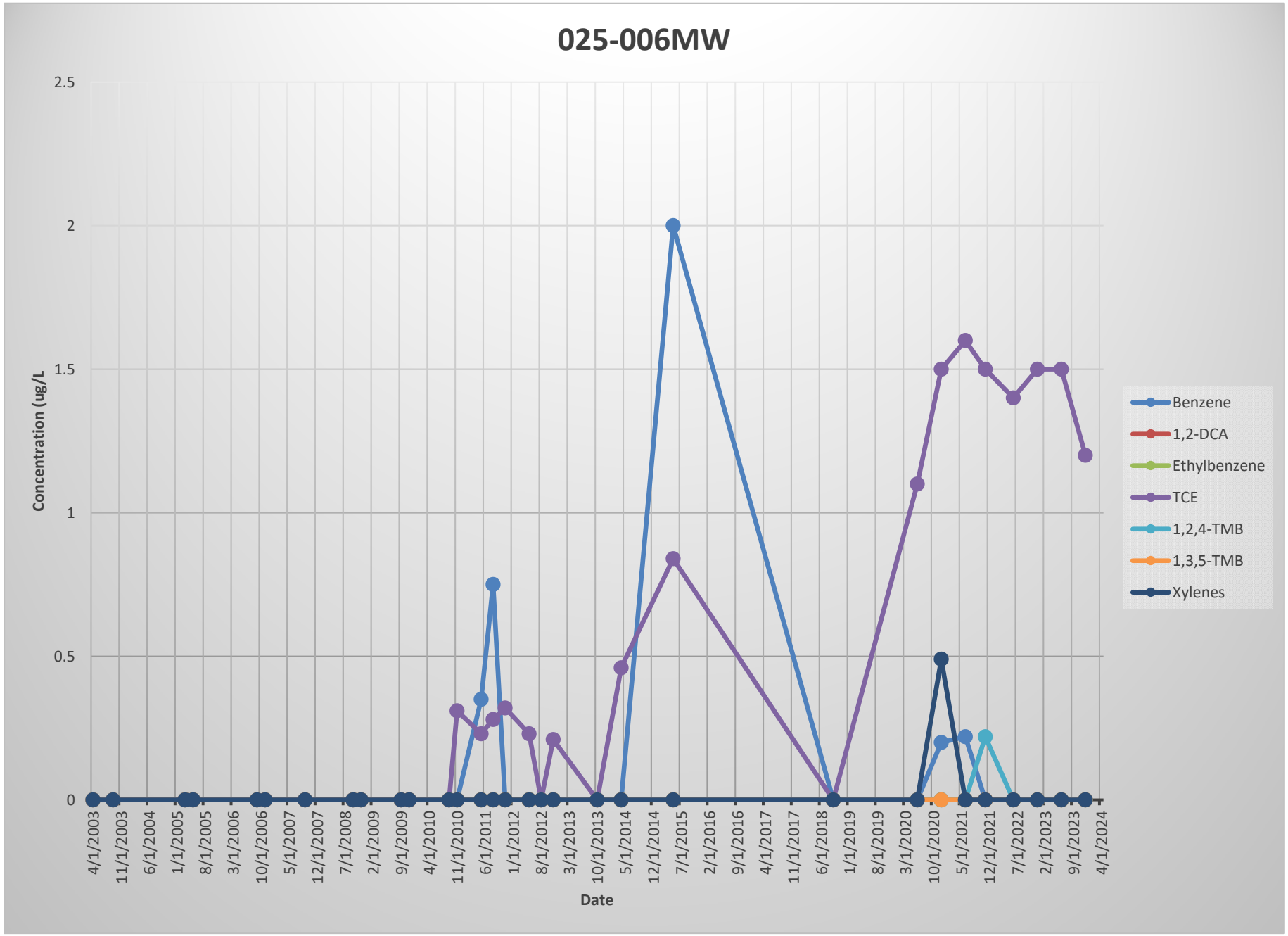
9/1/2019
3/1/2020
9/1/2020
3/1/2021
9/1/2021
3/1/2022
9/1/2022
3/1/2023
9/1/2023
3/1/2024
Date
Benzene
1,2-DCA
Ethylbenzene
TCE
1,2,4-TMB
1,3,5-TMB
Xylenes


025-006MW
Concentration (ug/L
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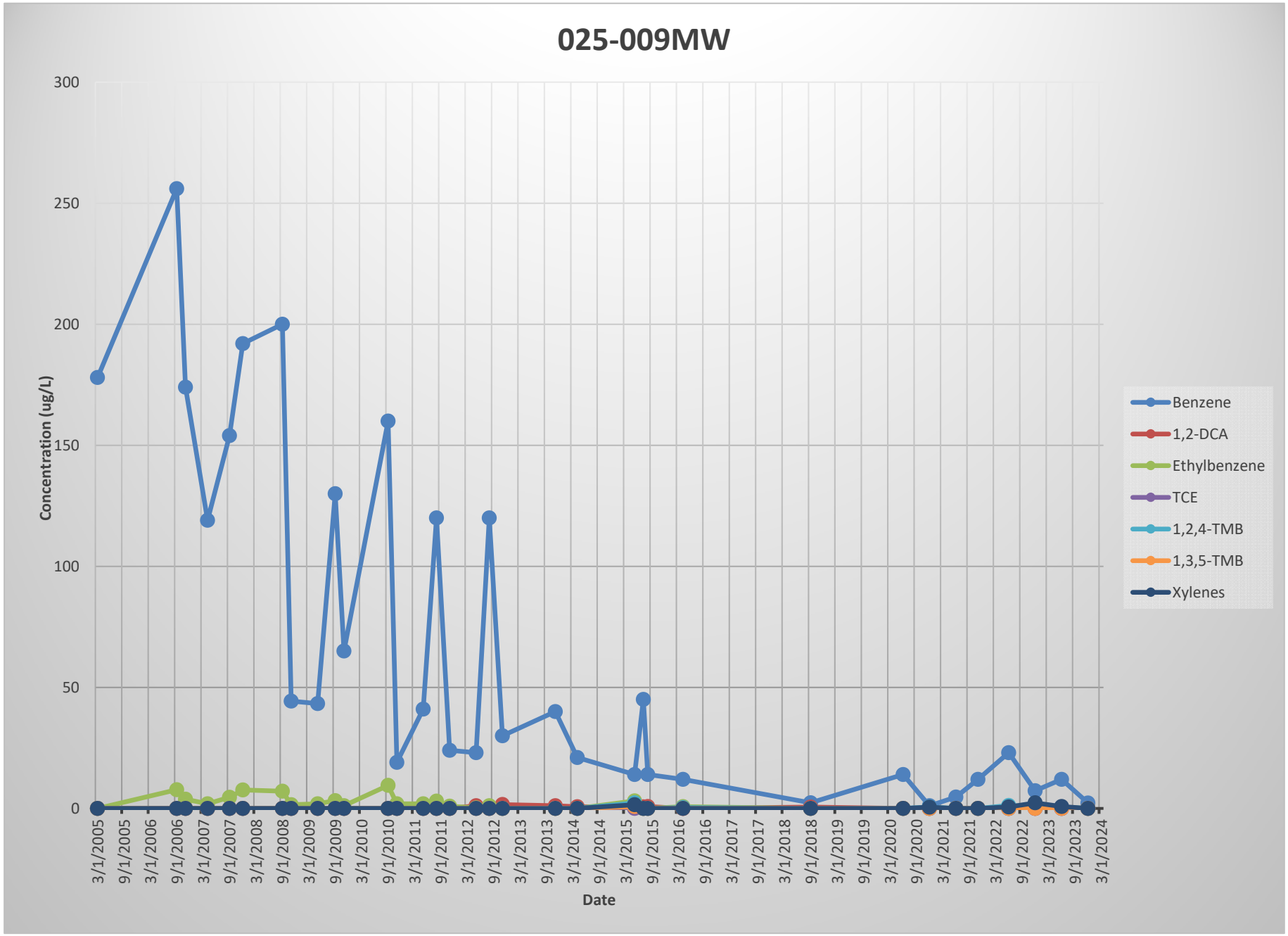
2
1.5
1
0.5
0
4/1/2003
11/1/2003
6/1/2004
1/1/2005
8/1/2005
3/1/2006
10/1/2006
5/1/2007
12/1/2007
7/1/2008
2/1/2009
9/1/2009
4/1/2010
11/1/2010
6/1/2011
1/1/2012
8/1/2012
3/1/2013
10/1/2013
5/1/2014
12/1/2014
7/1/2015
2/1/2016
9/1/2016
4/1/2017
11/1/2017
6/1/2018
1/1/2019
8/1/2019
3/1/2020
10/1/2020
5/1/2021
12/1/2021
7/1/2022
2/1/2023
9/1/2023
4/1/2024
Date
Benzene
1,2-DCA
Ethylbenzene
TCE
1,2,4-TMB
1,3,5-TMB
Xylenes


025-009MW
Concentration (ug/L)
300
250
200
150
100
50
0
3/1/2005
9/1/2005
3/1/2006
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3/1/2007
9/1/2007
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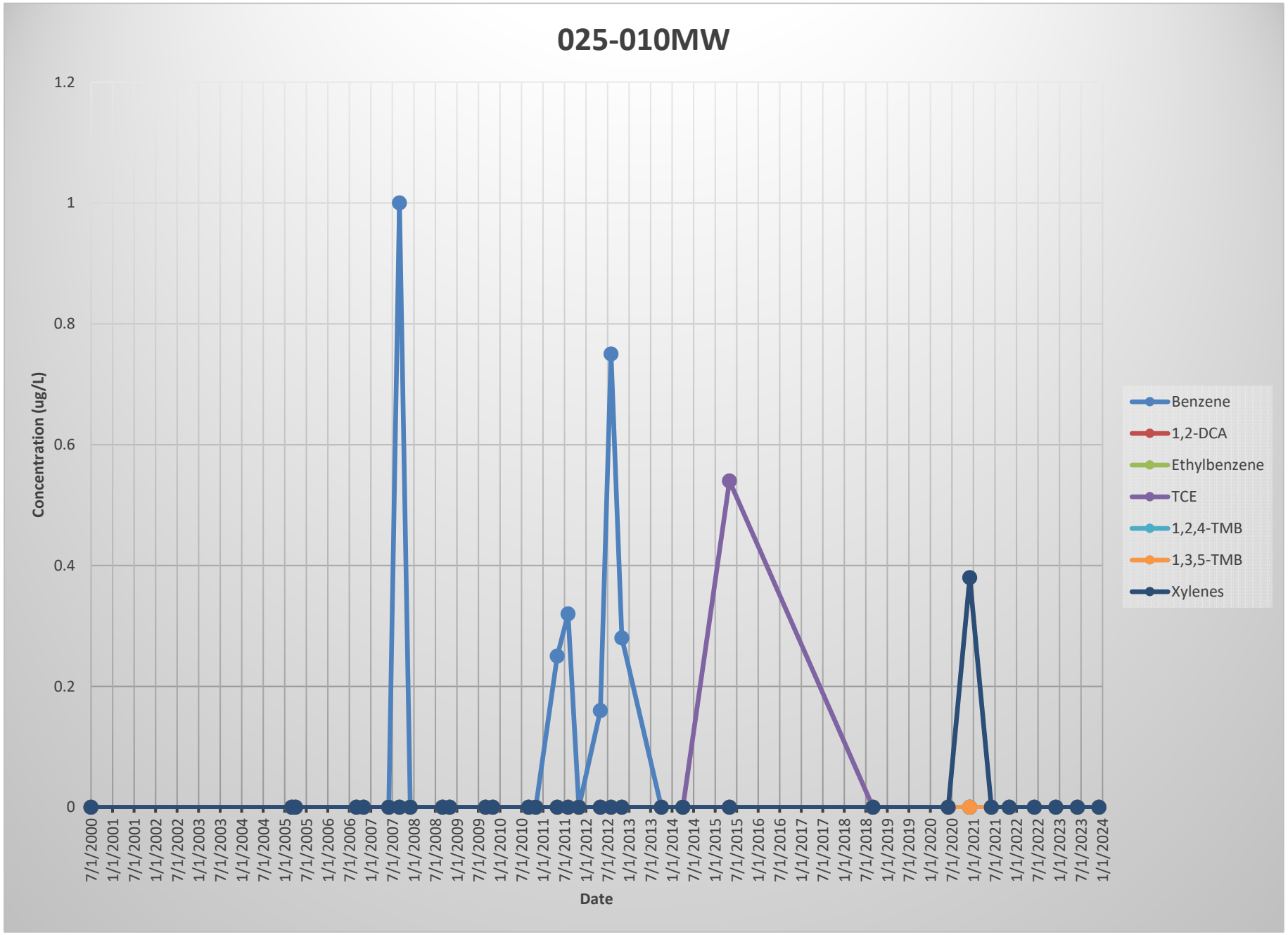
3/1/2021
9/1/2021
3/1/2022
9/1/2022
3/1/2023
9/1/2023
3/1/2024
Date
Benzene
1,2-DCA
Ethylbenzene
TCE
1,2,4-TMB
1,3,5-TMB
Xylenes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Concentration (ug/L)
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1
0.8
0.6
0.4
0.2
0
Date
7/1/2000
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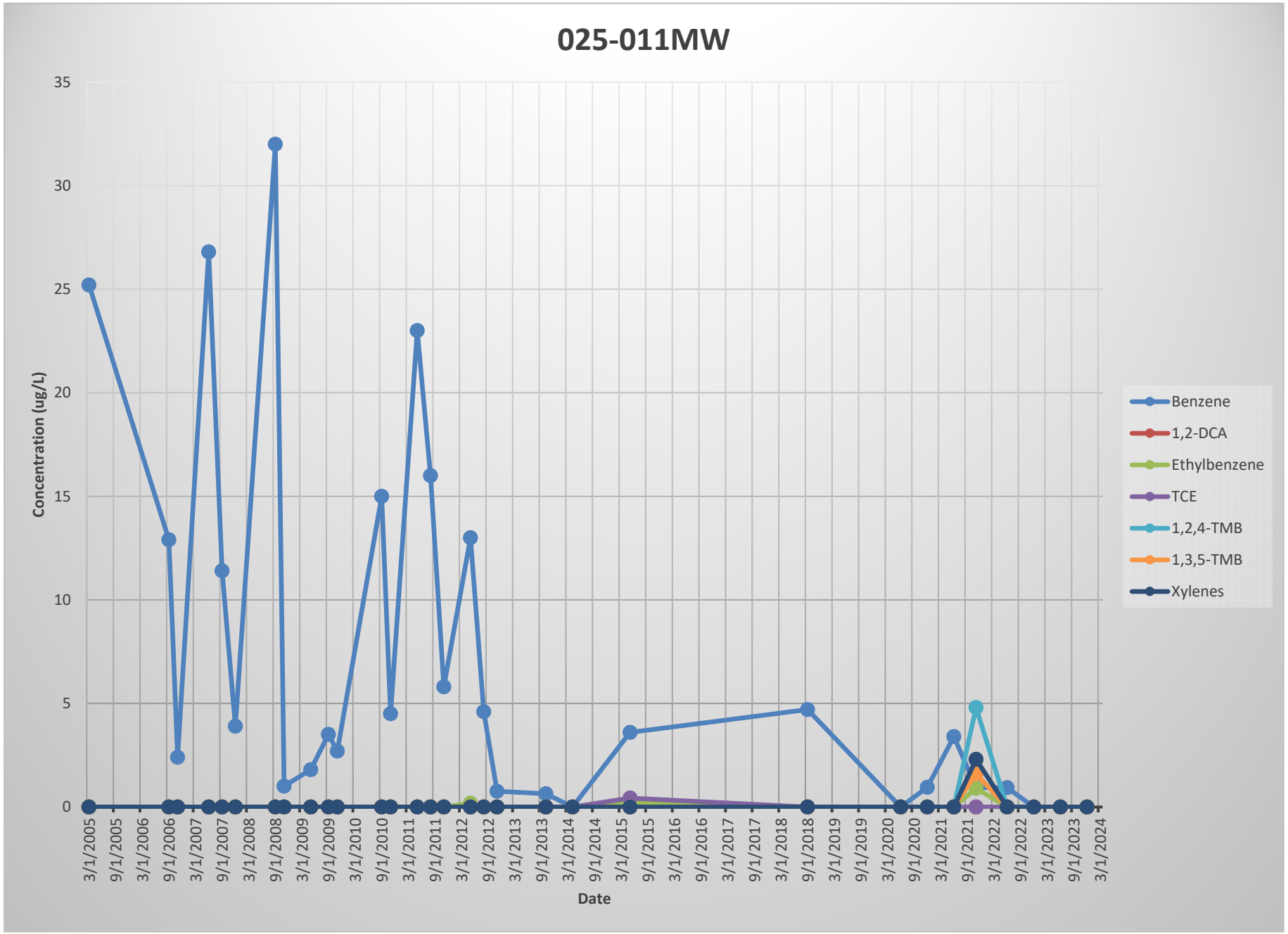
1/1/2023
7/1/2023
1/1/2024
Benzene
1,2-DCA
Ethylbenzene
TCE
1,2,4-TMB
1,3,5-TMB
Xylenes


025-011MW
Concentration (ug/L)
35
30
25
20
15
10
5
0
3/1/2005
9/1/2005
3/1/2006
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3/1/2007
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3/1/2008
9/1/2008
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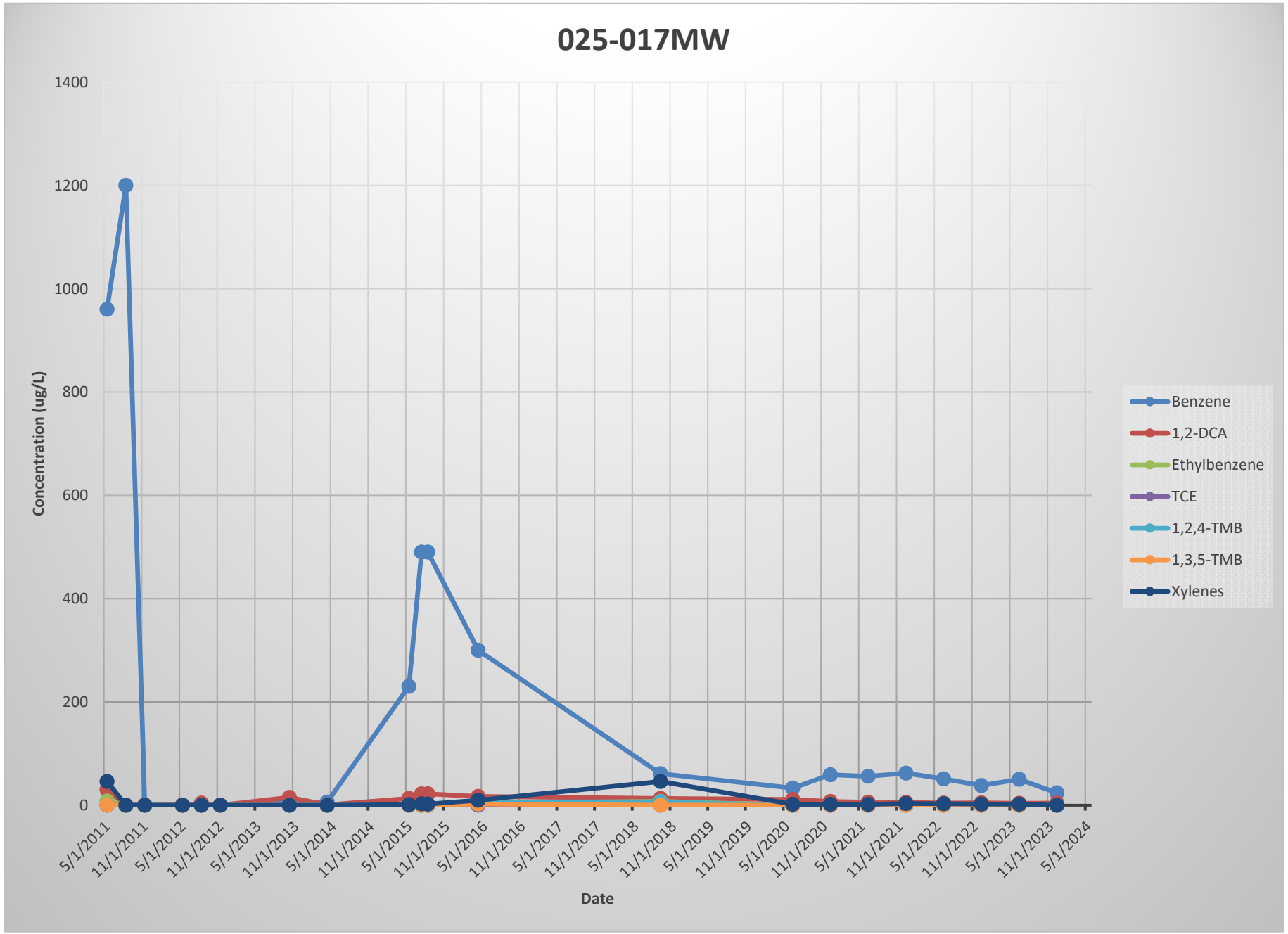
3/1/2020
9/1/2020
3/1/2021
9/1/2021
3/1/2022
9/1/2022
3/1/2023
9/1/2023
3/1/2024
Date
Benzene
1,2-DCA
Ethylbenzene
TCE
1,2,4-TMB
1,3,5-TMB
Xylenes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Concentration (ug/L)
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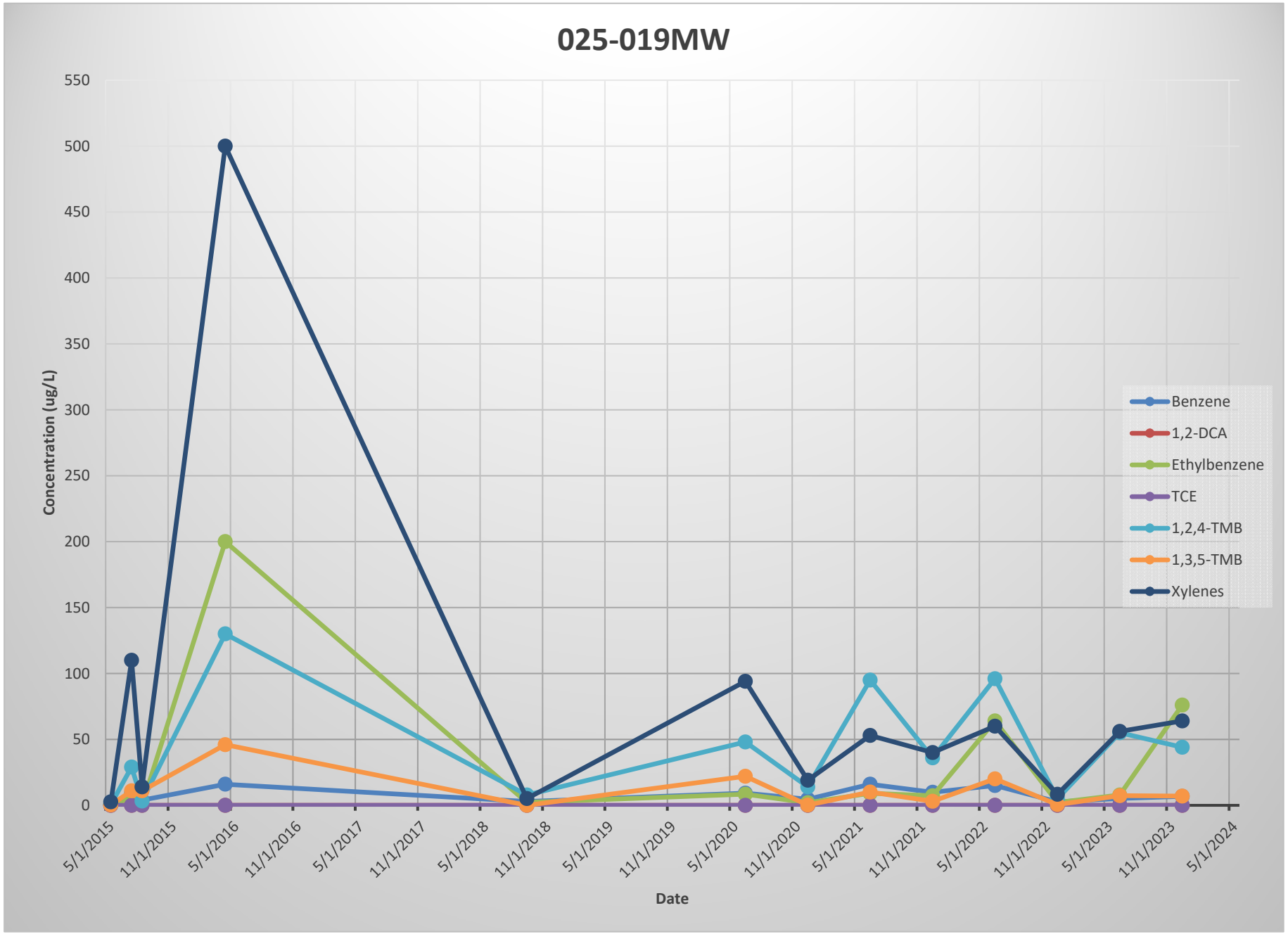
1200
1000
800
600
400
200
0
5/1/2011
11/1/2011
5/1/2012
11/1/2012
5/1/2013
11/1/2013
5/1/2014
11/1/2014
5/1/2015
11/1/2015
5/1/2016
11/1/2016
5/1/2017
11/1/2017
5/1/2018
11/1/2018
5/1/2019
11/1/2019
5/1/2020
11/1/2020
5/1/2021
11/1/2021
5/1/2022
11/1/2022
5/1/2023
11/1/2023
5/1/2024
Date
Benzene
1,2-DCA
Ethylbenzene
TCE
1,2,4-TMB
1,3,5-TMB
Xylenes


025-019MW
Concentration (ug/L)
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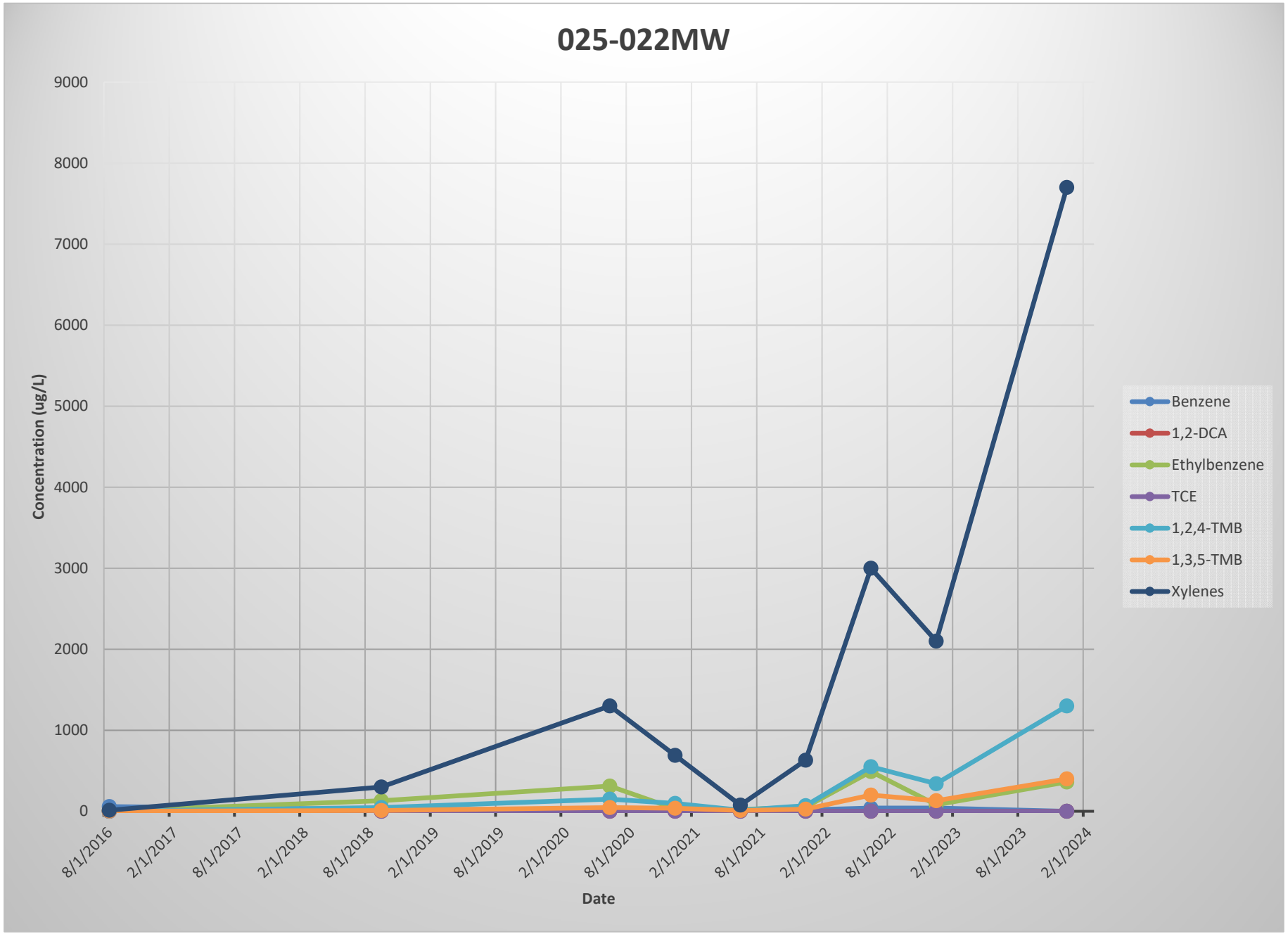
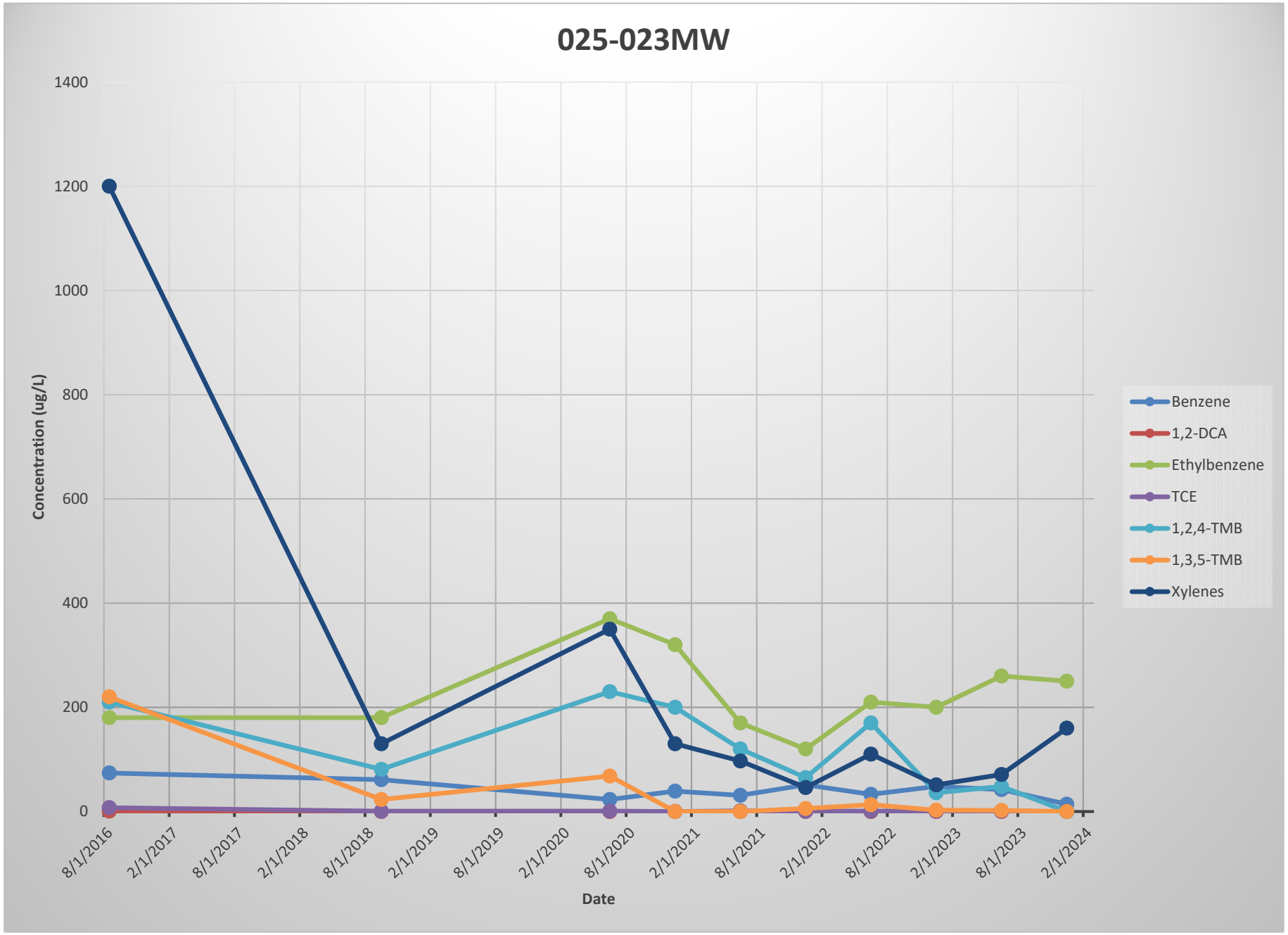
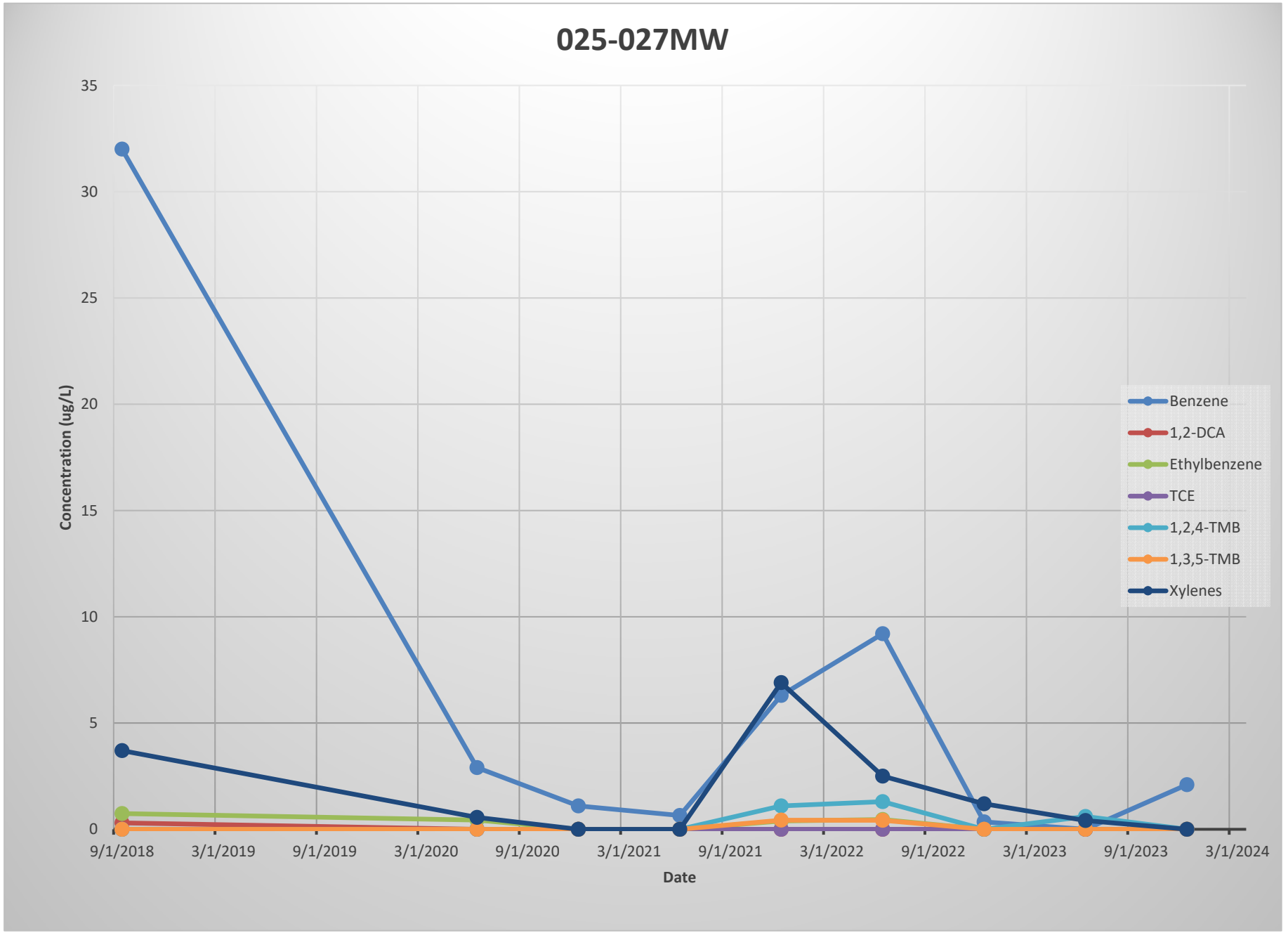
500
450
400
350
300
250
200
150
100
50
0
5/1/2015
11/1/2015
5/1/2016
11/1/2016
5/1/2017
11/1/2017
5/1/2018
11/1/2018
5/1/2019
11/1/2019
5/1/2020
11/1/2020
5/1/2021
11/1/2021
5/1/2022
11/1/2022
5/1/2023
11/1/2023
5/1/2024
Date
Benzene
1,2-DCA
Ethylbenzene
TCE
1,2,4-TMB
1,3,5-TMB
Xylenes


025-022MW
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Concentration (ug/L)
8/1/2016
2/1/2017
8/1/2017
2/1/2018
8/1/2018
2/1/2019
8/1/2019
2/1/2020
8/1/2020
2/1/2021
8/1/2021
2/1/2022
8/1/2022
2/1/2023
8/1/2023
2/1/2024
Date
Benzene
1,2-DCA
Ethylbenzene
TCE
1,2,4-TMB
1,3,5-TMB
Xylenes


025-023MW
1400
1200
1000
800
600
400
200
0
Concentration (ug/L)
8/1/2016
2/1/2017
8/1/2017
2/1/2018
8/1/2018
2/1/2019
8/1/2019
2/1/2020
8/1/2020
2/1/2021
8/1/2021
2/1/2022
8/1/2022
2/1/2023
8/1/2023
2/1/2024
Date
Benzene
1,2-DCA
Ethylbenzene
TCE
1,2,4-TMB
1,3,5-TMB
Xylenes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35
30
25
20
15
10
5
0
Concentration (ug/L)
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3/1/2019
9/1/2019
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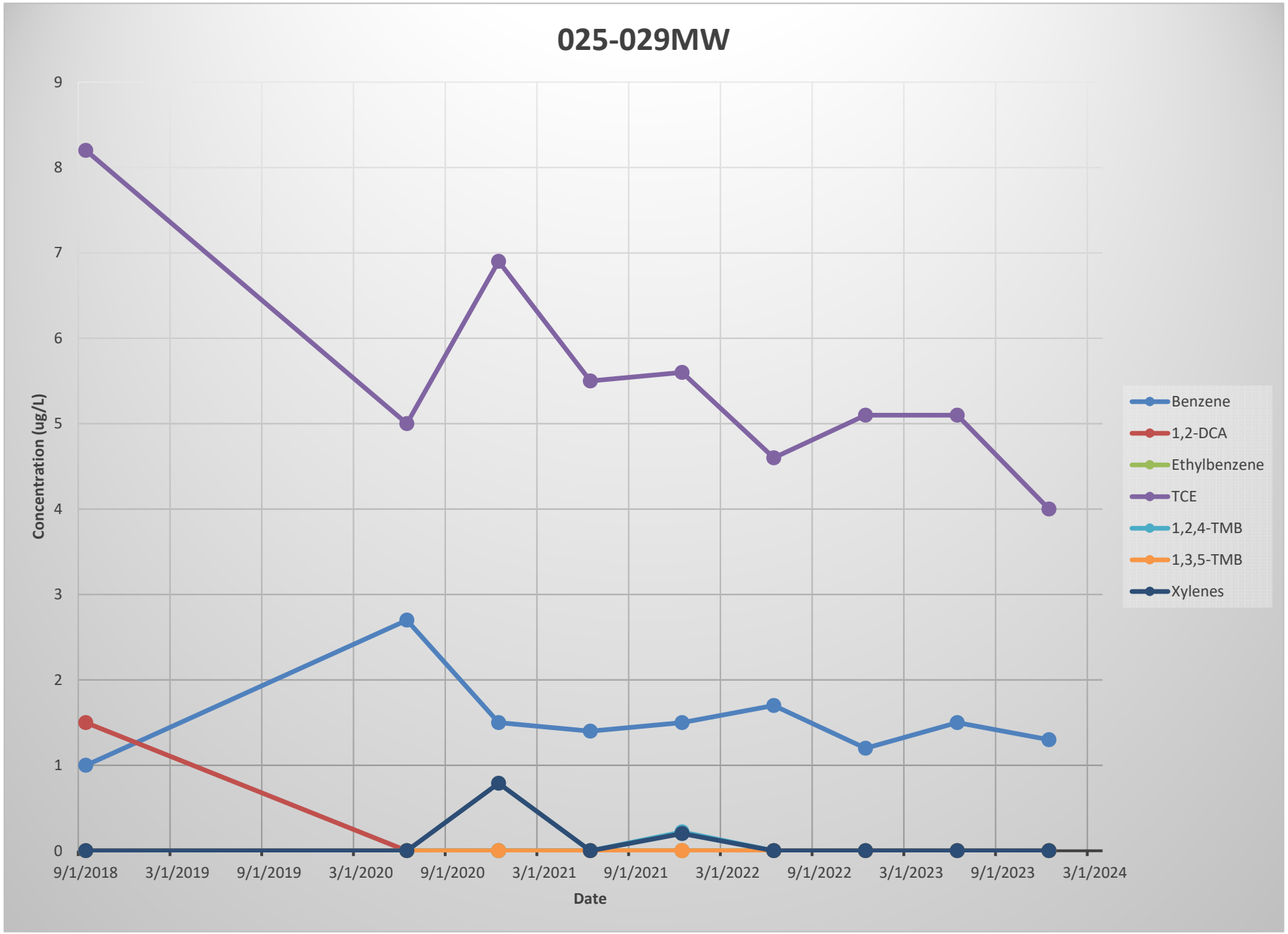
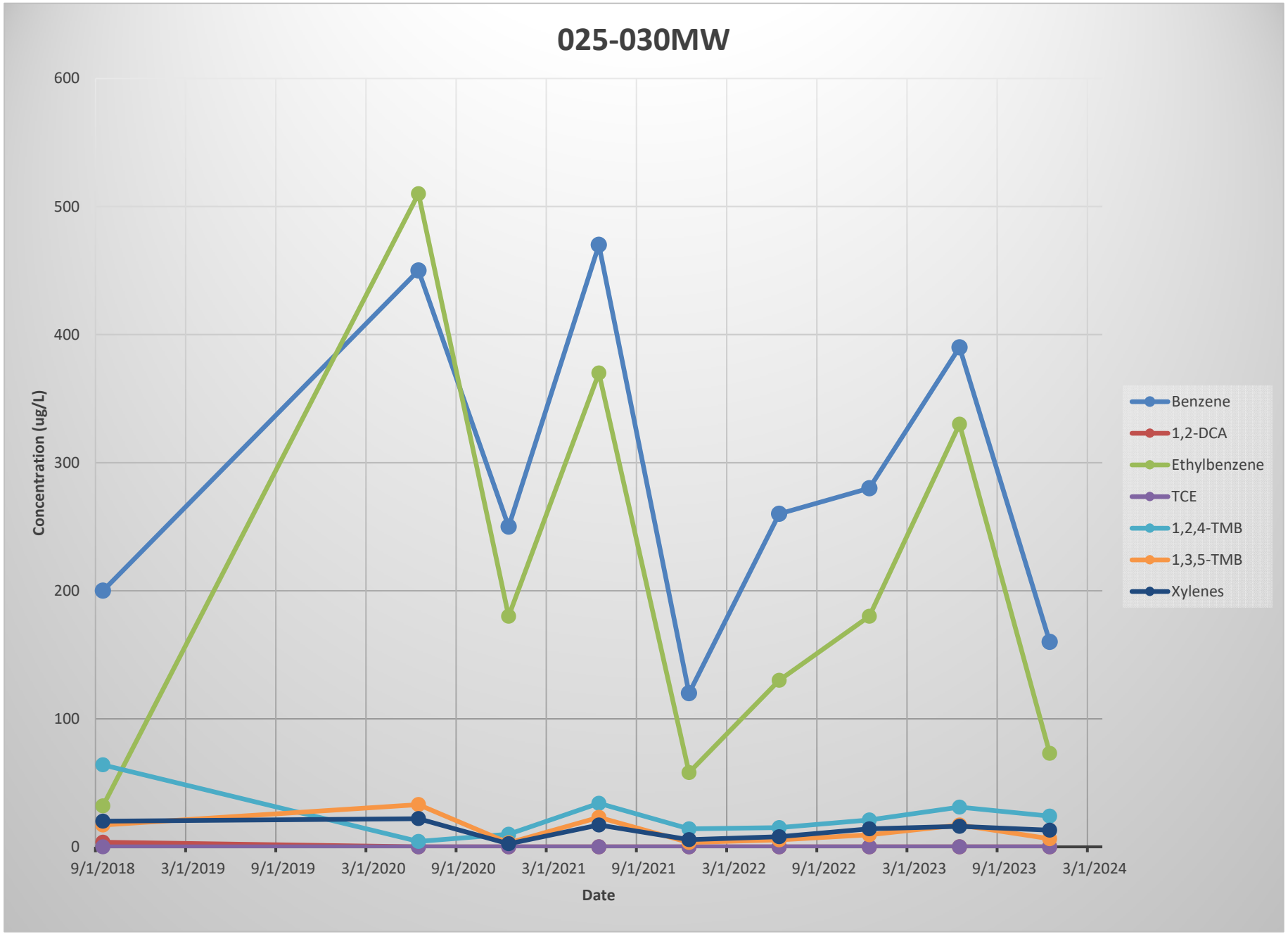
9/1/2020
3/1/2021
9/1/2021
3/1/2022
9/1/2022
3/1/2023
9/1/2023
3/1/2024
Date
Benzene
1,2-DCA
Ethylbenzene
TCE
1,2,4-TMB
1,3,5-TMB
Xylenes


025-029MW
Concentration (ug/L)
9
8
7
6
5
4
3
2
1
0
9/1/2018
3/1/2019
9/1/2019
3/1/2020
9/1/2020
3/1/2021
9/1/2021
3/1/2022
9/1/2022
3/1/2023
9/1/2023
3/1/2024
Date
Benzene
1,2-DCA
Ethylbenzene
TCE
1,2,4-TMB
1,3,5-TMB
Xylenes


025-030MW
600
500
400
300
200
100
0
Concentration (ug/L)
9/1/2018
3/1/2019
9/1/2019
3/1/2020
9/1/2020
3/1/2021
9/1/2021
3/1/2022
9/1/2022
3/1/2023
9/1/2023
3/1/2024
Date
Benzene
1,2-DCA
Ethylbenzene
TCE
1,2,4-TMB
1,3,5-TMB
Xylenes

APPENDIX I – SITE 29 SUPPORTING INFORMATION

Table 1
Groundwater Elevations
IRP Site 29, Duluth ANGB

Well ID	[1]Well Casing Elevation (feet amsl)	Depth to Water (feet)	Groundwater Elevation (feet amsl)	Depth to Water (feet)	Groundwater Elevation (feet amsl)	Depth to Water (feet)	Groundwater Elevation (feet amsl)	Depth to Water (feet)	Groundwater Elevation (feet amsl)
		June 2019		**October 2019**		**June 2020**		**September 2020**	
GW4-AA	[2]NM	5.57	[3]NA	5.02	[3]NA	6.40	[3]NA	6.19	[3]NA
GW4-BB	[2]NM	4.95	[3]NA	4.5	[3]NA	5.98	[3]NA	5.70	[3]NA
GW4-F	[2]NM	5.66	[3]NA	4.95	[3]NA	7.01	[3]NA	6.74	[3]NA
GW4-CC	[2]NM	6.42	[3]NA	5.82	[3]NA	7.65	[3]NA	7.82	[3]NA
GW29-A	1416	7.46	1408.54	6.49	1409.51	8.19	1407.81	8.40	1407.60
GW29-E	1415.57	5.93	1409.64	5.24	1410.33	7.30	1408.27	7.54	1408.03
GW29-B	1412.86	8.29	1404.57	2.44	1410.42	3.81	1409.05	4.21	1408.65
GW29-C	1413.08	2.48	1410.60	1.53	1411.55	3.33	1409.75	3.31	1409.77
GW4-O	1413.26	2.84	1410.42	2.34	1410.92	3.75	1409.51	4.05	1409.21
WP10D	1415.47	5.70	1409.77	5.12	1410.35	6.36	1409.11	6.76	1408.71
WP10	1415.55	5.60	1409.95	5.02	1410.53	6.40	1409.15	6.93	1408.62
GW4-Z	1413.17	3.82	1409.35	[4]NM	[3]NA	4.44	1408.73	4.87	1408.30
GW4-E	1416.03	5.46	1410.57	4.8	1411.23	5.23	1410.80	6.64	1409.39
GW4-P	1415.18	5.00	1410.18	4.35	1410.83	5.60	1409.58	5.75	1409.43
GW29-D	1421.56	11.09	1410.47	10.59	1410.97	11.69	1409.87	11.99	1409.57

Notes:
amsl - above mean sea level
NA - not applicable
NM - not measured
[1]Well Casing - Well casing elevations taken from 2015 survey completed by ERM
[2]NM - Wells on airfield were not included in the 2015 survey
[3]NA - Groundwater elevation was not calculated
[4]NM - Depth to water not measured, monitoring well not located during initial gauging event

Table 2
Groundwater Field Parameters
IRP Site 29, Duluth ANGB

Groundwater Sample ID	Date	Temperature (ºC)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Well Volume (gallons)	Well Purged (gallons)
Site 29									
SITE29-GW29-A-092920	9/29/2020	8.9	7.12	1.53	0.1	-194.2	86.2	4.1	8.5
[1]SITE29-GW4-AA-093020	9/30/2020	12	7.1	3.91	0.23	-191.2	234	1.1	1
SITE29-GW4-BB-093020	9/30/2020	10.7	7.08	3.52	0.12	-197.9	81.2	2.5	5
[1]SITE29-GW4-CC-093020	9/30/2020	9	7.88	0.67	0.73	-88.9	11.2	4	4
SITE29-GW4-E-100220	10/2/2020	12.6	6.75	0.85	0.14	-128.9	33.6	1.5	3
SITE29-GW4-F-093020	9/30/2020	11.1	6.66	0.97	0.27	-123.3	23.5	1.7	3.5
SITE29-GW4-P-100220	10/2/2020	9.5	7.44	1.83	0.11	-168.7	276	4.1	8.25
SITE29-GW4-Z-092920	9/29/2020	7.9	7.39	5.99	0.33	-155	49.9	6.1	12
[1]SITE29-GW29-B-092920	9/29/2020	14.6	6.98	1.08	0.1	-134.7	885	1.8	2.5
SITE29-GW29-C-092920	9/29/2020	16	6.96	0.8	0.49	-137.9	494	1.7	5.5
SITE29-GW29-D-100220	10/2/2020	13.2	6.68	1.26	0.13	-88.2	9.98	1.8	4
SITE29-GW29-E-092920	9/29/2020	12.3	6.64	1.34	0.12	-158.7	93.2	1.7	3.5
SITE29-GW4-O-092920	9/29/2020	16.7	6.71	0.92	0.09	-99.7	58.6	1.5	3
SITE29-WP10-092920	9/29/2020	9.5	6.68	1.18	0.24	-139.8	4.9	1	2
SITE29-WP10D-092020	9/29/2020	8.5	7.97	2.21	0.51	-141.1	2.61	1.6	4

Created by: JR 10/20/2020 - Checked by:

Notes:

°C - degrees Celsius

mg/L - milligram per liter

mS/cm - milliSiemens per centimeter

mV - millivolt

NTU - nephelometric turbidity unit

ORP - oxidation reduction potential

[1] Indicates that sample was collected after monitoring well was purged dry

Table 3
Groundwater Analytical Data
IRP Site 29, Duluth ANGB

Monitoring Well ID	Units	Minnesota Department of Health (HRL, HBV and/or RAA) based on 2015 ROD	Health-Based Water Guidance Values, MDH (HRL, HBV and/or RAA) Most Updated Criteria**	GW4-AA					GW4-BB						
Date Collected				11/15/16	6/11/19	10/16/19	6/25/20	9/30/20	11/15/16	8/14/18	10/9/18	6/11/19	10/16/19	6/25/20	9/30/20
Volatile Organic Compounds															
1,1,1,2-Tetrachloroethane	ug/L	70	70	<0.2	<0.24 UT	<1 UT	<5 UV	<5 UVT	<0.2	<0.5	<0.5 T	<0.24 UT	<1 UT	<1 UT	<1 UT
1,1,1-Trichloroethane (TCA)	ug/L	9000	5,000	<0.2	<0.21 UT	<0.6 UT	<3 UV	<3 UVT	<0.2	<0.5	<0.5 T	<0.21 UT	<0.6 UT	<0.6 UT	<0.6 UT
1,1,2-Trichloroethane	ug/L	3	3	<0.4	<0.26 UT	<0.6 UT	<3 UV	<3 UVT	<0.4	<0.5	<0.5 T	<0.26 UT	<0.6 UT	<0.6 UT	<0.6 UT
1,1-Dichloroethane (1,1-DCA)	ug/L	80	80	<0.2	<0.2 UT	<0.6 UT	<3 UV	<3 UVT	<0.2	<0.5	<0.5 T	<0.2 UT	<0.6 UT	<0.6 UT	<0.6 UT
1,1-Dichloroethene (1,1-DCE)*	ug/L	200	200	<0.2	<0.24 UT	<1 UT	<5 UV	<5 UVT	<0.2	<0.5	<0.5 T	<0.24 UT	<1 UT	<1 UT	<1 UT
1,2,4-Trichlorobenzene	ug/L	4	4	<0.3	<0.3 UT	<0.6 UT	<3 UV	<3 UVT	<0.3	<0.5	<0.5 T	<0.3 UT	<0.6 UT	<0.6 UT	<0.6 UT
1,2,4-Trimethylbenzene	ug/L	100	30	<0.2	<0.2 UT	<0.6 UT	<3 UV	<3 UVT	<0.2	<0.5	<0.5 T	<0.2 UT	<0.6 UT	<0.6 UT	<0.6 UT
1,2-Dichlorobenzene	ug/L	600	600	<0.2	<0.23 UT	<0.6 UT	<3 UV	<3 UVT	<0.2	<0.5	<0.5 T	<0.23 UT	<0.6 UT	<0.6 UT	<0.6 UT
1,2-Dichloroethane (EDC)	ug/L	1	1	<0.15	<0.3 UT	<0.6 UT	<3 UV	<3 UVT	<0.15	<0.5	<0.5 T	<0.3 UT	<0.6 UT	<0.6 UT	<0.6 UT
1,2-Dichloropropane	ug/L	5	5	<0.2	<0.22 UT	<0.6 UT	<3 UV	<3 UVT	<0.2	<0.5	<0.5 T	<0.22 UT	<0.6 UT	<0.6 UT	<0.6 UT
1,3,5-Trimethylbenzene	ug/L	100	30	<0.2	<0.23 UT	<0.6 UT	<3 UV	<3 UVT	<0.2	<0.5	<0.5 T	<0.23 UT	<0.6 UT	<0.6 UT	<0.6 UT
1,3-Dichloropropane	ug/L	NA	NC	<0.3	<0.26 UT	<0.3 UT	<1.5 UV	<1.5 UVT	<0.3	<0.5	<0.5 T	<0.26 UT	<0.3 UT	<0.3 UT	<0.3 UT
1,4-Dichlorobenzene	ug/L	10	10	**0.69**	**1.1** T	**1.1** T	<3 UV	<3 UVT	<0.2	<0.5	<0.5 T	<0.23 UT	<0.6 UT	<0.6 UT	<0.6 UT
2,2-Dichloropropane	ug/L	NA	NC	<0.2	<0.25 UT	<0.6 UT	<3 UV	<3 UVT	<0.2	<0.5	<0.5 T	<0.25 UT	<0.6 UT	<0.6 UT	<0.6 UT
2-Butanone (MEK)	ug/L	4000	4,000	**130**	**58** T	**83** T	**45** JV	<30 UVT	**73**	**290**	**210** T	**200** T	**170** T	**56** T	**43** T
2-Chlorotoluene	ug/L	NC	NC	<0.2	<0.22 UT	<0.6 UT	<3 UV	<3 UVT	<0.2	<0.5	<0.5 T	<0.22 UT	<0.6 UT	<0.6 UT	<0.6 UT
2-Hexanone	ug/L	NC	NC	**2.8** J	**9.7** JT	<6 UT	<30 UV	<30 UVT	<10	<10	**12** JT	<4 UT	<6 UT	<6 UT	<6 UT
4-Chlorotoluene	ug/L	NC	NC	<0.2	<0.22 UT	<0.6 UT	<3 UV	<3 UVT	<0.2	<0.5	<0.5 T	<0.22 UT	<0.6 UT	<0.6 UT	<0.6 UT
4-Isopropyltoluene	ug/L	NC	NC	<0.2	<0.23 UT	<0.6 UT	<3 UV	<3 UVT	<0.2	<0.5	<0.5 T	<0.23 UT	<0.6 UT	<0.6 UT	<0.6 UT
4-Methyl-2-pentanone (MIBK)	ug/L	300	300	<10	<3 UT	<6 UT	<30 UV	<30 UVT	<10	<5	<5 T	<3 UT	<6 UT	<6 UT	<6 UT
Acetone	ug/L	4000	3,000	**130**	**280** ZT	**220** ZT	**80** JV	<50 UVT	**130**	**46**	**60** T	**150** T	**140** ZT	**47** T	**47** T
Benzene	ug/L	2	2	**0.49** J	**0.38** JT	<1 UT	<5 UV	<5 UVT	**0.19** J	**0.21** J	**0.28** JT	**0.24** JT	<1 UT	<1 UT	<1 UT
Bromoform	ug/L	40	40	<0.5	<0.22 UT	<1 UT	<5 UV	<5 UVT	<0.5	<0.5	<0.5 T	<0.22 UT	<1 UT	<1 UT	<1 UT
Bromomethane	ug/L	10	10	<0.3	**1** UZT	<2 UT	<10 UV	<10 UZVT	<0.3	**1** QZ	**1** YT	<0.5 UT	<2 UT	<2 UT	<2 UT
Carbon Disulfide	ug/L	700	700	**0.3** J	**0.59** JT	<2 UT	<10 UV	<10 UVT	**0.1** J	<1	<1 T	<0.5 UT	<2 UT	<2 UT	<2 UT
Chlorobenzene	ug/L	100	100	<0.2	<0.24 UT	<0.6 UT	<3 UV	<3 UVT	<0.2	<0.5	<0.5 T	<0.24 UT	<0.6 UT	<0.6 UT	<0.6 UT
Chloroethane	ug/L	NC	NC	**0.24** J	<0.4 UT	<1 UT	<5 UV	<5 UVT	**0.24** J	<1	<1 T	<0.4 UT	<1 UT	<1 UT	<1 UT
Chloroform	ug/L	30	20	<0.2	<0.15 UT	<0.6 UT	<3 UV	<3 UVT	<0.2	<0.25	<0.25 T	<0.15 UT	<0.6 UT	<0.6 UT	<0.6 UT
Chloromethane	ug/L	NC	NC	<0.2	<0.4 UT	<1 UT	<5 UV	<5 UVT	<0.2	<1	<1 T	<0.4 UT	<1 UT	<1 UT	<1 UT
cis-1,2-Dichloroethene*	ug/L	50	6	**0.1** J	<0.25 UT	<0.6 UT	<3 UV	<3 UVT	**2.2**	**1.8**	**2** T	**0.74** JT	**0.79** JT	**0.36** JT	**0.36** JT
Dichlorodifluoromethane (CFC 12)	ug/L	700	500	<0.2	<0.26 UT	<1 UT	<5 UV	<5 UVT	<0.2	<0.5	<0.5 T	<0.26 UT	<1 UT	<1 UT	<1 UT
Dichloromethane (Methylene Chloride)	ug/L	5	5	**0.11** J	<0.4 UT	<1 UT	<5 UV	<5 UVT	<0.2	<1	<1 T	<0.4 UT	<1 UT	<1 UT	<1 UT
Ethylbenzene	ug/L	50	40	**0.07** J	<0.22 UT	<0.6 UT	<3 UV	<3 UVT	<0.1	<0.5	<0.5 T	<0.22 UT	<0.6 UT	<0.6 UT	<0.6 UT
Hexachlorobutadiene	ug/L	1	1	<0.3	<0.3 UT	<1 UT	<5 UV	<5 UZVT	<0.3	<0.5	<0.5 T	**0.5** UZT	<1 UT	<1 UT	<1 UZT
Isopropylbenzene	ug/L	300	300	<0.2	<0.18 UT	<0.6 UT	<3 UV	<3 UVT	<0.2	<0.5	<0.5 T	<0.18 UT	<0.6 UT	<0.6 UT	<0.6 UT
m,p-Xylenes	ug/L	NC	NC	**0.14** J	<0.5 UT	<1.2 UT	<6 UV	<6 UVT	<0.2	<1	<1 T	<0.5 UT	<1.2 UT	<1.2 UT	<1.2 UT
Naphthalene	ug/L	70	70	<0.3	<0.4 UT	<0.6 UT	<3 UV	<3 UVT	<0.3	<1	<1 T	<0.4 UT	<0.6 UT	<0.6 UT	<0.6 UT
n-Butylbenzene	ug/L	NC	NC	<0.1	<0.23 UT	<0.6 UT	<3 UV	<3 UVT	<0.1	<0.5	<0.5 T	<0.23 UT	<0.6 UT	<0.6 UT	<0.6 UT
n-Propylbenzene	ug/L	NC	NC	<0.2	<0.2 UT	<0.6 UT	<3 UV	<3 UVT	<0.2	<0.5	<0.5 T	<0.2 UT	<0.6 UT	<0.6 UT	<0.6 UT
o-Xylene	ug/L	NC	NC	**0.08** J	<0.24 UT	<0.6 UT	<3 UV	<3 UVT	<0.2	<0.5	<0.5 T	<0.24 UT	<0.6 UT	<0.6 UT	<0.6 UT
Tetrachloroethene (PCE)	ug/L	4	4	<0.2	<0.3 UT	<0.6 UT	<3 UV	<3 UVT	<0.2	<0.5	<0.5 T	<0.3 UT	<0.6 UT	<0.6 UT	<0.6 UT
Toluene	ug/L	200	70	**0.56**	**0.52** JT	**0.36** JT	<3 UV	**2.6** JVT	**0.19** J	<0.5	<0.5 T	<0.22 UT	**0.63** JT	**0.26** JT	**0.66** JT
trans-1,2-Dichloroethene*	ug/L	100	9	**0.15** J	<0.25 UT	<0.6 UT	<3 UV	<3 UVT	**0.26** J	<0.5	<0.5 T	<0.25 UT	<0.6 UT	<0.6 UT	<0.6 UT
trans-1,3-Dichloropropene	ug/L	NC	NC	<0.2	<0.19 UT	<0.6 UT	<3 UV	<3 UVT	<0.2	<0.5	<0.5 T	<0.19 UT	<0.6 UT	<0.6 UT	<0.6 UT
Trichloroethene (TCE)*	ug/L	5	0.4	**0.12** J	<0.21 UT	<0.6 UT	<3 UV	<3 UVT	**1.6**	**1.6**	**1.6** T	**0.43** JT	**0.45** JT	<0.6 UT	<0.6 UT
Trichlorofluoromethane (CFC 11)	ug/L	2000	2,000	<0.2	<0.2 UT	<1 UT	<5 UV	<5 UVT	<0.2	<0.5	<0.5 T	<0.2 UT	<1 UT	<1 UT	<1 UT
Vinyl Chloride*	ug/L	0.2	0.2	**1.4**	<0.18 UT	<0.3 UT	<1.5 UV	<1.5 UVT	**19**	**3.4**	**2.1** T	**0.5** JT	**10** T	**4.4** T	**8.7** T
Total Phase Hydrocarbons															
Gasoline Range Organics (GRO)	ug/L	NC	NC	**220** L	NS	**18** JT	NS	<200 UTV	**97** L	NS	NS	NS	**26** JT	NS	**73** JT
Diesel Range Organics (DRO)	ug/L	NC	NC	**9300** D	NS	**4200** L	NS	**1500** L	**5900** D	NS	NS	NS	**4000** L	NS	**3700** L
Optimization Parameters															
Alkalinity, Total as CaCO3	mg/L	NC	NC	NS	NS	NS	NS	NS	**1460**	**2700**	**2500**	NS	NS	NS	NS
Biochemical Oxygen Demand (BOD)	mg/L	NC	NC	NS	NS	NS	NS	NS	**>600** >	**710** O	**450** O	NS	NS	NS	NS
Carbon, Dissolved Organic (DOC)	mg/L	NC	NC	NS	NS	NS	NS	NS	**804**	**1500**	**680**	NS	NS	NS	NS
Carbon, Total Organic	mg/L	NC	NC	NS	NS	NS	NS	NS	**787**	**1600**	**760**	NS	NS	NS	NS
Chemical Oxygen Demand (COD)	mg/L	NC	NC	NS	NS	NS	NS	NS	**1950**	**5500**	**2300**	NS	NS	NS	NS
Iron, Dissolved	mg/L	NC	NC	NS	NS	NS	NS	NS	**42800**	**123000**	**103000**	NS	NS	NS	NS
Iron, Total	mg/L	NC	NC	NS	NS	NS	NS	NS	**46600**	**123000**	**103000**	NS	NS	NS	NS
Manganese, Dissolved	mg/L	NC	NC	NS	NS	NS	NS	NS	**910**	**836**	**962**	NS	NS	NS	NS
Manganese, Total	ug/L	NC	NC	NS	NS	NS	NS	NS	**909**	**836**	**962**	NS	NS	NS	NS
Nitrate as Nitrogen	ug/L	NC	NC	NS	NS	NS	NS	NS	<0.04 U	<0.2 U	<0.2 U	NS	NS	NS	NS
Sulfate	ug/L	NC	NC	NS	NS	NS	NS	NS	<0.04 U	**0.99** J	**0.89** J	NS	NS	NS	NS
Sulfide, Total	ug/L	NC	NC	NS	NS	NS	NS	NS	**0.023** J	<0.7 U	**4.5** U	NS	NS	NS	NS
Ethane	ug/L	NC	NC	NS	NS	NS	NS	NS	**15**	**9.4**	**4.4**	NS	NS	NS	NS
Ethene	ug/L	NC	NC	NS	NS	NS	NS	NS	**90**	**1600**	**1500**	NS	NS	NS	NS
Methane	ug/L	NC	NC	NS	NS	NS	NS	NS	**3800**	**1500**	**1500**	NS	NS	NS	NS

Monitoring Well ID	GW4-CC					GW4-E						GW4-F				
Date Collected	11/15/16	6/11/19	10/16/19	6/25/20	9/30/20	11/15/16	6/12/19	10/16/19	6/25/20	10/2/20	10/2/20 (DUP02)	11/15/16	6/11/19	10/16/19	6/25/20	9/30/20
Volatile Organic Compounds																
1,1,1,2-Tetrachloroethane	<0.2 U	<0.24 U	<1 U	<1 U	<1 U	<0.2 U	<0.24 U	<1 U	<1 U	<1 U	<1 U	<0.2	<0.24 U	<1 U	<5 UV	<5 UV
1,1,1-Trichloroethane (TCA)	<0.2 U	<0.21 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.21 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.21 U	<0.6 U	<3 UV	<3 UV
1,1,2-Trichloroethane	<0.4 U	<0.26 U	<0.6 U	<0.6 U	<0.6 U	<0.4 U	<0.26 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.4	<0.26 U	<0.6 U	<3 UV	<3 UV
1,1-Dichloroethane (1,1-DCA)	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.2 U	<0.6 U	<3 UV	<3 UV
1,1-Dichloroethene (1,1-DCE)*	<0.2 U	<0.24 U	<1 U	<1 U	<1 U	<0.2 U	<0.24 U	<1 U	<1 U	<1 U	<1 U	<0.2	<0.24 U	<1 U	<5 UV	<5 UV
1,2,4-Trichlorobenzene	<0.3 U	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.3 U	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.3	<0.3 U	<0.6 U	<3 UV	<3 UV
1,2,4-Trimethylbenzene	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.2 U	<0.6 U	<3 UV	<3 UV
1,2-Dichlorobenzene	<0.2 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.23 U	<0.6 U	<3 UV	<3 UV
1,2-Dichloroethane (EDC)	<0.15 U	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.15 U	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.15	<0.3 U	<0.6 U	<3 UV	<3 UV
1,2-Dichloropropane	<0.2 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.22 U	<0.6 U	<3 UV	<3 UV
1,3,5-Trimethylbenzene	<0.2 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.23 U	<0.6 U	<3 UV	<3 UV
1,3-Dichloropropane	<0.3 U	<0.26 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.26 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.3	<0.26 U	<0.3 U	<1.5 UV	<1.5 UV
1,4-Dichlorobenzene	<0.2 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.23 U	<0.6 U	<3 UV	<3 UV
2,2-Dichloropropane	<0.2 U	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.25 U	<0.6 U	<0.6 U	<0.6 UY	<0.6 UY	<0.2	<0.25 U	<0.6 U	<3 UV	<3 UV
2-Butanone (MEK)	<4	<2.4 U	<6 U	<6 U	<6 U	**5** U	<2.4 U	<6 U	<6 U	<6 U	<6 U	<4	<2.4 U	<6 U	<30 UV	<30 UV
2-Chlorotoluene	<0.2 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.22 U	<0.6 U	<3 UV	<3 UV
2-Hexanone	<10 U	<4 U	<6 U	<6 U	<6 U	<10 U	<4 U	<6 U	<6 U	<6 U	<6 U	<10	<4 U	<6 U	<30 UV	<30 UV
4-Chlorotoluene	<0.2 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.22 U	<0.6 U	<3 UV	<3 UV
4-Isopropyltoluene	<0.2 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.23 U	<0.6 U	<3 UV	<3 UV
4-Methyl-2-pentanone (MIBK)	<10 U	<3 U	<6 U	<6 U	<6 U	<10 U	<3 U	<6 U	<6 U	<6 U	<6 U	<10	<3 U	<6 U	<30 UV	<30 UV
Acetone	<10	<5 U	<10 UZ	<10 U	<10 U	**11** U	**10** UZ	**37** Z	<10 U	<10 U	<10 U	**4.6** J	<5 UZ	<10 UZ	<50 UV	<50 UV
Benzene	<0.1 U	<0.19 U	<1 U	<1 U	<1 U	<0.1 U	<0.19 U	<1 U	<1 U	<1 U	<1 U	<0.1	<0.19 U	<1 U	<5 UV	<5 UV
Bromoform	<0.5 U	<0.22 U	<1 U	<1 U	<1 U	<0.5 U	<0.22 U	<1 U	<1 U	<1 U	<1 U	<0.5	<0.22 U	<1 U	<5 UV	<5 UV
Bromomethane	<0.3 U	<0.5 U	<2 U	<2 U	<2 UZ	<0.3 U	**1** UZ	<2 U	<2 U	<2 UZ	<2 UZ	<0.3	<0.5 UZ	<2 U	<10 UV	<10 UZV
Carbon Disulfide	<0.2 U	<0.5 U	<2 U	<2 U	<2 U	**0.24** U	<0.5 U	<2 U	<2 U	<2 U	<2 U	<0.2	<0.5 U	<2 U	<10 UV	<10 UV
Chlorobenzene	<0.2 U	<0.24 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.24 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.24 U	<0.6 U	<3 UV	<3 UV
Chloroethane	<0.2 U	<0.4 U	<1 U	<1 U	<1 U	<0.2 U	<0.4 U	**0.89** J	<1 U	<1 U	<1 U	<0.2	<0.4 U	<1 U	<5 UV	<5 UV
Chloroform	<0.2 U	<0.15 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.15 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.15 U	<0.6 U	<3 UV	<3 UV
Chloromethane	<0.2 U	<0.4 U	<1 U	<1 U	<1 U	<0.2 U	<0.4 U	<1 U	<1 U	<1 U	<1 U	<0.2	<0.4 U	<1 U	<5 UV	<5 UV
cis-1,2-Dichloroethene*	<0.2 U	<0.25 U	<0.6 U	<0.6 U	<0.6 U	**2** U	**0.43** J	**0.75** J	**0.75** J	**2**	**1.6**	<0.2	<0.25 U	<0.6 U	<3 UV	<3 UV
Dichlorodifluoromethane (CFC 12)	<0.2 U	<0.26 U	<1 U	<1 U	<1 U	<0.2 U	<0.26 U	<1 U	<1 U	<1 U	<1 U	<0.2	<0.26 U	<1 U	<5 UV	<5 UV
Dichloromethane (Methylene Chloride)	<0.2 U	<0.4 U	<1 U	<1 U	<1 U	<0.2 U	<0.4 U	<1 U	<1 U	<1 U	<1 U	<0.2	<0.4 U	<1 U	<5 UV	**2.6** JV
Ethylbenzene	<0.1	**0.8** J	<0.6 U	<0.6 U	<0.6 U	**0.09** U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.22 U	<0.6 U	<3 UV	<3 UV
Hexachlorobutadiene	<0.3	**0.5** UZ	<1 U	<1 U	<1 UZ	<0.3 UZ	<0.3 U	<1 U	<1 U	<1 UZ	<1 UZ	<0.3	<0.3 U	<1 U	<5 UV	<5 UZV
Isopropylbenzene	<0.2 U	<0.18 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.18 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.18 U	<0.6 U	<3 UV	<3 UV
m,p-Xylenes	<0.2	<0.5 U	<1.2 U	<1.2 U	<1.2 U	<0.2 U	<0.5 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U	<0.2	<0.5 U	<1.2 U	<6 UV	<6 UV
Naphthalene	<0.3	<0.4 U	<0.6 U	<0.6 U	<0.6 U	<0.3 U	<0.4 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.3	<0.4 U	<0.6 U	<3 UV	<3 UV
n-Butylbenzene	<0.1	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.1 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.23 U	<0.6 U	<3 UV	<3 UV
n-Propylbenzene	<0.2	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.2 U	<0.6 U	<3 UV	<3 UV
o-Xylene	<0.2	<0.24 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.24 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.24 U	<0.6 U	<3 UV	<3 UV
Tetrachloroethene (PCE)	<0.2	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.3 U	<0.6 U	<3 UV	<3 UV
Toluene	<0.2	<0.22 U	<0.6 U	<0.6 U	<0.6 U	**1.7** U	<0.22 U	**0.86** J	**0.25** J	**0.65** J	**0.64** J	**0.08** J	<0.22 U	<0.6 U	<3 UV	<3 UV
trans-1,2-Dichloroethene*	<0.2	<0.25 U	<0.6 U	<0.6 U	<0.6 U	**0.52** U	<0.25 U	<0.6 U	<0.6 U	**0.40** J	**0.4** J	<0.2	<0.25 U	<0.6 U	<3 UV	<3 UV
trans-1,3-Dichloropropene	<0.2	<0.19 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.19 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.19 U	<0.6 U	<3 UV	<3 UV
Trichloroethene (TCE)*	<0.1	<0.21 U	<0.6 U	<0.6 U	<0.6 U	**0.47** U	<0.21 U	<0.6 U	<0.6 U	<0.6 U	**0.31** J	<0.1	<0.21 U	<0.6 U	<3 UV	<3 UV
Trichlorofluoromethane (CFC 11)	<0.2	<0.2 U	<1 U	<1 U	<1 U	<0.2 U	<0.2 U	<1 U	<1 U	<1 U	<1 U	<0.2	<0.2 U	<1 U	<5 UV	<5 UV
Vinyl Chloride*	<0.1	<0.18 U	<0.3 U	<0.3 U	<0.3 U	**0.87** U	<0.18 U	**0.27** J	**0.22** J	**0.79**	**0.67**	<0.1	<0.18 U	<0.3 U	<1.5 UV	<1.5 UV
Total Phase Hydrocarbons																
Gasoline Range Organics (GRO)	<40 U	NS	<40 U	NS	**320**	**48** J	NS	<40 U	NS	<200 UV	<200 UV	<40 U	NS	<40 U	NS	<200 UV
Diesel Range Organics (DRO)	**74** J	NS	**59** J	NS	**79** J	**6500** D	NS	**420**	NS	**450**	**480**	**500**	NS	**180** J	NS	**170** J
Optimization Parameters																
Alkalinity, Total as CaCO3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Biochemical Oxygen Demand (BOD)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Carbon, Dissolved Organic (DOC)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Carbon, Total Organic	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chemical Oxygen Demand (COD)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Iron, Dissolved	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Iron, Total	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Manganese, Dissolved	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Manganese, Total	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Nitrate as Nitrogen	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfate	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfide, Total	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethane	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methane	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Table 3
Groundwater Analytical Data
IRP Site 29, Duluth ANGB

Monitoring Well ID	Units	Minnesota Department of Health (HRL, HBV and/or RAA) based on 2015 ROD	Health-Based Water Guidance Values, MDH (HRL, HBV and/or RAA) Most Updated Criteria**	GW4-O					GW4-P								GW4-Z				GW29-A								GW29-B				
Date Collected				11/10/16	6/12/19	10/16/19	6/25/20	9/29/20	11/15/16	8/15/18	10/10/18	6/12/19	10/16/19	6/25/20	[2]6/25/20	10/2/20	6/12/19	10/17/19	6/25/20	9/29/20	11/10/16	[2]11/10/16	8/14/18	10/9/18	6/11/19	10/15/19	6/25/20	9/29/20	[1]11/10/16	6/12/19	10/15/19	6/25/20	9/29/20
Volatile Organic Compounds																																
1,1,1,2-Tetrachloroethane	ug/L	70	70	<0.2	<0.24 U	<1 U	<1 U	<1 U	<0.2	<0.5	<0.5	<0.24 U	<1 U	<1 U	<1 U	<1 U	<0.24 U	<1 U	<1 U	<1 U	<0.2	<0.2	<0.5	<0.5 T	<0.24 UT	<1 UT	<1 U	<1 U	<0.2	<0.24 U	<1 U	<1 U	<1 U
1,1,1-Trichloroethane (TCA)	ug/L	9000	5,000	<0.2	<0.21 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.21 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.21 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.2	<0.5	<0.5 T	<0.21 UT	<0.6 UT	<0.6 U	<0.6 U	<0.2	<0.21 U	<0.6 U	<0.6 U	<0.6 U
1,1,2-Trichloroethane	ug/L	3	3	<0.4	<0.26 U	<0.6 U	<0.6 U	<0.6 U	<0.4	<0.5	<0.5	<0.26 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.26 U	<0.6 U	<0.6 U	<0.6 U	<0.4	<0.4	<0.5	<0.5 T	<0.26 UT	<0.6 UT	<0.6 U	<0.6 U	<0.4	<0.26 U	<0.6 U	<0.6 U	<0.6 U
1,1-Dichloroethane (1,1-DCA)	ug/L	80	80	<0.2	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.2	<0.5	<0.5 T	<0.2 UT	<0.6 UT	<0.6 U	<0.6 U	<0.2	<0.2 U	<0.6 U	<0.6 U	<0.6 U
1,1-Dichloroethene (1,1-DCE)*	ug/L	200	200	<0.2	<0.24 U	<1 U	<1 U	<1 U	<0.2	<0.5	<0.5	<0.24 U	<1 U	<1 U	<1 U	<1 U	<0.24 U	<1 U	<1 U	<1 U	<0.2	<0.2	<0.5	<0.5 T	<0.24 UT	<1 UT	<1 U	<1 U	<0.2	<0.24 U	<1 U	<1 U	<1 U
1,2,4-Trichlorobenzene	ug/L	4	4	<0.3	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.3	<0.5	<0.5	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.3	<0.3	<0.5	<0.5 T	<0.3 UT	<0.6 UT	<0.6 U	<0.6 U	<0.3	<0.3 U	<0.6 U	<0.6 U	<0.6 U
1,2,4-Trimethylbenzene	ug/L	100	30	**0.84** J	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.2	**0.09** J	<0.5	<0.5 T	<0.2 UT	<0.6 UT	<0.6 U	<0.6 U	<0.2	<0.2 U	<0.6 U	<0.6 U	<0.6 U
1,2-Dichlorobenzene	ug/L	600	600	<0.2	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.2	<0.5	<0.5 T	<0.23 UT	<0.6 UT	<0.6 U	<0.6 U	<0.2	<0.23 U	<0.6 U	<0.6 U	<0.6 U
1,2-Dichloroethane (EDC)	ug/L	1	1	<0.15	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.15	<0.5	<0.5	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.15	<0.15	<0.5	<0.5 T	<0.3 UT	<0.6 UT	<0.6 U	<0.6 U	<0.15	<0.3 U	<0.6 U	<0.6 U	<0.6 U
1,2-Dichloropropane	ug/L	5	5	<0.2	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.2	<0.5	<0.5 T	<0.22 UT	<0.6 UT	<0.6 U	<0.6 U	<0.2	<0.22 U	<0.6 U	<0.6 U	<0.6 U
1,3,5-Trimethylbenzene	ug/L	100	30	**0.19** J	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.2	<0.5	<0.5 T	<0.23 UT	<0.6 UT	<0.6 U	<0.6 U	<0.2	<0.23 U	<0.6 U	<0.6 U	<0.6 U
1,3-Dichloropropane	ug/L	NA	NC	<0.3	<0.26 U	<0.3 U	<0.3 U	<0.3 U	<0.3	<0.5	<0.5	<0.26 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.26 U	<0.3 U	<0.3 U	<0.3 U	<0.3	<0.3	<0.5	<0.5 T	<0.26 UT	<0.3 UT	<0.3 U	<0.3 U	<0.3	<0.26 U	<0.3 U	<0.3 U	<0.3 U
1,4-Dichlorobenzene	ug/L	10	10	<0.2	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.2	<0.5	<0.5 T	<0.23 UT	<0.6 UT	<0.6 U	<0.6 U	<0.2	<0.23 U	<0.6 U	<0.6 U	<0.6 U
2,2-Dichloropropane	ug/L	NA	NC	<0.2	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.6 UY	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.2	<0.5	<0.5 T	<0.25 UT	<0.6 UT	<0.6 U	<0.6 U	<0.2	<0.25 U	<0.6 U	<0.6 U	<0.6 U
2-Butanone (MEK)	ug/L	4000	4,000	<4	<2.4 U	<6 U	<6 U	<6 U	**6.5** J	<10	<10	<2.4 U	<6 U	<6 U	<6 U	**2.7** J	<2.4 U	<6 U	<6 U	<6 U	<4	**5.7** J	**12**	**5.6** JT	<2.4 UT	<6 UT	<6 U	<6 U	<4	<2.4 U	<6 U	<6 U	<6 U
2-Chlorotoluene	ug/L	NC	NC	<0.2	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.2	<0.5	<0.5 T	<0.22 UT	<0.6 UT	<0.6 U	<0.6 U	<0.2	<0.22 U	<0.6 U	<0.6 U	<0.6 U
2-Hexanone	ug/L	NC	NC	<10	<4 U	<6 U	<6 U	<6 U	<10	<10	<10	<4 U	<6 U	<6 U	<6 U	<6 U	<4 U	<6 U	<6 U	<6 U	<10	<10	<10	<10 T	<4 UT	<6 UT	<6 U	<6 U	<10	<4 U	<6 U	<6 U	<6 U
4-Chlorotoluene	ug/L	NC	NC	<0.2	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.2	<0.5	<0.5 T	<0.22 UT	<0.6 UT	<0.6 U	<0.6 U	<0.2	<0.22 U	<0.6 U	<0.6 U	<0.6 U
4-Isopropyltoluene	ug/L	NC	NC	**0.07** J	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	**0.1** J	<0.2	<0.5	<0.5 T	<0.23 UT	<0.6 UT	<0.6 U	<0.6 U	<0.2	<0.23 U	<0.6 U	<0.6 U	<0.6 U
4-Methyl-2-pentanone (MIBK)	ug/L	300	300	<10	<3 U	<6 U	<6 U	<6 U	<10	<5	<5	<3 U	<6 U	<6 U	<6 U	<6 U	<3 U	<6 U	<6 U	<6 U	<10	<10	<5	<5 T	<3 UT	<6 UT	<6 U	<6 U	<10	<3 U	<6 U	<6 U	<6 U
Acetone	ug/L	4000	3,000	**3.7** J	**10** UZ	**15** JZ	<10 U	**18** J	**7.1** J	<10	<10	<5 U	**4.7** JZ	<10 U	<10 U	<10 U	<5 UZ	<10 UZ	<10 U	<10 U	<10	**12** J	**6.3** J	**7.8** JT	**6.2** JZT	<10 UZT	<10 U	<10 U	**5.6** J	**10** UZ	<10 UZ	<10 U	<10 U
Benzene	ug/L	2	2	**0.65**	<0.19 U	<1 U	<1 U	<1 U	<0.1	<0.5	<0.5	<0.19 U	<1 U	<1 U	<1 U	<1 U	<0.19 U	<1 U	<1 U	<1 U	**0.48** J	**0.08** J	<0.5	<0.5 T	<0.19 UT	<1 UT	<1 U	<1 U	<0.1	<0.19 U	<1 U	<1 U	<1 U
Bromoform	ug/L	40	40	<0.5	<0.22 U	<1 U	<1 U	<1 U	<0.5	<0.5	<0.5	<0.22 U	<1 U	<1 U	<1 U	<1 U	<0.22 U	<1 U	<1 U	<1 U	<0.5	<0.5	<0.5	<0.5 T	<0.22 UT	<1 UT	<1 U	<1 U	<0.5	<0.22 U	<1 U	<1 U	<1 U
Bromomethane	ug/L	10	10	<0.3	**1** UZ	<2 U	<2 U	<2 UZ	<0.3	**1** QZ	<1	<0.5 U	<2 UY	<2 U	<2 U	<2 UZ	<0.5 UZ	<2 U	<2 U	<2 UZ	<0.3	<0.3	**1** QZ	**1** ZYT	**1** UYZT	<2 UT	<2 U	<2 U	<0.3	**1** UZ	<2 U	<2 U	<2 UZ
Carbon Disulfide	ug/L	700	700	**0.07** J	<0.5 U	<2 U	<2 U	<2 U	<0.2	<1	<1	<0.5 U	<2 U	<2 U	<2 U	<2 U	<0.5 U	<2 U	<2 U	<2 U	<0.2	<0.2	<1	<1 T	<0.5 UT	<2 UT	<2 U	<2 U	<0.2	<0.5 U	<2 U	<2 U	<2 U
Chlorobenzene	ug/L	100	100	<0.2	<0.24 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.24 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.24 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.2	<0.5	<0.5 T	<0.24 UT	<0.6 UT	<0.6 U	<0.6 U	<0.2	<0.24 U	<0.6 U	<0.6 U	<0.6 U
Chloroethane	ug/L	NC	NC	<0.2	<0.4 U	<1 U	<1 U	<1 U	<0.2	<1	<1	<0.4 U	<1 U	<1 U	<1 U	<1 U	<0.4 U	<1 U	<1 U	<1 U	<0.2	<0.2	**1** Y	<1 T	<0.4 UT	<1 UT	<1 U	<1 U	<0.2	<0.4 U	<1 U	<1 U	<1 U
Chloroform	ug/L	30	20	<0.2	<0.15 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.25	<0.25	<0.15 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.15 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.2	<0.25	<0.25 T	<0.15 UT	<0.6 UT	<0.6 U	<0.6 U	<0.2	<0.15 U	<0.6 U	<0.6 U	<0.6 U
Chloromethane	ug/L	NC	NC	<0.2	<0.4 U	<1 U	<1 U	<1 U	<0.2	<1	<1	<0.4 U	<1 U	<1 U	<1 U	<1 U	<0.4 U	<1 U	<1 U	<1 U	<0.2	<0.2	<1	**1** ZT	<0.4 UT	<1 UT	<1 U	<1 U	<0.2	<0.4 U	<1 U	<1 U	<1 U
cis-1,2-Dichloroethene*	ug/L	50	6	**0.13** J	<0.25 U	<0.6 U	<0.6 U	<0.6 U	**6.2**	**0.26** J	**0.35** J	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.25 U	<0.6 U	<0.6 U	<0.6 U	**0.1** J	<0.2	<0.5	<0.5 T	<0.25 UT	<0.6 UT	<0.6 U	<0.6 U	**0.12** J	**0.65** J	**0.81** J	**0.48** J	**0.48** J
Dichlorodifluoromethane (CFC 12)	ug/L	700	500	<0.2	<0.26 U	<1 U	<1 U	<1 U	<0.2	<0.5	<0.5	<0.26 U	<1 U	<1 U	<1 U	<1 U	<0.26 U	<1 U	<1 U	<1 U	<0.2	<0.2	<0.5	<0.5 T	<0.26 UT	<1 UT	<1 U	<1 U	<0.2	<0.26 U	<1 U	<1 U	<1 U
Dichloromethane (Methylene Chloride)	ug/L	5	5	<0.2	<0.4 U	<1 U	<1 U	<1 U	<0.2	<1	<1	<0.4 U	<1 U	<1 U	<1 U	<1 U	<0.4 U	<1 U	<1 U	<1 U	<0.2	<0.2	<1	<1 T	<0.4 UT	<1 UT	<1 U	<1 U	<0.2	<0.4 U	<1 U	<1 U	<1 U
Ethylbenzene	ug/L	50	40	**0.14** J	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5	<0.5	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.1	**0.05** J	<0.5	<0.5 T	<0.22 UT	<0.6 UT	<0.6 U	<0.6 U	<0.1	<0.22 U	<0.6 U	<0.6 U	<0.6 U
Hexachlorobutadiene	ug/L	1	1	<0.3	<0.3 U	<1 U	<1 U	<1 UZ	<0.3	<0.5	<0.5	ND UZ	<1 U	<1 U	<1 U	<1 UZ	<0.3 U	<1 U	<1 U	<1 UZ	<0.3	<0.3	<0.5	<0.5 T	<0.3 UT	<1 UT	<1 U	<1 U	<0.3	<0.3 U	<1 U	<1 U	<1 UZ
Isopropylbenzene	ug/L	300	300	<0.2	<0.18 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.18 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.18 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.2	<0.5	<0.5 T	<0.18 UT	<0.6 UT	<0.6 U	<0.6 U	<0.2	<0.18 U	<0.6 U	<0.6 U	<0.6 U
m,p-Xylenes	ug/L	NC	NC	**0.8**	<0.5 U	<1.2 U	<1.2 U	<1.2 U	<0.2	<1	<1	<0.5 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U	<0.5 U	<1.2 U	<1.2 U	<1.2 U	<0.2	**0.23** J	<1	<1 T	<0.5 UT	<1.2 UT	<1.2 U	<1.2 U	<0.2	<0.5 U	<1.2 U	<1.2 U	<1.2 U
Naphthalene	ug/L	70	70	<0.3	<0.4 U	<0.6 U	<0.6 U	<0.6 U	<0.3	<1	<1	<0.4 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.4 U	<0.6 U	<0.6 U	<0.6 U	<0.3	<0.3	<1	<1 T	<0.4 UT	<0.6 UT	<0.6 U	<0.6 U	<0.3	<0.4 U	<0.6 U	<0.6 U	<0.6 U
n-Butylbenzene	ug/L	NC	NC	**0.06** J	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5	<0.5	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.1	<0.5	<0.5 T	<0.23 UT	<0.6 UT	<0.6 U	<0.6 U	<0.1	<0.23 U	<0.6 U	<0.6 U	<0.6 U
n-Propylbenzene	ug/L	NC	NC	<0.2	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.2	<0.5	<0.5 T	<0.2 UT	<0.6 UT	<0.6 U	<0.6 U	<0.2	<0.2 U	<0.6 U	<0.6 U	<0.6 U
o-Xylene	ug/L	NC	NC	**0.27** J	<0.24 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.24 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.24 U	<0.6 U	<0.6 U	<0.6 U	<0.2	**0.11** J	<0.5	<0.5 T	<0.24 UT	<0.6 UT	<0.6 U	<0.6 U	<0.2	<0.24 U	<0.6 U	<0.6 U	<0.6 U
Tetrachloroethene (PCE)	ug/L	4	4	<0.2	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.2	<0.5	<0.5 T	<0.3 UT	<0.6 UT	<0.6 U	<0.6 U	<0.2	<0.3 U	<0.6 U	<0.6 U	<0.6 U
Toluene	ug/L	200	70	**0.45** J	<0.22 U	**0.24** J	**0.25** J	<0.6 U	**0.09** J	<0.5	<0.5	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.22 U	<0.6 U	<0.6 U	<0.6 U	**0.22** J	**0.43** J	**0.62** JM	**0.57** JT	**0.26** JT	<0.6 UT	<0.6 U	**0.26** J	**0.08** J	**0.25** J	<0.6 U	<0.6 U	<0.6 U
trans-1,2-Dichloroethene*	ug/L	100	9	<0.2	<0.25 U	<0.6 U	<0.6 U	<0.6 U	**3.3**	**2.2**	**2**	**4.4**	**2**	**1.5**	**1.6**	**0.78** J	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.2	<0.5	<0.5 T	<0.25 UT	<0.6 UT	<0.6 U	<0.6 U	<0.2	<0.25 U	<0.6 U	<0.6 U	<0.6 U
trans-1,3-Dichloropropene	ug/L	NC	NC	<0.2	<0.19 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.19 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.19 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.2	<0.5	<0.5 T	<0.19 UT	<0.6 UT	<0.6 U	<0.6 U	<0.2	<0.19 U	<0.6 U	<0.6 U	<0.6 U
Trichloroethene (TCE)*	ug/L	5	0.4	<0.1	<0.21 U	<0.6 U	<0.6 U	<0.6 U	**0.19** J	<0.5	<0.5	<0.21 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.21 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.1	<0.5	<0.5 T	<0.21 UT	<0.6 UT	<0.6 U	<0.6 U	<0.1	<0.21 U	**0.31** J	<0.6 U	<0.6 U
Trichlorofluoromethane (CFC 11)	ug/L	2000	2,000	<0.2	<0.2 U	<1 U	<1 U	<1 U	<0.2	<0.5	<0.5	<0.2 U	<1 U	<1 U	<1 U	<1 U	<0.2 U	<1 U	<1 U	<1 U	<0.2	<0.2	<0.5	<0.5 T	<0.2 UT	<1 UT	<1 U	<1 U	<0.2	<0.2 U	<1 U	<1 U	<1 U
Vinyl Chloride*	ug/L	0.2	0.2	<0.1	<0.18 U	<0.3 U	<0.3 U	<0.3 U	**360 D**	**11**	**21**	**1.4**	**1.5**	**2.4**	**2.6**	**1.8**	<0.18 U	**0.24** J	<0.3 U	**0.19** J	<0.1	**2.3**	<0.5	<0.5 T	<0.18 UT	**0.17** JT	**0.35** J	**0.38** J	**0.32** J	**2.2**	**1.6**	**1.5**	**0.79**
Total Phase Hydrocarbons																																	
Gasoline Range Organics (GRO)	ug/L	NC	NC	**30** J	NS	<40 U	NS	<40 U	<40 U	NS	NS	NS	<40 U	NS	NS	<40 U	NS	<40 U	NS	**18** J	<40 U	**19** J	NS	NS	NS	<40 UT	NS	<40 U	<40 U	NS	<40 U	NS	**38** J
Diesel Range Organics (DRO)	ug/L	NC	NC	**4500**	NS	**1200**	NS	**1300** L	**14** J	NS	NS	NS	<110 U	NS	NS	**410**	NS	**110** J	NS	**91** J	**440**	**660**	NS	NS	NS	**360** L	NS	**330**	**560**	NS	**350**	NS	**360**
Optimization Parameters																																	
Alkalinity, Total as CaCO3	mg/L	NC	NC	NS	NS	NS	NS	NS	**618**	**870**	**890**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**1030**	NS	**1100**	**1500**	NS	NS	NS	NS	NS	NS	NS	NS	NS
Biochemical Oxygen Demand (BOD)	mg/L	NC	NC	NS	NS	NS	NS	NS	**76**	**40** O	**87** O	NS	NS	NS	NS	NS	NS	NS	NS	NS	**148**	NS	**230** O	<2 U	NS	NS	NS	NS	NS	NS	NS	NS	NS
Carbon, Dissolved Organic (DOC)	mg/L	NC	NC	NS	NS	NS	NS	NS	**85.4**	**45**	**120**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**125**	NS	**220**	**79**	NS	NS	NS	NS	NS	NS	NS	NS	NS
Carbon, Total Organic	mg/L	NC	NC	NS	NS	NS	NS	NS	**86.7**	**59**	**150**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**116**	NS	**230**	**68**	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chemical Oxygen Demand (COD)	mg/L	NC	NC	NS	NS	NS	NS	NS	**253**	**170**	**420**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**272**	NS	**780** M	**230**	NS	NS	NS	NS	NS	NS	NS	NS	NS
Iron, Dissolved	mg/L	NC	NC	NS	NS	NS	NS	NS	**3720**	**6000**	**3920**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**23000**	NS	**71900**	**50400**	NS	NS	NS	NS	NS	NS	NS	NS	NS
Iron, Total	mg/L	NC	NC	NS	NS	NS	NS	NS	**3290**	**6000**	**3920**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**22800**	NS	**71900**	**50400**	NS	NS	NS	NS	NS	NS	NS	NS	NS
Manganese, Dissolved	mg/L	NC	NC	NS	NS	NS	NS	NS	**562**	**334**	**278**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**1460**	NS	**1530** M	**1590**	NS	NS	NS	NS	NS	NS	NS	NS	NS
Manganese, Total	ug/L	NC	NC	NS	NS	NS	NS	NS	**500**	**334**	**278**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**1400**	NS	**1530** M	**1590**	NS	NS	NS	NS	NS	NS	NS	NS	NS
Nitrate as Nitrogen	ug/L	NC	NC	NS	NS	NS	NS	NS	<0.04 U	<0.2 U	<0.2 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.2 Ui	NS	<0.2	<0.2 U	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfate	ug/L	NC	NC	NS	NS	NS	NS	NS	**0.28**	<1.5 U	<1.5 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	**3.9**	NS	**0.83** JM	<1.5 U	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfide, Total	ug/L	NC	NC	NS	NS	NS	NS	NS	<0.04 U	<0.7 U	<0.7 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.04 U	NS	**0.7** UM	<0.7 U	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethane	ug/L	NC	NC	NS	NS	NS	NS	NS	**0.38** J	**34**	**22**	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.6 U	NS	**1** UM	<1 U	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethene	ug/L	NC	NC	NS	NS	NS	NS	NS	**22**	**2100**	**1300**	NS	NS	NS	NS	NS	NS	NS	NS	NS	<1 U	NS	**2600** YM	**220**	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methane	ug/L	NC	NC	NS	NS	NS	NS	NS	**5200**	**1200**	**900**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**2000**	NS	**1000**	**1200**	NS	NS	NS	NS	NS	NS	NS	NS	NS

Table 3
Groundwater Analytical Data
IRP Site 29, Duluth ANGB

Monitoring Well ID	Units	Minnesota Department of Health (HRL, HBV and/or RAA) based on 2015 ROD	Health-Based Water Guidance Values, MDH (HRL, HBV and/or RAA) Most Updated Criteria**	GW29-C								GW29-D							GW29-E					WP-10				
Date Collected				11/10/16	8/14/18	10/10/18	6/12/19	10/16/19	[2]10/16/19	6/25/20	9/29/20	11/15/16	8/15/18	10/10/18	6/12/19	10/16/19	6/25/20	10/2/20	11/10/16	6/11/19	10/15/19	6/25/20	9/29/20	11/9/16	6/12/19	10/16/19	6/25/20	9/29/20
Volatile Organic Compounds																												
1,1,1,2-Tetrachloroethane	ug/L	70	70	<0.2	<0.5	<0.5	<0.24 U	<1 U	<1 U	<1 U	<1 U	<0.2	<0.5	<0.5	<0.24 U	<1 U	<1 U	<1 U	<0.2	<0.24 U	<1 U	<5 UV	<5 UV	<0.2	<0.24 U	<1 U	<1 U	<1 U
1,1,1-Trichloroethane (TCA)	ug/L	9000	5,000	<0.2	<0.5	<0.5	<0.21 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	**1**	**0.23** J	<0.5	<0.21 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.21 U	<0.6 U	<3 UV	<3 UV	<0.2	<0.21 U	<0.6 U	<0.6 U	<0.6 U
1,1,2-Trichloroethane	ug/L	3	3	<0.4	<0.5	<0.5	<0.26 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.4	<0.5	<0.5	<0.26 U	<0.6 U	<0.6 U	<0.6 U	<0.4	<0.26 U	<0.6 U	<3 UV	<3 UV	<0.4	<0.26 U	<0.6 U	<0.6 U	<0.6 U
1,1-Dichloroethane (1,1-DCA)	ug/L	80	80	<0.2	<0.5	<0.5	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	**3**	**1.8**	**2.2**	**3.3**	**2.7**	**1.6**	**2.1**	<0.2	<0.2 U	<0.6 U	<3 UV	<3 UV	<0.2	<0.2 U	<0.6 U	<0.6 U	<0.6 U
1,1-Dichloroethene (1,1-DCE)*	ug/L	200	200	<0.2	<0.5	<0.5	<0.24 U	<1 U	<1 U	<1 U	<1 U	**0.93**	**0.78** J	**0.73** J	**0.97** J	**1** J	**0.52** J	**0.6** J	<0.2	<0.24 U	<1 U	<5 UV	<5 UV	<0.2	<0.24 U	<1 U	<1 U	<1 U
1,2,4-Trichlorobenzene	ug/L	4	4	<0.3	<0.5	<0.5	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.3	<0.5	<0.5	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.3	<0.3 U	<0.6 U	<3 UV	<3 UV	<0.3	<0.3 U	<0.6 U	<0.6 U	<0.6 U
1,2,4-Trimethylbenzene	ug/L	100	30	**0.07** J	**0.25** J	<0.5	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.2 U	<0.6 U	<3 UV	<3 UV	<0.2	<0.2 U	<0.6 U	<0.6 U	<0.6 U
1,2-Dichlorobenzene	ug/L	600	600	<0.2	<0.5	<0.5	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.23 U	<0.6 U	<3 UV	<3 UV	<0.2	<0.23 U	<0.6 U	<0.6 U	<0.6 U
1,2-Dichloroethane (EDC)	ug/L	1	1	<0.15	<0.5	<0.5	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.15	<0.5	<0.5	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.15	<0.3 U	<0.6 U	<3 UV	<3 UV	<0.15	<0.3 U	<0.6 U	<0.6 U	<0.6 U
1,2-Dichloropropane	ug/L	5	5	<0.2	<0.5	<0.5	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.22 U	<0.6 U	<3 UV	<3 UV	<0.2	<0.22 U	<0.6 U	<0.6 U	<0.6 U
1,3,5-Trimethylbenzene	ug/L	100	30	<0.2	<0.5	<0.5	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.23 U	<0.6 U	<3 UV	<3 UV	<0.2	<0.23 U	<0.6 U	<0.6 U	<0.6 U
1,3-Dichloropropane	ug/L	NA	NC	<0.3	<0.5	<0.5	<0.26 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.3	<0.5	<0.5	<0.26 U	<0.3 U	<0.3 U	<0.3 U	<0.3	<0.26 U	<0.3 U	<1.5 UV	<1.5 UV	<0.3	<0.26 U	<0.3 U	<0.3 U	<0.3 U
1,4-Dichlorobenzene	ug/L	10	10	<0.2	<0.5	<0.5	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.23 U	<0.6 U	<3 UV	<3 UV	<0.2	<0.23 U	<0.6 U	<0.6 U	<0.6 U
2,2-Dichloropropane	ug/L	NA	NC	<0.2	<0.5	<0.5	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.25 U	<0.6 U	<0.6 U	<0.6 UY	<0.2	<0.25 U	<0.6 U	<3 UV	<3 UV	<0.2	<0.25 U	<0.6 U	<0.6 U	<0.6 U
2-Butanone (MEK)	ug/L	4000	4,000	**3.3** J	**350**	<10	<2.4 U	<6 U	<6 U	<6 U	<6 U	<4	<10	<10	<2.4 U	<6 U	<6 U	<6 U	**2.8** J	<2.4 U	<6 U	<30 UV	<30 UV	<4	<2.4 U	<6 U	<6 U	<6 U
2-Chlorotoluene	ug/L	NC	NC	<0.2	<0.5	<0.5	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.22 U	<0.6 U	<3 UV	<3 UV	<0.2	<0.22 U	<0.6 U	<0.6 U	<0.6 U
2-Hexanone	ug/L	NC	NC	<10	<10	<10	<4 U	<6 U	<6 U	<6 U	<6 U	<10	<10	<10	<4 U	<6 U	<6 U	<6 U	<10	<4 U	<6 U	<30 UV	<30 UV	<10	<4 U	<6 U	<6 U	<6 U
4-Chlorotoluene	ug/L	NC	NC	<0.2	<0.5	<0.5	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.22 U	<0.6 U	<3 UV	<3 UV	<0.2	<0.22 U	<0.6 U	<0.6 U	<0.6 U
4-Isopropyltoluene	ug/L	NC	NC	<0.2	**0.33** J	<0.5	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.23 U	<0.6 U	<3 UV	<3 UV	<0.2	<0.23 U	<0.6 U	<0.6 U	<0.6 U
4-Methyl-2-pentanone (MIBK)	ug/L	300	300	<10	<5	<5	<3 U	<6 U	<6 U	<6 U	<6 U	<10	<5	<5	<3 U	<6 U	<6 U	<6 U	<10	<3 U	<6 U	<30 UV	<30 UV	<10	<3 U	<6 U	<6 U	<6 U
Acetone	ug/L	4000	3,000	**5.3** J	**310**	**46**	<5 U	<10 UZ	<10 UZ	<10 U	<10 U	<10	<10	<10	<5 U	<10 UZ	<10 U	<10 U	**4.9** J	**10** UZ	<10 UZ	<50 UV	<50 UV	<10	**10** UZ	<10 UZ	<10 U	<10 U
Benzene	ug/L	2	2	**0.34** J	**0.48** J	<0.5	<0.19 U	<1 U	<1 U	<1 U	<1 U	**0.09** J	<0.5	<0.5	<0.19 U	<1 U	<1 U	<1 U	<0.1	<0.19 U	<1 U	<5 UV	<5 UV	<0.1	<0.19 U	<1 U	<1 U	<1 U
Bromoform	ug/L	40	40	<0.5	<0.5	<0.5	<0.22 U	<1 U	<1 U	<1 U	<1 U	<0.5	<0.5	<0.5	<0.22 U	<1 U	<1 U	<1 U	<0.5	<0.22 U	<1 U	<5 UV	<5 UV	<0.5	<0.22 U	<1 U	<1 U	<1 U
Bromomethane	ug/L	10	10	<0.3	**1** ZQ	<1	<0.5 U	<2 U	<2 U	<2 U	<2 UZ	<0.3	**1** ZQ	**1** Z	<0.5 U	<2 U	<2 U	<2 UZ	<0.3	**1** UZ	<2 U	<10 UV	<10 UZV	<0.3	**1** UZ	<2 U	<2 U	<2 UZ
Carbon Disulfide	ug/L	700	700	<0.2	<1	<1	<0.5 U	<2 U	<2 U	<2 U	<2 U	**0.18** J	<1	<1	<0.5 U	<2 U	<2 U	<2 U	<0.2	<0.5 U	<2 U	<10 UV	<10 UV	<0.2	<0.5 U	<2 U	<2 U	<2 U
Chlorobenzene	ug/L	100	100	<0.2	<0.5	<0.5	<0.24 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.24 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.24 U	<0.6 U	<3 UV	<3 UV	<0.2	<0.24 U	<0.6 U	<0.6 U	<0.6 U
Chloroethane	ug/L	NC	NC	<0.2	**1** Z	<1	<0.4 U	<1 U	<1 U	<1 U	<1 U	**0.22** J	<1	<1	<0.4 U	<1 U	**1** J	<1 U	<0.2	<0.4 U	<1 U	<5 UV	<5 UV	<0.2	<0.4 U	<1 U	<1 U	<1 U
Chloroform	ug/L	30	20	<0.2	**0.25** B	<0.25	<0.15 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.25	<0.25	<0.15 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.15 U	<0.6 U	<3 UV	<3 UV	<0.2	<0.15 U	<0.6 U	<0.6 U	<0.6 U
Chloromethane	ug/L	NC	NC	<0.2	<1	<1	<0.4 U	<1 U	<1 U	<1 U	<1 U	<0.2	<1	**1** Z	<0.4 U	<1 U	<1 U	<1 U	<0.2	<0.4 U	<1 U	<5 UV	<5 UV	<0.2	<0.4 U	<1 U	<1 U	<1 U
cis-1,2-Dichloroethene*	ug/L	50	6	**0.75**	**0.47** J	<0.5	<0.25 U	<0.6 U	<0.6 U	**0.32** J	**0.31** J	**11**	**4.9**	**5.4**	**13**	**13**	**7.1**	**12**	<0.2	**0.43** J	<0.6 U	<3 UV	<3 UV	<0.2	<0.25 U	<0.6 U	<0.6 U	<0.6 U
Dichlorodifluoromethane (CFC 12)	ug/L	700	500	<0.2	<0.5	<0.5	<0.26 U	<1 U	<1 U	<1 U	<1 U	<0.2	<0.5	<0.5	<0.26 U	<1 U	<1 U	<1 U	<0.2	<0.26 U	<1 U	<5 UV	<5 UV	<0.2	<0.26 U	<1 U	<1 U	<1 U
Dichloromethane (Methylene Chloride)	ug/L	5	5	<0.2	<1	<1	<0.4 U	<1 U	<1 U	<1 U	<1 U	<0.2	<1	<1	<0.4 U	<1 U	<1 U	<1 U	<0.2	<0.4 U	<1 U	<5 UV	**3.9** JV	<0.2	<0.4 U	<1 U	<1 U	<1 U
Ethylbenzene	ug/L	50	40	**0.05** J	**50**	**4.6**	**0.8** J	<0.6 U	**0.38** J	**0.77** J	**0.46** J	<0.1	<0.5	<0.5	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.22 U	<0.6 U	<3 UV	<3 UV	<0.1	<0.22 U	<0.6 U	<0.6 U	<0.6 U
Hexachlorobutadiene	ug/L	1	1	<0.3	<0.5	<0.5	**0.5** UZ	<1 U	<1 U	<1 U	<1 UZ	<0.3	<0.5	<0.5	**0.5** UZ	<1 U	<1 U	<1 UZ	<0.3	<0.3 U	<1 U	<5 UV	<5 UZV	<0.3	<0.3 U	<1 U	<1 U	<1 UZ
Isopropylbenzene	ug/L	300	300	<0.2	<0.5	<0.5	<0.18 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.18 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.18 U	<0.6 U	<3 UV	<3 UV	<0.2	<0.18 U	<0.6 U	<0.6 U	<0.6 U
m,p-Xylenes	ug/L	NC	NC	**0.13** J	<1	<1	<0.5 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U	<0.2	<1	<1	<0.5 U	<1.2 U	<1.2 U	<1.2 U	<0.2	<0.5 U	<1.2 U	<6 UV	<6 UV	<0.2	<0.5 U	<1.2 U	<1.2 U	<1.2 U
Naphthalene	ug/L	70	70	<0.3	<1	<1	<0.4 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.3	<1	<1	<0.4 U	<0.6 U	<0.6 U	<0.6 U	<0.3	<0.4 U	<0.6 U	<3 UV	<3 UV	<0.3	<0.4 U	<0.6 U	<0.6 U	<0.6 U
n-Butylbenzene	ug/L	NC	NC	<0.1	<0.5	<0.5	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.5	<0.5	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.1	<0.23 U	<0.6 U	<3 UV	<3 UV	<0.1	<0.23 U	<0.6 U	<0.6 U	<0.6 U
n-Propylbenzene	ug/L	NC	NC	<0.2	<0.5	<0.5	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.2 U	<0.6 U	<3 UV	<3 UV	<0.2	<0.2 U	<0.6 U	<0.6 U	<0.6 U
o-Xylene	ug/L	NC	NC	**0.1** J	<0.5	<0.5	<0.24 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.24 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.24 U	<0.6 U	<3 UV	<3 UV	<0.2	<0.24 U	<0.6 U	<0.6 U	<0.6 U
Tetrachloroethene (PCE)	ug/L	4	4	<0.2	<0.5	<0.5	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.3 U	<0.6 U	<3 UV	<3 UV	<0.2	<0.3 U	<0.6 U	<0.6 U	<0.6 U
Toluene	ug/L	200	70	**0.31** J	**320**	**120**	**9.9**	<0.6 U	<0.6 U	**0.22** J	**0.22** J	<0.1	<0.5	<0.5	<0.22 U	<0.6 U	<0.6 U	<0.6 U	**0.13** J	<0.22 U	<0.6 U	<3 UV	<3 UV	**0.21** J	<0.22 U	<0.6 U	<0.6 U	<0.6 U
trans-1,2-Dichloroethene*	ug/L	100	9	<0.2	<0.5	<0.5	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	**0.36** J	<0.5	<0.5	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.25 U	<0.6 U	<3 UV	<3 UV	<0.2	<0.25 U	<0.6 U	<0.6 U	<0.6 U
trans-1,3-Dichloropropene	ug/L	NC	NC	<0.2	<0.5	<0.5	<0.19 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.5	<0.5	<0.19 U	<0.6 U	<0.6 U	<0.6 U	<0.2	<0.19 U	<0.6 U	<3 UV	<3 UV	<0.2	<0.19 U	<0.6 U	<0.6 U	<0.6 U
Trichloroethene (TCE)*	ug/L	5	0.4	**0.11** J	**0.93** J	<0.5	<0.21 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	**46**	**23**	**26**	**20**	**13**	**13**	**18**	<0.1	<0.21 U	<0.6 U	<3 UV	<3 UV	<0.1	<0.21 U	<0.6 U	<0.6 U	<0.6 U
Trichlorofluoromethane (CFC 11)	ug/L	2000	2,000	<0.2	<0.5	<0.5	<0.2 U	<1 U	<1 U	<1 U	<1 U	<0.2	<0.5	<0.5	<0.2 U	<1 U	<1 U	<1 U	<0.2	<0.2 U	<1 U	<5 UV	<5 UV	<0.2	<0.2 U	<1 U	<1 U	<1 U
Vinyl Chloride*	ug/L	0.2	0.2	**11**	**0.62** J	<0.5	<0.18 U	<0.3 U	<0.3 U	**1.6**	**2.7**	**0.08** J	<0.5	<0.5	**0.94** J	**1.3**	**0.95**	**1.9**	**2.5**	<0.18 U	<0.3 U	<1.5 UV	<1.5 UV	<0.1	<0.18 U	<0.3 U	<0.3 U	<0.3 U
Total Phase Hydrocarbons																												
Gasoline Range Organics (GRO)	ug/L	NC	NC	<40 U	NS	NS	NS	<40 U	<40 U	NS	<40 U	**18** J	NS	NS	NS	<40 U	NS	**86**	<40 U	NS	<40 U	NS	<40 U	**25** J	NS	<40 U	NS	<40 U
Diesel Range Organics (DRO)	ug/L	NC	NC	**390**	NS	NS	NS	**60** J	**51** J	NS	**490**	**220**	NS	NS	NS	**120** J	NS	**150** J	**740**	NS	**360**	NS	**500**	**320**	NS	**220** J	NS	**240**
Optimization Parameters																												
Alkalinity, Total as CaCO3	mg/L	NC	NC	**404**	**880**	**160**	NS	NS	NS	NS	NS	**425**	**440**	**470** M	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Biochemical Oxygen Demand (BOD)	mg/L	NC	NC	**7.5**	**220** O	**19**	NS	NS	NS	NS	NS	<2	**3.2**	**3.1** B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Carbon, Dissolved Organic (DOC)	mg/L	NC	NC	**9.2**	**410**	**5.2**	NS	NS	NS	NS	NS	**5.81**	**6.9**	**8.5**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Carbon, Total Organic	mg/L	NC	NC	**9.3**	**460**	**5.9**	NS	NS	NS	NS	NS	**5.96**	**6.1**	**8.5**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chemical Oxygen Demand (COD)	mg/L	NC	NC	**24.4**	**1500**	**580**	NS	NS	NS	NS	NS	**16.4**	**32** J	**20** J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Iron, Dissolved	mg/L	NC	NC	**1430**	**139000**	**12700**	NS	NS	NS	NS	NS	**185**	**3770**	**2890**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Iron, Total	mg/L	NC	NC	**2130**	**139000**	**12700**	NS	NS	NS	NS	NS	**214**	**3770**	**2890**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Manganese, Dissolved	mg/L	NC	NC	**4090**	**14600**	**1340**	NS	NS	NS	NS	NS	**1900**	**2230** M	**1490**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Manganese, Total	ug/L	NC	NC	**4150**	**14600**	**1340**	NS	NS	NS	NS	NS	**1820**	**2230** M	**1490**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Nitrate as Nitrogen	ug/L	NC	NC	<0.04 U	<0.2 U	<0.2 U	NS	NS	NS	NS	NS	<0.04	<0.2 U	<0.2 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfate	ug/L	NC	NC	**6.52**	<1.5 U	**1.1** J	NS	NS	NS	NS	NS	**44.5**	**59** M	**59** M	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfide, Total	ug/L	NC	NC	<0.04 U	**1.6**	<0.7 U	NS	NS	NS	NS	NS	<0.04	<0.7 U	**0.7** UM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethane	ug/L	NC	NC	**0.79**	<1 U	<1 U	NS	NS	NS	NS	NS	<0.24	<1 U	**1** UM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethene	ug/L	NC	NC	**2**	**2700**	**440**	NS	NS	NS	NS	NS	<0.22	**300**	**350** M	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methane	ug/L	NC	NC	**580**	**660**	**72**	NS	NS	NS	NS	NS	**180**	**440**	**300** M	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Table 3
Groundwater Analytical Data
IRP Site 29, Duluth ANGB

Monitoring Well ID	Units	Minnesota Department of Health (HRL, HBV and/or RAA) based on 2015 ROD	Health-Based Water Guidance Values, MDH (HRL, HBV and/or RAA) Most Updated Criteria**	WP-10D										
Date Collected				11/9/16	8/14/18	[2]8/14/18	10/10/18	6/12/19	10/16/19	[2]10/16/19	6/25/20	[2]6/25/20	9/29/2020	9/29/20 (DUP01)
Volatile Organic Compounds														
1,1,1,2-Tetrachloroethane	ug/L	70	70	<0.2	<0.5	<0.5 U	<0.5	<0.24 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
1,1,1-Trichloroethane (TCA)	ug/L	9000	5,000	<0.2	<0.5	<0.5 U	<0.5	<0.21 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
1,1,2-Trichloroethane	ug/L	3	3	<0.4	<0.5	<0.5 U	<0.5	<0.26 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
1,1-Dichloroethane (1,1-DCA)	ug/L	80	80	**0.21** J	<0.5	<0.5 U	<0.5	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
1,1-Dichloroethene (1,1-DCE)*	ug/L	200	200	**0.09** J	<0.5	<0.5 U	<0.5	<0.24 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
1,2,4-Trichlorobenzene	ug/L	4	4	<0.3	<0.5	<0.5 U	<0.5	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
1,2,4-Trimethylbenzene	ug/L	100	30	<0.2	<0.5	<0.5 U	<0.5	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
1,2-Dichlorobenzene	ug/L	600	600	<0.2	<0.5	<0.5 U	<0.5	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
1,2-Dichloroethane (EDC)	ug/L	1	1	**0.09** J	<0.5	<0.5 U	<0.5	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
1,2-Dichloropropane	ug/L	5	5	<0.2	<0.5	<0.5 U	<0.5	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
1,3,5-Trimethylbenzene	ug/L	100	30	<0.2	<0.5	<0.5 U	<0.5	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
1,3-Dichloropropane	ug/L	NA	NC	<0.3	<0.5	<0.5 U	<0.5	<0.26 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U
1,4-Dichlorobenzene	ug/L	10	10	<0.2	<0.5	<0.5 U	<0.5	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
2,2-Dichloropropane	ug/L	NA	NC	<0.2	<0.5	<0.5 U	<0.5	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
2-Butanone (MEK)	ug/L	4000	4,000	<4	<10	<10 U	<10	<2.4 U	<6 U	<6 U	<6 U	<6 U	<6 U	<6 U
2-Chlorotoluene	ug/L	NC	NC	<0.2	<0.5	<0.5 U	<0.5	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
2-Hexanone	ug/L	NC	NC	<10	<10	<10 U	<10	<4 U	<6 U	<6 U	<6 U	<6 U	<6 U	<6 U
4-Chlorotoluene	ug/L	NC	NC	<0.2	<0.5	<0.5 U	<0.5	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
4-Isopropyltoluene	ug/L	NC	NC	<0.2	<0.5	<0.5 U	<0.5	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
4-Methyl-2-pentanone (MIBK)	ug/L	300	300	<10	<5	<5 U	<5	<3 U	<6 U	<6 U	<6 U	<6 U	<6 U	<6 U
Acetone	ug/L	4000	3,000	<10	<10	<10 U	<10	**10** UZ	<10 UZ	<10 UZ	<10 U	<10 U	<10 U	<10 U
Benzene	ug/L	2	2	<0.1	<0.5	<0.5 U	<0.5	<0.19 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Bromoform	ug/L	40	40	<0.5	<0.5	<0.5 U	<0.5	<0.22 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Bromomethane	ug/L	10	10	<0.3	**1** ZQ	**1** UZQ	**1** ZY	**1** UZ	<2 U	<2 U	<2 U	<2 U	<2 UZ	<2 UZ
Carbon Disulfide	ug/L	700	700	<0.2	<1	<1 U	<1	<0.5 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
Chlorobenzene	ug/L	100	100	<0.2	<0.5	<0.5 U	<0.5	<0.24 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Chloroethane	ug/L	NC	NC	<0.2	**1** Z	**1** UZ	<1	<0.4 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Chloroform	ug/L	30	20	<0.2	**0.25** B	**0.25** UB	<0.25	<0.15 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Chloromethane	ug/L	NC	NC	<0.2	<1	<1 U	**1** Z	<0.4 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
cis-1,2-Dichloroethene*	ug/L	50	6	**4.1**	**2.5**	**3**	**2.6**	**2.3**	**2.2**	**2.3**	**2.6**	**2.6**	**3**	**3**
Dichlorodifluoromethane (CFC 12)	ug/L	700	500	<0.2	<0.5	<0.5 U	<0.5	<0.26 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Dichloromethane (Methylene Chloride)	ug/L	5	5	<0.2	<1	<1 U	<1	<0.4 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Ethylbenzene	ug/L	50	40	<0.1	<0.5	<0.5 U	<0.5	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Hexachlorobutadiene	ug/L	1	1	<0.3	<0.5	<0.5 U	<0.5	<0.3 U	<1 U	<1 U	<1 U	<1 U	<1 UZ	<1 UZ
Isopropylbenzene	ug/L	300	300	<0.2	<0.5	<0.5 U	<0.5	<0.18 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
m,p-Xylenes	ug/L	NC	NC	<0.2	<1	<1 U	<1	<0.5 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U
Naphthalene	ug/L	70	70	<0.3	<1	<1 U	<1	<0.4 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
n-Butylbenzene	ug/L	NC	NC	<0.1	<0.5	<0.5 U	<0.5	<0.23 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
n-Propylbenzene	ug/L	NC	NC	<0.2	<0.5	<0.5 U	<0.5	<0.2 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
o-Xylene	ug/L	NC	NC	<0.2	<0.5	<0.5 U	<0.5	<0.24 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Tetrachloroethene (PCE)	ug/L	4	4	<0.2	<0.5	<0.5 U	<0.5	<0.3 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Toluene	ug/L	200	70	<0.1	<0.5	**0.23** J	<0.5	<0.22 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
trans-1,2-Dichloroethene*	ug/L	100	9	**0.11** J	<0.5	<0.5 U	<0.5	<0.25 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
trans-1,3-Dichloropropene	ug/L	NC	NC	<0.2	<0.5	<0.5 U	<0.5	<0.19 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U	<0.6 U
Trichloroethene (TCE)*	ug/L	5	0.4	**0.7**	**0.4** J	**0.42** J	**0.44** J	<0.21 U	**0.41** J	**0.39** J	**0.56** J	**0.54** J	**0.59** J	**0.56** J
Trichlorofluoromethane (CFC 11)	ug/L	2000	2,000	<0.2	<0.5	<0.5 U	<0.5	<0.2 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Vinyl Chloride*	ug/L	0.2	0.2	**13**	**5.1**	**6**	**5**	**5.4**	**5.5**	**5.7**	**6.8**	**6.9**	**6.3**	**6.7**
Total Phase Hydrocarbons														
Gasoline Range Organics (GRO)	ug/L	NC	NC	<40 U	NS	NS	NS	NS	<40 U	<40 U	NS	NS	<40 U	<40 U
Diesel Range Organics (DRO)	ug/L	NC	NC	**120**	NS	NS	NS	NS	**97** J	**85** J	NS	NS	**60** J	**100** J
Optimization Parameters														
Alkalinity, Total as CaCO3	mg/L	NC	NC	**185**	**210**	**210**	**210**	NS	NS	NS	NS	NS	NS	NS
Biochemical Oxygen Demand (BOD)	mg/L	NC	NC	<2.0 Ui	<2 U	**1.5**	<2 U	NS	NS	NS	NS	NS	NS	NS
Carbon, Dissolved Organic (DOC)	mg/L	NC	NC	**5.2**	**5.3**	**4.6**	**6.6**	NS	NS	NS	NS	NS	NS	NS
Carbon, Total Organic	mg/L	NC	NC	**4.77**	**5.4**	**4.4**	**5.6**	NS	NS	NS	NS	NS	NS	NS
Chemical Oxygen Demand (COD)	mg/L	NC	NC	**17.5**	**23** J	**20** J	**32** J	NS	NS	NS	NS	NS	NS	NS
Iron, Dissolved	mg/L	NC	NC	**95**	**500**	**230**	**617**	NS	NS	NS	NS	NS	NS	NS
Iron, Total	mg/L	NC	NC	**112**	**500**	**230**	**617**	NS	NS	NS	NS	NS	NS	NS
Manganese, Dissolved	mg/L	NC	NC	**99.2**	**81.8**	**82.3**	**79.4**	NS	NS	NS	NS	NS	NS	NS
Manganese, Total	ug/L	NC	NC	**95.1**	**81.8**	**82.3**	**79.4**	NS	NS	NS	NS	NS	NS	NS
Nitrate as Nitrogen	ug/L	NC	NC	<0.2 Ui	<0.2 U	**0.2** U	**0.2** UM	NS	NS	NS	NS	NS	NS	NS
Sulfate	ug/L	NC	NC	**6.5**	**5.1**	**5.8**	**4.9**	NS	NS	NS	NS	NS	NS	NS
Sulfide, Total	ug/L	NC	NC	<0.04 U	<0.7 U	**0.7** U	<0.7 U	NS	NS	NS	NS	NS	NS	NS
Ethane	ug/L	NC	NC	<0.6 U	**1.9**	**2.3**	**0.78** J	NS	NS	NS	NS	NS	NS	NS
Ethene	ug/L	NC	NC	**2.2**	**45**	**100**	**52**	NS	NS	NS	NS	NS	NS	NS
Methane	ug/L	NC	NC	**47**	**680**	**720**	**660**	NS	NS	NS	NS	NS	NS	NS

Table 3
Groundwater Analytical Data
IRP Site 29, Duluth ANGB

Notes:
Shaded value indicates exceedance of criterion.
Bolded values indicate concentrations above detection limits
Criteria from Minnesota Pollution Control Agency (MPCA) 2015
Only compounds that have values detected above laboratory detection limit is shown
mg/L: milligrams per liter
µg/L: micrograms per liter
[1]Monitoring well ID's for GW29-B and GW29-C were mislabeled in during sampling.
[2]Indicates duplicate sample collected
Sample ID's on figures and tables have been corrected. Lab reports contain the mislabeled samples.
*: Compared criteria as set in the Site 29, 2013 ROD
< : not detected at or above value
HRL: Health Risk Level
DUP: Field duplicate sample
MDH: Minnesota Department of Health
B: Analyte detected in associated method blank
D: Diluted Out
J: Estimated detected concentration.
L: Significant peaks were detected outside the chromatographic window
M: Matrix spike and/or Matrix spike duplicate recovery outside acceptance limits.
NC: No Criteria
NS: Not Sampled
O: Complete BOD oxygen depletion
T: Sample received with improper preservation or temperature.
Q: % REC exceeded control Limits. When applied to sample analytes- denotes an associated LCS recovery that exceeded control limits.
U: Analyte concentration was not above the detection level.
UJ: Estimated detection limit concentration.
V: Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interferences.
Y: Replicate/Duplicate precision outside acceptance limits
Z: Calibration criteria exceeded
HBV: Health Based Values
RAA: Risk Assessment Advice
=: validated result, which is detected and unqualified

APPENDIX J – TS737 AND TS738 SUPPORTING INFORMATION

Table 7-1: Summary of Chemicals of Potential Concern
Human Health Risk Assessment for the Trap Range and the Skeet Range
Duluth Air National Guard Base

Munitions Response Area	Chemical of Potential Concern	Media				
		Surface Soil	Subsurface Soil	Sediment	Surface Water	Groundwater
Trap Range	Antimony	X	X			
	Arsenic	X	X	X	X[t]	X[t,d]
	Copper	X		X	X[t]	
	Iron	X	X	X	X[t,d]	X[t,d]
	Lead	X	X		X[t]	
	Benzo(a)anthracene				X	
	Benzo(a)pyrene	X	X	X	X	
	Benzo(b)fluoranthene			X	X	
	Benzo(k)fluoranthene				X	
	Chrysene				X	
	Indeno(1,2,3-cd)pyrene			X		
Skeet Range	Antimony	X	X			
	Arsenic	X	X			
	Iron	X	X			
	Lead	X	X		X[t,1]	X[t,d]
	Benzo(a)anthracene	X	X			
	Benzo(a)pyrene	X	X	X[1]		
	Benzo(b)fluoranthene	X	X			
	Benzo(k)fluoranthene					
	Dibenz(a,h)anthracene	X	X			
	Indeno(1,2,3-cd)pyrene		X			

Notes:

X = Chemical was identified as a COPC for this media.

[t] = total metal, unfiltered water analyzed

[d] = dissolved metal, filtered water analyzed

[1] The same COPC was identified for both the in-grid and outside of grid areas.

Table 7-2: Summary of Exposure Point Concentrations
Humand Health Risk Assessment for the Trap Range and the Skeet Range
Duluth Air National Guard Base

Munitions Response Area	Chemical of Potential Concern	Exposure Point Concentrations by Media				
		Surface Soil (mg/kg)	Subsurface Soil (mg/kg)	Sediment (mg/kg)	Surface Water (ug/L)	Groundwater (ug/L)
Trap Range	Antimony	213.7	8.702			
	Arsenic	14.65	13.25	5.53	63.2	6.025/1.705[a]
	Copper	50.31		102	424.8	
	Iron	18684	18669	43212	400429/678.8[a]	19350/28600[a]
	Lead	6790	743.5		104	
	Benzo(a)anthracene			0.3	0.0083	
	Benzo(a)pyrene	0.032	0.0165	0.58	0.0086	
	Benzo(b)fluoranthene			X	0.018	
	Benzo(k)fluoranthene				0.5	
	Chrysene				0.0074	
	Indeno(1,2,3-cd)pyrene			0.27		
Skeet Range	Antimony	20.38	1.009			
	Arsenic	3.3	2.8			
	Iron	23000	24000			
	Lead	1034	156.8		35.7/22[b]	86.15/66.25[a]
	Benzo(a)anthracene	0.193	0.47			
	Benzo(a)pyrene	0.171	0.67	0.041/0.036[b]		
	Benzo(b)fluoranthene	0.276	0.82			
	Benzo(k)fluoranthene					
	Dibenz(a,h)anthracene	0.0315	0.14			
	Indeno(1,2,3-cd)pyrene		0.52			

Notes:

mg/kg = milligram per kilogram

ug/L = microgram per liter

[a] The first value is the total concentration and the second value is the dissolved concentration.

[b] The first value is for the media concentration within the grid, while the second is outside of the grid.

Table 7-3: Background Comparison for Metal COPCs, Trap Range and Skeet Range (mg/kg)

Chemical	Maximum Detection	EPC	95th Percentile Background Value	Maximum > 95th Background?	EPC > 95th Background?	Duluth ANGB Background Range	Maximum Above Background Range?	EPC Above Background Range?
Surface Soil Metal COPCs (mg/kg) - Trap Range								
Antimony	1280	213.7	N/A	--	--	N/A	--	--
Arsenic	215	14.7	3.065	Yes	Yes	1.36 – 3.72	Yes	Yes
Copper	188	50	39.7	Yes	Yes	6.09 – 71.2	Yes	No
Iron	38,000	18,684	24,402	Yes	No	14400 – 26100	Yes	No
Lead	75100	6,790	13.62	Yes	Yes	4.47 – 14.4	Yes	Yes
Subsurface Soil Metals COPCs (mg/kg) - Trap Range								
Antimony	32.75	8.702	N/A	--	--	N/A	--	--
Arsenic	40	13.3	3.065	Yes	Yes	0.21 – 29	Yes	No
Iron	27,000	18669	24,402	Yes	No	1,300 – 140,000	Yes	No
Lead	2750	744	13.62	Yes	Yes	0.19 – 40	Yes	Yes
Groundwater Metals COPC - Trap Range								
Arsenic, total	6.03	6.03	N/A	--	--	N/A	--	--
Arsenic, dissolved	1.71	1.71	N/A	--	--	N/A	--	--
Iron, total	19,350	19,350	328.5	Yes	Yes	25.2 – 328.5	Yes	Yes
Iron, dissolved	28,600	28,600	62.7	Yes	Yes	16.5 – 62.7	Yes	Yes
Surface Soil Metal COPCs (mg/kg) - Skeet Range								
Antimony	259	20.38	N/A	--	--	N/A	--	--
Arsenic	3.3	3.3	3.065	Yes	Yes	0.21 – 29	Yes	No
Iron	23,000	23,000	24,402	Yes	Yes	1,300 – 140,000	Yes	Yes
Lead	13,000	1,034	13.62	Yes	Yes	0.19 – 40	Yes	Yes
Subsurface Soil Metals COPCs (mg/kg) - Skeet Range								
Antimony	2.79	1.009	N/A	--	--	N/A	--	--
Arsenic	2.8	2.8	3.065	Yes	No	0.21 – 29	Yes	No
Iron	24,000	24,000	24,402	Yes	Yes	1,300 – 140,000	Yes	Yes
Lead	504.6	157	13.62	Yes	Yes	0.19 – 40	Yes	Yes
Groundwater Metals COPC - Trap Range								
Lead, total	86.2	86.2	0.512	Yes	Yes	0.00578 – 0.512	Yes	Yes
Lead, dissolved	66.3	66.3	N/A	--	--	N/A	--	--

Notes:

COPC = chemical of potential concern

EPC = exposure point concentration

mg/kg = milligrams per kilogram

ug/L = microgram per liter

N/A = not available; no background data are available for this metal

-- = comparison to background could not be made

Table 7-4: Summary of Risks (Excluding Lead[a])
Trap Tange and Skeet Range
Duluth Air National Guard Base

Munitions Response Area	Receptors	Estimated Risks and Hazards with Risk Drivers[b]											
		Surface Soil		Subsurface Soil		Sediment		Surface Water		Groundwater		Receptor Total	
		ILCR	HI	ILCR	HI	ILCR	HI	ILCR	HI	ILCR	HI	ILCR	HI
Trap Range	Indoor Worker	9E-06 Arsenic	<1	NE	NE	NE	NE	NE	NE	NE	NE	9E-06	<1
	Outdoor Worker	7E-6 Arsenic	1 Antimony	NE	NE	NE	NE	NE	NE	NE	NE	7E-06	1
	Recreational Visitor/Trespasser - Adult	4E-06 Arsenic	<1	NE	NE	2E-06 Arsenic and BaP	<1	4E-06 Arsenic, BaP, BkF	<1	NE	NE	1E-05	<1
	Recreational Visitor/Trespasser - Child	5E-6 Arsenic	1 Antimony	NE	NE	2E-06 Arsenic	<1	2E-06 Arsenic and BaP	<1	NE	NE	9E-06	1
	Construction Worker	1E-6 Arsenic	2 Antimony	1E-6 Arsenic	<1	NE	NE	NE	NE	<1E-06	<1	2E-06	2
	Resident - Adult	1E-05 Arsenic	<1	NE	NE	NE	NE	NE	NE	2E-06 Arsenic	<1	1E-05	<1
	Resident - Child	3E-5 Arsenic	7 Antimony	NE	NE	NE	NE	NE	NE	2E-06 Arsenic	<1	3E-05	7
	Resident - Adult Plus Child	4E-05 Arsenic	—	NE	NE	NE	NE	NE	NE	2E-06 Arsenic	—	4E-05	NE
Skeet Range	Indoor Worker	3E-06 Arsenic and BaP	<1	NE	NE	NE	NE	NE	NE	NE	NE	3E-06	<1
	Outdoor Worker	2E-06 Arsenic and BaP	<1	NE	NE	NE	NE	NE	NE	NE	NE	2E-06	<1
	Recreational Visitor/Trespasser - Adult	1E-6 Arsenic	<1	NE	NE	<1E-06	<1	No Cancer COPCs	No Noncancer COPCs	NE	NE	1E-06	<1
	Recreational Visitor/Trespasser - Child	2E-06 Arsenic and BaP	<1	NE	NE	<1E-06	<1	No Cancer COPCs	No Noncancer COPCs	NE	NE	2E-06	<1
	Construction Worker	<1E-06	<1	<1E-06	<1	NE	NE	NE	NE	No Cancer COPCs	No Noncancer COPCs	<1E-06	<1
	Resident - Adult	5E-06 Arsenic and BaP	<1	NE	NE	NE	NE	NE	NE	No Cancer COPCs	No Noncancer COPCs	5E-06	<1
	Resident - Child	8E-06 Arsenic and BaP	1 Antimony	NE	NE	NE	NE	NE	NE	No Cancer COPCs	No Noncancer COPCs	8E-06	1
	Resident - Adult Plus Child	1E-05 Arsenic and BaP	—	NE	NE	NE	NE	NE	NE	No Cancer COPCs	—	1E-05	NE

Notes:
— = Adult + Child risks are not estimated for non-cancer hazards.
ILCR = incremental lifetime cancer risk
HI = hazard index

Table 7-5: Summary of Blood Lead Levels
Human Health Risk Assessment for the Trap Range and the Skeet Range
Duluth Air National Guard Base

Munitions Response Area	Media	Lead Statistics and Blood Lead Levels by Media						
		FOD	Range of Detects	Mean [a] (mg/kg)	Adult PRG (mg/kg)	Probability Fetal PbB >10 µg/dL [b]	Child PRG (mg/kg)	PbB (µg/dL) In Child [c,d]
Trap Range	Surface Soil	93/93	3.97 - 75100	2492	2,240	6.6%	418	17.6
	Subsurface Soil	22/22	4.15 - 2750	406.6	2,240	0.0%	418	4.6
Skeet Range	Surface Soil	75/76	4.025 - 13000	286.7	2,240	0.0%	418	3.5 (7.8)
	Subsurface Soil	30/30	2.9 - 504.6	58.83	2,240	0.0%	418	1.4 (6.0)

Notes:

FOD = frequency of detection; number of detections/total number of samples

mg/kg = milligram per kilogram

PRG = preliminary remediation goal

HQ =hazard quotient

PbB = blood lead level

µg/dL = micrograms per deciliter

[a] Both the Adult Lead Model and the Integrated Exposure Uptake Biokinetic Model recommend tat mean lead concentrations be used in estimating blood lead levels.

[b] USEPA, *Update of the Adult Lead Methodology's Default Baseline Blood Lead Concentration and Geometric Standard Deviation Parameters*, June 2009.

[c] USEPA, *Integrated Exposure Uptake Biokinetic Model for Lead in Children*, 2010.

[d] Blood lead levels in parantheses were calculated using the groundwater mean for dissolved lead in monitoring wells within the Skeet Range as input into the IEUBK model.

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Table 9-1: Summary and Total of the EHE Data Element Scores

Specific Data Element	Trap Range (TS737)	Skeet Range (TS738)
Explosive Hazard		
Munitions Type	2	2
Source of Hazard	1	1
Accessibility		
Information on the Location of Munitions	1	1
Ease of Access	8	10
Status of Property	5	0
Receptors		
Population Density	1	1
Population Near Hazard	5	5
Types of Activities/Structures	5	5
Ecological and/or Cultural Resources	0	0
Total EHE Module Score	28	25
Total EHE Module Rating	G	G

Table 9-2: Summary and Total of the HHE Data Element Scores

Specific Data Element		Trap Range (TS737)	Skeet Range (TS738)
Groundwater			
	Contamination Hazard Factor	M	M
	Migration Pathway Factor	L	M
	Receptor Factor	L	L
HHE Combination Level		MLL	MML
Media Rating		F	E
Surface Water/Human Endpoint			
	Contamination Hazard Factor	L	NA
	Migration Pathway Factor	M	NA
	Receptor Factor	M	NA
HHE Combination Level		MML	NA
Media Rating		E	NA
Sediment/Human Endpoint			
	Contamination Hazard Factor	M	L
	Migration Pathway Factor	M	M
	Receptor Factor	M	M
HHE Combination Level		MMM	MML
Media Rating		D	E
Surface Water/Ecological Endpoint			
	Contamination Hazard Factor	L	NA
	Migration Pathway Factor	M	NA
	Receptor Factor	M	NA
HHE Combination Level		MML	NA
Media Rating		E	NA
Sediment/Ecological Endpoint			
	Contamination Hazard Factor	M	M
	Migration Pathway Factor	M	M
	Receptor Factor	M	M
HHE Combination Level		MMM	MMM
Media Rating		D	D
Soil			
	Contamination Hazard Factor	H	M
	Migration Pathway Factor	M	L
	Receptor Factor	M	M
HHE Combination Level		HMM	MML
Media Rating		C	E
Total HHE Module Rating		C	D

Notes:
NA Not Applicable

Table 9-3: Priority Rating

Specific Data Element	Trap Range (TS737)	Skeet Range (TS738)
EHE Module Rating	G	G
CHE Module Rating	**	**
HHE Module Rating	C	D
Priority	4	5
Priority Prior to CSE Phase II	3	3

Notes:
** No Known or Suspected Hazard

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Table 10-1
Summary of Human Health Risk Assessment

Receptor	Exposure Pathways Potentially Contributing to Risk/HI	Summary of Human Health Risk Assessment
Trap Range Receptors		
Current/Future On-site Indoor Worker	***Surface Soil Exposures.*** Incidental ingestion of and dermal contact with surface soil.	USEPA's acceptable cancer risk management range of 10^{-6} to 10^{-4} was not exceeded for this receptor and the evaluated pathway(s). USEPA's target HI of 1 was not exceeded for this receptor and the evaluated pathway(s).
Current/Future On-site Outdoor Worker	***Surface Soil Exposures.*** Incidental ingestion of surface soil.	USEPA's acceptable cancer risk management range of 10^{-6} to 10^{-4} was not exceeded for this receptor and the evaluated pathway(s). Exposure to lead in surface soil by a female outdoor worker may result in elevated blood lead levels in a fetus above USEPA's target PbB level of 10 µg/dL.
Current/Future Recreational Visitor/Trespasser (adult and child)	***Surface Soil, Surface Water and Sediment Exposures.*** Incidental ingestion of and dermal contact with surface soil. Dermal contact with surface water. Incidental ingestion and dermal contact with sediment.	USEPA's acceptable cancer risk management range of 10^{-6} to 10^{-4} was not exceeded for this receptor and the evaluated pathway(s). USEPA's target HI of 1 was not exceeded for this receptor and the evaluated pathway(s).
Future Resident (adult and child)	***Surface Soil and Groundwater Exposures.*** Incidental ingestion of and dermal contact with surface soil. Dermal contact with groundwater (adult only).	USEPA's acceptable cancer risk management range of 10-6 to 10-4 was not exceeded for this receptor and the evaluated pathway(s). USEPA's target HI of 1 was exceeded for the hypothetical future child resident from potential exposure to antimony in surface soil. Exposure to lead in surface soil by a child may result in elevated blood lead levels above USEPA's target PbB level of 10 µg/dL.
Future Construction Worker	***Surface Soil Exposures.*** Incidental ingestion of surface soil.	USEPA's acceptable cancer risk management range of 10-6 to 10-4 was not exceeded for this receptor and the evaluated pathway(s). USEPA's target HI of 1 was exceeded for this receptor from potential exposure to antimony in surface soil. Exposure to lead in surface soil by a female construction worker may result in elevated blood lead levels in a fetus above USEPA's target PbB level of 10 µg/dL.
Skeet Range Receptors		
Current/Future On-site Indoor Worker	***Surface Soil Exposures.*** Incidental ingestion of surface soil.	USEPA's acceptable cancer risk management range of 10^{-6} to 10^{-4} was not exceeded for this receptor and the evaluated pathway(s). USEPA's target HI of 1 was not exceeded for this receptor and the evaluated pathway(s).
Current/Future On-site Outdoor Worker	***Surface Soil Exposures.*** Incidental ingestion of surface soil.	USEPA's acceptable cancer risk management range of 10^{-6} to 10^{-4} was not exceeded for this receptor and the evaluated pathway(s). USEPA's target HI of 1 was not exceeded for this receptor and the evaluated pathway(s).
Current/Future Recreational Visitor/Trespasser (adult and child)	***Surface Soil Exposures.*** Incidental ingestion of surface soil.	USEPA's acceptable cancer risk management range of 10^{-6} to 10^{-4} was not exceeded for this receptor and the evaluated pathway(s). USEPA's target HI of 1 was not exceeded for this receptor and the evaluated pathway(s).
Future Resident (adult and child)	***Surface Soil and Groundwater Exposures.*** Incidental ingestion of surface soil. Ingestion of groundwater.	USEPA's acceptable cancer risk management range of 10^{-6} to 10^{-4} was not exceeded for this receptor and the evaluated pathway(s). EPC for lead (66 µg/L) in groundwater exceeds the Federal action level for drinking water of 15 µg/L.
Future Construction Worker	***Surface Soil, Subsurface Soil and Groundwater.*** Estimated risks and HIs for all of the above exposure pathways are below 10^{-6} or 1, respectively.	USEPA's acceptable cancer risk management range of 10-6 to 10-4 was not exceeded for this receptor and the evaluated pathway(s). USEPA's target HI of 1 was not exceeded for this receptor and the evaluated pathway(s).

Notes:
BaP = benzo(a)pyrene
EPC = exposure point concentration
HI = hazard index
PbB = blood lead level
µg/dL = micrograms per deciliter
µg/L = micrograms per liter
Source: With the exception of lead, information for this table was obtained from Appendix L, Attachment L1, RAGS Part D Table 7. Information on lead was obtained from Appendix L, Attachment L4.

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Table10-2
Summary of Ecological Risk Assessment for the Trap Range

Receptors	Exposure Pathways	Conservative SERA Risk Benchmarks	Step 3a Risk Benchmarks	Summary of Chemicals Exceeding Conservative SERA Risk Benchmarks Based On Maximum Detect Concentrations	Summary Chemicals Exceeding Step 3a Risk Benchmarks Based On 95% UCL or Maximum Detect Concentrations, Whichever is Lower 1
Trap Range					
Terrestrial Habitats					
Plants	***Surface Soil (0-0.5 ft bgs).*** Incidental ingestion of surface soil and contaminated forage organisms and direct contact with surface soil.	plant and soil invertebrates soil quality benchmarks (e.g. Eco-SSLs, EPA Region 5, ORNL)	plant and soil invertebrates soil quality benchmarks (e.g. Eco-SSLs, EPA Region 5, ORNL)	antimony (HQ=256), lead (HQ=656), arsenic (HQ=12), copper (HQ=2.7)	plant (antimony - HQ=42.7), lead - HQ=57)
Soil Invertebrates				antimony (HQ=16), lead (HQ=44), iron (HQ=190), arsenic (HQ=3.6), copper (HQ=2.4)	soil invertebrate (antimony - HQ=2.7), (lead - HQ=4.0)
Birds (e.g., herbivorous birds - mourning dove, omnivorous birds - horned lark, and carnivorous birds - American kestral)		bird and mammal soil quality benchmarks (e.g. Eco-SSLs, EPA Region 5)	lowest NOAEL ingestion dose TRVs for birds and mammals from EPA Eco-SSL literature. Lowest LOAEL based on NOAEL multiplied by 10.	all birds - lead (HQ=6,827), arsenic (HQ=5), copper (HQ=7.7), zinc (HQ=2.4)	unacceptable risk (NOAEL and LOAEL both have HQ>1) mourning dove (lead - HQ=28, 2.8), horned lark (lead - HQ=99,9.9) indeterminate risk (NOAEL HQ>1 and LOAEL HQ<1) American kestral (lead - HQ=1.3)
Mammals (e.g., herbivorous mammals - meadow vole, omnivorous mammals – house mouse, carnivorous mammals - mink)				all mammals - antimony (HQ=4,741), arsenic (HQ=4.7), copper (HQ=3.8), zinc (HQ=1.4)	unacceptable risk (NOAEL and LOAEL both have HQ>1) meadow vole (antimony - HQ=28, 2.8), house mouse (antimony - HQ=659, 66), house mouse (lead- HQ=43, 4.3) indeterminate risk (NOAEL HQ>1 and LOAEL HQ<1) meadow vole (lead - HQ=6.3), mink (antimony - HQ=2.9)
Plants	***Subsurface Soil (>0.5-2.0 ft bgs).*** Incidental ingestion of subsurface soil and contaminated forage organisms and direct contact with subsurface soil potentially transported to surface soil.	same as surface soil	same as surface soil	antimony (HQ=6.6), lead (HQ=23), arsenic (HQ=2.2)	plant (antimony - HQ=42.7), lead - HQ=57)
Soil Invertebrates				lead (HQ=1.6), iron (HQ=135)	soil invertebrate (antimony - HQ=2.7), (lead - HQ=4.0), both 95% UCL concentrations less the background
Birds		same as surface soil	same as surface soil	all birds - lead (HQ=250), copper (HQ=2.1)	unacceptable risk (NOAEL and LOAEL both have HQ>1) horned lark (lead - HQ=14, 1.4) indeterminate risk (NOAEL HQ>1 and LOAEL HQ<1) mourning dove (lead - HQ=3.3)
Mammals				all mammals - antimony (HQ=121), lead (HQ=49), copper (HQ=1.4)	unacceptable risk (NOAEL and LOAEL both have HQ>1) house mouse (antimony - HQ=26, 2.6) indeterminate risk (NOAEL HQ>1 and LOAEL HQ<1) meadow vole (lead - HQ=1.2), house mouse (lead 6.9)
Aquatic and Riparian/Wetlands Habitats					
Benthic Invertebrates	***Surface Sediment.*** Direct contact with benthic invertebrates living in or on the surface sediment.	sediment quality benchmarks (e.g., Minnesota Level I SQTs)	sediment quality benchmarks (e.g., Minnesota Level I and II SQTs)	SQT I - arsenic (HQ=4.1), copper (HQ=3.0), lead (HQ=1.6), acenaphthylene (HQ=19), indeno(1,2,3-cd)pyrene (HQ=1.4), benzo(a)pyrene (HQ=2.0), benzo(g,h,i)perylene (HQ=1.8), total PAHs (HQ=1.4), benz[a]anthracene (HQ=1.2), pyrene (HQ=1.2), chrysene (HQ=1.02)	SQT I HQ>1 - copper (HQ=3.2), iron (HQ=2.2), lead (HQ=1.04) SQT II HQ>1- iron (HQ=1.1), indeno(1,2,3-cd)pyrene (HQ=1.4) and benzo(g,h,i)perylene (HQ=1.8) remain because there are not SQT II benchmarks
Aquatic Organisms (e.g., aquatic plants, benthic invertebrates, and fish)	***Surface Water.*** Direct contact with aquatic organisms living in the water column	chronic standard (CS) water quality thresholds (criteria) - total recoverable, 100 mg/L total hardness (e.g., chronic Minnesota Class 2 Subparts 3a, 4a, and 5a)	chronic standard (CS) and maximum standard)+(MS) water quality thresholds (criteria) - total recoverable, 400 mg/L total hardness (e.g., chronic Minnesota Class 2 Subparts 3a, 4a, and 5a)	chronic standard (CS) criteria - unfiltered or total water samples: iron (HQ=1,813), copper (HQ=83), lead (HQ=72), arsenic (HQ=38) filtered or dissolved water samples: iron (HQ=3.4)	chronic standard (CS) criteria HQ>1- unfiltered or total water samples: iron (HQ=1,335), copper (HQ=18.5), lead (HQ=5.5), arsenic (HQ=31.6) maximum standard (MS) criteria HQ>1- unfiltered or total water samples: copper (HQ=6.5)
Aquatic Organisms (e.g., aquatic plants, benthic invertebrates, and fish)	***Groundwater.*** Potentially Discharging to Surface Water. Direct contact with aquatic organisms living in the water column at the point of discharge.			chronic standard (CS) criteria - unfiltered or total water samples: iron (HQ=65), copper (HQ=8.7), arsenic (HQ=3.0), lead (HQ=2.4), filtered or dissolved water samples: iron (HQ=95), copper (HQ=5.7), lead (HQ=1.4)	chronic standard (CS) criteria HQ>1- unfiltered or total water samples: copper (HQ=3.7), arsenic (HQ=3.0), iron (HQ=1,335) maximum standard (MS) criteria HQ>1- unfiltered or total water samples: copper (HQ=1.3), iron (HQ=1,335)
Fish	***Surface Water and Groundwater.*** Potentially Discharging to Surface Water	lowest NOAEL Critical Body Residues for fish from the scientific literature	lowest NOAEL and lowest LOAEL Critical Body Residues for fish from the scientific literature	surface water - copper (HQ=147), arsenic (HQ=17), benzo(k)fluoranthene (HQ=1.2) groundwater -benzo(k)fluoranthene (HQ=1.2)	unacceptable risk (NOAEL and LOAEL both have HQ>1) surface water: arsenic HQ=14, 4.2, copper HQ=77, 67 groundwater: copper HQ=15, 13
Birds (e.g., herbivorous and omnivorous birds - ring necked duck, carnivorous birds - belted kingfisher)	***Sediment, Surface Water or Groundwater.*** Incidental ingestion of surface sediment and contaminated forage organisms, direct contact with surface sediment, surface water and/or groundwater.	lowest NOAEL ingestion dose TRVs for birds from EPA Eco-SSL literature	lowest NOAEL ingestion dose TRVs for birds from EPA Eco-SSL literature. Lowest LOAEL based on NOAEL multiplied by 10.	sediment at wetland on the range: ring-necked duck - lead (HQ=71), copper (HQ=18) , surface water: belted kingfisher - arsenic (HQ=1.9), copper (HQ=299) , lead (HQ=1.8) groundwater: belted kingfisher - copper (HQ=31)	sediment: No NOAEL HQ>1 surface water: No NOAEL HQ>1 groundwater: No NOAEL HQ>1
Mammals (e.g., herbivorous and omnivorous mammals - muskrat, carnivorous mammals - mink)	***Sediment, Surface Water or Groundwater.*** Incidental ingestion of surface sediment and contaminated forage organisms, direct contact with surface sediment, surface water and/or groundwater.	lowest NOAEL ingestion dose TRVs for mammals from EPA Eco-SSL literature	lowest NOAEL ingestion dose TRVs for mammals from EPA Eco-SSL literature. Lowest LOAEL based on NOAEL multiplied by 10.	sediment at wetland on the range: muskrat - copper (HQ=16) lead (HQ=1.02) surface water: mink - arsenic (HQ=209), copper (HQ=157) groundwater: mink - copper (HQ=16)	sediment: No NOAEL HQ>1 surface water: No NOAEL HQ>1 groundwater: No NOAEL HQ>1

[1]- some metals, PAHs or semi volatile chemicals reported as non-detect have reporting limits that exceed SERA risk benchmarks.
Charters, D. and M. Greenberg 2004. The Rule of Five: A Novel Weight of Evidence Approach to Derive a Site Specific Cleanup Goal. Poster presented at the Society of Environmental Toxicology and Chemistry (SETAC) National Conference, Portland. OR, November 14-18, 2004.

BERA - Baseline Ecological Risk Assessment
COPEC - Chemical of Potential Ecological Concern
Eco-SSL - Ecological Soil Screening Level
EPA - Environmental Protection Agency, United States
EPC - exposure point concentration
LOAEL - Lowest-Observed-Adverse-Effect-Level
NOAEL - No-Observed-Adverse-Effect-Level
NRWQC - National Recommended Water Quality Criteria
ORNL - Oak Ridge National Laboratory
PAH - Polyaromatic Hydrocarbon
SERA - Screening-Level Ecological Risk Assessment
SQB - Soil Quality Benchmark
SQT - Sediment Quality Target
TEL - Threshold Effect Level
TRV - Toxicity Reference Value
UCL - upper confidence limit

Table 10-3
Summary of Ecological Risk Assessment for the Skeet Range

Receptors	Exposure Pathways	Conservative SERA Risk Benchmarks	Step 3a Risk Benchmarks	Summary of Chemicals Exceeding Conservative SERA Risk Benchmarks Based On Maximum Detect Concentrations	Summary Chemicals Exceeding Step 3a Risk Benchmarks Based On 95% UCL or Maximum Detect Concentrations, Whichever is Lower 1
Skeet Range					
Terrestrial Habitats					
Plants	***Surface Soil (0.0.5 ft bgs***). Incidental ingestion of surface soil and contaminated forage organisms and direct contact with surface soil.	soil quality benchmarks (e.g. Eco-SSLs, EPA Region 5, ORNL)	plant and soil invertebrates soil quality benchmarks (e.g. Eco-SSLs, EPA Region 5, ORNL)	plants - antimony (HQ=52), lead (HQ=108), copper (HQ=1.01)	plants - antimony (HQ=4.1), lead (HQ=8.6), copper (HQ=1.01)
Soil Invertebrates				soil invertebrates - antimony (HQ=3.3), lead (HQ=7.6), iron (HQ=115)	soil invertebrate - iron (HQ=115), 95% UCL concentration less the background
Birds (e.g., herbivorous birds - mourning dove, omnivorous birds - horned lark, and carnivorous birds - American kestrel)		soil quality benchmarks (e.g. Eco-SSLs, EPA Region 5)	lowest NOAEL ingestion dose TRVs for birds and mammals from EPA Eco-SSL literature. Lowest LOAEL based on NOAEL multiplied by 10.	all birds - lead (HQ=1,182), copper (HQ=2.5), zinc (HQ=1.6)	unacceptable risk (NOAEL and LOAEL both have HQ>1) horned lark (lead - HQ=19, 1.9) indeterminate risk (NOAEL HQ>1 and LOAEL HQ<1) mourning dove (lead - HQ=4.5), horned lark (copper - HQ=1.05)
Mammals (e.g., herbivorous mammals - meadow vole, omnivorous mammals – house mouse, carnivorous mammals - mink)				all mammals - antimony (HQ=959), arsenic (HQ=232), copper (HQ=1.4)	unacceptable risk (NOAEL and LOAEL both have HQ>1) house mouse (lead - HQ=63, 6.3) indeterminate risk (NOAEL HQ>1 and LOAEL HQ<1) meadow vole (antimony HQ=2.9, lead - HQ=1.2), house mouse lead - HQ=9.1, copper HQ=1.2), mink (antimony HQ=14, lead - HQ=1.98)
Plants	***Subsurface Soil (>0.5-2.0 ft bgs).*** Incidental ingestion of subsurface soil and contaminated forage organisms and direct contact with subsurface soil potentially transported to surface soil.	soil quality benchmarks (e.g. Eco-SSLs, EPA Region 5, ORNL)	same as surface soil	plants - lead (HQ=4.2)	plant (antimony - HQ=1.3)
Soil Invertebrates				soil invertebrates - iron (HQ=120)	soil invertebrate (iron - HQ=120), 95% UCL concentration less the background
Birds		soil quality benchmarks (e.g. Eco-SSLs, EPA Region 5)	same as surface soil	all birds - lead (HQ=46), copper (HQ=1.1), zinc (HQ=1.1)	unacceptable risk (NOAEL and LOAEL both have HQ>1) No NOAEL or LOAEL HQ>1 indeterminate risk (NOAEL HQ>1 and LOAEL HQ<1) horned lark(lead - HQ=3.8)
Mammals				all mammals - antimony (HQ=9.0), lead (HQ=10.3), Total HMWPAHs (HQ=5.7)	unacceptable risk (NOAEL and LOAEL both have HQ>1) No NOAEL or LOAEL HQ>1 indeterminate risk (NOAEL HQ>1 and LOAEL HQ<1) meadow vole (antimony - HQ=3.1, lead - HQ=1.9, Total HMWPAHs HQ=4.8), mink (copper HQ=1.05)
Aquatic and Riparian/Wetlands Habitats					
Benthic Invertebrates	***Surface Sediment.*** Direct contact with benthic invertebrates living in or on the surface sediment.	sediment quality benchmarks (e.g., Minnesota Level I SQTs, EPA Region 5, TELs)	sediment quality benchmarks (e.g., Minnesota Level I and II SQTs)	SQT I - Wetland on Range - lead (HQ=1.6) Wetland on South Boundary of Range - lead (HQ=8.1)	SQT I Wetland on Range - lead (HQ=1.6) Wetland on South Boundary of Range - lead (HQ=2.2) SQT II Wetland on Range - No SQT I HQ >1 Wetland on South Boundary of Range - lead (HQ=2.2)
Aquatic Organisms (e.g., aquatic plants, benthic invertebrates, and fish)	***Surface Water.*** Direct contact with aquatic organisms living in the water column	water quality thresholds (criteria) - total recoverable, 100 mg/L total hardness (e.g., chronic Minnesota Class 2 Subparts 3a, 4a, and 5a, EPA Region 5, NRWQC)	chronic standard (CS) and maximum standard (MS) water quality thresholds (criteria) - total recoverable, 400 mg/L total hardness (e.g., chronic Minnesota Class 2 Subparts 3a, 4a, and 5a)	chronic standard (CS) criteria Wetland on Range unfiltered or total water samples: lead (HQ=11), antimony (all non-detect, HQ=36.4 for maximum non-detect concentration) filtered or dissolved water samples: No detected metals HQ >1 Wetland on South Boundary of Range unfiltered or total water samples: lead (HQ=6.9) filtered or dissolved water samples: No detected metals HQ >1	chronic standard (CS) criteria and maximum standard (MS) criteria Wetland on Range unfiltered or total water samples: lead (CS HQ=2.7, MS HQ= 0.1), antimony (all non-detect CS HQ=36.4, MS HQ=2.2 for maximum non-detect concentration) filtered or dissolved water samples: No detected metals HQ >1 in SERA Wetland on South Boundary of Range unfiltered or total water samples: lead (CS HQ=1.2, MS HQ=0.05), antimony (all non-detect CS HQ=36.4, MS HQ=2.2 for maximum non-detect concentration) filtered or dissolved water samples: No detected metals HQ >1 in SERA
Aquatic Organisms (e.g., aquatic plants, benthic invertebrates, and fish)	***Groundwater.*** Potentially Discharging to Surface Water. Direct contact with aquatic organisms living in the water column at the point of discharge.			chronic standard (CS) criteria unfiltered or total water samples: lead (HQ=26.9), antimony (all non-detect, HQ=36.4 for maximum non-detect concentration) filtered or dissolved water samples: No detected metals HQ >1	unfiltered or total water samples: lead (CS HQ=4.5, MS HQ= 0.2), antimony (all non-detect CS HQ=36.4, MS HQ=2.2 for maximum non-detect concentration) filtered or dissolved water samples: No detected metals HQ >1 in SERA
Fish	**Surface Water and Groundwater.** Potentially Discharging to Surface Water	lowest NOAEL Critical Body Residues from the scientific literature	lowest NOAEL and lowest LOAEL Critical Body Residues for fish from the scientific literature	No COPECs in fish exceed an HQ of 1 from exposure to surface water and groundwater at the wetland on the range or the wetland south of the range	No SERA HQ>1
Birds (e.g., herbivorous and omnivorous birds - ring necked duck, carnivorous birds - belted kingfisher)	***Sediment, Surface Water or Groundwater.*** Incidental ingestion of surface sediment and contaminated forage organisms, direct contact with surface sediment, surface water and/or groundwater.	lowest NOAEL ingestion dose TRVs for Birds from the scientific literature	lowest NOAEL ingestion dose TRVs for birds from EPA Eco-SSL literature. Lowest LOAEL based on NOAEL multiplied by 10.	Wetland on Range sediment: ring-necked duck - lead (HQ=88) surface water: No NOAEL HQ>1 groundwater: No NOAEL HQ>1 Wetland on South Boundary of Range sediment: ring-necked duck - lead (HQ=368) surface water: No NOAEL HQ>1	Wetland on Range sediment: No SERA HQ>1 surface water: No SERA HQ>1 groundwater: No SERA HQ>1 Wetland on South Boundary of Range sediment: No SERA HQ>1 surface water: No SERA HQ>1
Mammals (e.g., herbivorous and omnivorous mammals - muskrat, carnivorous mammals - mink)	***Sediment, Surface Water or Groundwater.*** Incidental ingestion of surface sediment and contaminated forage organisms, direct contact with surface sediment, surface water and/or groundwater.	lowest NOAEL ingestion dose TRVs for mammals from the scientific literature	lowest NOAEL ingestion dose TRVs for mammals from EPA Eco-SSL literature. Lowest LOAEL based on NOAEL multiplied by 10.	Wetland on Range sediment: muskrat (HQ=1.3) surface water: No NOAEL HQ>1) groundwater: No NOAEL HQ>1 Wetland on South Boundary of Range sediment: muskrat (HQ=5.2), muskrat antimony (HQ=6.3) surface water: No NOAEL HQ>1)	Wetland on Range sediment: No SERA HQ>1)) surface water: No SERA HQ>1) groundwater: No SERA HQ>1) Wetland on South Boundary of Range sediment: No NOAEL HQ>1) surface water: No SERA HQ>1)

[1] - some metals, PAHs or semi volatile chemicals reported as non-detect have reporting limits that exceed SERA risk benchmarks.

BERA - Baseline Ecological Risk Assessment
COPEC - Chemical of Potential Ecological Concern
Eco-SSL - Ecological Soil Screening Level
EPA - Environmental Protection Agency, United States
EPC - exposure point concentration
HMWPAH - High Molecular Weight Polyaromatic Hydrocarbon
LOAEL - Lowest-Observed-Adverse-Effect-Level
NOAEL - No-Observed-Adverse-Effect-Level
ORNL - Oak Ridge National Laboratory
PAH - Polyaromatic Hydrocarbon
SERA - Screening-Level Ecological Risk Assessment
SQB - Soil Quality Benchmark
SQT - Sediment Quality Target
TRV - Toxicity Reference Value
UCL - upper confidence limit

Table 10-4: Air Force MMRP Cohort Assignments

Cohort	Description
A	Small Arms Ranges
B	Boresight Ranges
C	Explosive Ordnance Disposal (EOD) Ranges
D	Open Burn/Open Detonation (OB/OD) Sites
E	Chemical Warfare Materiel (CWM) Sites
F	Pyrotechnic/Practice Sites
G	All Other Sites

Table 10-5: RI Conclusions

MRS	RI Conclusions	Recommendation
TS737 Trap Range	MEC Results: No MEC identified. MC Results: MC impacted soil, sediment, and surface water. Human Health Screening Results: MC above Tier 1 SRVs. Screening Ecological Risk Assessment Results: HQs>1 were observed for several COPCs and several assessment endpoints. MRSPP Score: 3	Further Action
TS738 Skeet Range	MEC Results: No MEC identified. MC Results: Isolated locations of MC impacted soil, sediment, and surface water. Human Health Screening Results: MC above Tier 1 SRVs. Screening Ecological Risk Assessment Results: HQs>1 were observed for several COPCs and several assessment endpoints. MRSPP Score: 3	Further Action

APPENDIX K – LUCS/ICS CHECKLIST

ANNUAL LAND USE CONTROL CHECKLIST **INSTALLATION: Duluth Air National Guard Base**

Site	Description of LUC	Action Required	Date Action Completed	Follow Up Necessary? Yes/No	Description of Follow Up Actions	Issue Resolved? Yes/No	Description of Resolution (if necessary)
All	Administrative	**Verify** that GeoBase includes an outline of all IRP Sites and Areas of Concern and indicates if Land Use Controls Exist.					
Active Sites	Annual Monitoring Well Inventory	**Verify** that annual monitoring well inventory is completed by current contractor. If no current contractor, complete annual monitoring well inventory and submit to NGB/A4VR.					
FT002 - Site FT-1 FDTA	CERCLA Required LUCs for soil and groundwater	Maintain current industrial land use and control exposures to constituents remaining in place at the site. In the event this land should pass out of the control of the DoD, CERCLA Section 120 (h) provisions will be implemented to ensure adequate LUCs/Ics are maintained.					
	AF/ANG Required LUCs for groundwater	**Verify** that groundwater is not to be used for any purpose (irrigation, etc.) other than environmental monitoring and that no production wells have been installed at the site. If land transfer occurs, **verify** that land use restrictions are communicated to the new owner by the Real Property Office. Provide a record of this communication to the ANG Restoration Program Manager.					
RW010 - Site RD-1 Low Level Radioactive Waste	AF/ANG Required LUCs for groundwater	**Verify** that groundwater is not to be used for any purpose (irrigation, etc.) other than environmental monitoring and that no production wells have been installed at the site. **Verify** that surface water use is restricted, other than for monitoring, in GeoBase. If land transfer occurs, **verify** that land use restrictions are communicated to the new owner by the Real Property Office. Provide a record of this communication to the ANG Restoration Program Manager.					
SS003 - Site S-2 DPDO Storage Area C	Interim LUCs for groundwater	**Verify** that groundwater is not to be used for any purpose (irrigation, etc.) other than environmental monitoring and that no production wells have been installed at the site. If land transfer occurs, **verify** that land use restrictions are communicated to the new owner by the Real Property Office. Provide a record of this communication to the ANG Restoration Program Manager.					
SS004 - Fuel Storage Area S-1	Interim LUCs for groundwater	**Verify** that groundwater is not to be used for any purpose (irrigation, etc.) other than environmental monitoring and that no production wells have been installed at the site. If land transfer occurs, **verify** that land use restrictions are communicated to the new owner by the Real Property Office. Provide a record of this communication to the ANG Restoration Program Manager.					
SS008 - Site S-1 Old DPDO Storage Area	AF/ANG Required LUCs for soil and groundwater	**Verify** there has been no residential construction (housing, daycares, schools, etc.) at these sites through review of construction project files, discussion with CE, and/or visiting the site. **Verify** that groundwater is not to be used for any purpose (irrigation, etc.) other than environmental monitoring and that no production wells have been installed at the site. If land transfer occurs, **verify** that land use restrictions are communicated to the new owner by the Real Property Office. Provide a record of this communication to the ANG Restoration Program Manager.					
SS017 - Base Support Storage Area S-3	AF/ANG Required LUCs for soil	**Verify** there has been no residential construction (housing, daycares, schools, etc.) at these sites through review of construction project files, discussion with CE, and/or visiting the site. If land transfer occurs, **verify** that land use restrictions are communicated to the new owner by the Real Property Office. Provide a record of this communication to the ANG Restoration Program Manager.					
SS023 - Aircraft Parking Ramp	CERCLA Required LUCs for soil and groundwater	Maintain current industrial land use and control exposures to constituents remaining in place at the site. In the event this land should pass out of the control of the DoD, CERCLA Section 120 (h) provisions will be implemented to ensure adequate LUCs/Ics are maintained.					
	AF/ANG Required LUCs for groundwater	**Verify** that groundwater is not to be used for any purpose (irrigation, etc.) other than environmental monitoring and that no production wells have been installed at the site. If land transfer occurs, **verify** that land use restrictions are communicated to the new owner by the Real Property Office. Provide a record of this communication to the ANG Restoration Program Manager.					
SS029 - Former Refueler Parking Area	Interim LUCs for groundwater	**Verify** that groundwater is not to be used for any purpose (irrigation, etc.) other than environmental monitoring and that no production wells have been installed at the site. If land transfer occurs, **verify** that land use restrictions are communicated to the new owner by the Real Property Office. Provide a record of this communication to the ANG Restoration Program Manager.					

ANNUAL LAND USE CONTROL CHECKLIST **INSTALLATION: Duluth Air National Guard Base**

Site	Description of LUC	Action Required	Date Action Completed	Follow Up Necessary? Yes/No	Description of Follow Up Actions	Issue Resolved? Yes/No	Description of Resolution (if necessary)
ST025 - Old Motor Pool Area	CERCLA Required LUCs for groundwater	**Verify** that LUCs/ICs, including construction controls and engineering controls are in place until the interim RA-O is achieved.					
	Interim LUCs for groundwater	**Verify** that groundwater is not to be used for any purpose (irrigation, etc.) other than environmental monitoring and that no production wells have been installed at the site. If land transfer occurs, **verify** that land use restrictions are communicated to the new owner by the Real Property Office. Provide a record of this communication to the ANG Restoration Program Manager.					
TS737 - Trap Range	Interim LUCs for soil	**Verify** there has been no residential construction (housing, daycares, schools, etc.) at these sites through review of construction project files, discussion with CE, and/or visiting the site. If land transfer occurs, **verify** that land use restrictions are communicated to the new owner by the Real Property Office. Provide a record of this communication to the ANG Restoration Program Manager.					
TS738 - Skeet Range	Interim LUCs for soil	**Verify** there has been no residential construction (housing, daycares, schools, etc.) at these sites through review of construction project files, discussion with CE, and/or visiting the site. If land transfer occurs, **verify** that land use restrictions are communicated to the new owner by the Real Property Office. Provide a record of this communication to the ANG Restoration Program Manager.					
WP021 - Imhoff Tank Treatment System	CERCLA Required LUCs for groundwater	**Verify** groundwater ICs, including warning signs, are posted to deter unauthorized use of the site, placing a land use restriction on the Intsallation Master Use Plan, prohibiting the use of groundwater and conducting Five-Year Reviews until the regulatory criteria are achieved.					
	Interim LUCs for groundwater	**Verify** that groundwater is not to be used for any purpose (irrigation, etc.) other than environmental monitoring and that no production wells have been installed at the site. If land transfer occurs, **verify** that land use restrictions are communicated to the new owner by the Real Property Office. Provide a record of this communication to the ANG Restoration Program Manager.					
WP022 - Building 125 and NDI Septic System	AF/ANG Required LUCs for soil	**Verify** there has been no residential construction (housing, daycares, schools, etc.) at these sites through review of construction project files, discussion with CE, and/or visiting the site. If land transfer occurs, **verify** that land use restrictions are communicated to the new owner by the Real Property Office. Provide a record of this communication to the ANG Restoration Program Manager.					

1. Five Year Review (FYR) to be completed by external source for Required LUCs only.
2. Annual inspections are to be completed by the Base EM. Will occur annually unless specified in action required column.
3. If the LUC is AF/ANG required or interim, then the use of the term LUC is not applicable to CERCLA in the formal sense but rather a best management practice. However, for practical purposes, the term LUC will be used for both connotations.
4. For site boundaries and figures refer to GeoBase data and figures provided as reference.

Base Civil Engineer

Date

APPENDIX L – MPCA CORRESPONDENCE

MINNESOTA POLLUTION CONTROL AGENCY

Duluth Office | 525 Lake Avenue South | Suite 400 | Duluth, MN 55802 | 218-723-4660
800-657-3864 | Use your preferred relay service | info.pca@state.mn.us | Equal Opportunity Employer

May 29, 2025

VIA EMAIL

William Myer (COL Ret), PG
ANG Environmental Program Manager
NGB-A4VR

RE: Review of Draft Final Five-Year Review Report for Sites 2, 3, 4, 21, 23, 25, 29, TS737, and TS738, Minnesota Air National Guard Duluth Air National Guard Base Site, Duluth Minnesota, dated February 2025
MPCA Site IDs: SR0000252, SR0000253, SR0000254, SR0000366, MND0007733, SR0000355, SR0000367

Dear William Myer:

The Minnesota Pollution Control Agency (MPCA) staff in the Superfund Program have reviewed the Draft Final Five-Year Review Report (FYR) for several sites listed above and located on the Minnesota Air National Guard (MANG) Duluth Air National Guard Base Site, Duluth, Minnesota (the Site). The FYR was prepared by BB&E, Inc. on behalf of the National Guard Bureau (NGB), the lead agency responsible for administering response actions at the Site. The MPCA, MANG, NGB, and BB&E met on April 17, 2025, to discuss MPCA's comments on the draft FYR. Following that meeting, MPCA has prepared comments:

General Comments

1. The MPCA requests clarification on why all response sites with completed remedies and contaminants remaining with concentrations of contaminants not allowing for unlimited use/unrestricted exposure (UU/UE) are not included in this FYR. For example, IRP Sites 17, 20, and 22 were included in the previous FYR, but not in this 2025 FYR. All sites with remaining contamination and not eligible of UU/UE should be identified with the status indicated. The MPCA agrees that sites with No Further Action (NFA) determinations and no requirements for active monitoring and maintenance do not need to be evaluated and discussed in depth in the Technical Assessment Section. However, documenting inspections and any issues for all sites not meeting UU/UE requirements should be included in the FYR and the status and applicable land use controls (LUCs) and institutional controls (ICs) should be included in Table 5 and Appendix K of the FYR for all sites.

2. The FYR should include a formal discussion on specific LUCs and ICs used by MANG/NGB to maintain protectiveness of response sites with completed remedies but not meeting UU/UE requirements. This discussion should include but not be limited to controls that are in place, how they are implemented and tracked, the governing authority, and how this information is made available to property owners and other stakeholders. Several tracking mechanisms used by the MANG/NGB at other sites or in the process of being developed by the MANG/NGB, including an Installation Development Plan (IDP) and electronic staff summary sheets were discussed as possibly being used for LUC/IC tracking at the FYR meeting with the MPCA and MANG/NGB on April 17, 2025. The MPCA requests more detailed information how these tracking systems could be used for implementing and documenting LUCs/ICs.

3. The FYR indicates that remedy decision documents serve as LUC/ICs by specifying the LUCs/ICs that are required for the remedies to remain protective. A formal plan or system for implementing, enforcing, and tracking LUCs/ICs for all MANG/NGB response sites on the Duluth International Airport (DIA) is needed. This plan should include a description of all LUCs/ICs and how they ensure remedy protectiveness, how they are monitored and tracked, and who has the authority to implement and enforce these controls.

Specific FYR Report Comments

1. Section I, Introduction, Site 2 Former Fire Fighting Training Areas: Also include in the background description that these areas were used for firefighting training which included the use of aqueous film-forming foam (AFFF) which is a source of per- and polyfluoroalkyl substances (PFAS) contamination released in these areas.

2. Section I, Introduction, Site 21: Include here that in addition to releases from the former Imhoff treatment systems, that releases from nearby stormwater outfalls connected to other portions of the MANG/NGB base also appear to have contributed to the identified impacts.

3. Section II, Response Actions, Site 2: Include explanation here that following issuance of an NFA for this site, new conditions and risk associated with PFAS contamination related to AFFF use at this former firefighting training area have been identified, and that this area is now being investigated as a significant source of PFAS contamination in the area. This comment also applies to Sites 21, 23, and 25 where PFAS contaminated soil and groundwater were discovered in the footprint of these areas during the 2015 PFAS Assessment and where Remedial Investigation (RI) work related to PFAS is currently being conducted by NGB.

4. Section II, Response Actions: For LUCs/ICs summary Tables 1-4:
    a) Under the Objectives column include the following: Ensure that a response action plan is prepared and approved by the MPCA/NGB/MANG for any development or construction activities that occur in this area. This would include plans for characterizing and managing any media that will be disturbed or moved.
    b) Under the last column (Title of LUCs/ICs Instruments) include the base-wide management plan.

5. Section II, Sites 21, 29, 3, and 25 Response Actions: These sections indicate that response action objectives will be considered to be attained when contaminant of concern (COC) concentrations specified in the Record of Decision (ROD) are met even though the current Minnesota health risk limits (HRLs) may be lower, specifically for trichloroethylene (TCE). The MPCA concurs with this as long as no receptors are impacted, and the area of contamination is stable and managed with no off-site migration. The MPCA may require further response actions based on current standards if conditions change that could result in impacts to receptors or the remedy no longer being protective.

6. Section IV. Five-Year Process
    a) The Report indicates the MANG/NGB has determined public notice and broader public participation is not warranted for this FYR. The MPCA recommends and requests providing this report and requesting comments from primary stakeholders that own, lease, manage, or operate on property on the DIA and project areas such as the City of Duluth, the DIA, and Cirrus Aircraft.

b) The MPCA recommends and requests that MANG/NGB prepares and implements a Community Involvement Plan related to PFAS investigations, which we acknowledge are outside of the scope of this FYR.

7. Section V. Question A, Is the Remedy Functioning as Intended by The Decision Document?
    a) For the seven response site project areas (Sites) identified (2, 3, 4, 21, 23, 25, and 29), it should be documented in this section of the report that all of these are still being actively monitored and completed remedies are still being evaluated for protectiveness.
    b) For these seven sites it should be stated that remedies are functioning as intended in the short-term. Each of these remedies are still being evaluated through long term monitoring (LTM). These sites still have COCs present above remedial action objective (RAO) concentrations and do not meet requirements for UU/UE status. Also indicate that LUCs/ICs are needed for these sites to ensure remedy protectiveness in the short-term.
    c) List the other sites with no ongoing monitoring or active operation and monitoring (O&M) requirements or NFA determinations, but that are not eligible of UU/UE and indicate that the remedies are functioning as intended for these as long as appropriate LUCs/ICs are in place so that the remedies remain protective.

8. Section V. Question B, Are exposure assumption, toxicity data, cleanup levels, and RAOs used at the time of the remedy selection still valid?
    a) Add to this section the presence of PFAS are an emerging concern that has been identified at several of the project sites and may affect other sites. Sites 2, 21, 23, and 25 are in the footprint of areas where PFAS contamination has been identified since cleanup decisions were made, and these PFAS releases are being investigated under a separate program. As discussed in the FYR meeting on April 17, protectiveness deferred determination should be made for PFAS releases for these response sites in the FYR or addendum. The FYR should include a discussion on the ongoing RI work being conducted under a separate project for these areas.
    b) The MPCA had requested a PFAS assessment be conducted for operational areas coinciding with Sites 3, 4, and 29 based on the potential for these types of contaminants to be associated with previous MANG/NGB and USAF activities in these areas and this request remains unaddressed.
    c) The RAOs for many of the sites with completed remedies are based on restoring groundwater to meet numeric Minnesota HRLs for COC concentrations. Some of the HRL values for COCs present at many of the sites, including for TCE, 1,4-dioxane, and cis 1,2 DCE for example, have decreased since the remedy decisions were made. The MPCA generally agrees that the remedies remain protective for these sites. This requires that no receptors are impacted, appropriate LUCs/ICs are in place and implemented to prevent exposure to COCs, and that the areas of contamination are defined and documented, and off-site migration does not occur.

9. Section V. Question C, Has Other Information Come to Light that could call into question the remedy?
    a) See responses to Question B.

10. Section VI. Issues and Recommendations
    a) The MPCA recommends and requests that in addition to the seven response sites included, that the FYR also identifies all of the additional inactive sites that are not eligible of UU/UE. This could be a basic list indicating the NFA status with no current monitoring or active O&M required and the LUCs/ICs that are in place to ensure protectiveness. Explain that these are tracked and documented in the IDP to ensure that no development or disturbance occurs without approved plans.
    b) Add to the report response and issues section information about the IDP which is being developed to document and track the status of all of the response sites, including both open and closed sites.
    c) Additionally, explain how the IDP can serve as a primary IC for documenting issues and restrictions related to response sites and the authority the MANG/NGB have to enforce the applicable LUCs/ICs and restrictions. Describe the authority the MANG/NGB have to control the use of properties they are leasing and to prevent lease termination? Does the MANG/NGB have the authority to require ICs and other restrictions to remain after leases are terminated under the current lease agreements?
    d) Per- and polyfluoroalkyl substances are emerging contaminants present at many of these response sites that are being investigated under a separate program. Several sites, including 3, 4, and 29 still need to be assessed for the potential presence of PFAS. The presence of PFAS at these sites could affect future O&M activities and response actions.

We look forward to continuing to the work with the National Guard Bureau and the Minnesota Air National Guard 148th Fighter Wing on completing this Five-Year Review for sites located on the Duluth Air National Guard Base. Attachment A provides disclaimers to the review. If you have any questions regarding this letter, please contact Dan Cervin, 218-302-6633, dan.cervin@state.mn.us or Mark Elliott, 218-302-6649, mark.elliott@state.mn.us.

Sincerely,

Dan Cervin

This document has been electronically signed.

Dan Cervin. P.G.
Project Manager
Remediation Division

Sincerely,

Mark Elliott

This document has been electronically signed.

Mark C. Elliott, P.G., M.S.
Hydrologist
Remediation Division

cc: Mikah Inkawhich, Minnesota Air National Guard (electronic)
Blake Bornhodlt, Minnesota Air National Guard (electronic)
Celeste Holtz, BB&E, Inc. (electronic)

ME/DC:km

Disclaimers

Duluth Air National Guard Base

MPCA Site ID: SR0000252

1. Reservation of authorities

   The Minnesota Pollution Control Agency (MPCA) Commissioner reserves the authority to take any appropriate actions with respect to any release, threatened release, or other conditions at the Site. The MPCA Commissioner also reserves the authority to take such actions if the voluntary party does not proceed in the manner described in this letter or if actions taken or omitted by the voluntary party with respect to the Site contribute to any release or threatened release, or create an imminent and substantial danger to public health and welfare.

2. No MPCA assumption of liability

   The MPCA, its Commissioner and staff do not assume any liability for any release, threatened release or other conditions at the Site or for any actions taken or omitted by the voluntary party with regard to the release, threatened release, or other conditions at the Site, whether the actions taken or omitted are in accordance with this letter or otherwise.

3. Letter based on current information

   All statements, conclusions and representations in this letter are based upon information known to the MPCA Commissioner and staff at the time this letter was issued. The MPCA Commissioner and staff reserve the authority to modify or rescind any such statement, conclusion or representation and to take any appropriate action under her authority if the MPCA Commissioner or staff acquires information after issuance of this letter that provides a basis for such modification or action.

4. Disclaimer regarding use or development of the property

   The MPCA, its Commissioner and staff do not warrant that the Site is suitable or appropriate for any particular use.

5. Disclaimer regarding investigative or response action at the property

   Nothing in this letter is intended to authorize any response action under Minn. Stat. § 115B.17, subd. 12.

6. This approval does not supplant any applicable state or local stormwater permits, ordinances, or other regulatory documents.

BB&E
CONSULTING ENGINEERS
& PROFESSIONALS

235 East Main Street, Suite 107
Northville, MI 48167
Tel: (248) 489-9636
Fax: (248) 489-9646

DATE: July 2, 2025

RE: Response to Comments on the *Draft Final Five-Year Review Report for Duluth Air National Guard Base – IRP Sites 2, 3, 4, 21, 23, 25, 29, TS737, and TS738*

Dear Mr. Cervin,

On behalf of the Air National Guard (ANG), BB&E, Inc. (BB&E) is providing this letter in response to the Minnesota Pollution Control Agency (MPCA) comments on the Draft Final Five-Year Review (FYR) Report for Duluth Air National Guard Base, Installation Restoration Program Sites 2, 3, 4, 21, 23, 25, 29, TS737, and TS738. This letter addresses the 13 comments included in the May 29, 2025, MPCA letter. A red-line strike out version of the FYR Report has been prepared to track changes to the document based on MPCA's comments, along with the (clean) Final FYR Report.

MPCA General Comment 1:

The MPCA requests clarification on why all response sites with completed remedies and contaminants remaining with concentrations of contaminants not allowing for unlimited use/unrestricted exposure (UU/UE) are not included in this FYR. For example, Installation Restoration Program (IRP) Sites 17, 20, and 22 were included in the previous FYR, but not in this 2025 FYR. All sites with remaining contamination and not eligible of UU/UE should be identified with the status indicated. The MPCA agrees that sites with No Further Action (NFA) determinations and no requirements for active monitoring and maintenance do not need to be evaluated and discussed in depth in the Technical Assessment Section. However, documenting inspections and any issues for all sites not meeting UU/UE requirements should be included in the FYR, and the status and applicable land use controls (LUCs) and institutional controls (ICs) should be included in Table 5 and Appendix K of the FYR for all sites.

BB&E Response to General Comment 1:

As discussed during the April 17, 2025 meeting, following a legal review of the ANG's LUC and FYR program, an internal ANG policy document was developed dated 13 October 2020 which detailed a change in how LUCs are managed when a site is closed, and does not meet UU/UE requirements, but does not have LUCs/ICs specified in the Record of Decision (ROD; BB&E 2020). This policy change led to Sites 17, 20, and 22 being excluded from this FYR Report. Site 17 and Site 22 are still tracked by the ANG as having "Air Force/ANG required LUCs" (not Comprehensive Environmental Response, Compensation, and Liability Act [CERCLA]-required LUCs); Site 20 is no longer being tracked as having LUCs based on the updated policy (BB&E 2020). A copy of the latest completed Annual LUCs Checklist is included as **Attachment 1** to this response to comment letter for reference purposes. The version of the checklist included as an appendix to the FYR will remain the same. Sites that are not eligible for UU/UE, that are not included in this FYR, still have LUCs/ICs that are managed

internally by the ANG; how those LUCs/ICs are tracked/managed by the ANG was discussed with MPCA during the April 17, 2025 meeting and initial Duluth FYR meeting, and is also described further below.

MPCA General Comment 2:

The FYR should include a formal discussion on specific LUCs and ICs used by MANG/NGB to maintain protectiveness of response sites with completed remedies but not meeting UU/UE requirements. This discussion should include but not be limited to controls that are in place, how they are implemented and tracked, the governing authority, and how this information is made available to property owners and other stakeholders. Several tracking mechanisms used by the MANG/NGB at other sites or in the process of being developed by the MANG/NGB, including an Installation Development Plan (IDP) and electronic staff summary sheets were discussed as possibly being used for LUC/IC tracking at the FYR meeting with the MPCA and MANG/NGB on April 17, 2025. The MPCA requests more detailed information on how these tracking systems could be used for implementing and documenting LUCs/ICs.

BB&E Response to General Comment 2:

As described during the April 17, 2025 meeting and below, LUCs/ICs are managed properly by the ANG utilizing multiple tools. In the event of a property transfer/potential land development, LUCs/ICs are also properly communicated to the property owner and/or other stakeholders. Tools utilized by the ANG for tracking/managing LUCs/ICs include, but are not limited to the following:

- ANG's Geographic Information System (GIS) system (GeoBase): GeoBase can be used to depict IRP site boundaries and the associated LUC/IC description, as applicable.
- Enterprise Environmental Safety and Occupational Health – Management Information System (EESOH-MIS): EESOH-MIS is a web-based information system used by the Air Force/ANG to collect and track environmental data. It is used to track hazardous waste, hazardous materials, air quality, and in this case, environmental liabilities/cleanup data and information for the Environmental Restoration Program (ERP) including LUCs/ICs at sites. EESOH-MIS is required to be updated routinely/frequently to ensure information is up to date/accurate, including updating the LUCs/ICs information on an annual basis, at a minimum.
- Annual LUCs/ICs Tracking/Checklist: LUCs/ICs are inspected/maintained on an annual basis via completion of the Annual LUCs/ICs Checklist. To ensure accountability at the base level, the annual LUCs/ICs checklist, when prepared (and/or updated) is transmitted from NGB to the Base via an electronic Staff Summary Sheet (eSSS). The eSSS is an electronic document used in the Air Force/ANG for coordinating and tracking staff packages, and includes key elements like coordination, identification, and a summary, ensuring that the information and requirements are reviewed and signed off on by the appropriate personnel at the base. In the instance of the LUCs/ICs eSSS, the package is routed up to the Base Civil Engineer (BCE) level.
- Installation Development Plans (IDPs): IDPs are developed/prepared for bases to support on-installation planning decisions and align strategic, operational, and tactical requirements with mission support requirements while considering other constraints such

as natural resources, incompatible land uses, etc. IDPs are often used by the Air Force/ANG to ensure the appropriate personnel at the Base are informed of any land use restrictions (e.g., areas that may have LUCs/ICs in place).

- FYRs: FYRs are used as a component under CERCLA to evaluate the status of LUCs/ICs at sites where a site did not meet UU/UE criteria and LUCs/ICs were identified in the ROD. The FYR process is utilized for sites with LUCs/ICs to ensure that cleanup actions at sites are still effective and continue to protect human health and the environment.

All of the above tools are used across the ANG for tracking/maintaining LUCs/ICs. The IDP is still in the process of being updated to include the LUCs/ICs for the sites at Duluth; BB&E will continue working with the ANG regarding incorporation of the LUCs/ICs into the IDP.

This information has been further elaborated on in the revised FYR Report.

MPCA General Comment 3:

The FYR indicates that remedy decision documents serve as LUC/ICs by specifying the LUCs/ICs that are required for the remedies to remain protective. A formal plan or system for implementing, enforcing, and tracking LUCs/ICs for all MANG/NGB response sites on the Duluth International Airport (DIA) is needed. This plan should include a description of all LUCs/ICs and how they ensure remedy protectiveness, how they are monitored and tracked, and who has the authority to implement and enforce these controls.

BB&E Response to General Comment 3:

The recommendations section of the FYR includes a recommendation for the development of a Land Use Control Implementation Plan (LUCIP) to include additional information for communicating LUCs/ICs to property owners and/or tenants of land not owned and/or controlled by the Department of Defense. The LUCs/ICs at the Base are currently being managed in accordance with the responses provided for General Comment 1 and General Comment 2.

MPCA Specific Comment 1:

Section I, Introduction, Site 2 Former Fire Fighting Training Areas: Also include in the background description that these areas were used for firefighting training which included the use of aqueous film-forming foam (AFFF) which is a source of per- and polyfluoroalkyl substances (PFAS) contamination released in these areas.

BB&E Response to Specific Comment 1:

The text for Site 2 in Section I has been revised to indicate that PFAS contamination within the footprint of Site 2 is being investigated as Site AT028, and therefore, PFAS within the footprint of Site 2 will not be addressed further in the FYR.

MPCA Specific Comment 2:

Section I, Introduction, Site 21: Include here that in addition to releases from the former Imhoff treatment systems, that releases from nearby stormwater outfalls connected to other portions of the MANG/NGB base also appear to have contributed to the identified impacts.

BB&E Response to Specific Comment 2:

The text currently states in Section I for Site 21"It appeared there were multiple small releases near Building 252 or a release of diluted dissolved-phase contamination from a stormwater outfall at the former Imhoff tank treatment system". The ROD and recent groundwater monitoring reports were reviewed to confirm the conceptual site model; these documents indicate that the only outfall that may be a potential source is the outfall at the Imhoff tank treatment system. Therefore, no revision is required, as BB&E does not currently have data/information to further support the statement.

MPCA Specific Comment 3:

Section II, Response Actions, Site 2: Include explanation here that following issuance of an NFA for this site, new conditions and risk associated with PFAS contamination related to AFFF use at this former firefighting training area have been identified, and that this area is now being investigated as a significant source of PFAS contamination in the area. This comment also applies to Sites 21, 23, and 25 where PFAS contaminated soil and groundwater were discovered in the footprint of these areas during the 2015 PFAS Assessment and where Remedial Investigation (RI) work related to PFAS is currently being conducted by NGB.

BB&E Response to Specific Comment 3:

The text for Site 2 in Section I has been revised per MPCA Specific Comment 1. Since PFAS is being investigated as a separate site, AT028, and Site 2 has not been reopened for PFAS, further discussion of PFAS in relation to Site 2 will not be included as part of the FYR.

Information regarding reopening Site 23 to address PFAS is addressed in Question C of Section V.

Question C of Section V states that any commingled PFAS and IRP sites included in this FYR will be addressed upon completion of the RI in the next FYR. Due to the RI not being complete, the aforementioned sites (Sites 2, 21, 23, and 25) are not fully addressed in this FYR as no risk assessment has been completed for PFAS. For these reasons, Section II will not be revised at this time; these sites will be re-evaluated during the next FYR.

MPCA Specific Comment 4:

Section II, Response Actions: For LUCs/ICs summary Tables 1-4:

a) Under the Objectives column include the following: Ensure that a response action plan is prepared and approved by the MPCA/NGB/MANG for any development or construction activities that occur in this area. This would include plans for characterizing and managing any media that will be disturbed or moved.

b) Under the last column (Title of LUCs/ICs Instruments) include the base-wide management plan.

BB&E Response to Specific Comment 4:

a) The LUCs/ICs objectives column for in-text Tables 1-4 list the specific LUCs/ICs that apply to the media, and the language is directly from the respective ROD or Decision Document (DD). No revision is required. This requested information (i.e., preparation of a response

action plan prior to development/construction activities) will be incorporated into the recommended LUCIP, which would become the LUCs/ICs instrument; as described above, the recommendations section has been updated with the recommendation to develop a LUCIP for the base, subject to the availability of funds.

b) Once LUCs/ICs have been incorporated into the IDP and/or a LUCIP, those documents will be added to the last column (Title of LUCs/ICs Instrument Implemented). No revision is required at this time.

MPCA Specific Comment 5:

Section II, Sites 21, 29, 3, and 25 Response Actions: These sections indicate that response action objectives will be considered to be attained when contaminant of concern (COC) concentrations specified in the Record of Decision (ROD) are met even though the current Minnesota health risk limits (HRLs) may be lower, specifically for trichloroethylene (TCE). The MPCA concurs with this as long as no receptors are impacted, and the area of contamination is stable and managed with no off-site migration. The MPCA may require further response actions based on current standards if conditions change that could result in impacts to receptors or the remedy no longer being protective.

BB&E Response to Specific Comment 5:

Comment acknowledged. The FYR Report acknowledges that criteria for certain COCs have been revised after implementation of the ROD; specifically, the current Minnesota Department of Health (MDH) criterion for TCE is 0.4 micrograms per liter (µg/L), and the MDH criterion at the time of the ROD documents was 5 µg/L. The MPCA will continue to be involved in the ANG's execution of the ERP, including when sites are proposed for site closeout; the need for further actions can be evaluated at that time. No change to the FYR Report.

MPCA Specific Comment 6:

Section IV. Five-Year Process

a) The Report indicates the MANG/NGB has determined public notice and broader public participation is not warranted for this FYR. The MPCA recommends and requests providing this report and requesting comments from primary stakeholders that own, lease, manage, or operate on property on the DIA and project areas such as the City of Duluth, the DIA, and Cirrus Aircraft.

b) The MPCA recommends and requests that MANG/NGB prepares and implements a Community Involvement Plan related to PFAS investigations, which we acknowledge are outside of the scope of this FYR.

BB&E Response to Specific Comment 6:

a) The ANG will provide a copy of the FYR to the property owner, the Duluth Airport Authority (DAA), for DAA to provide to appropriate tenants (e.g., Cirrus Aircraft). Regarding broader public participation, as described in the FYR Report, this FYR and other investigation documents can be viewed online in the Administrative Record or at the Information Repository. If additional Proposed Plans or DDs are drafted for these sites, the ANG will solicit public comments. No change to the FYR Report.

b) Comment acknowledged. PFAS investigations are discussed in the 2022 Community Involvement Plan prepared by Jacobs. Under CERCLA, CIPs are typically updated every five to seven years; the ANG is currently working to update CIPs every two years. PFAS will be handled in the same manner as other constituents of concern in future CIP documents. No change to the FYR Report.

MPCA Specific Comment 7:

Section V. Question A, Is the Remedy Functioning as Intended by The Decision Document?

a) For the seven response site project areas (Sites) identified (2, 3, 4, 21, 23, 25, and 29), it should be documented in this section of the report that all of these are still being actively monitored and completed remedies are still being evaluated for protectiveness.

b) For these seven sites it should be stated that remedies are functioning as intended in the short term. Each of these remedies are still being evaluated through long term monitoring (LTM). These sites still have COCs present above remedial action objective (RAO) concentrations and do not meet requirements for UU/UE status. Also indicate that LUCs/ICs are needed for these sites to ensure remedy protectiveness in the short term.

c) List the other sites with no ongoing monitoring or active operation and monitoring (O&M) requirements or NFA determinations, but that are not eligible of UU/UE and indicate that the remedies are functioning as intended for these as long as appropriate LUCs/ICs are in place so that the remedies remain protective.

BB&E Response to Specific Comment 7:

a) The text has been revised to indicate that Sites 3, 4, 21, 25, and 29 are being actively monitored to evaluate protectiveness and progress towards achieving RAOs. Due to Site 23 being reopened, there is an ongoing investigation to determine the nature and extent of PFAS at the site.

b) The text has been revised to indicate the remedies are functioning as intended and documented in the RODs, so long as LUCs/ICs remain in place until the sites meet the requirements for UU/UE status or are closed with LUCs/ICs.

c) As stated in the response to General Comment 1, other sites that are not eligible for UU/UE and have not been included in this FYR will not be included in the document as their RODs did not specify LUCs/ICs. For sites where "informal" (i.e., Air Force/ANG required) LUCs/ICs are in place, these sites are still tracked and managed as described above in response to response to general comment 1 and general comment 2; however, they have not been added to the FYR report. No change to the FYR Report.

MPCA Specific Comment 8:

Section V. Question B, Are exposure assumption, toxicity data, cleanup levels, and RAOs used at the time of the remedy selection still valid?

a) Add to this section the presence of PFAS are an emerging concern that has been identified at several of the project sites and may affect other sites. Sites 2, 21, 23, and 25 are in the footprint of areas where PFAS contamination has been identified since cleanup decisions

were made, and these PFAS releases are being investigated under a separate program. As discussed in the FYR meeting on April 17, protectiveness deferred determination should be made for PFAS releases for these response sites in the FYR or addendum. The FYR should include a discussion on the ongoing RI work being conducted under a separate project for these areas.

b) The MPCA had requested a PFAS assessment be conducted for operational areas coinciding with Sites 3, 4, and 29 based on the potential for these types of contaminants to be associated with previous MANG/NGB and USAF activities in these areas and this request remains unaddressed.

c) The RAOs for many of the sites with completed remedies are based on restoring groundwater to meet numeric Minnesota HRLs for COC concentrations. Some of the HRL values for COCs present at many of the sites, including for TCE, 1,4-dioxane, and cis 1,2 DCE for example, have decreased since the remedy decisions were made. The MPCA generally agrees that the remedies remain protective for these sites. This requires that no receptors are impacted, appropriate LUCs/ICs are in place and implemented to prevent exposure to COCs, and that the areas of contamination are defined and documented, and off-site migration does not occur.

BB&E Response to Specific Comment 8:

a) Per Department of Air Force Guidance, only compounds included in the ROD or DD for the sites are to be discussed in Question B. Since PFAS are not listed as a constituent of concern in the ROD/DD for any of the sites, PFAS are addressed in Question C. While PFAS have been identified within the footprints of the sites, the RI is ongoing, and risks related to PFAS have not been determined. If unacceptable risk is determined to be present at the sites following the RI, and response actions are deemed necessary, then PFAS may be included as part of the new PFAS IRP site. It is anticipated that these determinations will be made prior to the next FYR, and as such, additional PFAS evaluation and discussion will be included in the next FYR. A protectiveness deferred determination due to PFAS releases was (and is) included in the FYR Report for Site 23, with a FYR Addendum planned for 2028. No change to the FYR Report.

b) While Sites 3, 4, and 29 are not included for investigation for Phase I RI activities at the base, a Phase II RI will likely be completed and may incorporate these sites. In addition, a Non-Aqueous Film Forming Foam PFAS Due Diligence effort is ongoing at the Base. The Due Diligence effort is comparable to a CERCLA Preliminary Assessment. Sites identified during the Due Diligence effort for further investigation will continue through the CERCLA process. The Non-AFFF PFAS Due Diligence report included evaluation of the requested three sites (Sites 3, 4, and 29) for potential release of non-AFFF PFAS sources as the evaluation is base-wide effort.

c) Comment acknowledged. The FYR Report acknowledges that criteria for certain COCs have been revised after implementation of the ROD (e.g., TCE). The MPCA will continue to be involved in the ANG's execution of the ERP, including when sites are proposed for site closeout; the need for further actions can be evaluated at that time (e.g., to ensure

appropriate LUCs/ICs are in place and implemented to prevent exposure to COCs, etc.), and off-site migration does not occur. No change to the FYR Report.

MPCA Specific Comment 9:

Section V. Question C, Has Other Information Come to Light that could call into question the remedy?

a) See responses to Question B.

BB&E Response to Specific Comment 9:

See above responses for MPCA Specific Comment 8.

MPCA Specific Comment 10:

Section VI. Issues and Recommendations

a) The MPCA recommends and requests that in addition to the seven response sites included, the FYR also identifies all of the additional inactive sites that are not eligible of UU/UE. This could be a basic list indicating the NFA status with no current monitoring or active O&M required and the LUCs/ICs that are in place to ensure protectiveness. Explain that these are tracked and documented in the IDP to ensure that no development or disturbance occurs without approved plans.

b) Add to the report response and issues section information about the IDP which is being developed to document and track the status of all of the response sites, including both open and closed sites.

c) Additionally, explain how the IDP can serve as a primary IC for documenting issues and restrictions related to response sites and the authority the MANG/NGB have to enforce the applicable LUCs/ICs and restrictions. Describe the authority the MANG/NGB have to control the use of properties they are leasing and to prevent lease termination? Does the MANG/NGB have the authority to require ICs and other restrictions to remain after leases are terminated under the current lease agreements?

d) Per- and polyfluoroalkyl substances are emerging contaminants present at many of these response sites that are being investigated under a separate program. Several sites, including 3, 4, and 29 still need to be assessed for the potential presence of PFAS. The presence of PFAS at these sites could affect future O&M activities and response actions.

BB&E Response to Specific Comment 10:

a) See response to General Comment 1 regarding sites not eligible for UU/UE that are not included as part of this FYR.

b) The incorporation of LUCs/ICs into the IDP has not yet been completed, and BB&E is coordinating with ANG for incorporating the LUCs/ICs into the IDP for the next FYR. The FYR currently recommends the preparation of a LUCIP, that may be able to be developed prior to or in lieu of the addition of LUCs/ICs into the IDP. The following was added to the Recommendations Section of the FYR Report: “In addition to the LUC Implementation Plan, it is recommended that the ANG update the IDP to include sites with LUCs/ICs, and that the

ANG's GIS system (GeoBase) continue to be updated/maintained along with other tracking tools (e.g., EESOH-MIS, completion of the Annual LUCs/ICs checklist, etc.)."

c) As indicated during the April 17, 2025 meeting, internal procedures are in place if land transfers occur to notify the current property owner/future property owner. The Minnesota Air National Guard/National Guard Bureau (MANG/NGB) does not have the authority to control the use of properties they are leasing in a "formal" means (i.e., adding a formal restriction such as a Restrictive Covenant/Deed Restriction); however, upon lease termination and transfer, LUCs/ICs will be coordinated with property owners at that time, and may include more formal restrictions if the property owner is amenable. More "informal" means for controlling the property are described above (e.g., completion of the LUCs/ICs inspections by ANG, EESOH-MIS LUC tracking, etc.).

   Further, the MANG/NGB does not have the authority to require LUCs/ICs and other restrictions to remain after leases are terminated; however, similar to the above scenario, the MANG/NGB will work with the different parties to put in place more formal restrictions due to the residual contamination (e.g., a Restrictive Covenant/Deed Restriction), and/or some other sort of agreement that would describe that the land transfer is happening with residual contamination in place and what the expectations are (e.g., ANG can continue accessing the property for LTM, completion of Five Year Reviews, etc.), and/or other steps that may need to be taken to prevent exposure (e.g., installation of a pre-emptive Vapor Barrier). As discussed with MPCA during the April 17, 2025 meeting, these conversations are currently on-going with DAA, Cirrus, and the MANG/NGB as it relates to the anticipated land transfer for Site 4 and Site 29; any requirements will be formally documented in required real property documentation (e.g., if ANG has to maintain access to the property) and/or others (e.g., a Deed Restriction, LUCIP, etc.).

d) See response to Specific Comment 8b, above. While Sites 3, 4, and 29 are not included for investigation for Phase I RI activities at the base, a Phase II RI will likely be completed and may incorporate these sites. In addition, a Non-Aqueous Film Forming Foam PFAS Due Diligence effort is ongoing at the Base. The Due Diligence effort is comparable to a CERCLA Preliminary Assessment. Sites identified during the Due Diligence effort for further investigation will continue through the CERCLA process. The MPCA will receive a copy of the document for review.

Attachment 1

Completed LUCs/ICs Checklist

ANNUAL LAND USE CONTROL CHECKLIST **INSTALLATION: Duluth Air National Guard Base**

Site	Description of LUC	Action Required	Date Action Completed	Follow Up Necessary? Yes/No	Description of Follow Up Actions	Issue Resolved? Yes/No	Description of Resolution (if necessary)
All	Administrative	**Verify** that GeoBase includes an outline of all IRP Sites and Areas of Concern and indicates if Land Use Controls Exist.	-	Yes	ERP layer exists, but need	Yes/No	
Active Sites	Annual Monitoring Well Inventory	**Verify** that annual monitoring well inventory is completed by current contractor. If no current contractor, complete annual monitoring well inventory and submit to NGB/A4VR.	-	Yes	New contract for Sites	Yes/No	
FT002 - Site FT-1 FDTA	Required LUCs for groundwater	**Verify** that Institutional controls (ICs) are in place to maintain the current land use and control exposures to consituents remaining in place at the site. **Verify** the Base Master Plan includes adequate land use controls. If land transfer occurs, **verify** that CERCLA Section 120 (h) provisions are implemented to ensure adequate ICs are maintained and that land use restrictions are communicated to the new owner by the Real Property Office. Provide a record of this communication to the ANG Restoration Program Manager.	09/06/2024	No		Yes/No	
RW010 - Site RD-1 Low Level Radioactive Waste	AF/ANG Required LUCs for groundwater	**Verify** that groundwater is not to be used for any purpose (irrigation, etc.) other than environmental monitoring and that no production wells have been installed at the site. **Verify** that surface water use is restricted, other than for monitoring, in GeoBase. If land transfer occurs, **verify** that land use restrictions are communicated to the new owner by the Real Property Office. Provide a record of this communication to the ANG Restoration Program Manager.	09/06/2024	Yes	- LUCs in GeoBase need to be confirmed. - Groundwater is not used	Yes/No	
SS003 - Site S-2 DPDO Storage Area C	Interim LUCs for groundwater	**Verify** that groundwater is not to be used for any purpose (irrigation, etc.) other than environmental monitoring and that no production wells have been installed at the site. If land transfer occurs, **verify** that land use restrictions are communicated to the new owner by the Real Property Office. Provide a record of this communication to the ANG Restoration Program Manager.	09/06/2024	No		Yes/No	
SS004 - Fuel Storage Area S-1	Interim LUCs for groundwater	**Verify** that groundwater is not to be used for any purpose (irrigation, etc.) other than environmental monitoring and that no production wells have been installed at the site. If land transfer occurs, **verify** that land use restrictions are communicated to the new owner by the Real Property Office. Provide a record of this communication to the ANG Restoration Program Manager.	09/06/2024	No		Yes/No	
SS008 - Site S-1 Old DPDO Storage Area	AF/ANG Required LUCs for soil and groundwater	**Verify** there has been no residential construction (housing, daycares, schools, etc.) at these sites through review of construction project files, discussion with CE, and/or visiting the site. **Verify** that groundwater is not to be used for any purpose (irrigation, etc.) other than environmental monitoring and that no production wells have been installed at the site. If land transfer occurs, **verify** that land use restrictions are communicated to the new owner by the Real Property Office. Provide a record of this communication to the ANG Restoration Program Manager.	09/06/2024	No		Yes/No	
SS017 - Base Support Storage Area S-3	AF/ANG Required LUCs for soil	**Verify** there has been no residential construction (housing, daycares, schools, etc.) at these sites through review of construction project files, discussion with CE, and/or visiting the site. If land transfer occurs, **verify** that land use restrictions are communicated to the new owner by the Real Property Office. Provide a record of this communication to the ANG Restoration Program Manager.	09/06/2024	No		Yes/No	
SS023 - Aircraft Parking Ramp	Required LUCs for groundwater	**Verify** that groundwater is not to be used for any purpose (irrigation, etc.) other than environmental monitoring and that no production wells have been installed at the site. If land transfer occurs, **verify** that land use restrictions are communicated to the new owner by the Real Property Office. Provide a record of this communication to the ANG Restoration Program Manager.	09/06/2024	No		Yes/No	

ANNUAL LAND USE CONTROL CHECKLIST **INSTALLATION: Duluth Air National Guard Base**

Site	Description of LUC	Action Required	Date Action Completed	Follow Up Necessary? Yes/No	Description of Follow Up Actions	Issue Resolved? Yes/No	Description of Resolution (if necessary)
SS029 - Former Refueler Parking Area	Interim LUCs for groundwater	**Verify** that groundwater is not to be used for any purpose (irrigation, etc.) other than environmental monitoring and that no production wells have been installed at the site. If land transfer occurs, **verify** that land use restrictions are communicated to the new owner by the Real Property Office. Provide a record of this communication to the ANG Restoration Program Manager.	09/06/2024	No		Yes/No	
ST025 - Old Motor Pool Area	Interim LUCs for groundwater	**Verify** that groundwater is not to be used for any purpose (irrigation, etc.) other than environmental monitoring and that no production wells have been installed at the site. If land transfer occurs, **verify** that land use restrictions are communicated to the new owner by the Real Property Office. Provide a record of this communication to the ANG Restoration Program Manager.	09/06/2024	No		Yes/No	
TS737 - Trap Range	Interim LUCs for soil	**Verify** there has been no residential construction (housing, daycares, schools, etc.) at these sites through review of construction project files, discussion with CE, and/or visiting the site. If land transfer occurs, **verify** that land use restrictions are communicated to the new owner by the Real Property Office. Provide a record of this communication to the ANG Restoration Program Manager.	09/06/2024	No		Yes/No	
TS738 - Skeet Range	Interim LUCs for soil	**Verify** there has been no residential construction (housing, daycares, schools, etc.) at these sites through review of construction project files, discussion with CE, and/or visiting the site. If land transfer occurs, **verify** that land use restrictions are communicated to the new owner by the Real Property Office. Provide a record of this communication to the ANG Restoration Program Manager.	09/06/2024	No		Yes/No	
WP021 - Imhoff Tank Treatment System	Interim LUCs for groundwater	**Verify** that groundwater is not to be used for any purpose (irrigation, etc.) other than environmental monitoring and that no production wells have been installed at the site. **Verify** groundwater ICs, including warning signs, are posted to deter unauthorized use of the site, placing a land use restriction on the Intsallation Master Use Plan, prohibiting the use of groundwater and conducting Five-Year Reviews until the regulatory criteria are achieved. If land transfer occurs, **verify** that land use restrictions are communicated to the new owner by the Real Property Office. Provide a record of this communication to the ANG Restoration Program Manager.	09/06/2024	Yes	- Five-Year Review conducted in July 2024. - Need to post warning signs - Groundwater is not used	Yes/No	
WP022 - Building 125 and NDI Septic System	AF/ANG Required LUCs for soil	**Verify** there has been no residential construction (housing, daycares, schools, etc.) at these sites through review of construction project files, discussion with CE, and/or visiting the site. If land transfer occurs, **verify** that land use restrictions are communicated to the new owner by the Real Property Office. Provide a record of this communication to the ANG Restoration Program Manager.	09/06/2024	No		Yes/No	

1. Five Year Review (FYR) to be completed by external source for Required LUCs only.
2. Annual inspections are to be completed by the Base EM. Will occur annually unless specified in action required column.
3. If the LUC is AF/ANG required, then the use of the term LUC is not applicable to CERCLA in the formal sense but rather a best management practice. However, for practical purposes, the term LUC will be used for both connotations.
4. For site boundaries and figures refer to GeoBase data and figures provided as reference.

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Date: 2024.09.06 09:00:38 -05'00'

Base Civil Engineer

06 Sep 2024

Date

MINNESOTA POLLUTION CONTROL AGENCY

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August 20, 2025

VIA EMAIL

William Myer (COL Ret), PG
ANG Environmental Program Manager
NGB-A4VR

RE: Review of Response to Comments on the Draft Final Five-Year Review Report for IRP Sites 2, 3, 4, 21, 23, 25, 29, TS737, and TS738, Minnesota Air National Guard Duluth Air National Guard Base Site, Duluth, Minnesota, dated July 3, 2025
MPCA Site IDs: SR0000252, SR0000253, SR0000254, SR0000366, MND0007733, SR0000355, SR0000367

Dear William Myer:

The Minnesota Pollution Control Agency (MPCA) staff in the Superfund Program have reviewed the above-referenced Response to Comments (RTC) Letter and revised Draft Final Five-Year Review Report (FYR) dated July 2, 2025, for several sites listed above and located on the Minnesota Air National Guard (MANG) Duluth Air National Guard (DANG) Base Site, Duluth, Minnesota.

The FYR and RTC were prepared by BB&E, Inc. on behalf of the National Guard Bureau (NGB), the lead agency responsible for administering response actions at the DANG and MANG. The MPCA, MANG, NGB, and BB&E met on April 17, 2025, to discuss the MPCA's comments on the initial draft FYR. Following that meeting, the MPCA prepared comments on the FYR in a letter addressed to the NGB-A4VR dated May 29, 2025.

This letter is written in response to the revised FYR and RTC submitted to the MPCA on July 2, 2025. The MPCA appreciates the response to our comments and the corresponding revisions and additional information added to the draft FYR. In accordance with our review of these documents, the MPCA agrees the Draft FYR should be completed as final with the changes presented in the revised Draft FYR and contingent on including the MPCA's May 29, 2025 comment letter and the ANG Response to comments as attachments to the FYR.

Some additional requests from the MPCA regarding how the status and restrictions for active and closed installation restoration program (IRP) sites are managed and tracked are presented below:

- As indicated in the recommendations section of the RTC, the MPCA requests the ANG/MANG prepare and begin implementing a Land Use Control and Implementation Plan (LUCIP) within the next year (or by June 30, 2026). This plan should identify all active and inactive IRP sites and should provide a plan for tracking information on their status and condition.

  This plan should include a description of all land use controls (LUCs) and institutional controls (ICs) and how they ensure remedy protectiveness, how they are monitored and tracked, and who has the authority to implement and enforce these controls and how this information is made available to property owners and other stakeholders. The MPCA requests the opportunity to review and comment on the LUCIP. This plan must identify how all LUC/ICs are implemented and enforced by the ANG and property owners.

- The LUCIP should include a system for tracking and documenting the status and condition of all IRP sites on the DANG, including inactive and closed sites as proposed in the BB&E response to MPCA Comment #2 (Response to Comments, 7/2/2025). Several tracking mechanisms used by the MANG/NGB at other sites or in the process of being developed by the MANG/NGB, including an Installation Development Plan (IDP) and electronic staff summary sheets were discussed as possibly being used for LUC/IC tracking at the FYR meeting with the MPCA and MANG/NGB on April 17, 2025.

  The MPCA requests the tracking system should include:

  - Identification of all active and inactive and closed IRP sites even if no ICs or LUCs were required by the Record of Decision.
  - A description of any restrictions needed for each site.
  - Annual updates with site inspections results and a summary of the status and condition of each site.
  - Corrective action needs identified for each site.

This information should be incorporated in the tracking tools proposed to be used by the ANG in the RTC letter.

We look forward to continuing to work with the NGB and the MANG 148th Fighter Wing on the implementation of the recommendations from the Five-Year Review. Attachment A provides disclaimers to the review. If you have any questions regarding this letter, please contact Dan Cervin, 218-302-6633, dan.cervin@state.mn.us or Mark Elliott, 218-302-6649, mark.elliott@state.mn.us.

Sincerely,

Dan Cervin

This document has been electronically signed.

Dan Cervin. P.G.
Project Manager
Remediation Division

Sincerely,

Mark Elliott

This document has been electronically signed.

Mark C. Elliott, P.G., M.S.
Hydrologist
Remediation Division

ME/DC:km

cc: Mikah Inkawhich, Minnesota Air National Guard (electronic)
Blake Bornhodlt, Minnesota Air National Guard (electronic)
Celeste Holtz, BB&E, Inc. (electronic)
Tom Werner, Duluth Airport Authority (electronic)
Ryan Welch, Duluth Airport Authority (electronic)

Disclaimers

Duluth Air National Guard Base

MPCA Site ID: SR0000252

1. Reservation of authorities

   The Minnesota Pollution Control Agency (MPCA) Commissioner reserves the authority to take any appropriate actions with respect to any release, threatened release, or other conditions at the Site. The MPCA Commissioner also reserves the authority to take such actions if the voluntary party does not proceed in the manner described in this letter or if actions taken or omitted by the voluntary party with respect to the Site contribute to any release or threatened release, or create an imminent and substantial danger to public health and welfare.

2. No MPCA assumption of liability

   The MPCA, its Commissioner and staff do not assume any liability for any release, threatened release or other conditions at the Site or for any actions taken or omitted by the voluntary party with regard to the release, threatened release, or other conditions at the Site, whether the actions taken or omitted are in accordance with this letter or otherwise.

3. Letter based on current information

   All statements, conclusions and representations in this letter are based upon information known to the MPCA Commissioner and staff at the time this letter was issued. The MPCA Commissioner and staff reserve the authority to modify or rescind any such statement, conclusion or representation and to take any appropriate action under her authority if the MPCA Commissioner or staff acquires information after issuance of this letter that provides a basis for such modification or action.

4. Disclaimer regarding use or development of the property

   The MPCA, its Commissioner and staff do not warrant that the Site is suitable or appropriate for any particular use.

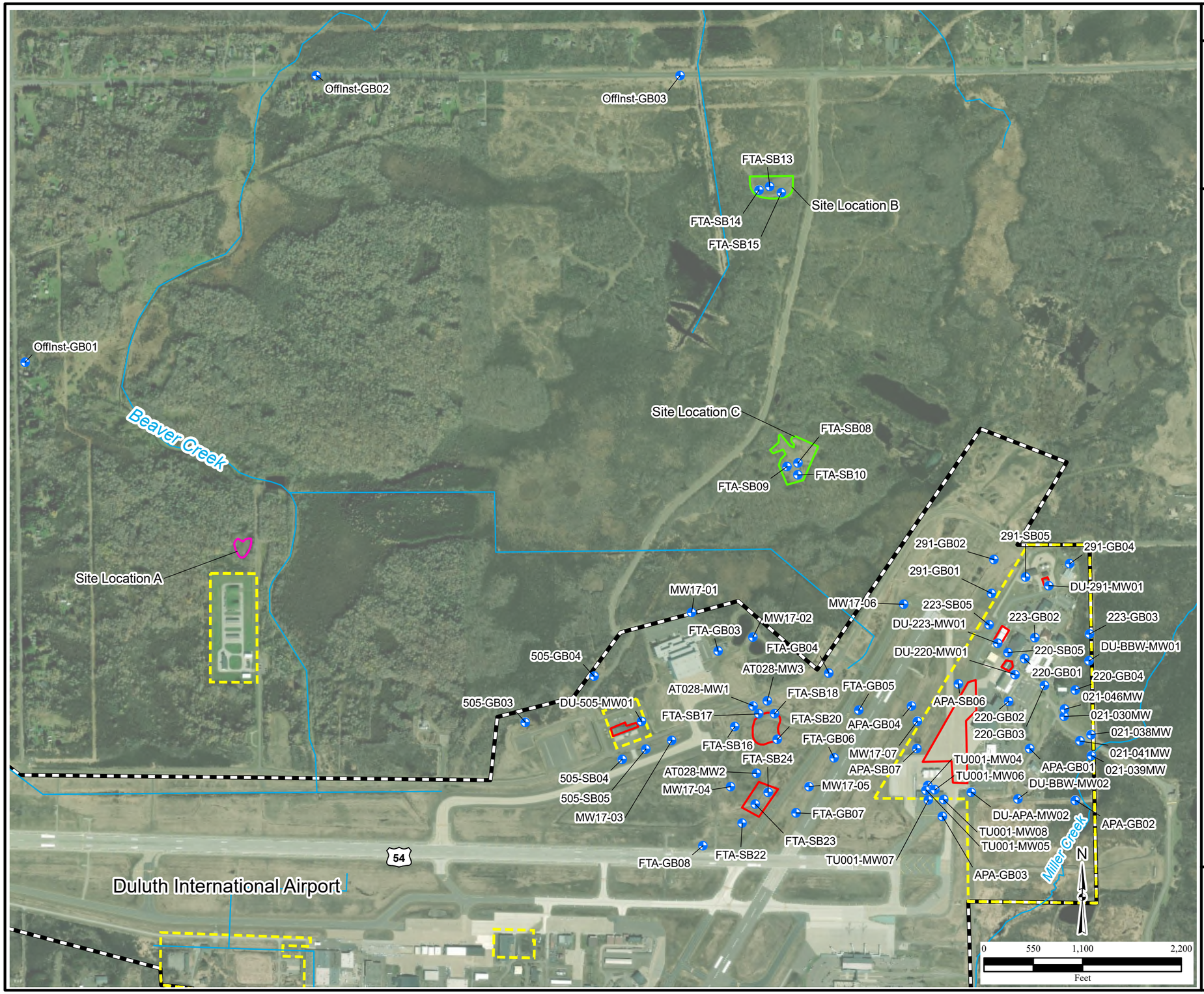
5. Disclaimer regarding investigative or response action at the property

   Nothing in this letter is intended to authorize any response action under Minn. Stat. § 115B.17, subd. 12.

6. This approval does not supplant any applicable state or local stormwater permits, ordinances, or other regulatory documents.

Duluth Air National Guard Base, MN

Figure B
Groundwater Sampling Locations



Legend

- Groundwater Sample Location
- Surface Water Course
- Approximate Boundaries of Former FTAs
- Site Location A (temporary soil stockpile from July 1994 excavation)
- Site Locations B and C (soil stockpile from 1993 excavation)
- Duluth ANGB Boundary
- Duluth International Airport

Notes:
ANGB=Air National Guard Base
FTA=Fire Training Area
PRL=Potential Release Location

DRAFT

\\srv-gst-01\HGLGIS\Duluth_V2O005_Misc_Figures\APRX\APRX.aprx
(B)GW_Sampling_Locs
4/9/2026 JM
Source: HGL, Tehama, USGS, USACE, ArcGIS Online Imagery

Appendix D

Aerial Photographs

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**2025** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**2021** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**2017** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**2013** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**2008** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**2003** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1997** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1991** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1989** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1981** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1978** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

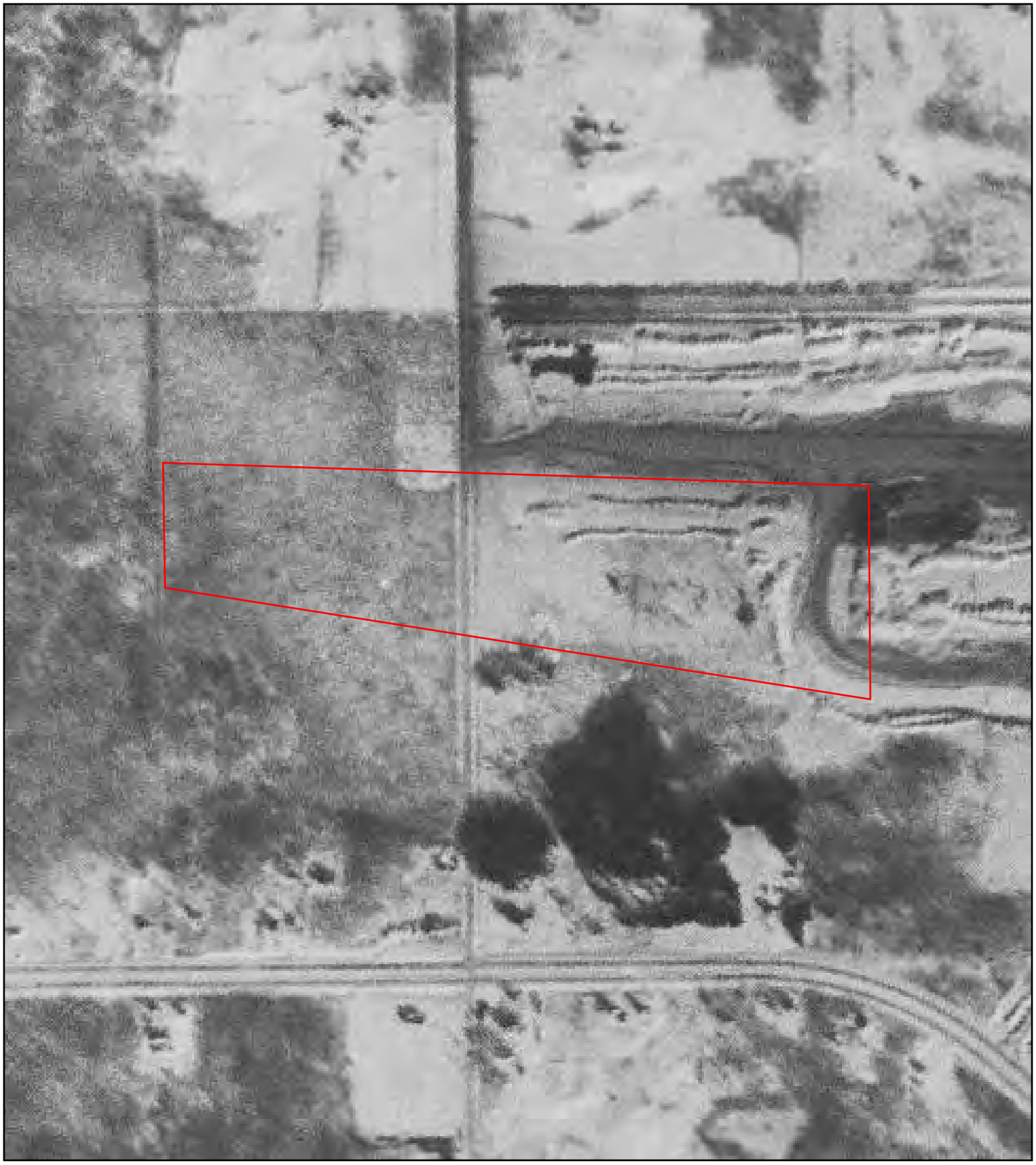
Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1972** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1961** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1953** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG



Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1951** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1948** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1939** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**2025** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

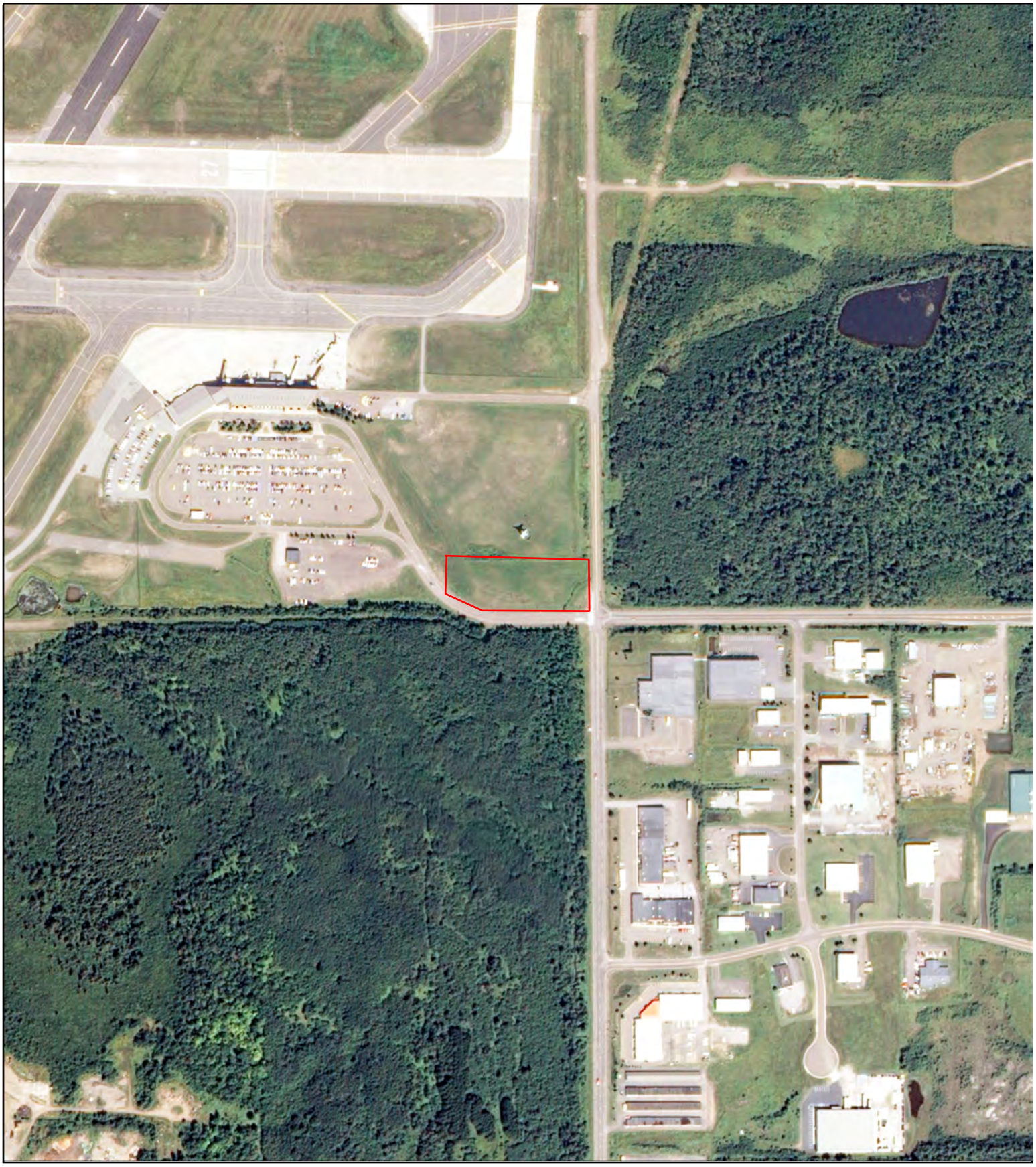
Taxiway A Reconstruction Phase 7 Duluth, MN	N	**2021** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**2017** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**2013** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG



Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**2008** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**2003** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1997** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1991** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1989** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1981** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1978** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1972** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1961** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1953** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1951** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1948** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1939** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**2025** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**2021** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

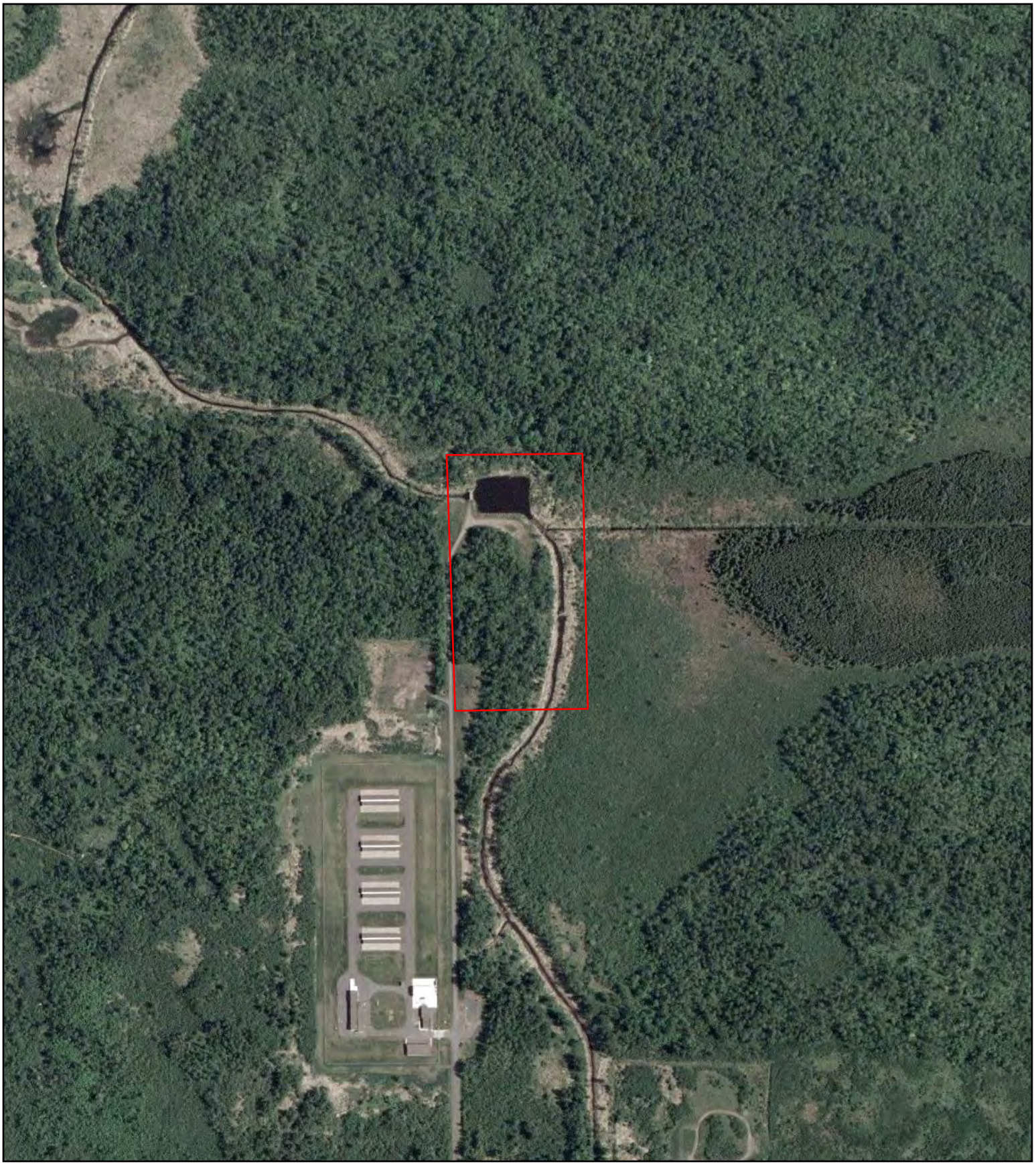
Taxiway A Reconstruction Phase 7 Duluth, MN	N	**2017** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**2013** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**2008** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG



Site boundaries shown in red are approximate

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Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1997** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

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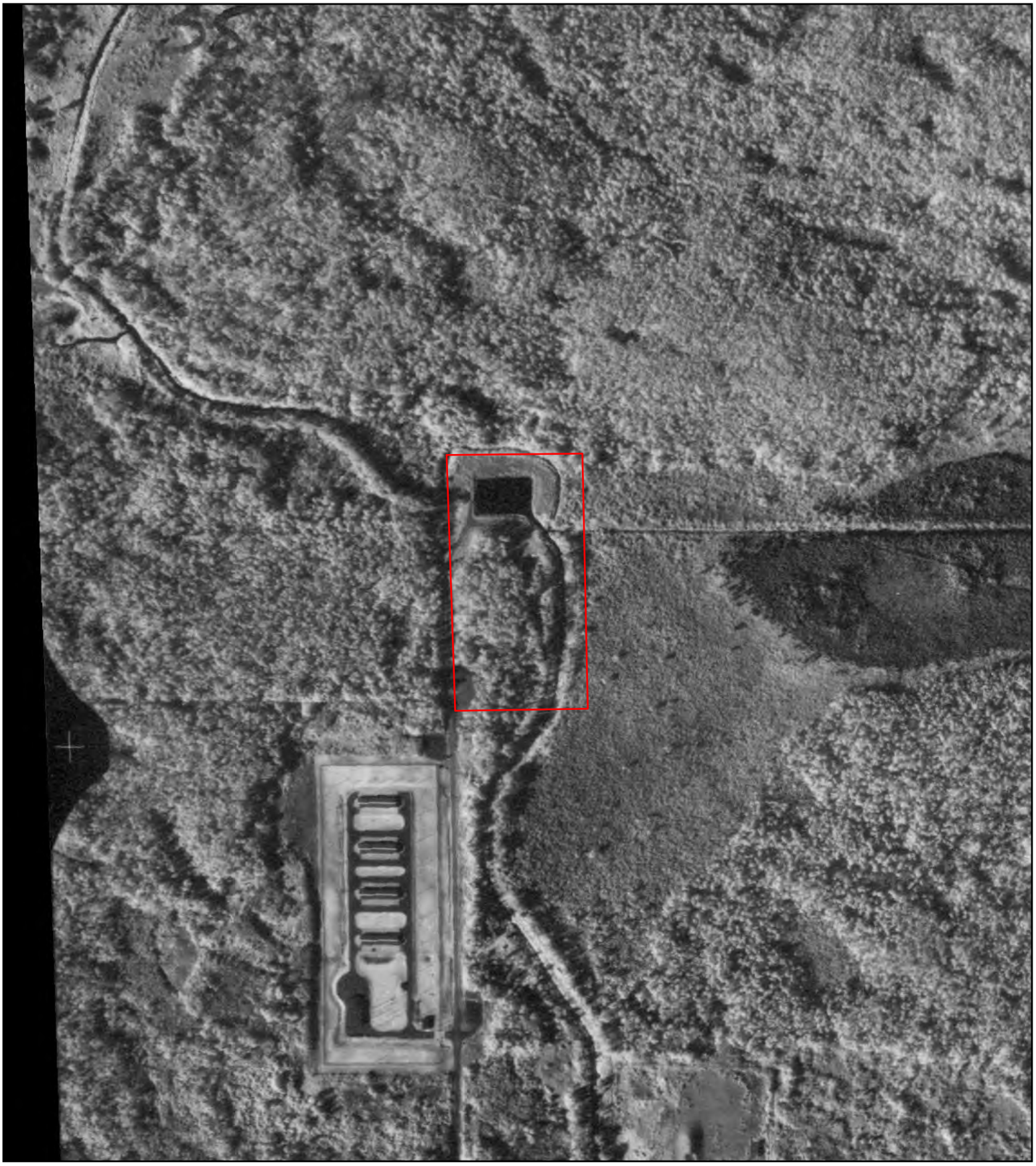
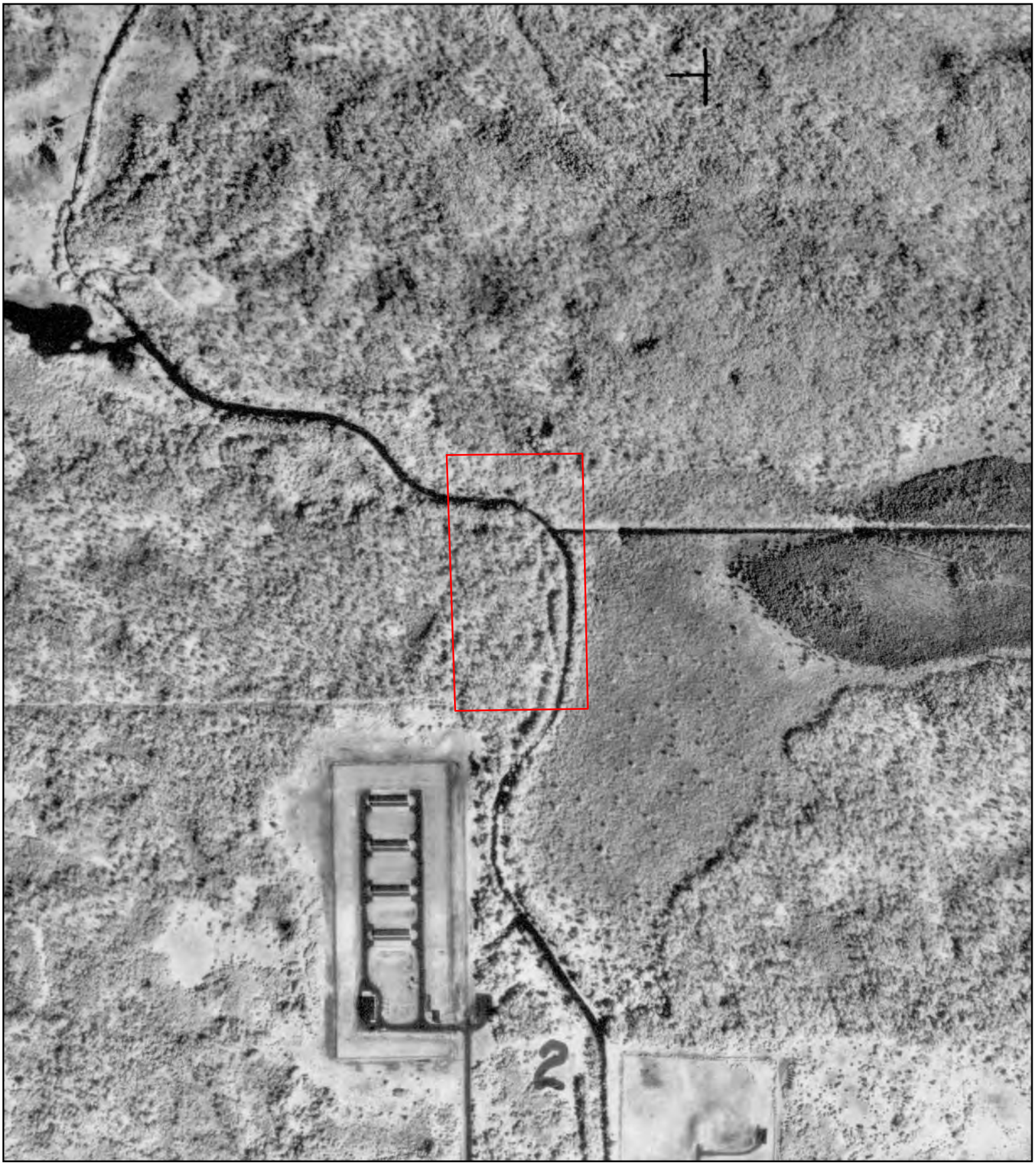
Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1991** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG



Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1989** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

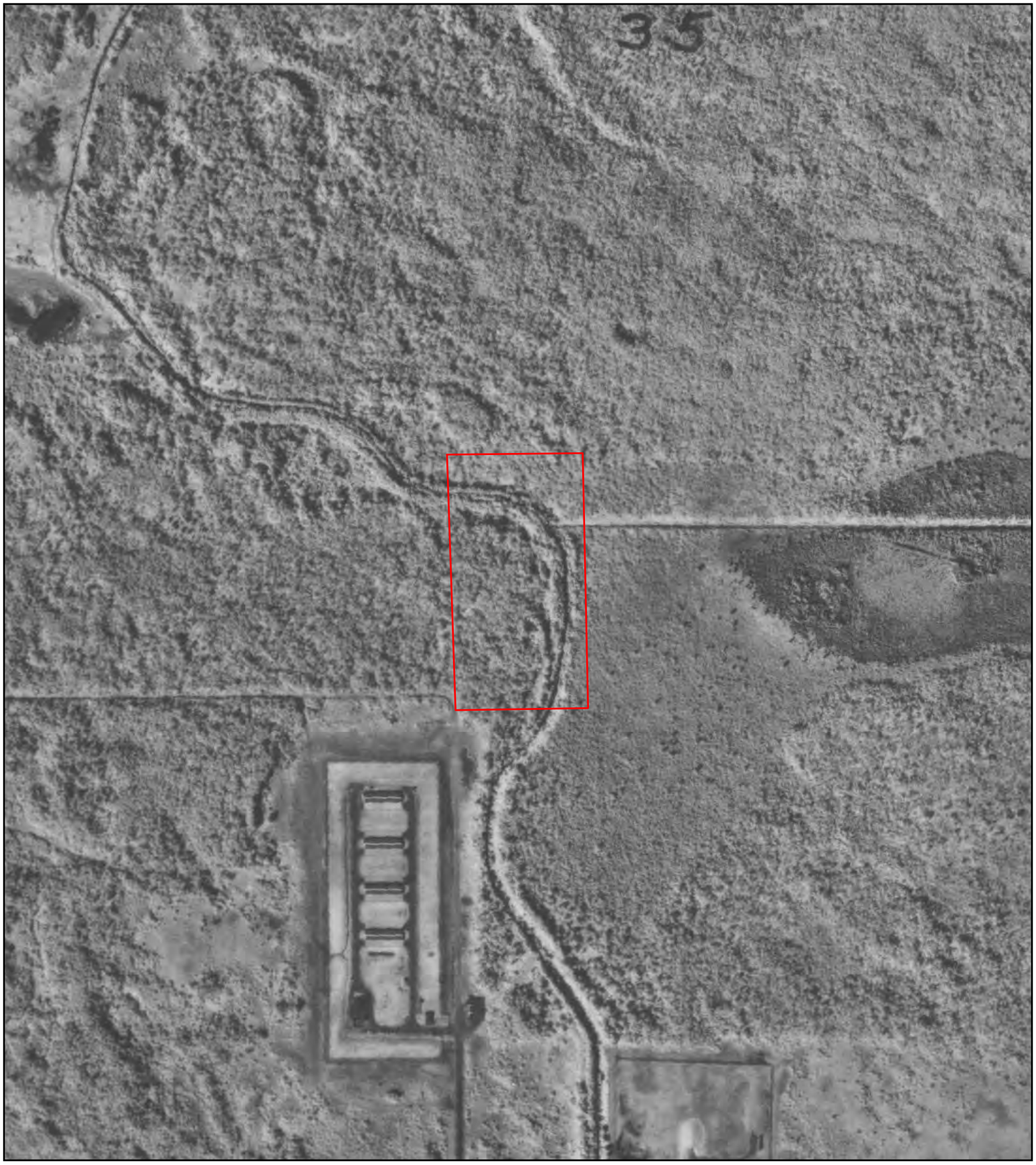


Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1981** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

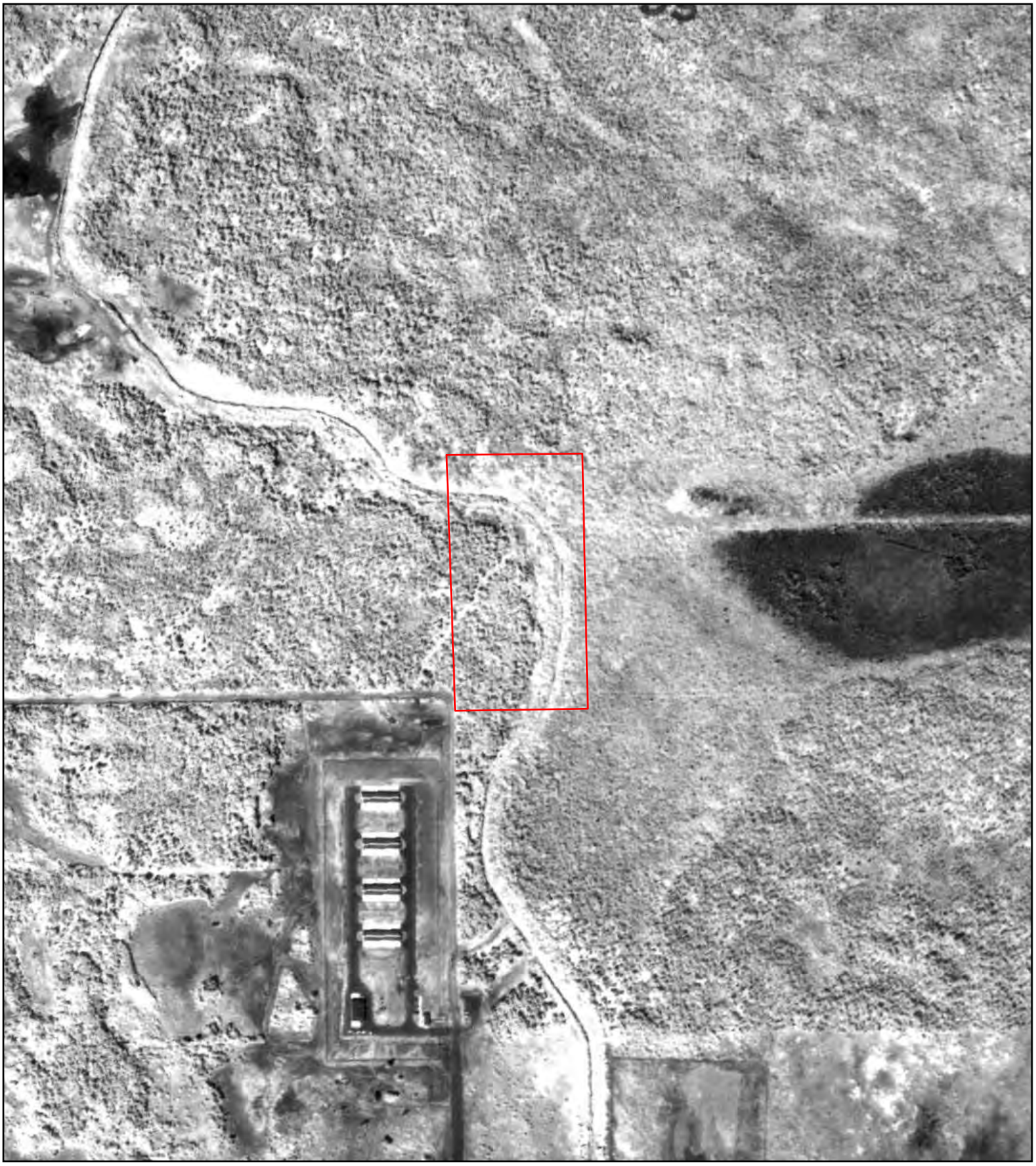
Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1978** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG



Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1972** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG



Site boundaries shown in red are approximate

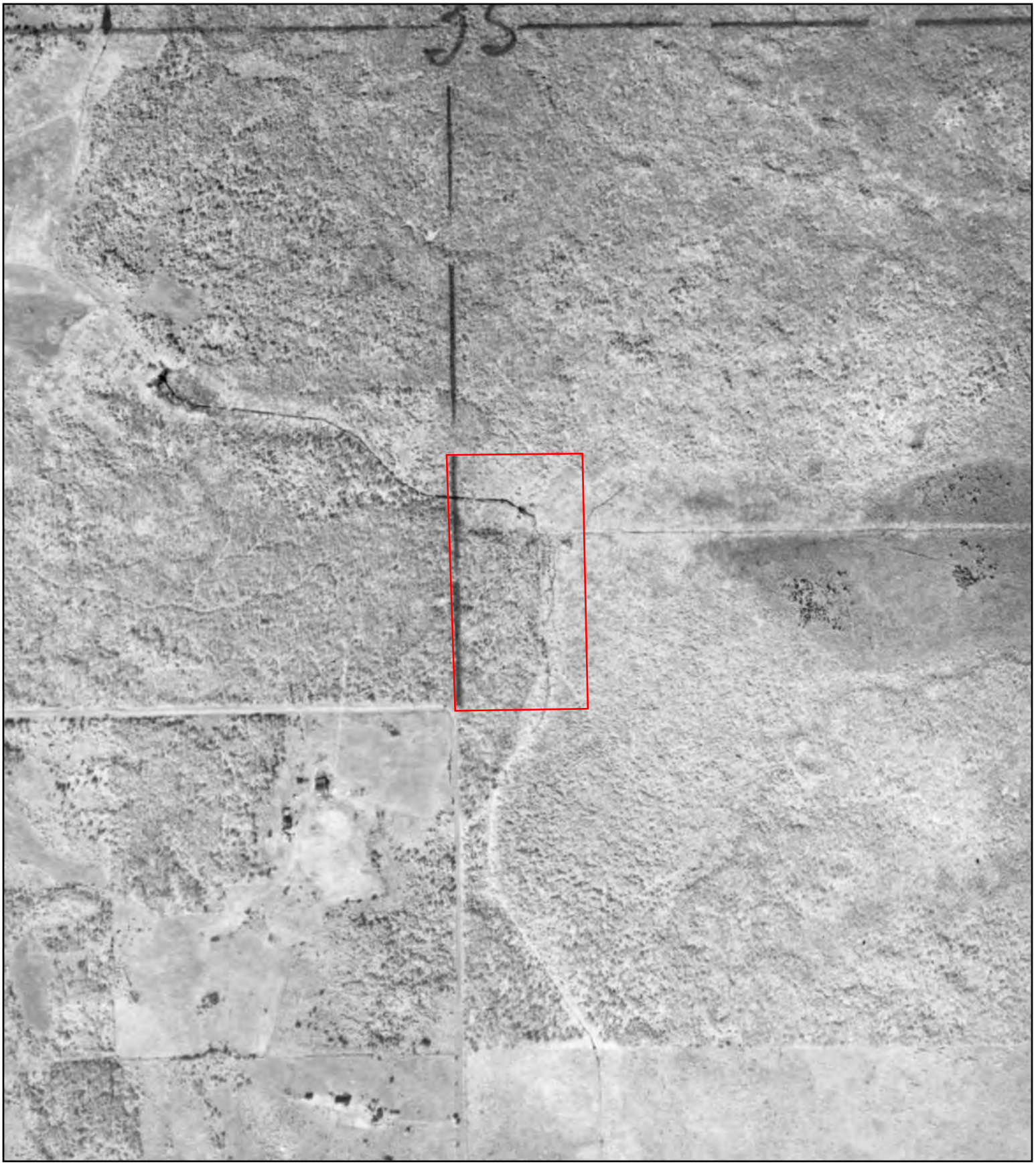
Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1961** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1953** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1951** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG



Site boundaries shown in red are approximate

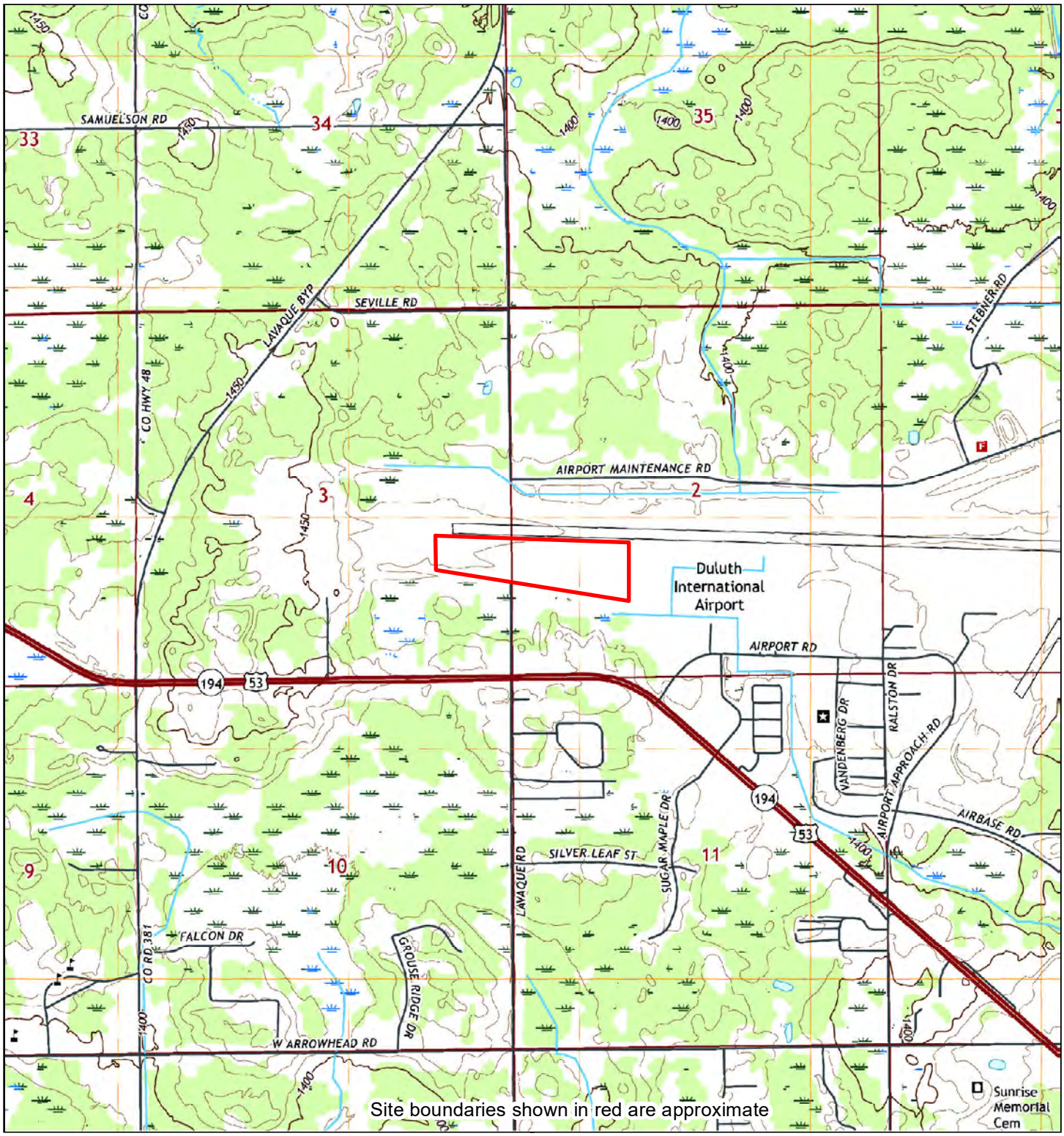
Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1948** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

Site boundaries shown in red are approximate

Taxiway A Reconstruction Phase 7 Duluth, MN	N	**1939** HIG Project # 2097200 Client Project # DULAI 186683 Approximate Scale 1: 6,000 (1"=500') www.historicalinfo.com	HIG

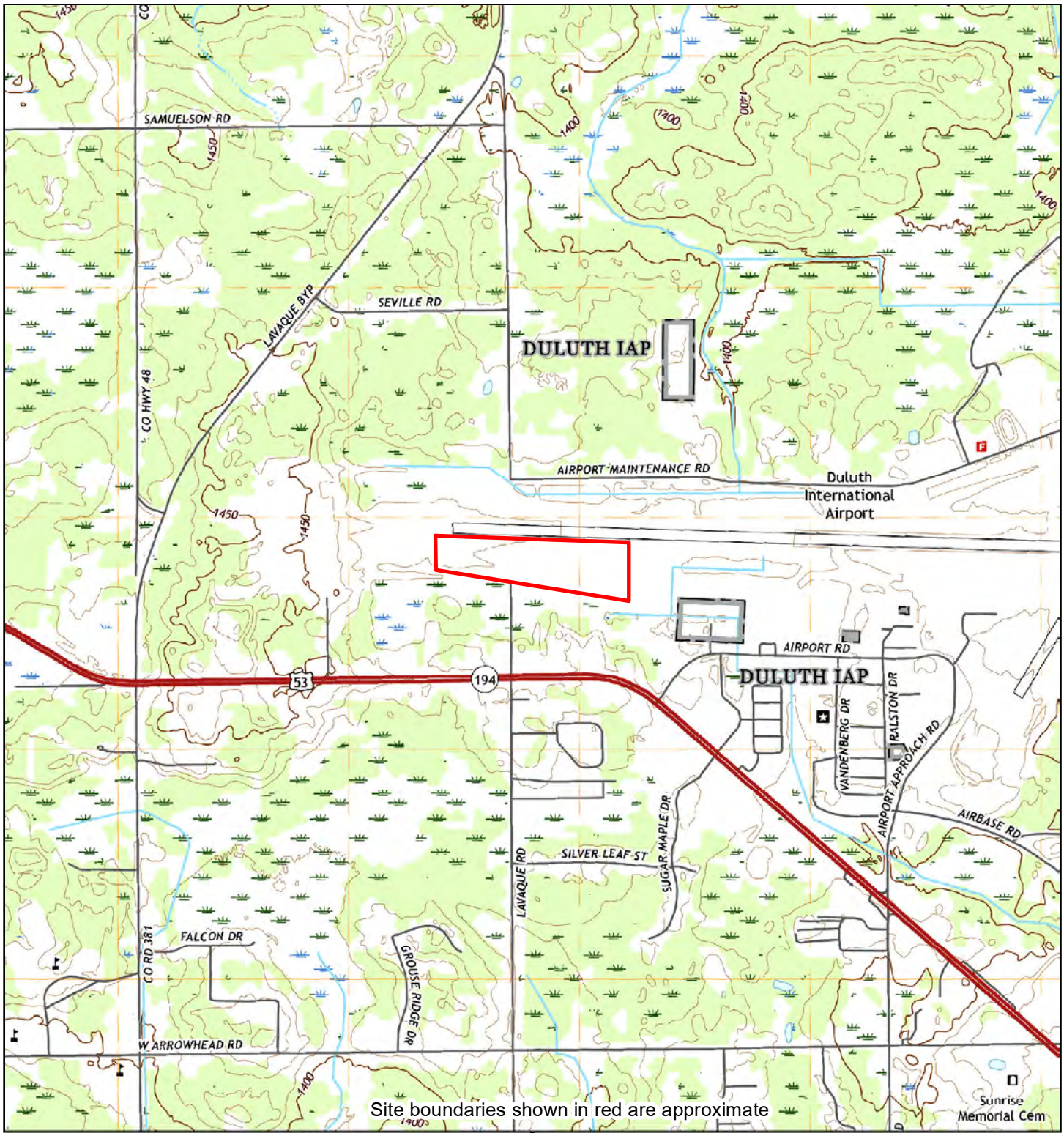
Appendix E

Topographic Maps



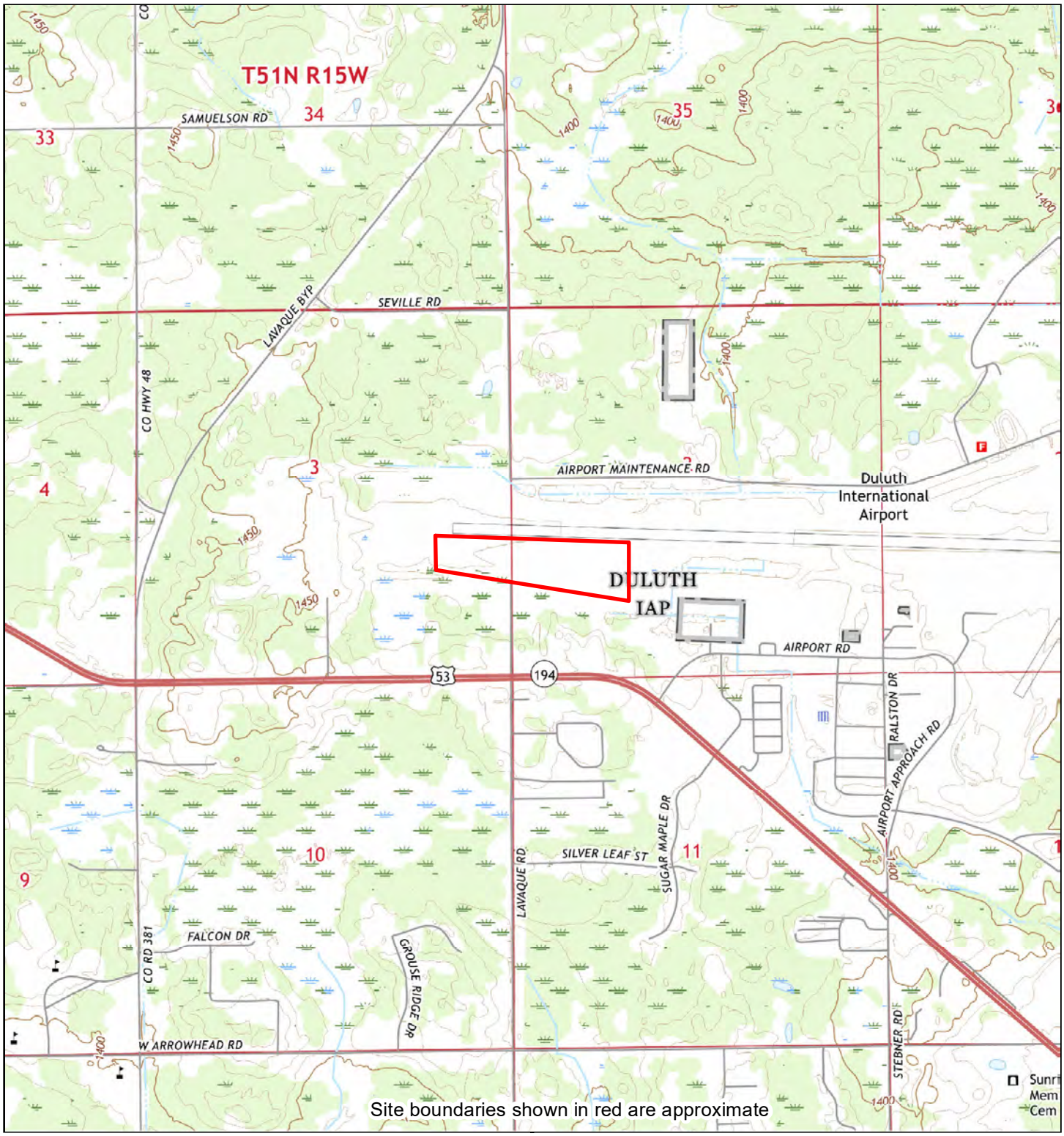
2022	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.		Short Elliot Hendrickson, Inc. project #DULAI 186683 HIG #2097200 completed: 04/03/2026

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates Photo Year	Inspected	Revised
All	Duluth Heights, MN	USGS	7½' x 7½'	2022	--	--	--



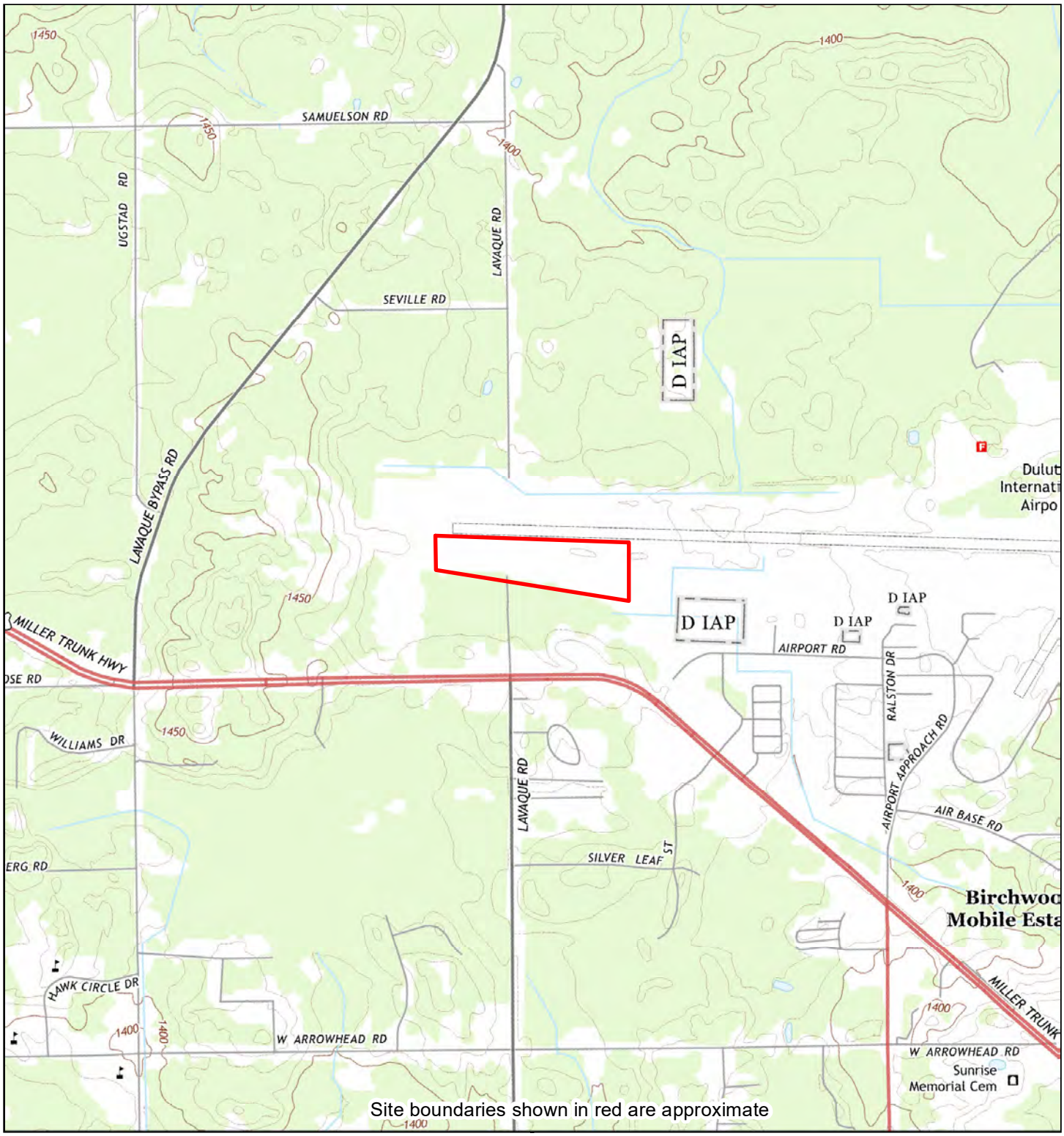
2019	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN	HIG
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.		Short Elliot Hendrickson, Inc. project #DULAI 186683 HIG #2097200 completed: 04/03/2026	

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Year	Topo Updates Inspected	Topo Updates Revised
All	Duluth Heights, MN	USGS	7½' x 7½'	2019	--	--	--



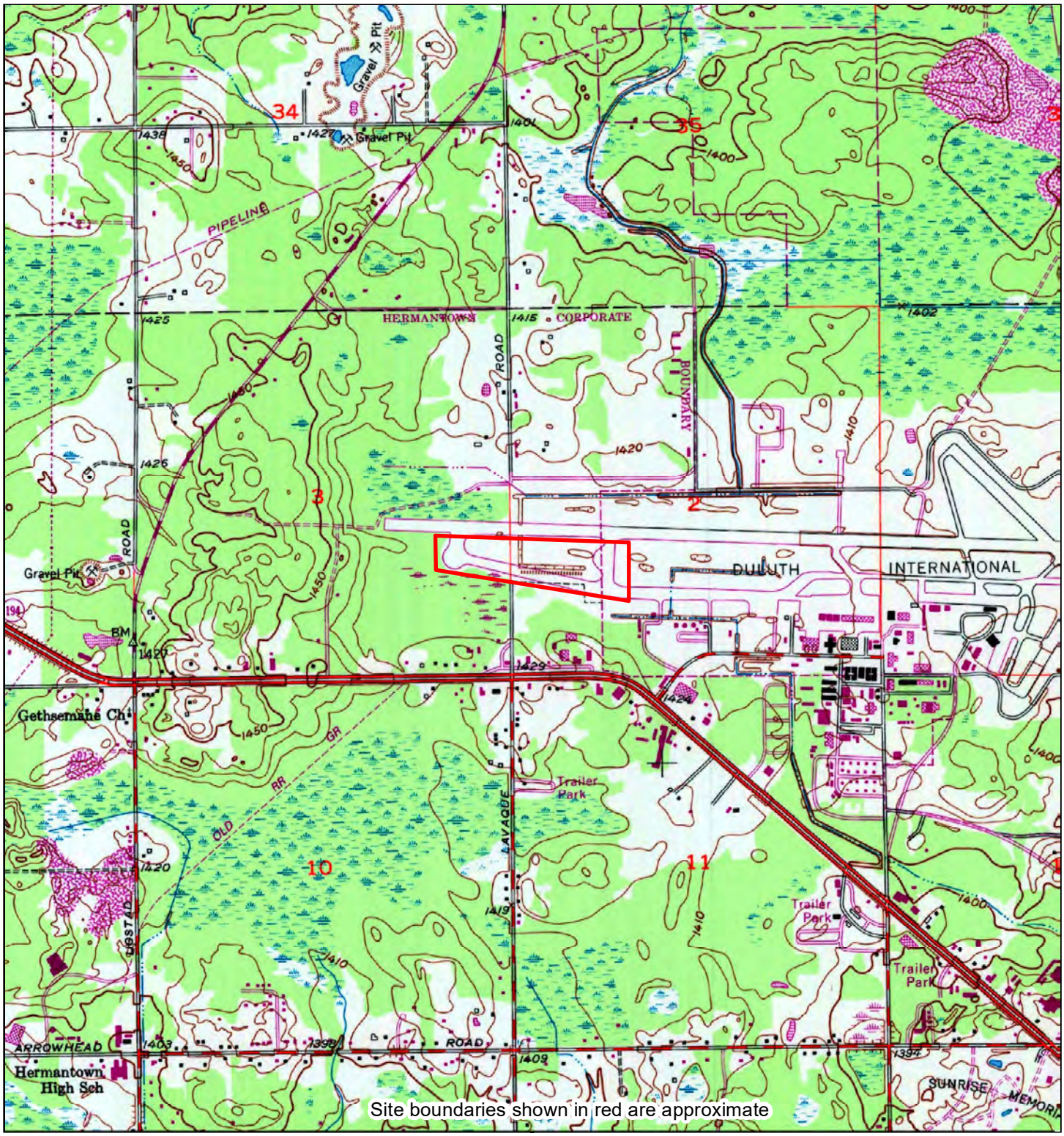
2016	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.	Short Elliot Hendrickson, Inc. project #DULAI 186683 HIG #2097200 completed: 04/03/2026	

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates Photo Year	Inspected	Revised
All	Duluth Heights, MN	USGS	7½' x 7½'	2016	--	--	--



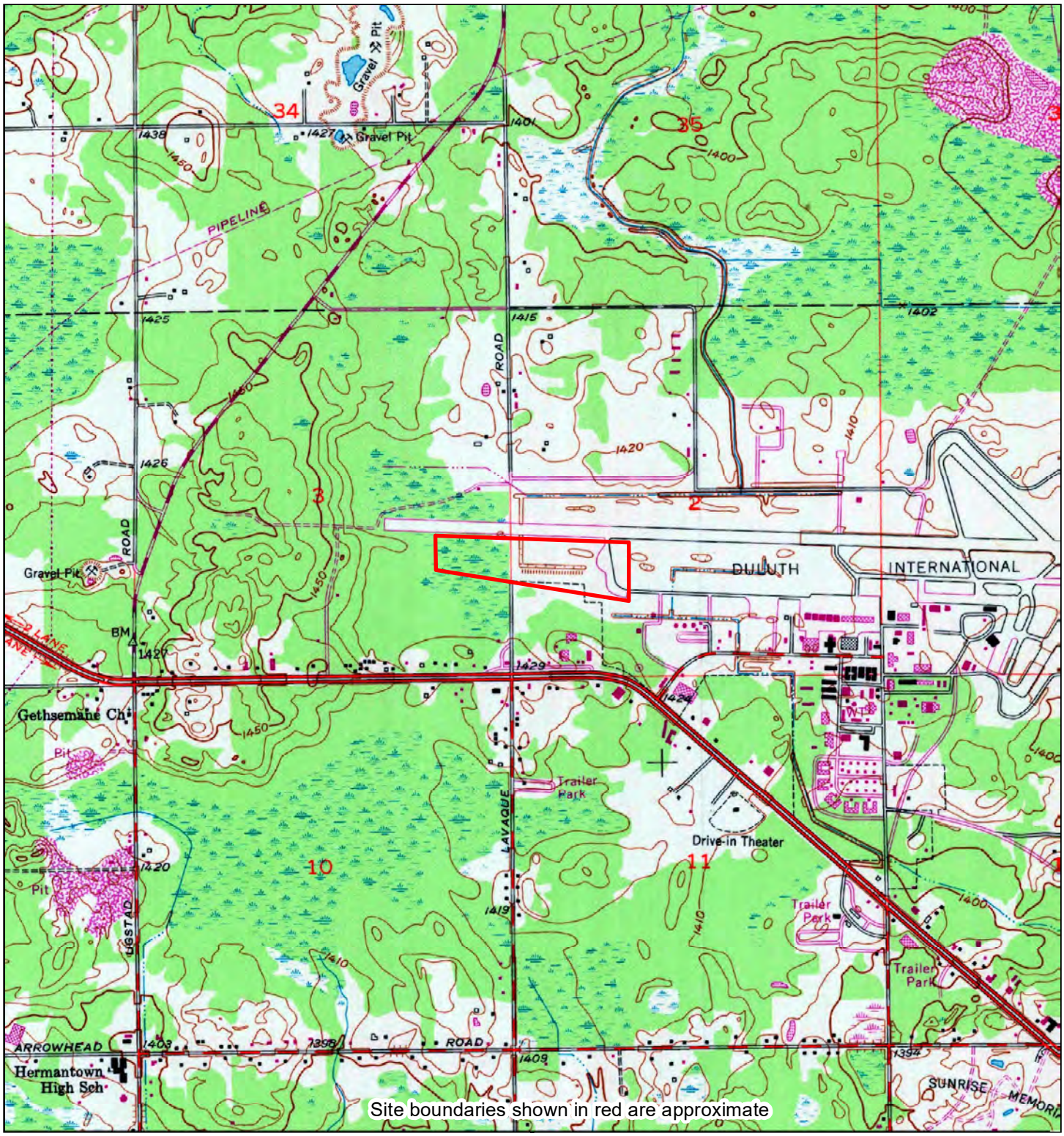
2013	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.	Short Elliot Hendrickson, Inc. project #DULAI 186683 HIG #2097200 completed: 04/03/2026	

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Year	Topo Updates Inspected	Topo Updates Revised
All	Duluth Heights, MN	USGS	7½' x 7½'	2013	--	--	--



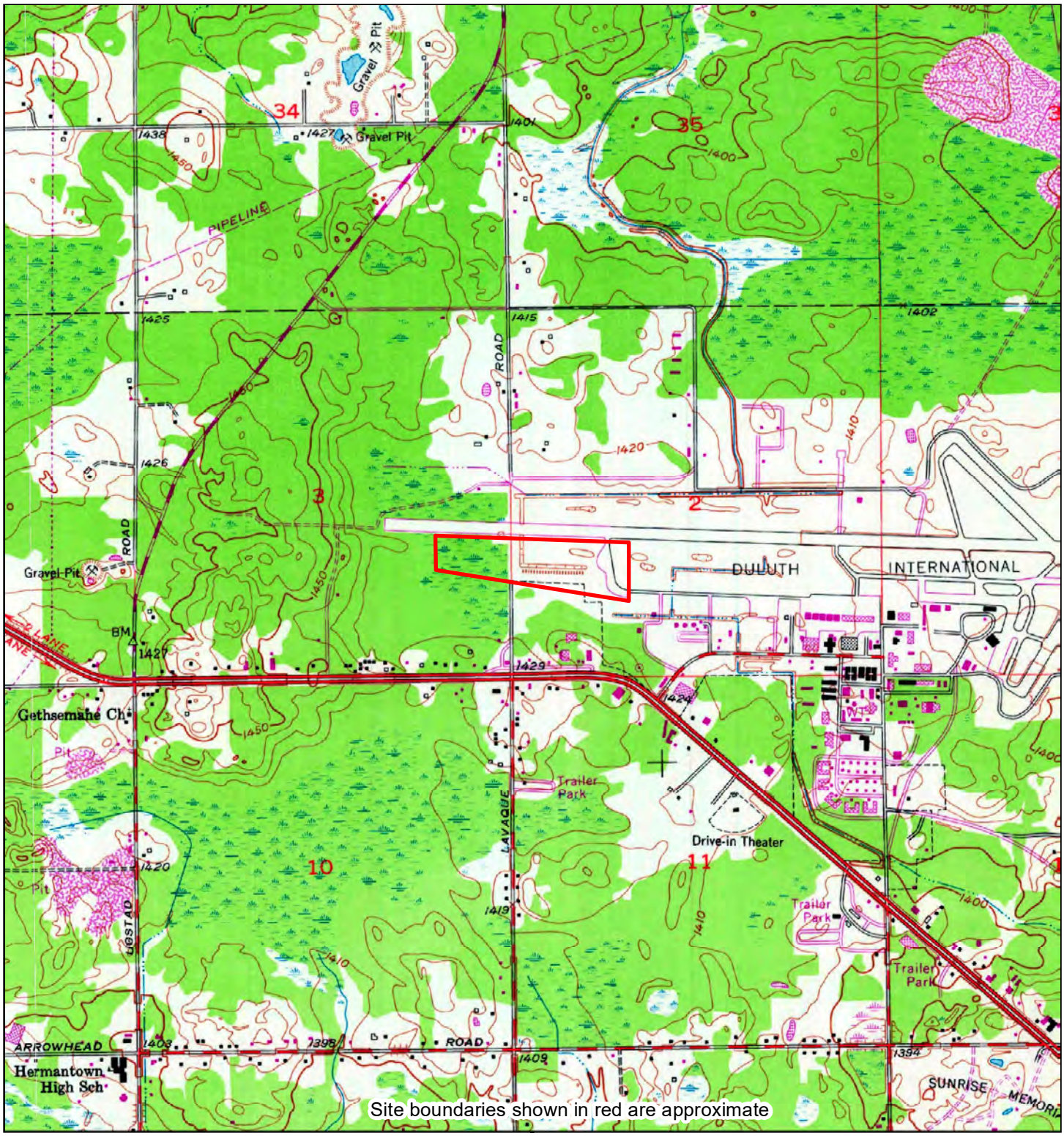
1993	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.	Short Elliot Hendrickson, Inc. project #DULAI 186683 HIG #2097200 completed: 04/03/2026	

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates Photo Year	Inspected	Revised
All	Duluth Heights, MN	USGS	7½' x 7½'	1953	1991	--	1993



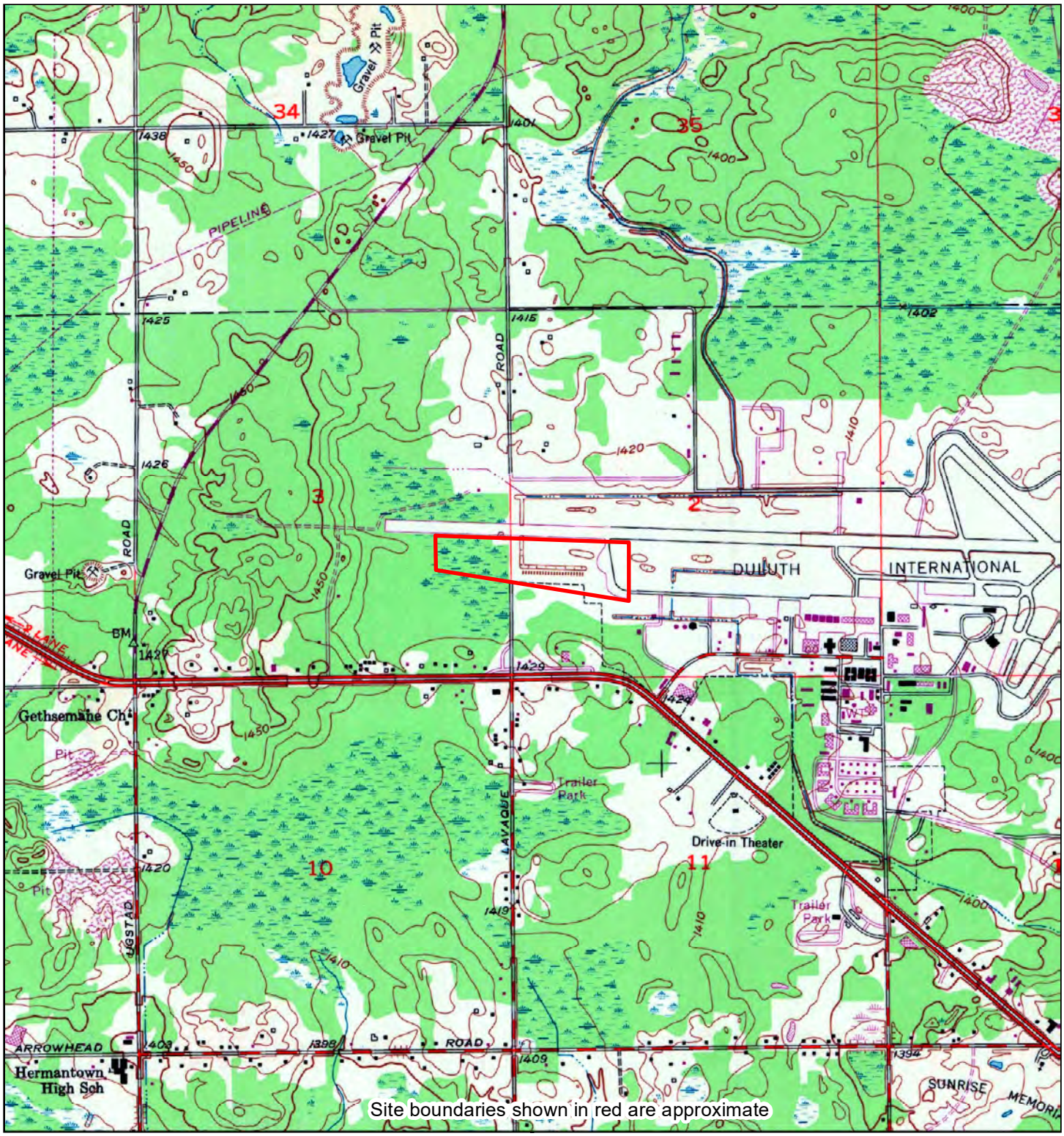
1981	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.	Short Elliot Hendrickson, Inc. project #DULAI 186683 HIG #2097200 completed: 04/03/2026	

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates Photo Year	Inspected	Revised
All	Duluth Heights, MN	USGS	7½' x 7½'	1953	1975	1981	1975



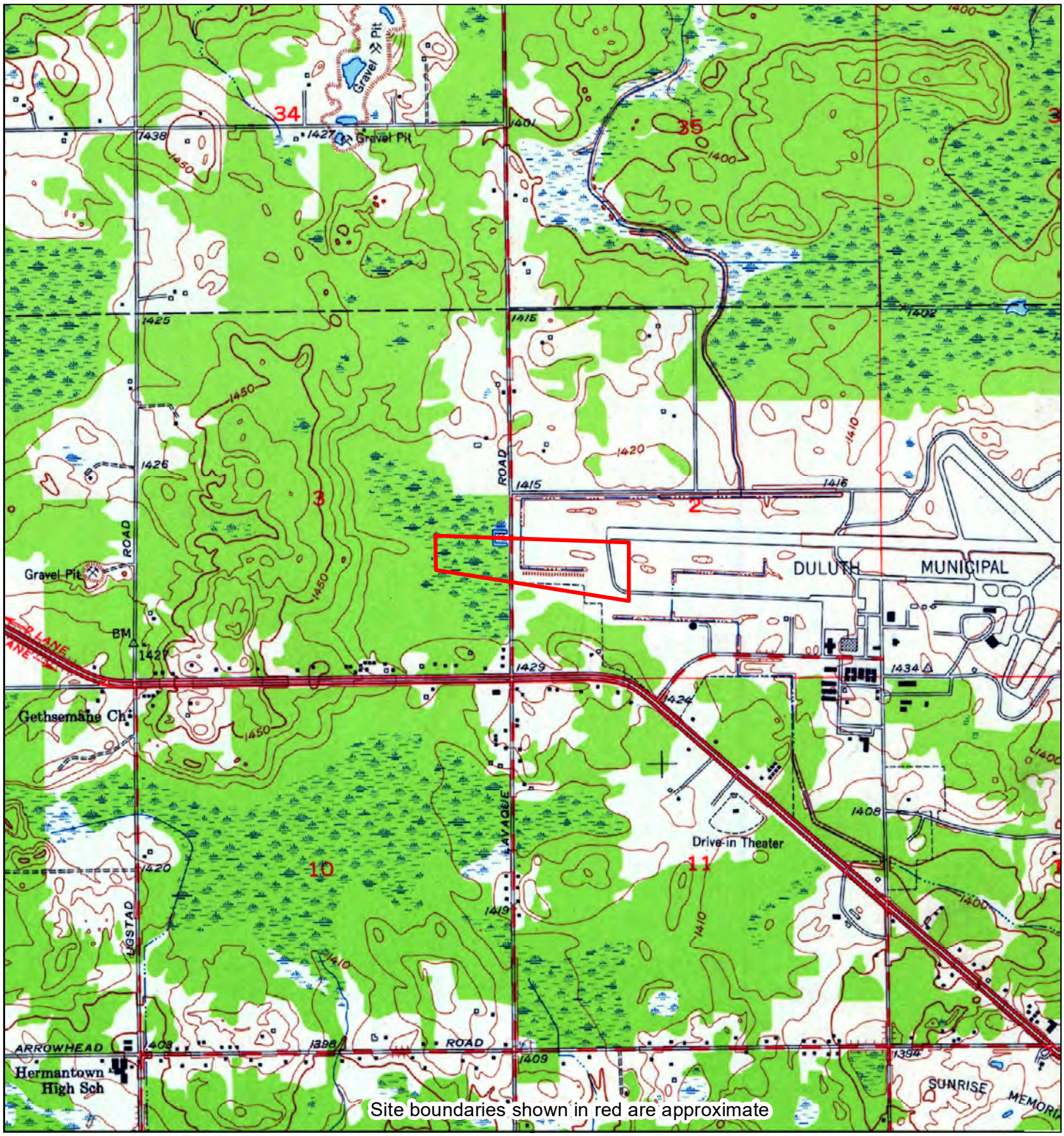
1975	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.	Short Elliot Hendrickson, Inc. project #DULAI 186683 HIG #2097200 completed: 04/03/2026	

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates Photo Year	Inspected	Revised
All	Duluth Heights, MN	USGS	7½' x 7½'	1953	1975	--	1975



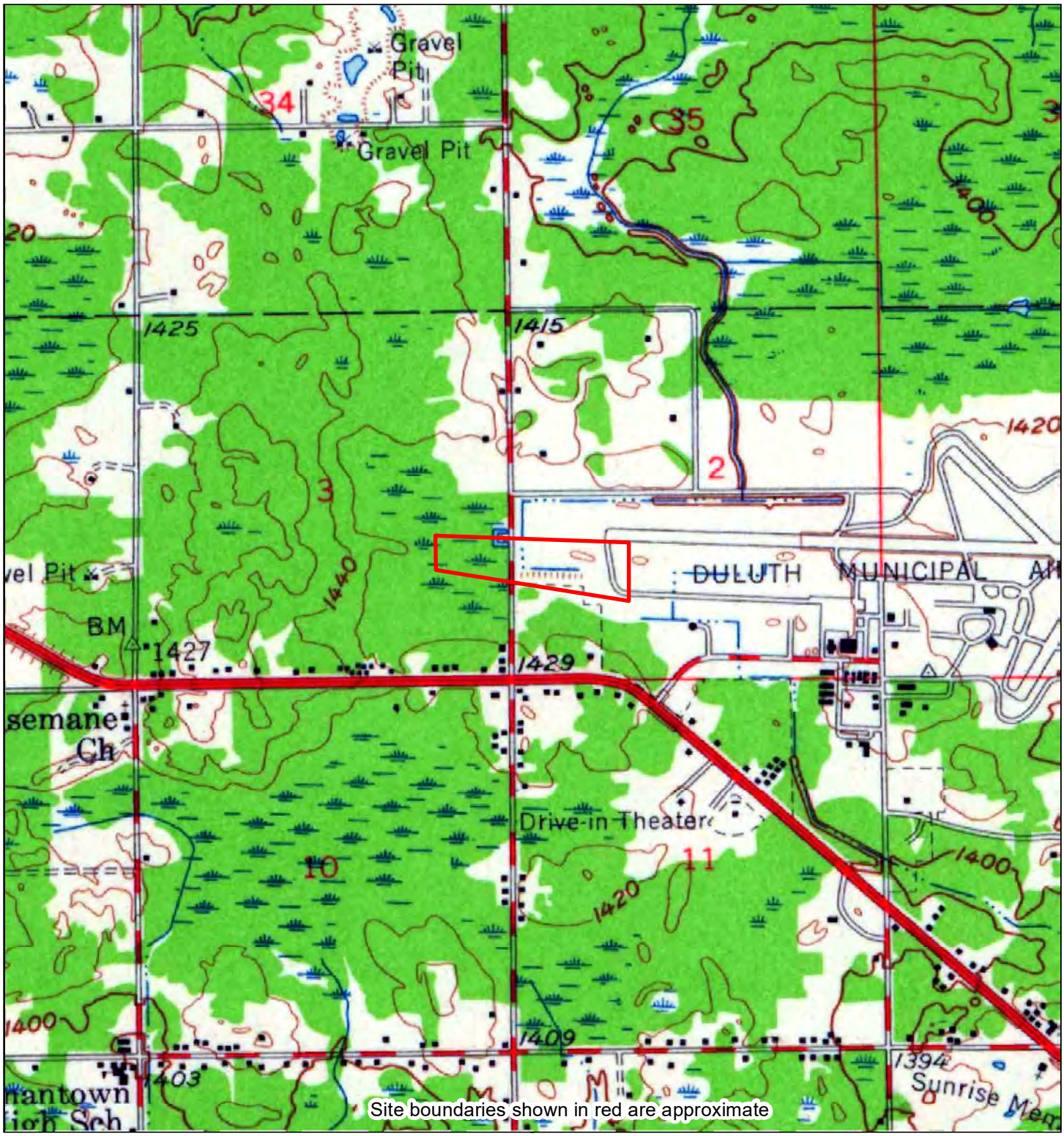
1969	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.		Short Elliot Hendrickson, Inc. project #DULAI 186683 HIG #2097200 completed: 04/03/2026

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates Photo Year	Inspected	Revised
All	Duluth Heights, MN	USGS	7½' x 7½'	1953	1969	--	1969



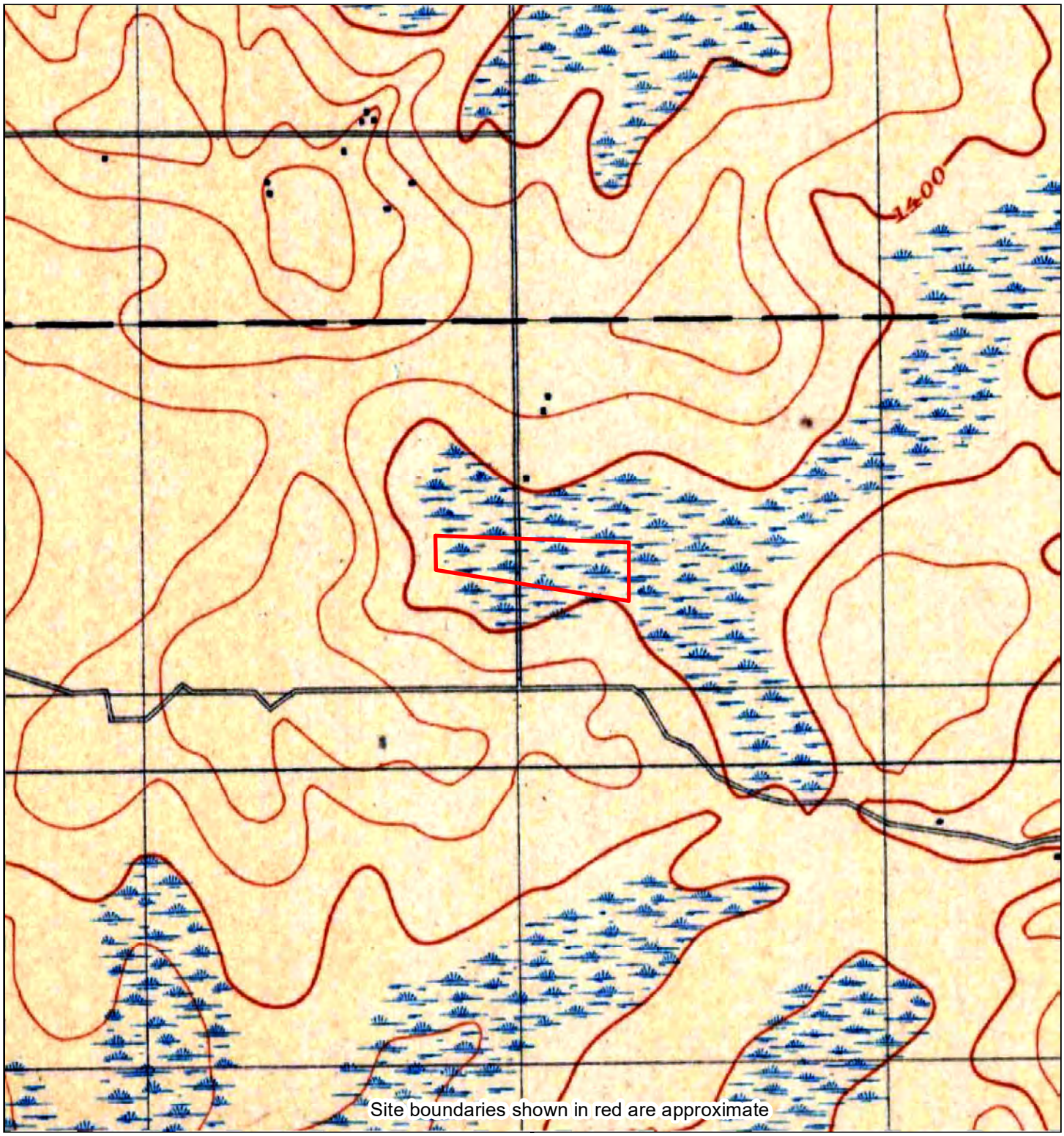
1953	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.		Short Elliot Hendrickson, Inc. project #DULAI 186683 HIG #2097200 completed: 04/03/2026

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates Photo Year	Inspected	Revised
All	Duluth Heights, MN	USGS	7½' x 7½'	1953	1952	--	--



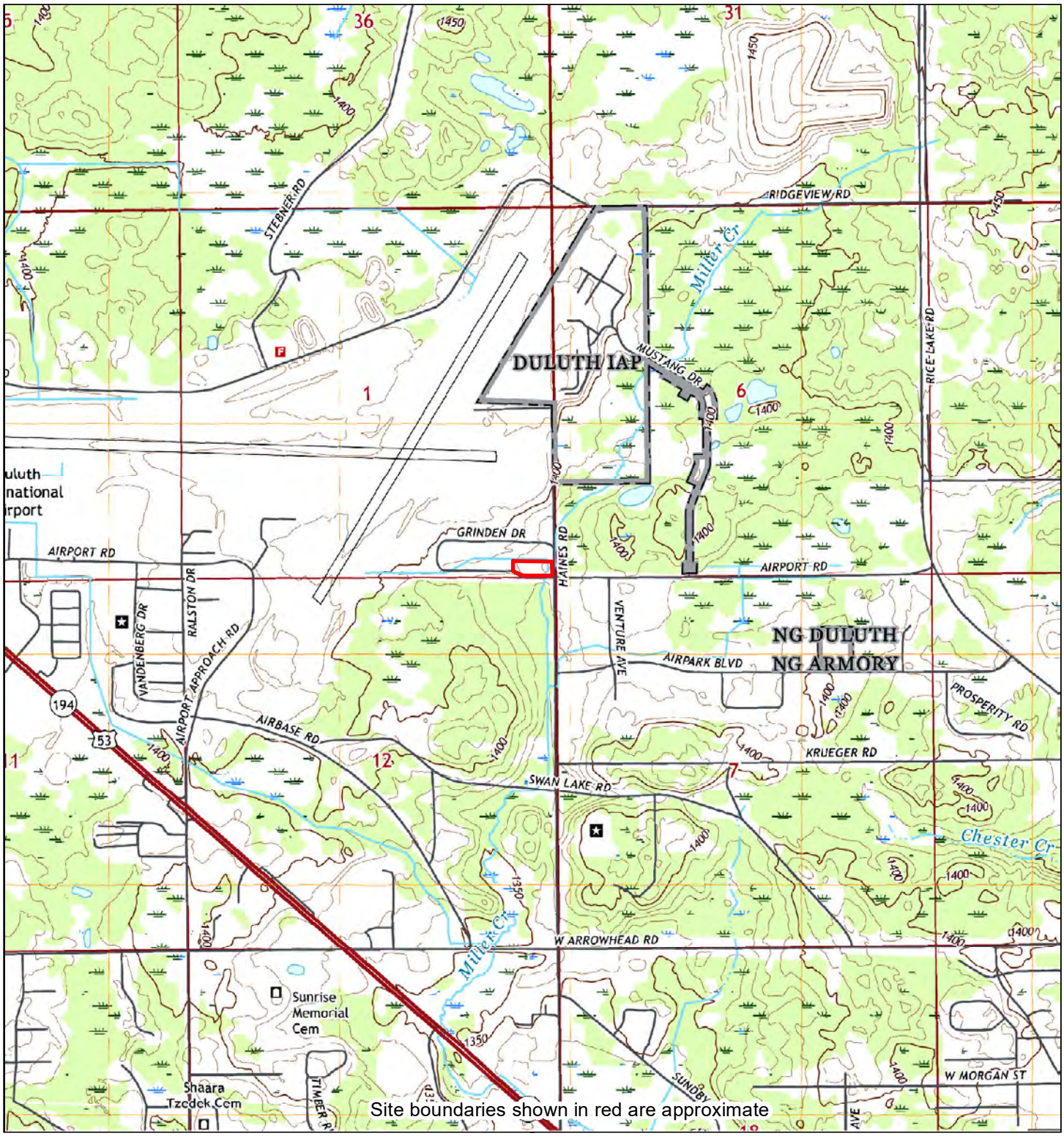
1953	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.	Short Elliot Hendrickson, Inc. project #DULAI 186683 HIG #2097200 completed: 04/03/2026	

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates Photo Year	Inspected	Revised
All	Duluth, MN	USGS	15' x 15'	1953	1952	--	--



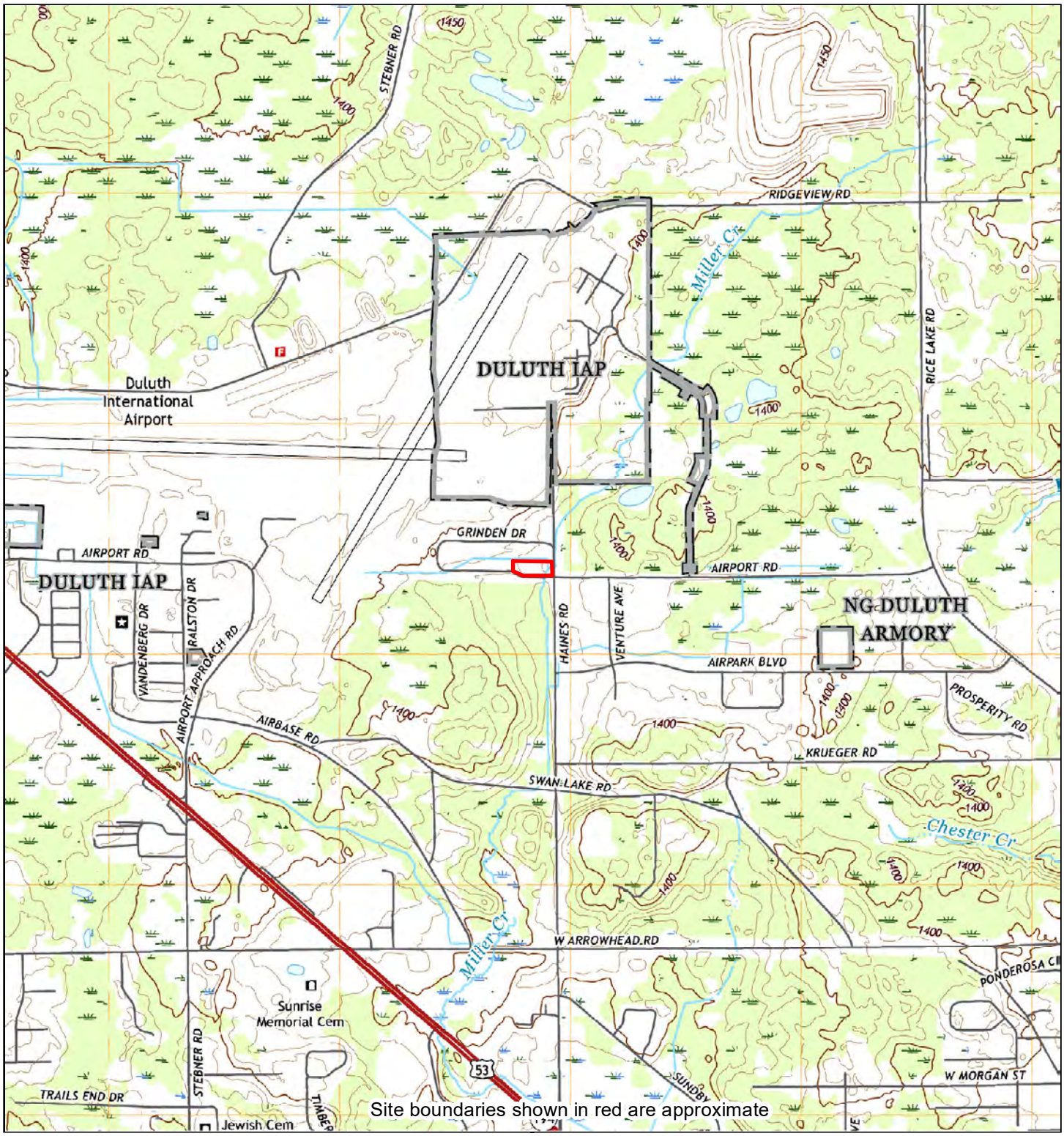
1895	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN	HIG
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.		Short Elliot Hendrickson, Inc. project #DULAI 186683 HIG #2097200 completed: 04/03/2026	

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates Photo Year	Inspected	Revised
All	Duluth, MN	USGS	15' x 15'	1895	--	--	--



2022	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.		Short Elliot Hendrickson, Inc. project #DULAI 186683 HIG #2097200 completed: 04/03/2026

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Year	Topo Updates Inspected	Topo Updates Revised
All	Duluth Heights, MN	USGS	7½' x 7½'	2022	--	--	--



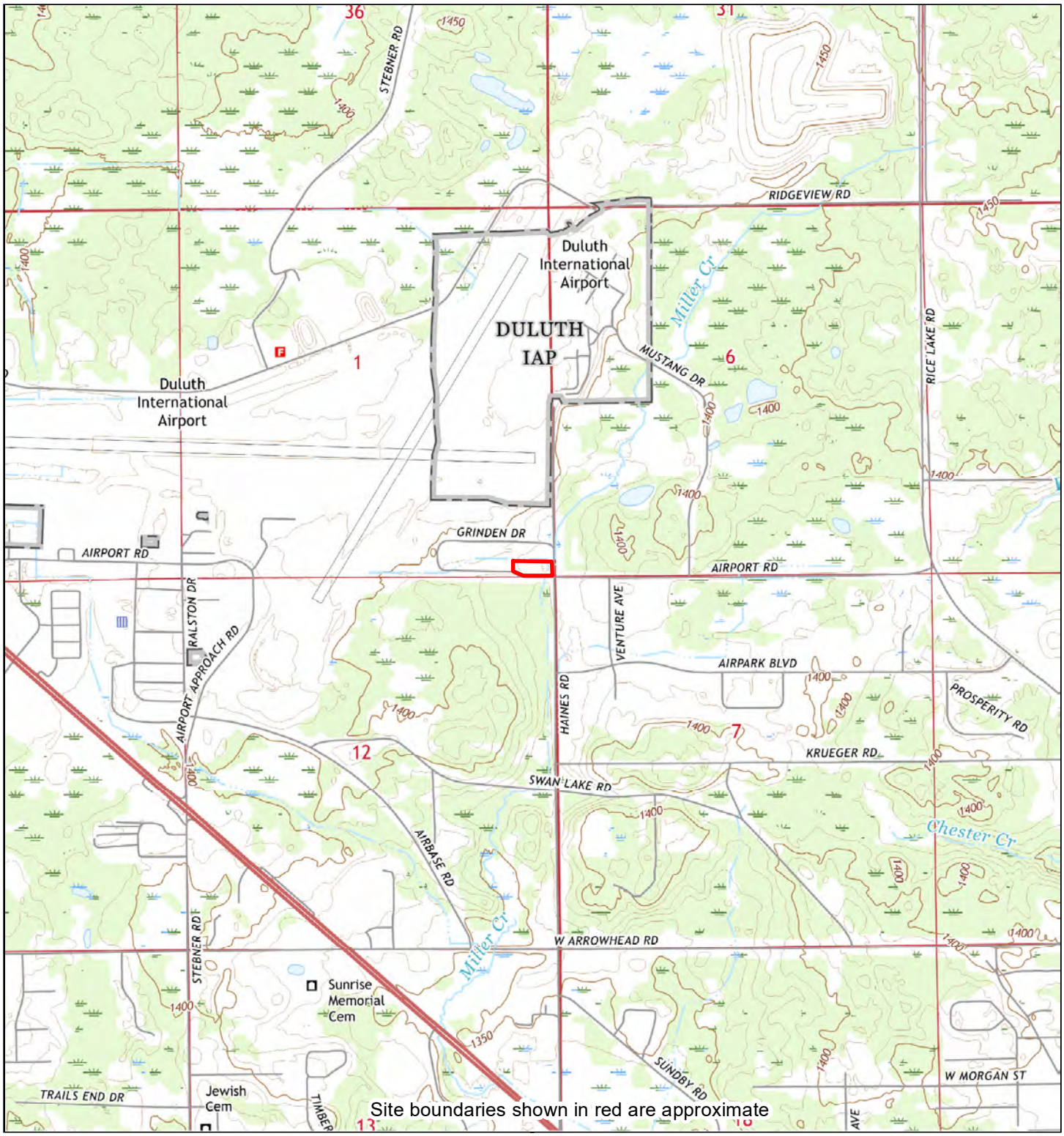
Site boundaries shown in red are approximate

2019	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN

Unified maps show subdued modern topo features where corresponding maps of the same year were not published.

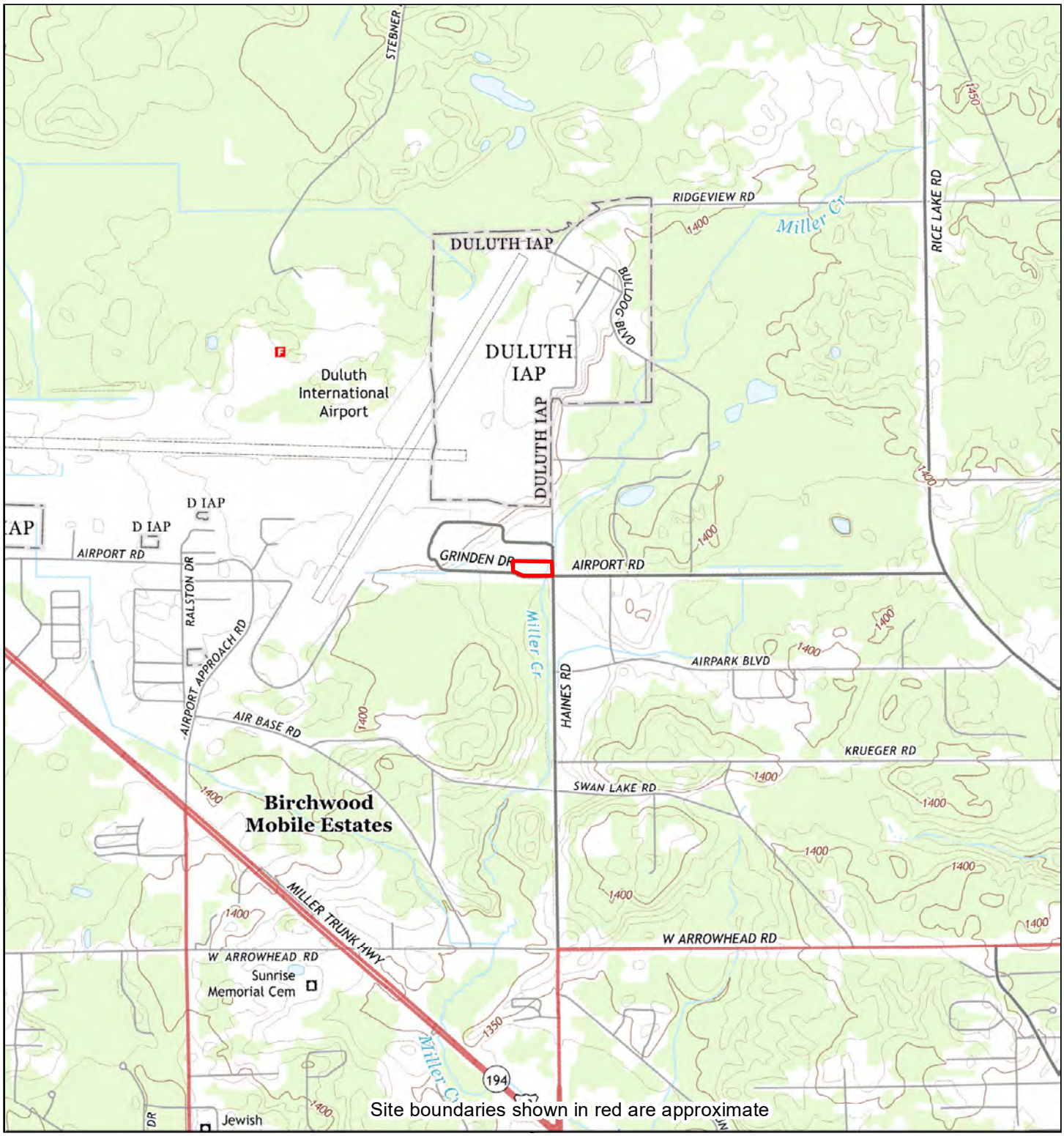
Short Elliot Hendrickson, Inc. project #DULAI 186683
HIG #2097200 completed: 04/03/2026

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates Photo Year	Inspected	Revised
All	Duluth Heights, MN	USGS	7½' x 7½'	2019	--	--	--



2016	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.	Short Elliot Hendrickson, Inc. project #DULAI 186683 HIG #2097200 completed: 04/03/2026	

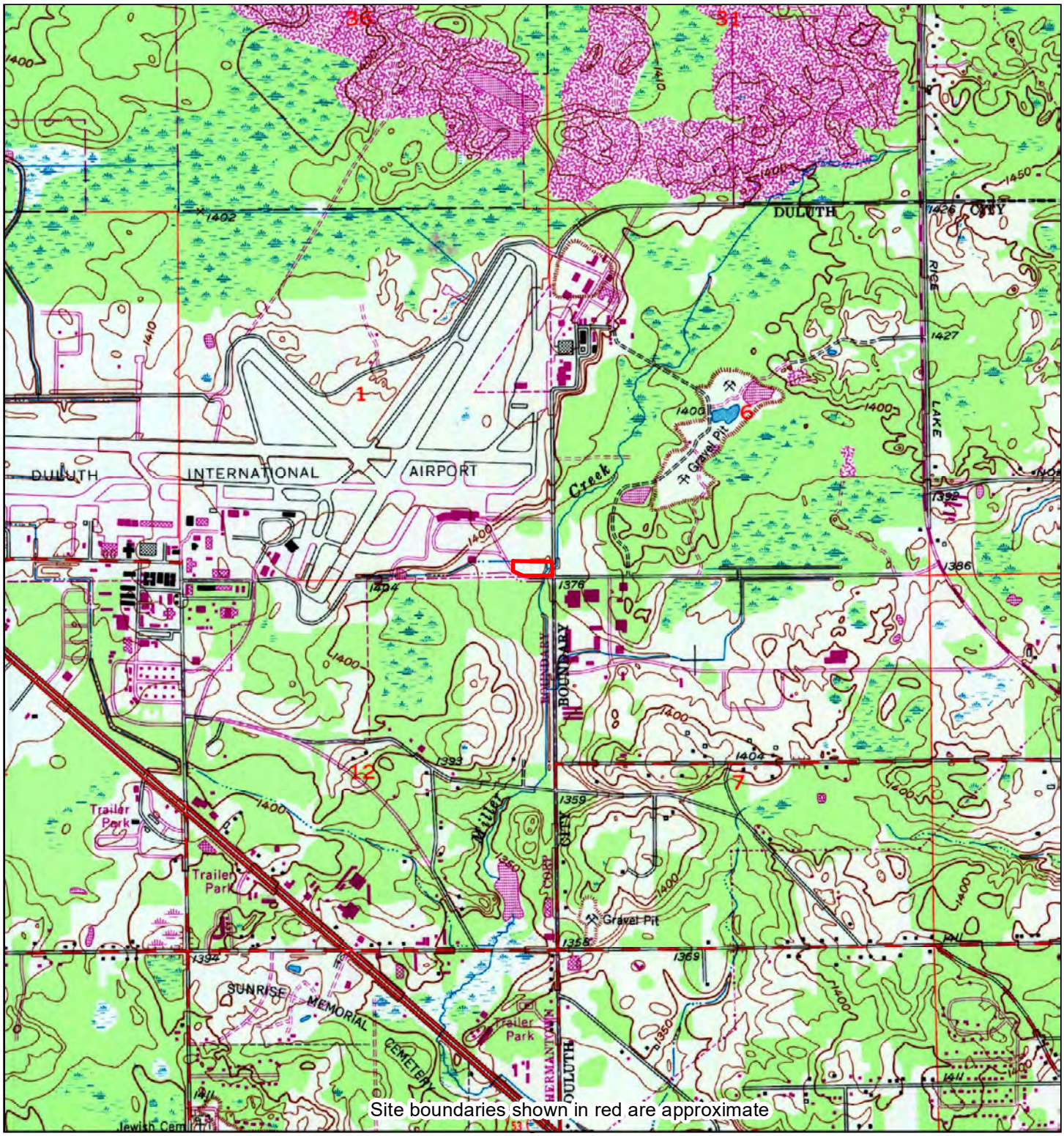
Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Year	Topo Updates Inspected	Topo Updates Revised
All	Duluth Heights, MN	USGS	7½' x 7½'	2016	--	--	--



Site boundaries shown in red are approximate

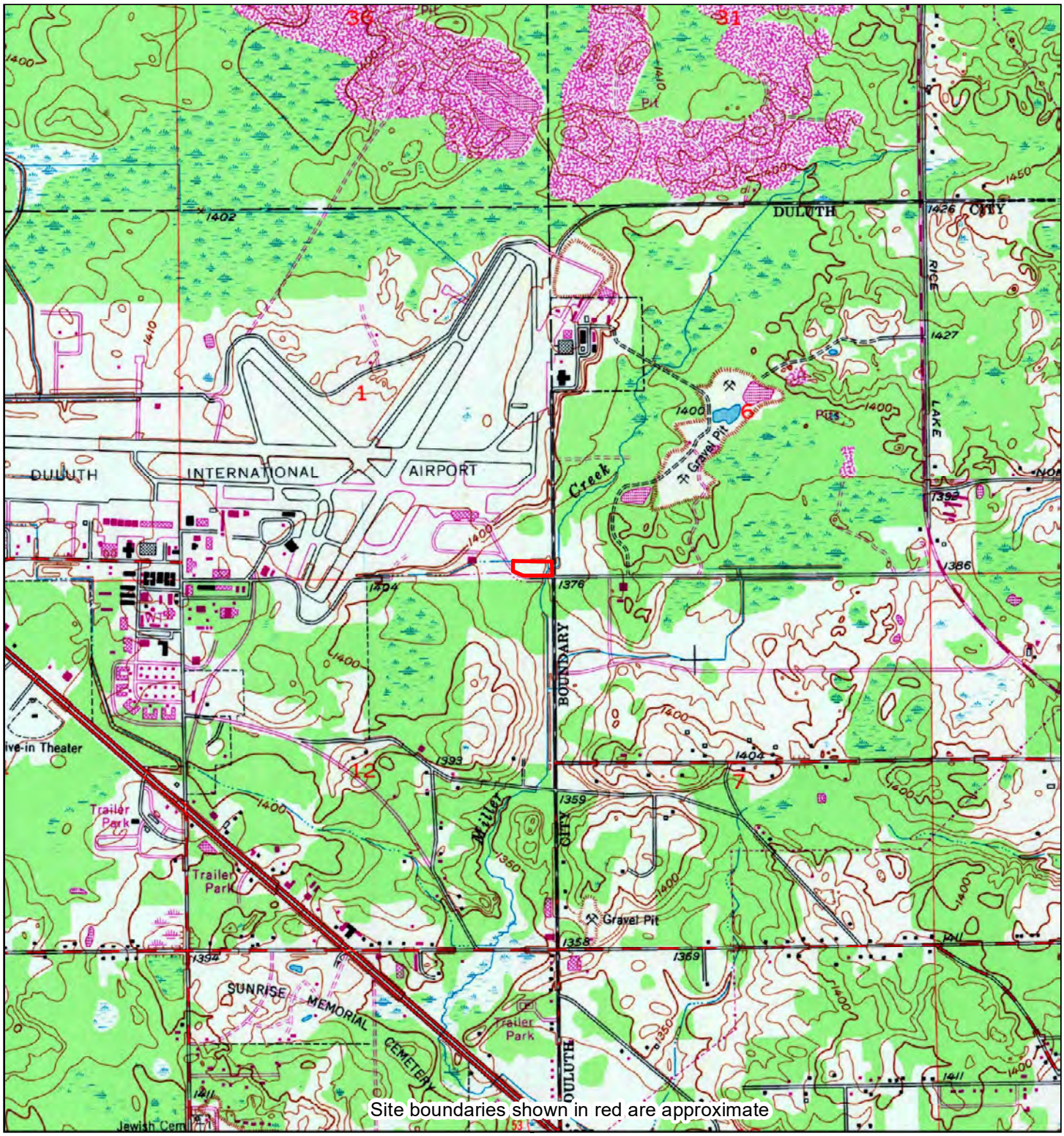
2013	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.	Short Elliot Hendrickson, Inc. project #DULAI 186683 HIG #2097200 completed: 04/03/2026	

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates Photo Year	Inspected	Revised
All	Duluth Heights, MN	USGS	7½' x 7½'	2013	--	--	--



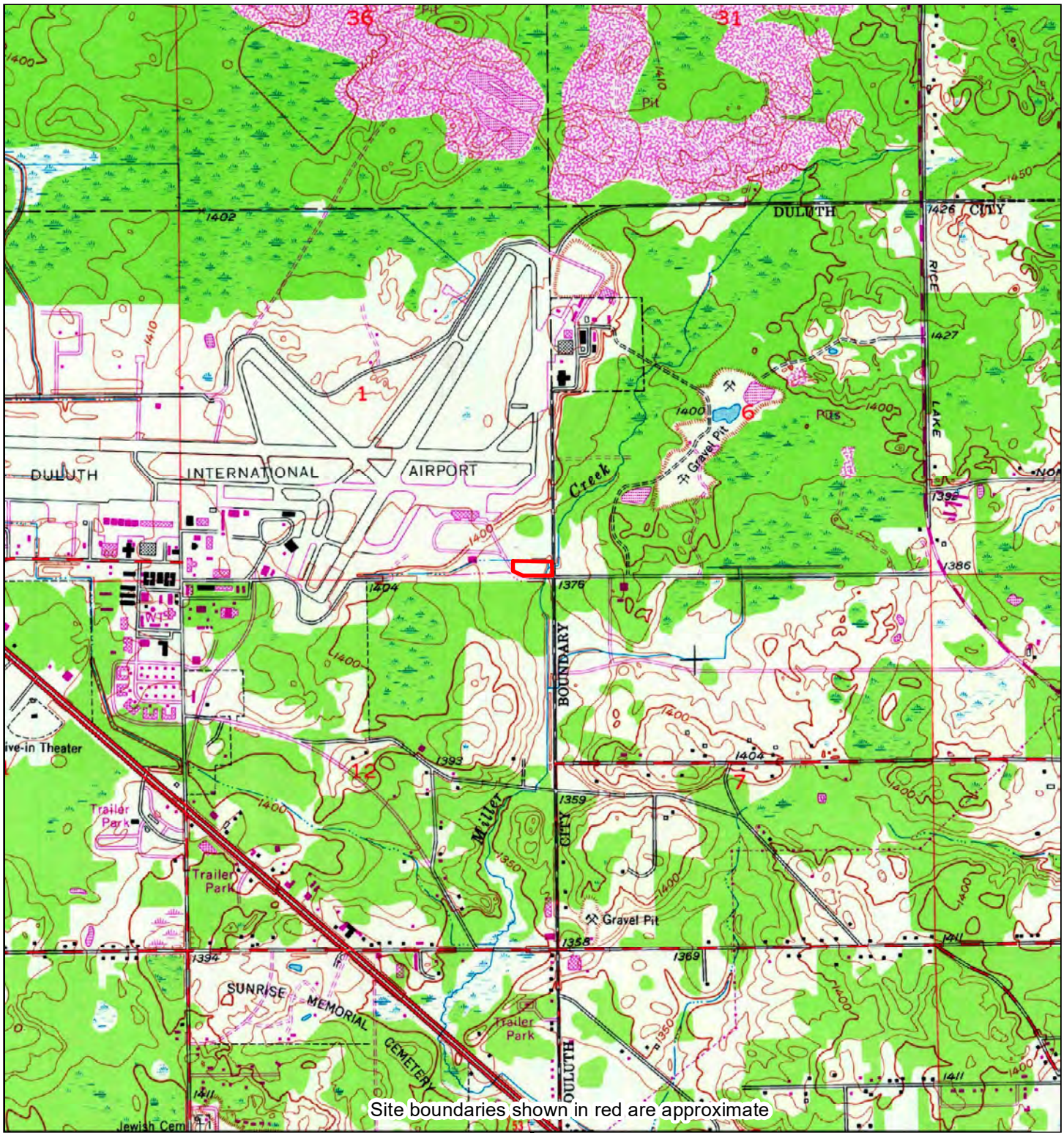
1993	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.	Short Elliot Hendrickson, Inc. project #DULAI 186683 HIG #2097200 completed: 04/03/2026	

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates Photo Year	Inspected	Revised
All	Duluth Heights, MN	USGS	7½' x 7½'	1953	1991	--	1993



1981	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.	Short Elliot Hendrickson, Inc. project #DULAI 186683 HIG #2097200 completed: 04/03/2026	

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates Photo Year	Inspected	Revised
All	Duluth Heights, MN	USGS	7½' x 7½'	1953	1975	1981	1975

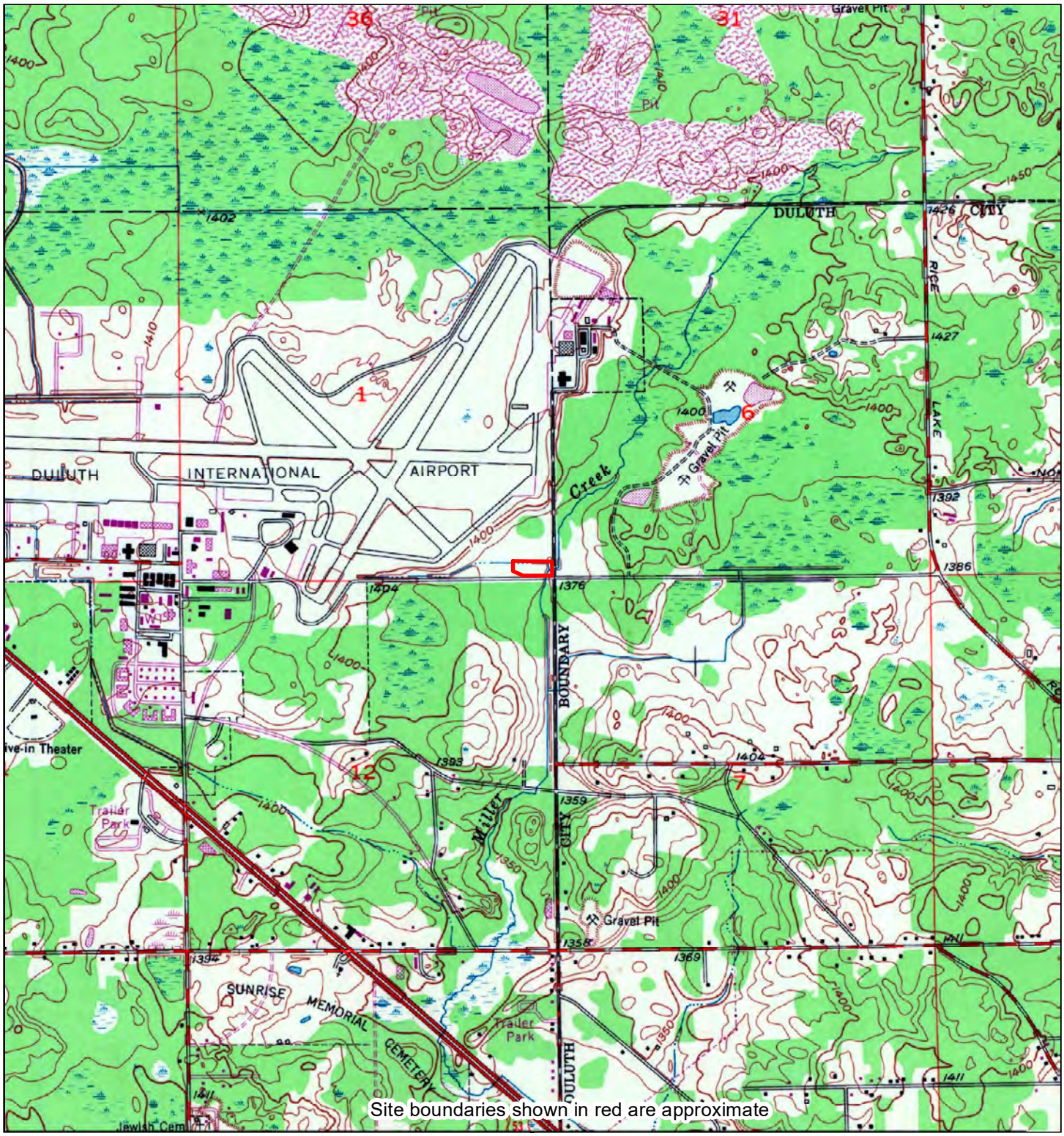


1975	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN

Unified maps show subdued modern topo features where corresponding maps of the same year were not published.

Short Elliot Hendrickson, Inc. project #DULAI 186683
HIG #2097200 completed: 04/03/2026

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates Photo Year	Inspected	Revised
All	Duluth Heights, MN	USGS	7½' x 7½'	1953	1975	--	1975

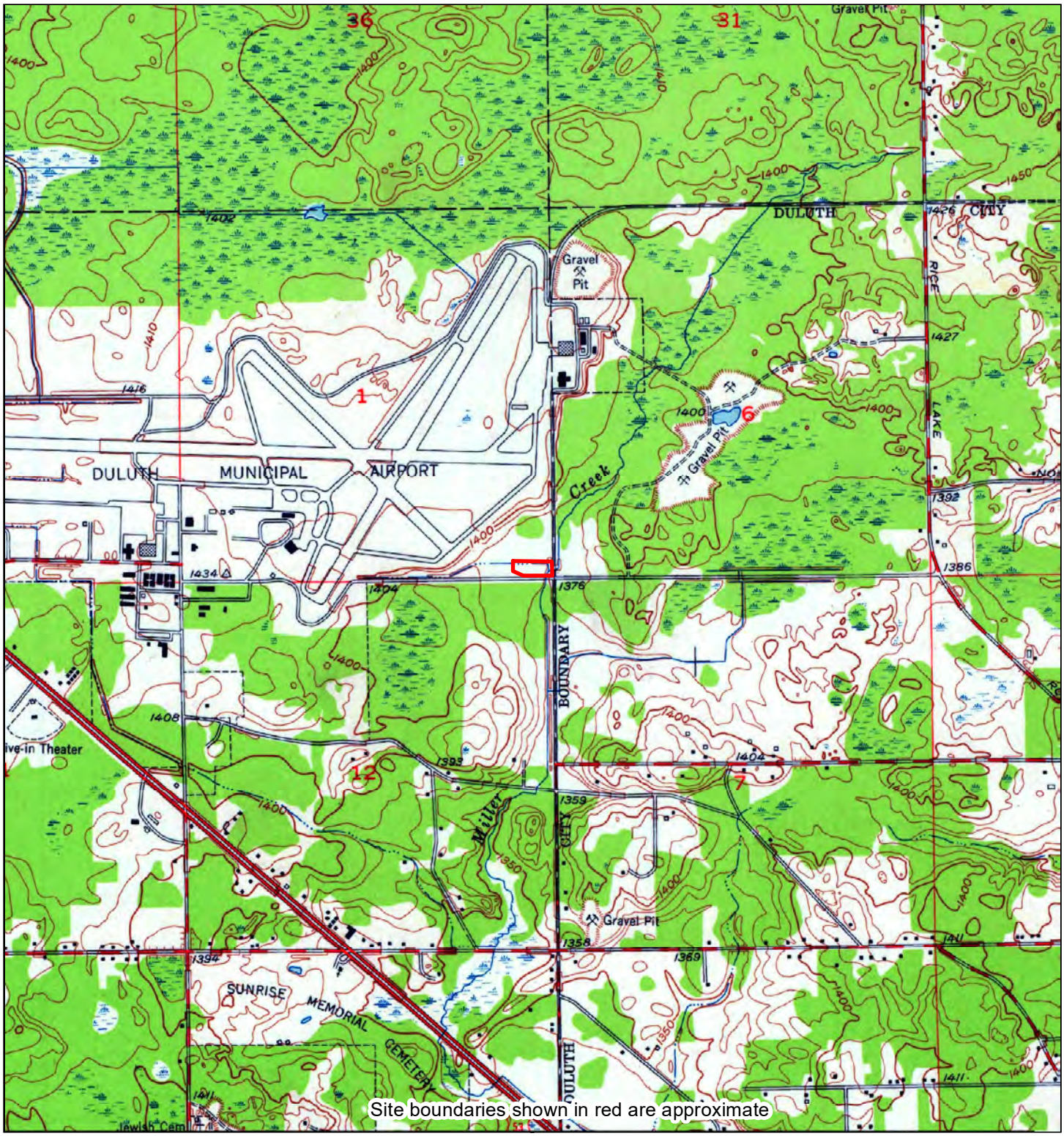


1969	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN

Unified maps show subdued modern topo features where corresponding maps of the same year were not published.

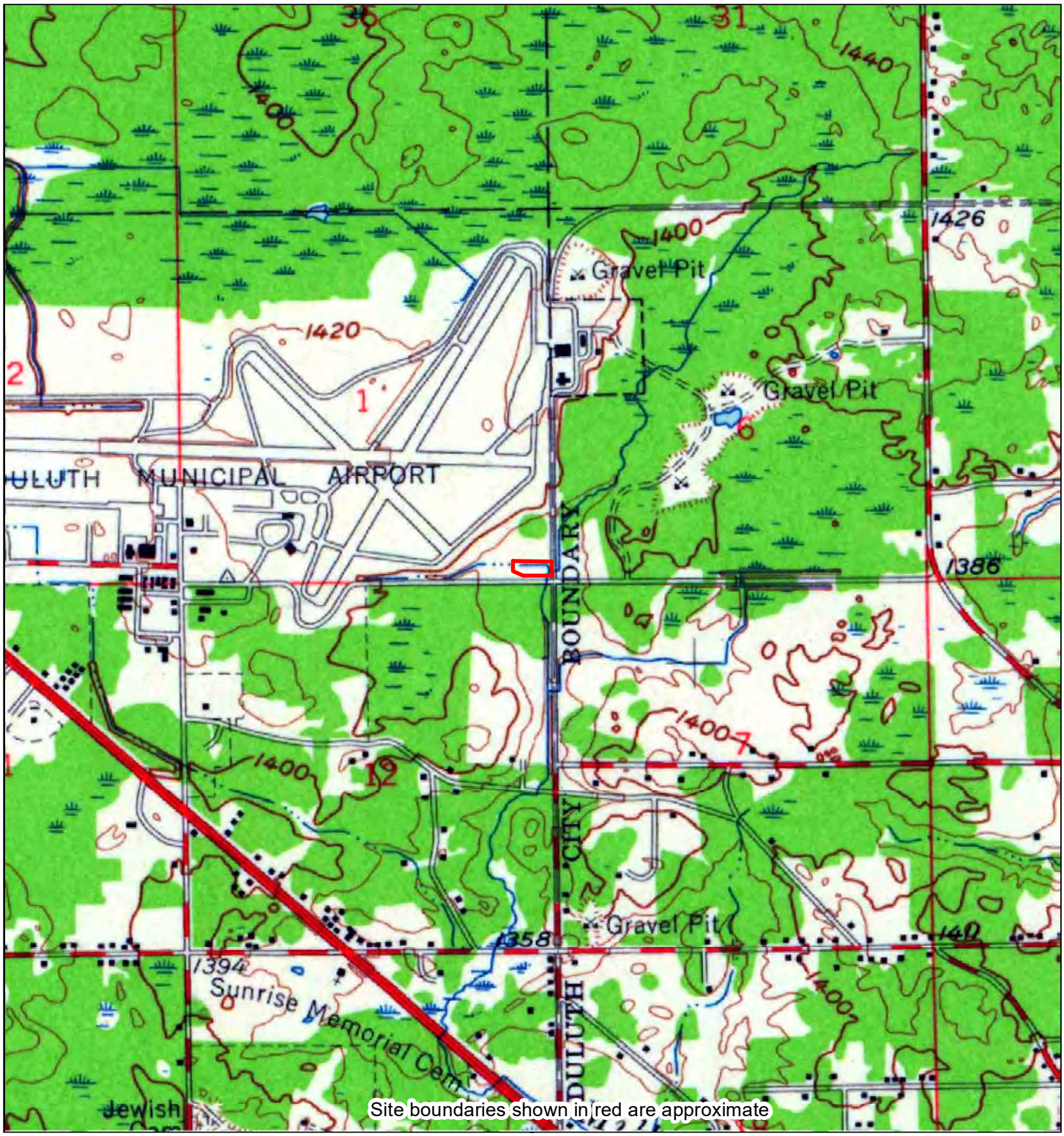
Short Elliot Hendrickson, Inc. project #DULAI 186683
HIG #2097200 completed: 04/03/2026

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates: Photo Year	Inspected	Revised
All	Duluth Heights, MN	USGS	7½' x 7½'	1953	1969	--	1969



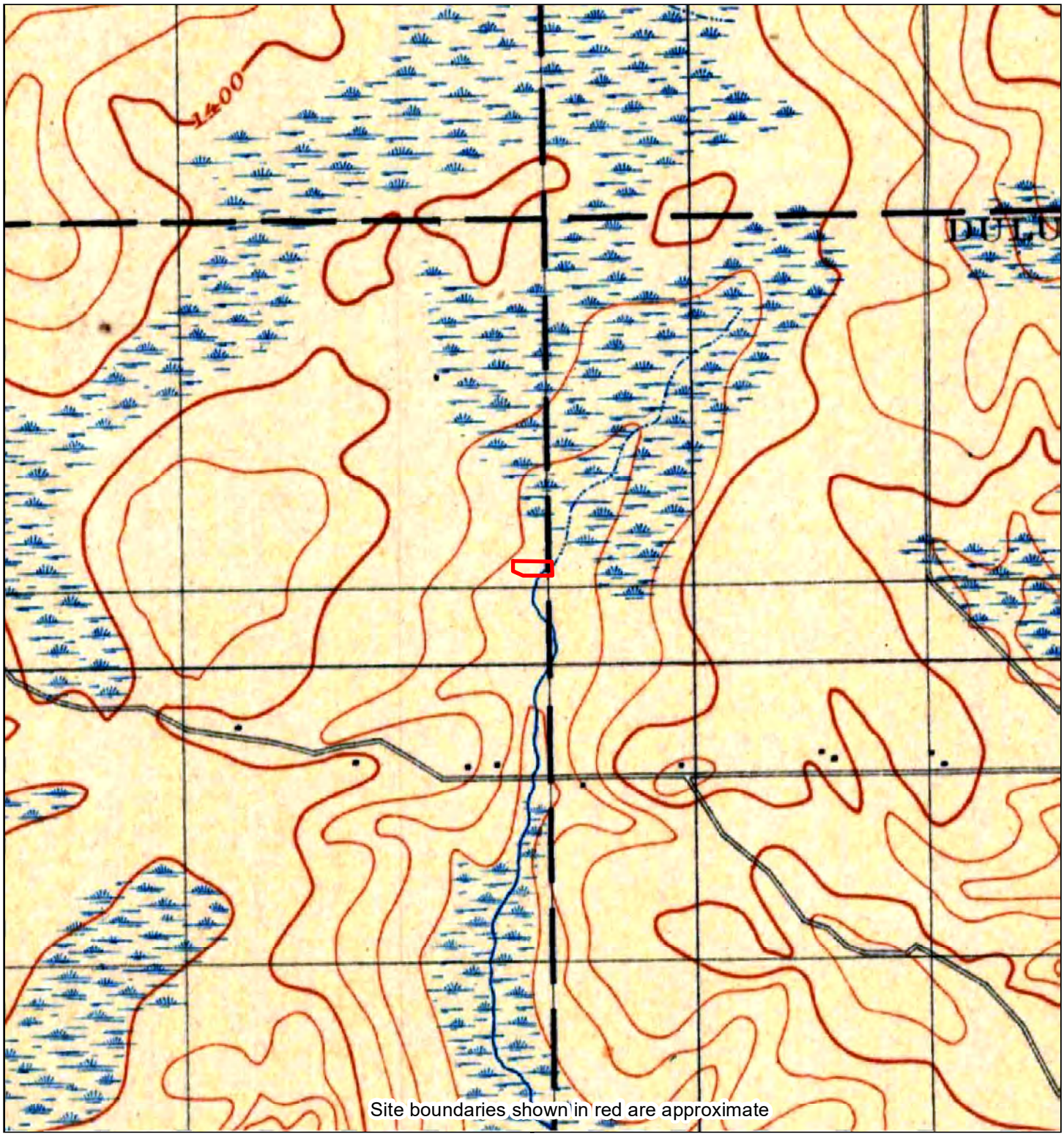
1953	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.	Short Elliot Hendrickson, Inc. project #DULAI 186683 HIG #2097200 completed: 04/03/2026	

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates Photo Year	Inspected	Revised
All	Duluth Heights, MN	USGS	7½' x 7½'	1953	1952	--	--



1953	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN	HIG
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.		Short Elliot Hendrickson, Inc. project #DULAI 186683 HIG #2097200 completed: 04/03/2026	

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates Photo Year	Inspected	Revised
All	Duluth, MN	USGS	15' x 15'	1953	1952	--	--



1895

0 Distance in Miles 1

1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N

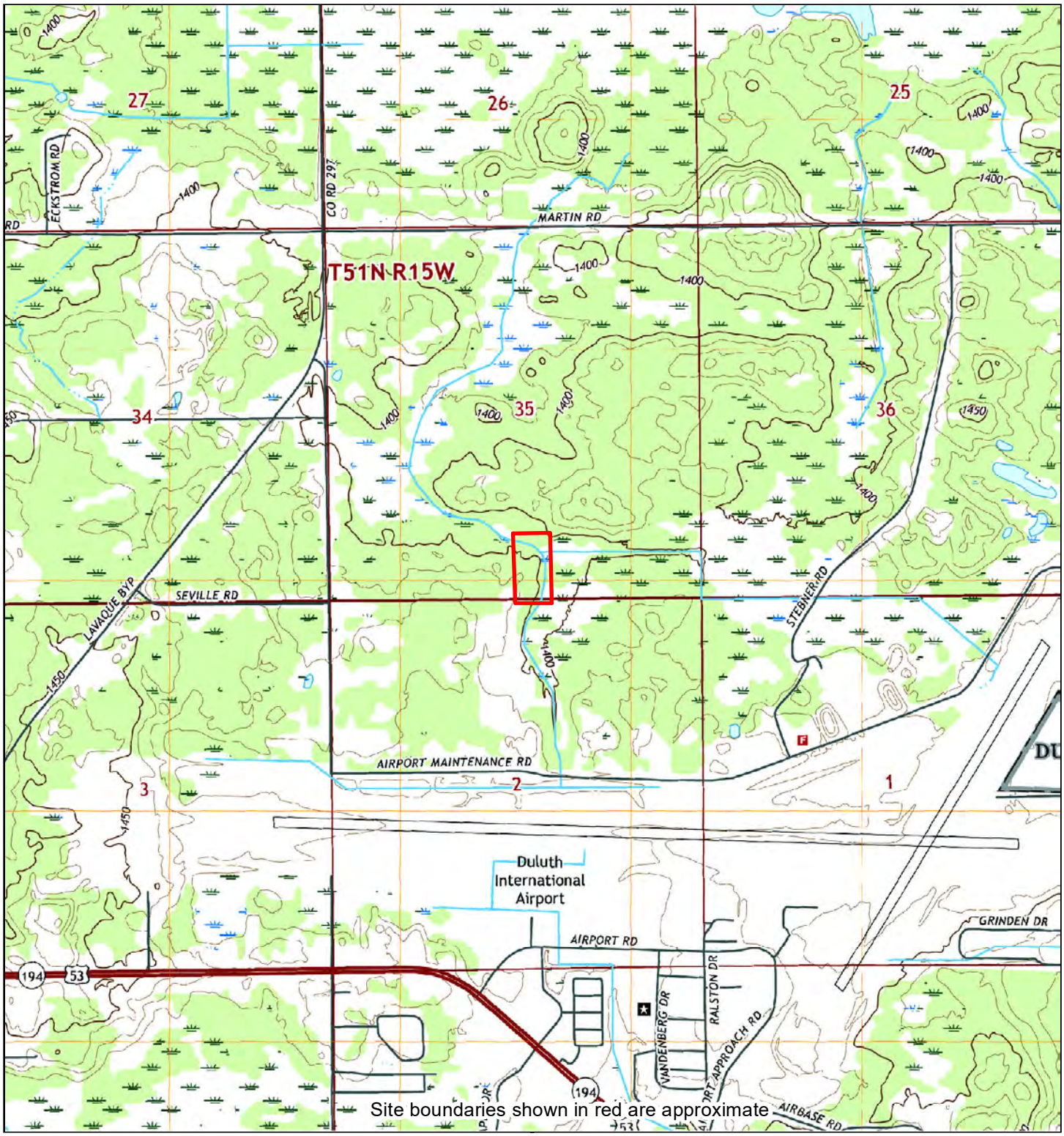
Site information:
Taxiway A Reconstruction Phase 7

Duluth, MN

Unified maps show subdued modern topo features where corresponding maps of the same year were not published.

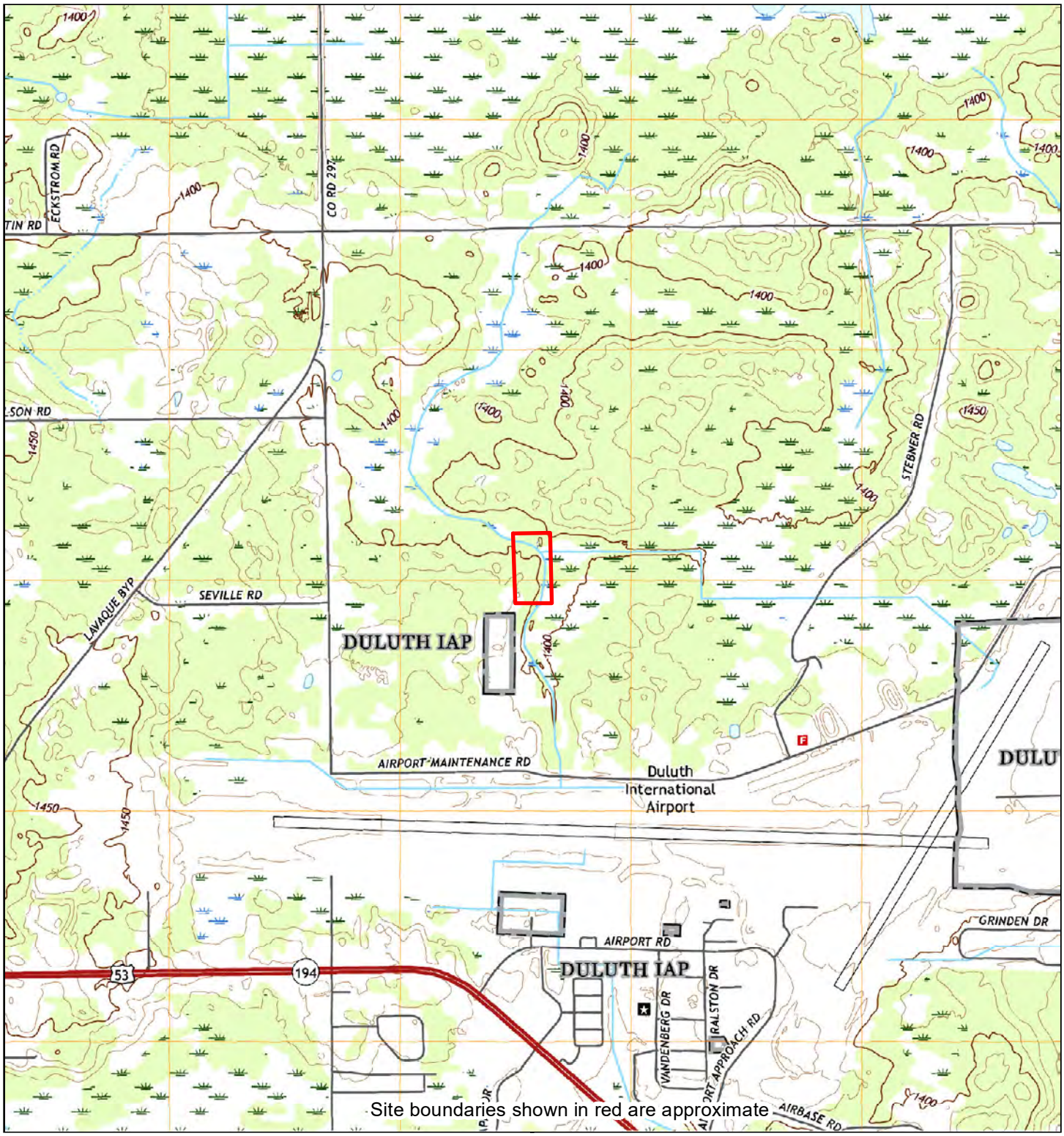
Short Elliot Hendrickson, Inc. project #DULAI 186683
HIG #2097200 completed: 04/03/2026

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates Photo Year	Inspected	Revised
All	Duluth, MN	USGS	15' x 15'	1895	--	--	--



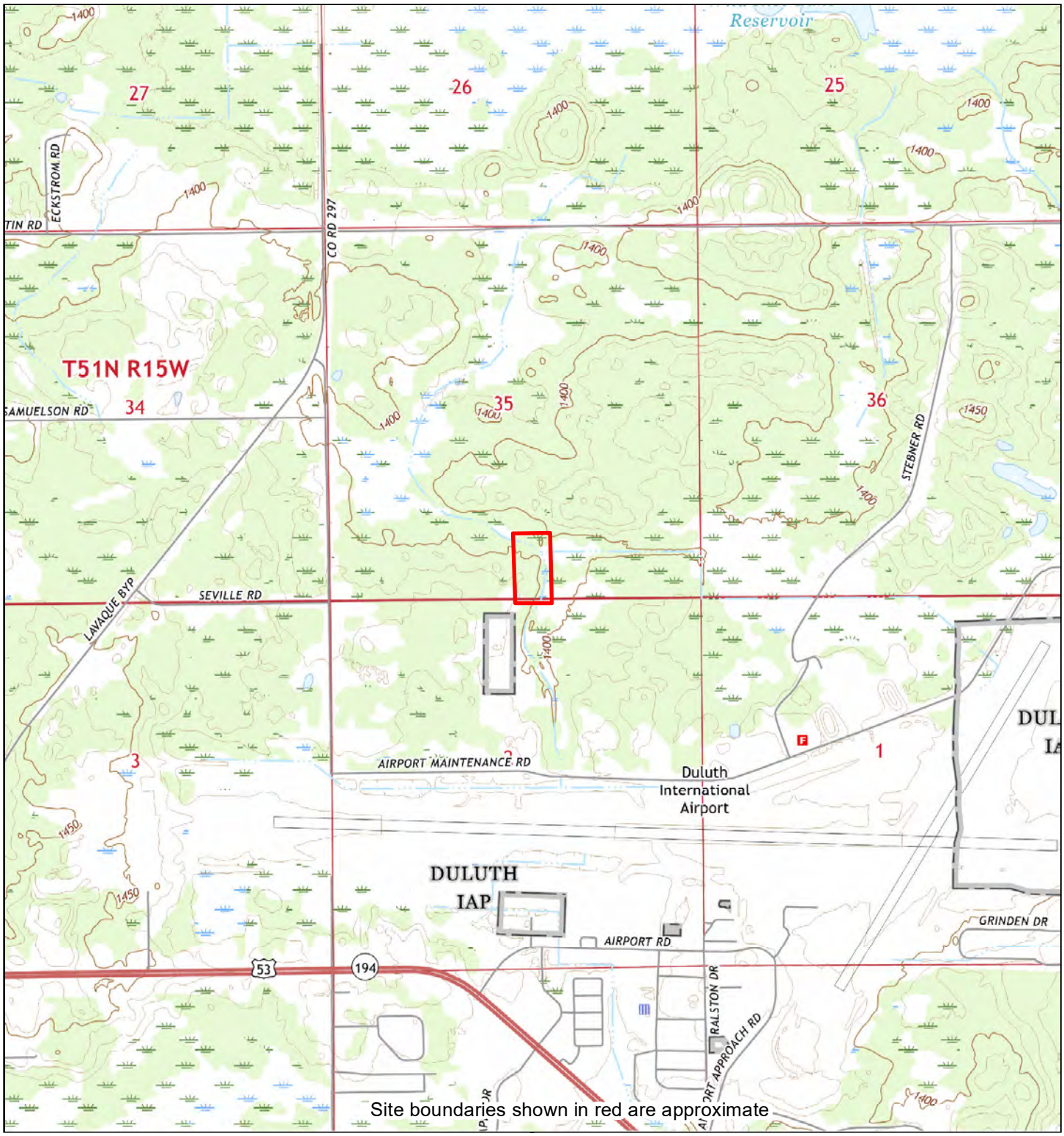
2022	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.		Short Elliot Hendrickson, Inc. project #DULAI 186683 HIG #2097200 completed: 04/03/2026

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates: Photo Year	Inspected	Revised
All	Duluth Heights, MN	USGS	7½' x 7½'	2022	--	--	--



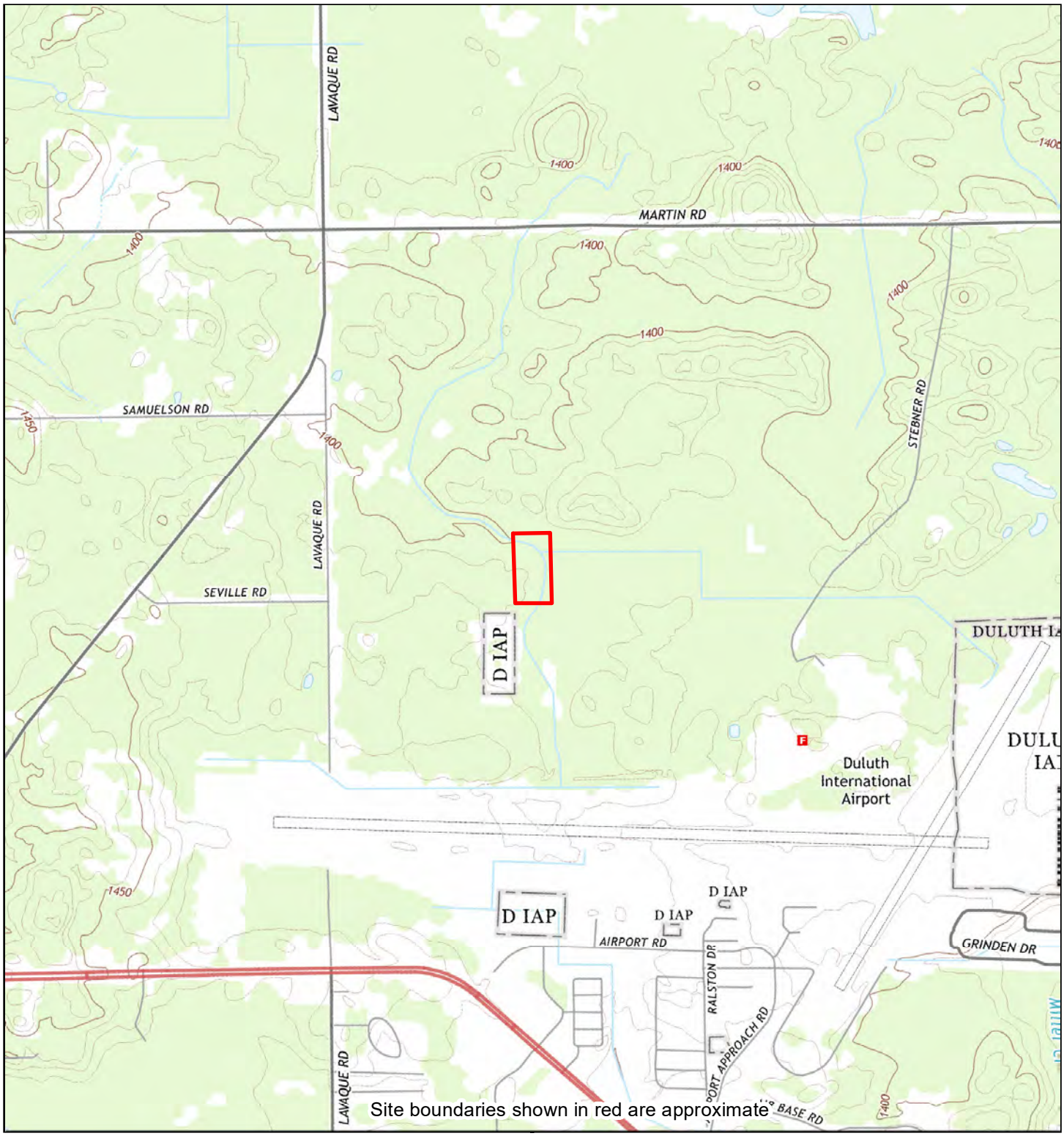
2019	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.		Short Elliot Hendrickson, Inc. project #DULAI 186683 HIG #2097200 completed: 04/03/2026

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Year	Topo Updates Inspected	Topo Updates Revised
All	Duluth Heights, MN	USGS	7½' x 7½'	2019	--	--	--



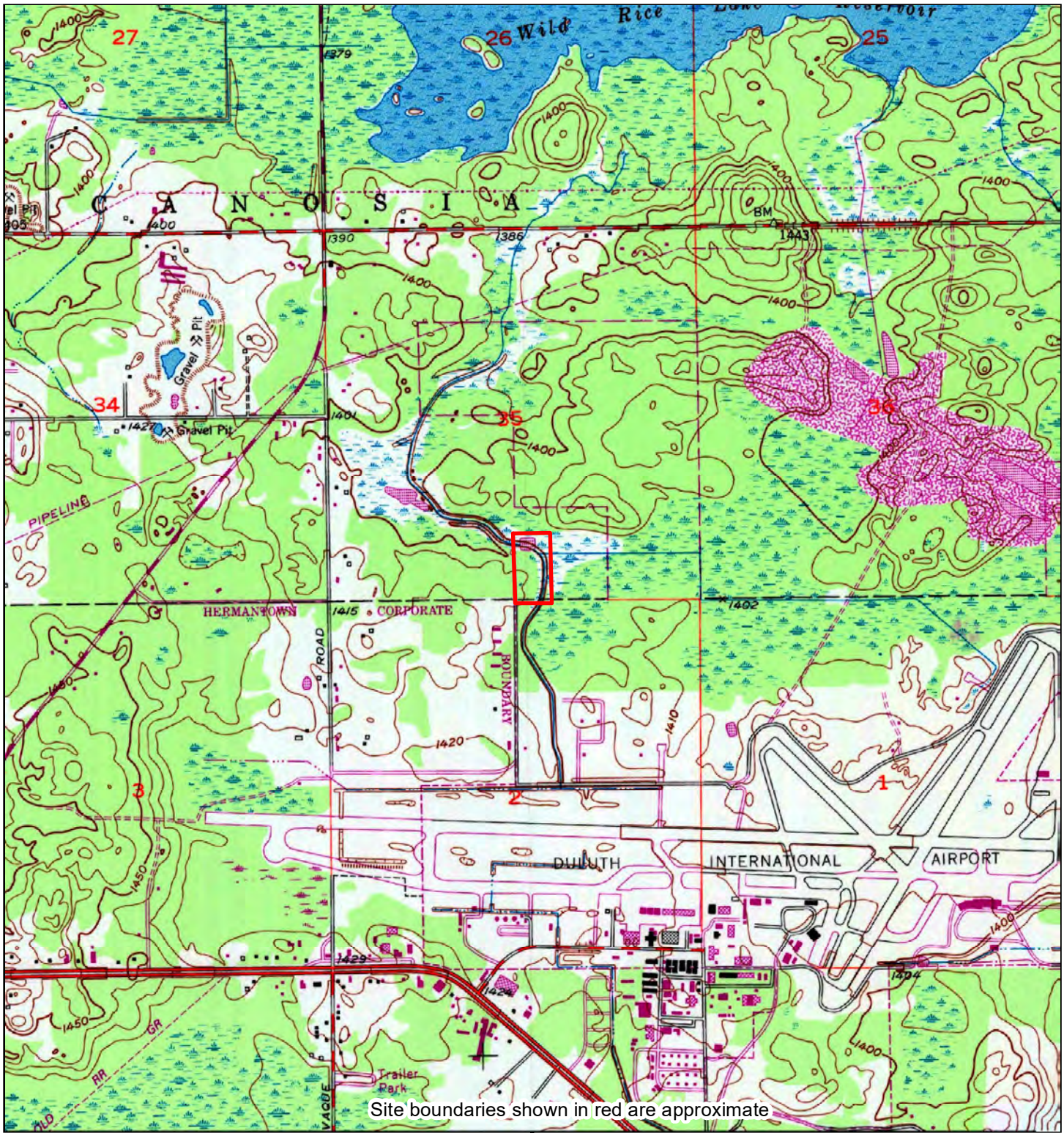
2016	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.		Short Elliot Hendrickson, Inc. project #DULAI 186683 HIG #2097200 completed: 04/03/2026

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Year	Topo Updates Inspected	Topo Updates Revised
All	Duluth Heights, MN	USGS	7½' x 7½'	2016	--	--	--



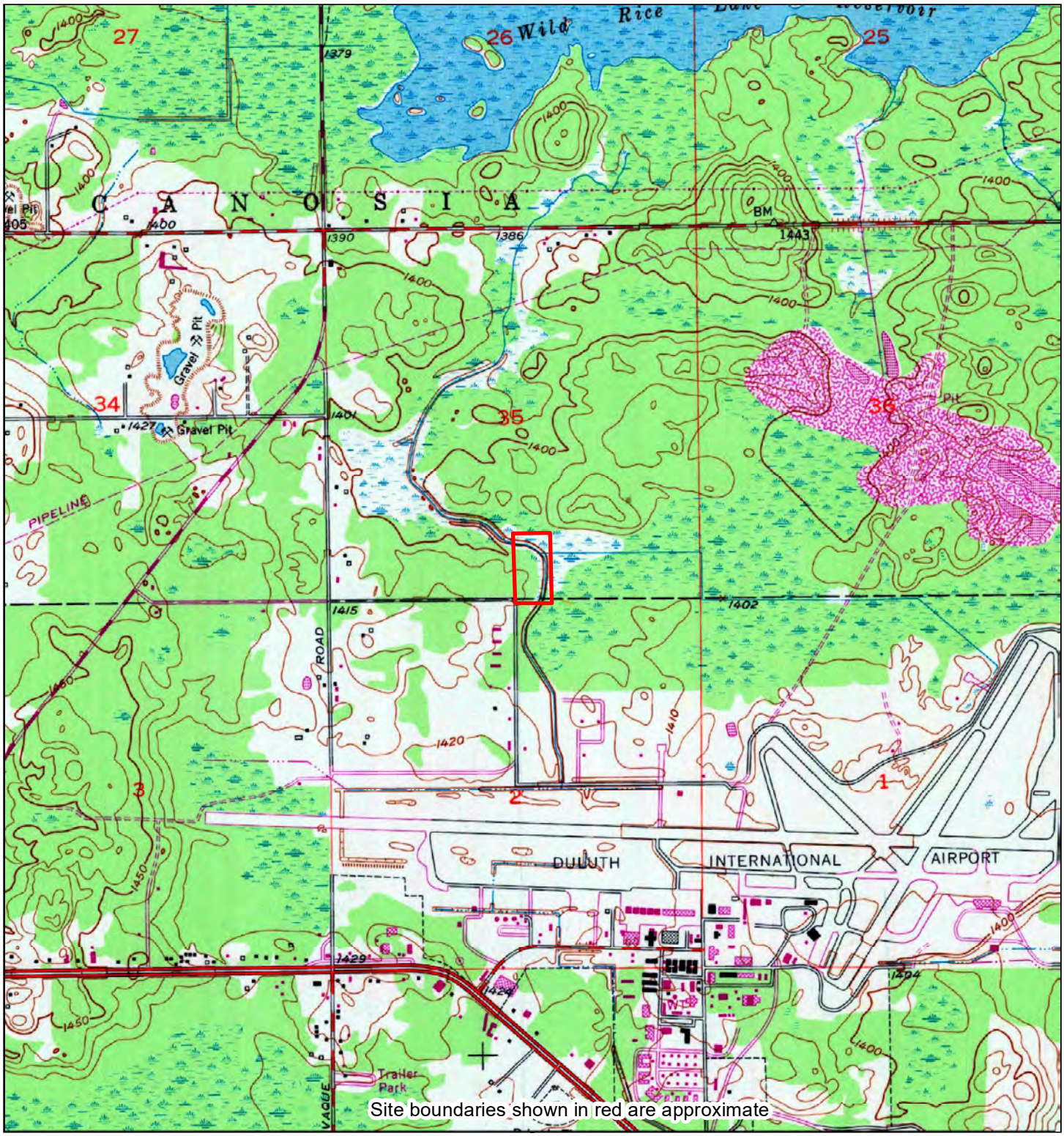
2013	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.	Short Elliot Hendrickson, Inc. project #DULAI 186683 HIG #2097200 completed: 04/03/2026	

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates Photo Year	Inspected	Revised
All	Duluth Heights, MN	USGS	7½' x 7½'	2013	--	--	--



1993	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.	Short Elliot Hendrickson, Inc. project #DULAI 186683 HIG #2097200 completed: 04/03/2026	

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Year	Topo Updates Inspected	Topo Updates Revised
All	Duluth Heights, MN	USGS	7½' x 7½'	1953	1991	--	1993

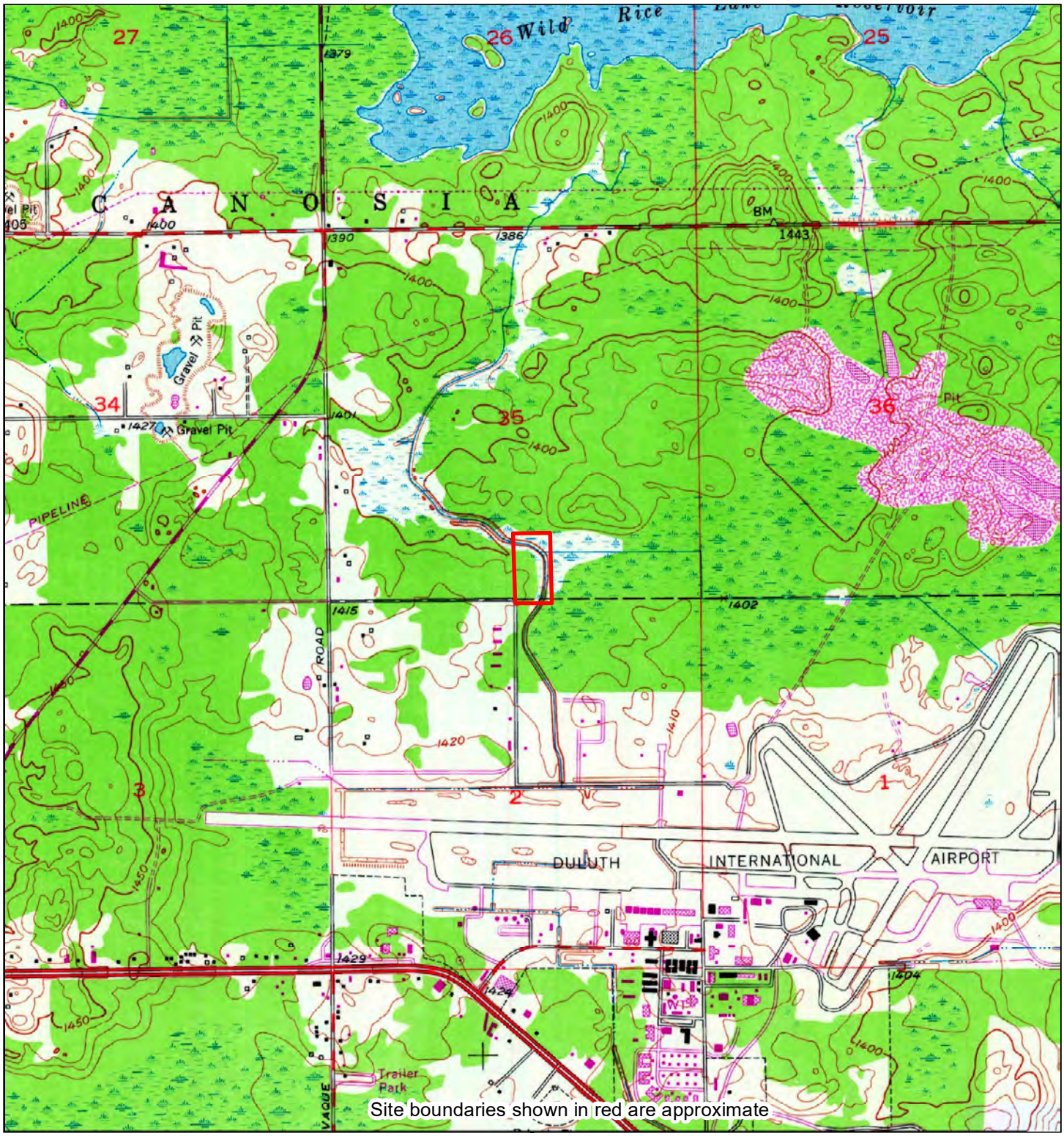


1981	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN

Unified maps show subdued modern topo features where corresponding maps of the same year were not published.

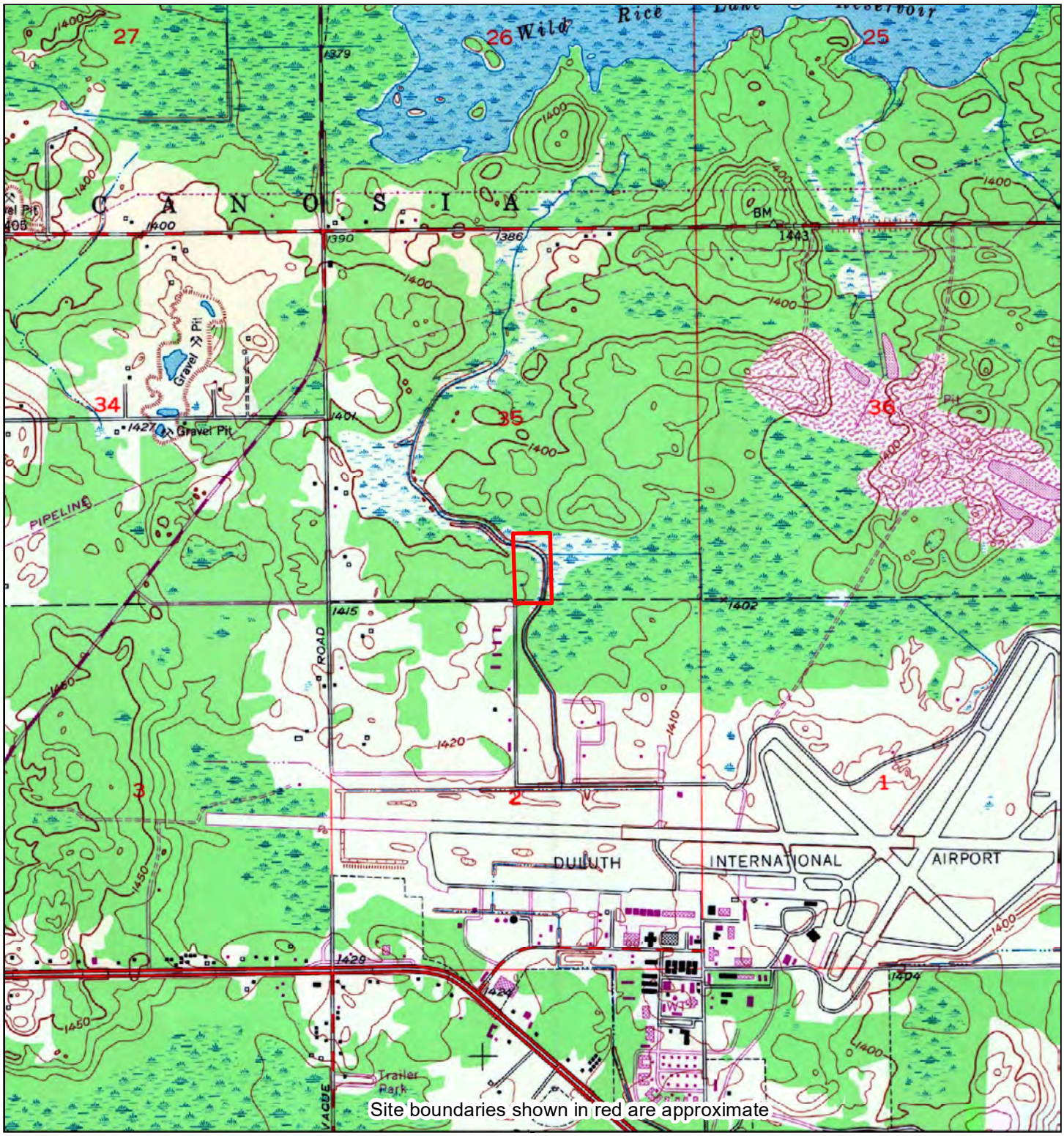
Short Elliot Hendrickson, Inc. project #DULAI 186683
HIG #2097200 completed: 04/03/2026

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates Photo Year	Inspected	Revised
All	Duluth Heights, MN	USGS	7½' x 7½'	1953	1975	1981	1975



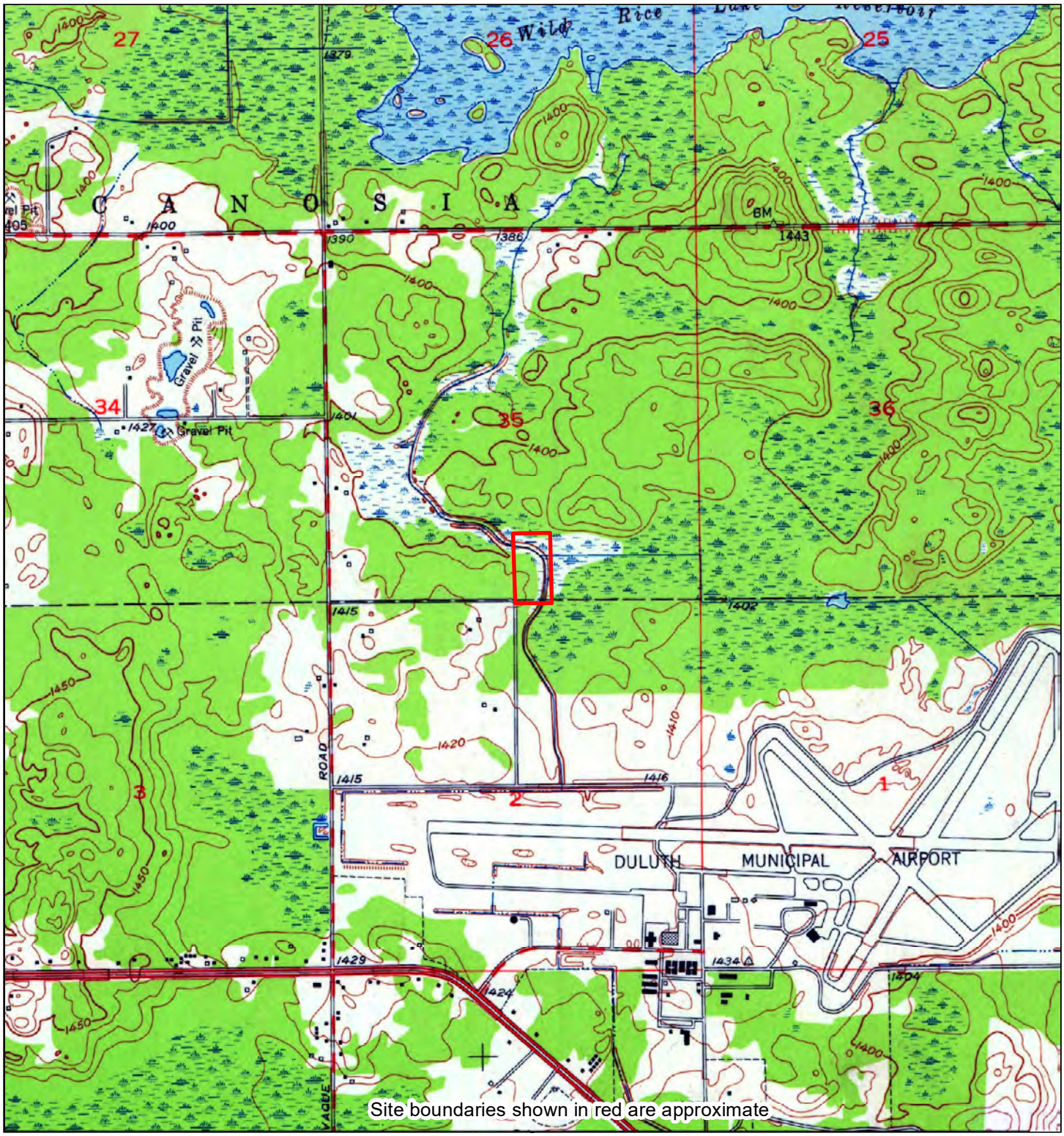
1975	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.	Short Elliot Hendrickson, Inc. project #DULAI 186683 HIG #2097200 completed: 04/03/2026	

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates Photo Year	Inspected	Revised
All	Duluth Heights, MN	USGS	7½' x 7½'	1953	1975	--	1975



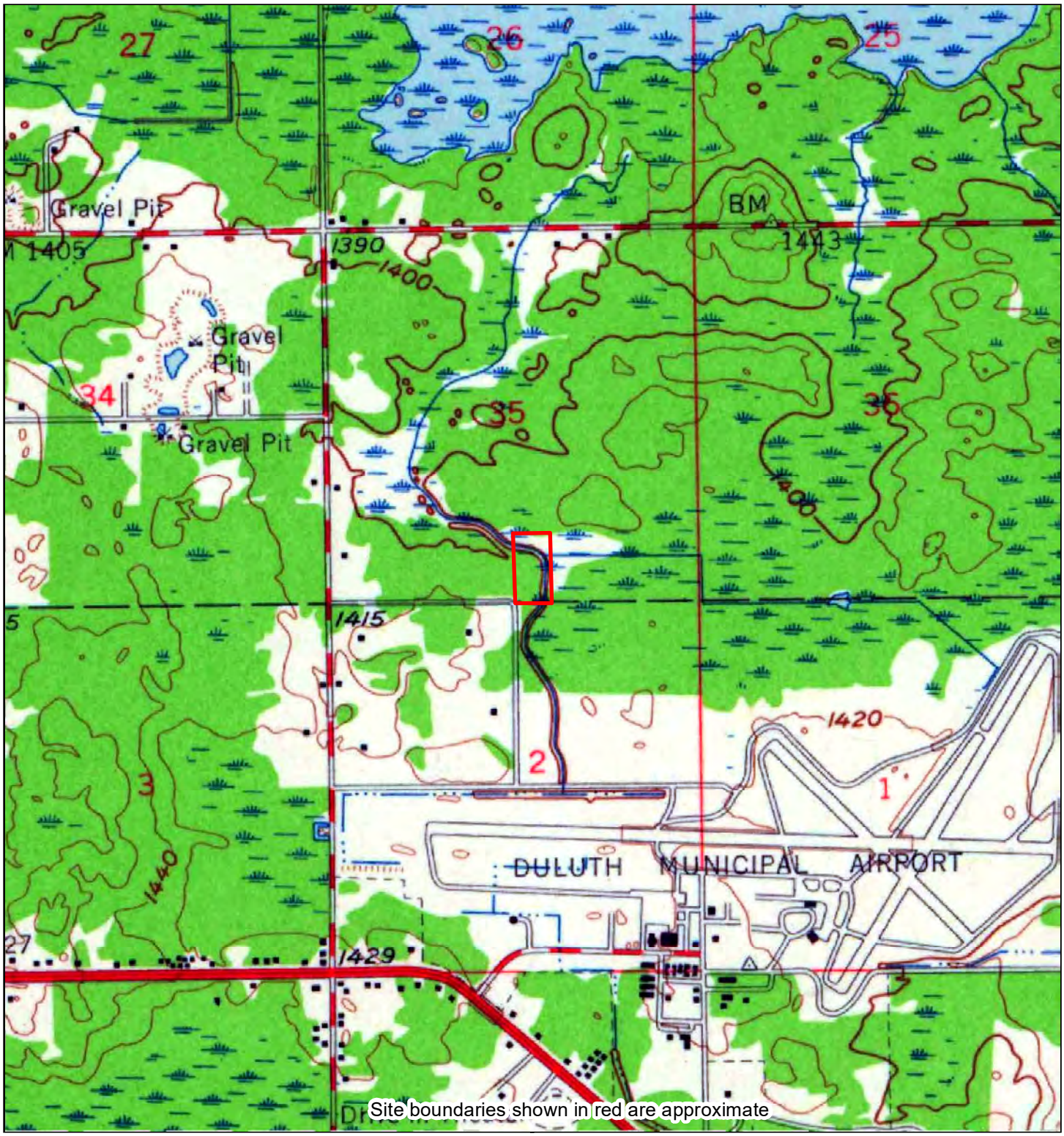
1969	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.	Short Elliot Hendrickson, Inc. project #DULAI 186683 HIG #2097200 completed: 04/03/2026	

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Year	Topo Updates Inspected	Topo Updates Revised
All	Duluth Heights, MN	USGS	7½' x 7½'	1953	1969	--	1969



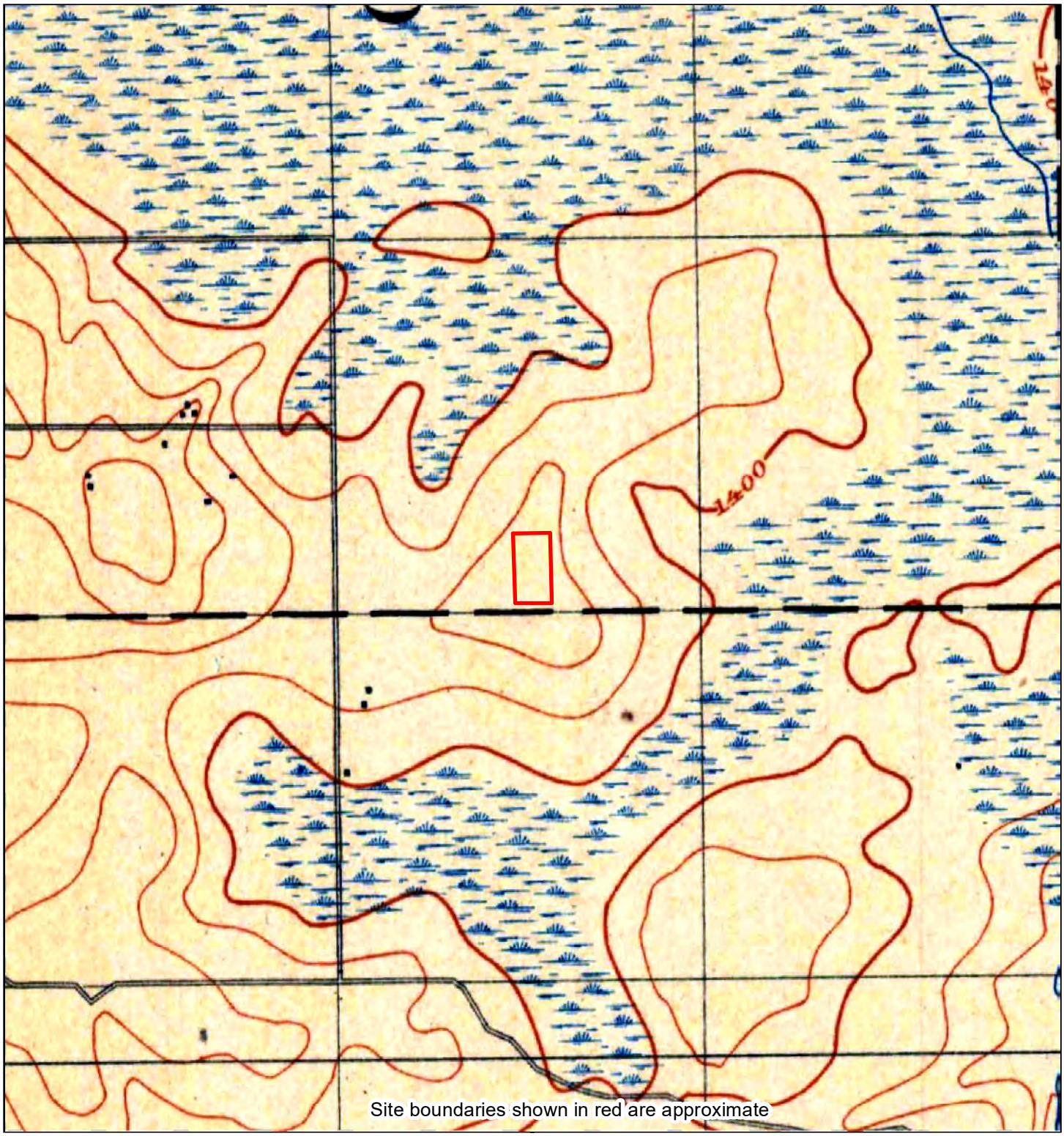
1953	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.	Short Elliot Hendrickson, Inc. project #DULAI 186683 HIG #2097200 completed: 04/03/2026	

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates Photo Year	Inspected	Revised
All	Duluth Heights, MN	USGS	7½' x 7½'	1953	1952	--	--



1953	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N	Site information: Taxiway A Reconstruction Phase 7 Duluth, MN
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.		Short Elliot Hendrickson, Inc. project #DULAI 186683 HIG #2097200 completed: 04/03/2026

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Year	Topo Updates Inspected	Topo Updates Revised
All	Duluth, MN	USGS	15' x 15'	1953	1952	--	--



1895

0 Distance in Miles 1

1: 24,000 (1"=2,000') NAD 1983 UTM Zone 15N

Site information:
Taxiway A Reconstruction Phase 7

Duluth, MN

Unified maps show subdued modern topo features where corresponding maps of the same year were not published.

Short Elliot Hendrickson, Inc. project #DULAI 186683
HIG #2097200 completed: 04/03/2026

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates: Photo Year	Inspected	Revised
All	Duluth, MN	USGS	15' x 15'	1895	--	--	--

Appendix F

Fire Insurance Maps

Fire Insurance Maps No Coverage Statement

Site Location
Taxiway A Reconstruction Phase 7
Duluth, MN

Requested by
Short Elliot Hendrickson, Inc.
3535 Vadnais Center Drive
St. Paul, MN

HIG Project #
2097200
Client Project #
DULAI 186683
Date Created
04/06/2026

Historical Information Gatherers

FIM+ Maps

The HIG Historical Map Collection and the United States Library of Congress Map Collection were searched for fire insurance maps (FIMs), real estate atlases and similar maps for the site location and adjoining properties. No FIMs or similar maps were identified for the site location and/or adjoining properties.

Appendix G

City Directories

2023 Duluth-North Shore, MN - Polk City Directory

LAVAQUE RD Cont'd

6244 Nelson Myron K & Janet H ✓ 84 ● (1976) 218-721-3476
6257 Baribeau Brittny L ✓ Ⓦ 26 ● (1990)
JM TRANSMISSION transmissions-auto ✓ Ⓦ 218-393-1153
Martindale James K & Sharry L ✓ Ⓦ 30 ● (1971) 218-721-4972
6262 ABI ELECTRIC electric contractors ✓ Ⓦ 218-721-3928
Adams Gordon G & Tyra M ✓ Ⓦ 36 ● (1990) 218-721-3928
6265 Ⓖ Fisher Lenka ✓ 218-721-4648
6288 Kallberg Darin L ✓ w 20 ● (1990)
Kallberg Christine
6290 Happy Steven C ✓ w 32 ● (1971) 218-721-4039
Happy David W 218-721-4039
Kempffer Aaron ✓ 15 ● (1990)
STEVE'S SEPTIC PUMPING SVC septic tanks/sys- cleaning/rpr ✓ 218-391-6863
6291 McKeever Rodger W ✓ 51 ● (1990) 218-721-4111
McKeever Richard G 218-721-4111
6297 No Current Listing
6298 Ⓖ Reiswig Courtney Ⓦ
Staadland Natalia ✓ 9 ● (1990)
6299 No Current Listing
6339 Older Lee K Jr & Lucia A ✓ Ⓦ 24 ● (1971) 218-721-3070
6340 Pykkonan John M ✓ w 9 ● (2016)
Pykkonan Samantha G
6360 Carlson Robert ✓ Ⓦ w 64 ● (1971) 218-721-4069
Carlson Timothy E 218-721-4069
6367 FREDENBERG VOLUNTEER FIRE DEPT fire departments ✓
+ FISH LAKE RD INTERSECTS
+ ISLAND LAKE DAM RD INTERSECTS
BUSINESSES 9 HOUSEHOLDS 142

LAVAQUE RD (HERMANTOWN)-FROM 5099 HANSON RD NORTHWEST

• ZIP CODE 55810 CAR-RT C037

3503 Kozlowski Jeffrey J ✓ 40 ● (1959)
3504 No Current Listing ✓
Gaidis Kent M & Tasha R ✓ Ⓦ 28 ● (1980)
3509 Ⓖ Griffith Paul D ✓ ● (1992)
Lowinski James J & Sara J ✓ Ⓦ w 12 ● (1954)
3517 Turcotte Daniel D ✓ 8 ● (1958)
Turcotte Sarah
+ WILLOUGHBY LN INTERSECTS
+ SHERIDAN DR INTERSECTS
3554 Dahl Richard J & Diana J ✓ 38 ● (1980) 218-624-3841
3562 Cadotte Steven J & Anna M ✓ Ⓦ 43 ● (1979) 218-628-1720
3580 Rudolph Calvin H & Diane T ✓ 64 ● (1997) 218-624-5178
3584 Berg Brynn ✓ 2 ● (1992)
Hiemenz Amy 8 ● (1970)
3613 Schmidt Brandon ✓ 9 ● (1992)
3615 Hansen Steven L & Sandra K ✓ Ⓦ 39 ● (1979) 218-624-4303
3616 Lundequam Daniel G & Tina R ✓ w 19 ● (1980)
+ THOMPSON RD ENDS
+ HANSON RD ENDS
3656 Hanson Gail M 33 ● (1992)
Hanson Jon M
+ SECORA RD INTERSECTS
3669 Ⓖ Strasow Rebecca ● (1992)
+ BENSON RD ENDS
+ MORRIS THOMAS RD INTERSECTS

• ZIP CODE 55810 CAR-RT R007

3707 MINARDI LUMBER & MILLWORK lumber-retail ✓
Sundquist Gerald W & Margie A ✓ 28 ● (1992)
3721 Mesojedec David M & Melanie C ✓ w 13 ● (1978)
NORTHSTAR INSULATING insulation contractors ✓ Ⓦ 218-525-4637
Sandstrom Christine ✓ 23 ● (1992)
Sandstrom Lauren
3724 Flaten Maria S & Lon M ✓ 10 ● (2014)
3726 Latuska Walter D Jr & Kelli M ✓ w 7 ● (2014) 218-729-8137
3728 Tormondsen Cathy S ✓ 8 ● (2016)
3730 Sylvester Chuck ✓ Ⓦ 2 ● (1992) 218-206-7690
3747 Theobald Martin J & Teresa F ✓ Ⓦ w 11 ● (2011)
3748 Bergren Liberty ✓ 3 ● (1992)
Swanson Trista I ✓ Ⓦ 9 ● (1956)
Swanson Tyler
3750 Peterson Thomas R & Linda R ✓ w 64 ● (1987) 218-729-6477
3754 Shetka Mark A & Rachel A ✓ 64 ● (1978)
3759 Ⓖ Johnson Greg ✓ ● (1992)
Johnson Heather w
3764 Linnum Dawn T ✓ 64 ● (1975)
Linnum Ross E w
3768 Kachinske Brian D & Kristy L ✓ Ⓦ w 5 ● (1992)
+ COUNTRY RD INTERSECTS
3783 Klaist Christopher S ✓ 16 ● (1970)
Klaist Jamie L w
3787 Clausen David & Sarah ✓ w 4 ● (1993)
3790 Ⓖ Herstad Makayla M ✓ ● (1992)
+ HERMANTOWN RD INTERSECTS

• ZIP CODE 55811 CAR-RT C018

3810 Ronquist Neal R & Renae L ✓ w 10 ● (2011)
3845 Kaspszak Brian M & Veronica J ✓ Ⓦ 20 ● (2004) 218-624-5498
3886 No Current Listing
3891 McLachlan Robert J & June D ✓ w 26 ● (1998) 218-729-7248
3940 Reno Rick R & Cynthia R ✓ 31 ● (1992) 218-729-6522
3953 Bullyan Joseph M Jr & Peggy L ✓ w 20 ● (1971) 218-729-5799
Myers Kelli L ✓ 23 ● (1992)
3954 Rohlader Matthew D & Janet L ✓ 10 ● (2005)
3960 Aho Robert A & Lois L ✓ w 21 ● (1980)
3961 DULUTH CONSTRUCTION CO home builders ✓ Ⓦ 218-729-0587
Gustofson Roger G & Peggy S ✓ Ⓦ w 64 ● (1997) 218-729-0587
3969 Dirksen Alan R & Kris M w 37 ● (1971)
3975 Karo William J & Jennifer L ✓ Ⓦ 18 ● (2004) 218-729-0263
3976 Johnson Eric T & Jessie ✓ Ⓦ w 64 ● (1977) 218-729-7809
3977 Thompson Brian J Ⓦ 9 ● (1992)
3978 Reid Justin M & Sara M ✓ w 9 ● (2003) 218-729-6900
3988 Ⓖ Wang Iris ✓ ● (1992)
3995 Biondich Nicholas D & Nicole C ✓ w 19 ● (2005) 218-727-4881
Ⓖ Kard Jennifer ✓ ● (1992)
3998 Willoughby Mark J & Jennifer J ✓ w 29 ● (2003) 218-729-3398
3999 Ⓖ Kitson Donald R w ● (1973)
4002 Bahr Richard V & Kathleen M w 19 ● (2005)
4009 Alwan Sabah J ✓ 19 ● (1978)
Alwan Caterina R w
4017 Wourms Nathan B & Janelle M ✓ Ⓦ 11 ● (1965)
4025 Fadum Brenton J & Luann G ✓ w 11 ● (1968)
4026 Johnson Kurt W & Teresa A ✓ 39 ● (1973) 218-729-0134
4035 Hane Richard C & Judith J ✓ Ⓦ 64 ● (1977) 218-729-9114
4036 Lavalley Shawn M & Michelle L ✓ w 16 ● (1974)
4038 Johnson J ✓ 14 ● (1992) 218-729-3371
4039 Bodell Scott J ✓ 33 ● (1956)
Bodell Dan N
4041 Moan Ronald J Jr 64 ● (1992)
Moan Baylor
4044 Ⓖ Deroche Derek ✓ Ⓦ ● (1992)

LAVAQUE RD Cont'd

Ⓖ Ellis Rebecca ✓ w ● (1992)
4050 Linde Daniel D & Jessica A ✓ w 12 ● (2006) 218-206-7457
4051 Plaisted Marcus P & Amy L ✓ 5 ● (1991) 218-206-7615
4054 Ⓖ Bennett Susan A & James T ✓ ● (2006)
Ⓖ Lefebvre Bennett Susan ✓ w ● (1992)
4061 Kildahl Michael L & Susan M ✓ w 7 ● (1992)
4071 Lepage Jamie A ✓ w 20 ● (1992) 218-729-7137
Lepage Randine w 218-729-7137
4081 Lockhart Mark A & Stacie J ✓ Ⓦ w 12 ● (1980)
4089 Butorac Matthew D & Mary K ✓ 26 ● (1981)
+ MAPLE GROVE RD INTERSECTS

• ZIP CODE 55811 CAR-RT C106

4114 No Current Listing
4122 Takes Charles J & Shannon K ✓ 7 ● (1992)
4128 Hinks Jared P & Heidi ✓ Ⓦ 3 ● (1995)
4134 Soderburg Robert P & Heather ✓ 24 ● (1965)
+ BEAVER LN BEGINS
4190 Wildolson Kathleen D ✓ 8 ● (2006)
4194 Ⓖ Boyat Ashley ✓
Brooks Jarod P ✓ 9 ● (2013)
4198 Tyson Stephen E & Brigetta M ✓ Ⓦ 10 ● (2006)
+ BEAVER CREEK RD BEGINS
4201 No Current Listing
4206 Ⓖ Lockhart Keith G ✓ ● (1991)
4212 Airis Adam 4 ● (2002)
4213 No Current Listing ✓
4214 Sawyer Daren K & Jennifer A ✓ Ⓦ 14 ● (1950)
4217 Anderson Mark R & Suzanne W ✓ Ⓦ 3 ● (2018) 218-724-0693
4220 Bakkan Dennis L & Bridie ✓ Ⓦ 31 ● (1965) 218-729-5612
4223 Smedstad Katie ✓ 2 ● (1991)
4228 Ⓖ Casper Ruth ✓ w
4229 Larson Steve E Jr & Billie J ✓ w 9 ● (1935)
4234 Stauber John A ✓ 5 ● (2018)
4235 Janny Gary M & Della K ✓ 64 ● (1965) 218-729-5059
4238 Nordling Daniel W & Brianna L ✓ w 7 ● (1993)
4245 Fish Philip J ✓ 31 ● (1965)
4248 Dingels Peter J ✓ 7 ● (1930) 218-206-7211
+ LAVAQUE JUNCTION RD BEGINS
4255 No Current Listing
4262 Murphy Gregg T 31 ● (1965)
4263 No Current Listing ✓
4264 Ⓖ Fudally Christopher ✓ ● (1991)
4266 No Current Listing
4268 Ⓖ Higgins Thomas ✓
4271 Dixon Christopher M & Eileen N 28 ● (1965)
4272 INNOVATIVE LIVING INC residential care homes ✓ 218-729-8427
Martineau Bobby & Rhiannon ✓ 7
4274 Ⓖ Pokela Callahan ✓
4275 Kallerhuis Brian L & Pamela S ✓ w 22 ● (1988)
4280 Anderson Eric J & Amy E ✓ Ⓦ 12 ● (1985) 218-206-7833
4286 CIRCLE OF LIFE CHIROPRACTIC chiropractors dc ✓ 218-740-3379
Ⓖ Joswiak Zackary J ✓
Joswiak Nicole
Lee Lo D ✓ 9 ● (1991)
+ WARROWHEAD RD INTERSECTS

• ZIP CODE 55811 CAR-RT C042

4308 Erickson Margaret S ✓ Ⓦ 32 ● (1965) 218-729-7927
4313 Monson Rodney A & Saundra D ✓ w 17 ● (2007) 218-729-6216
4323 SOUMIS CONSTRUCTION INC construction companies ✓ Ⓦ 218-391-2052
Soumis Jesse R & Amanda M ✓ w 14 ● (2009)
4333 Aho Ryan E & Natalie L ✓ Ⓦ 18 ● (1963)
4337 Clark Samuel W 3 ● (1966)
Clark Jansin
4343 Claus Kevin D & Cynthia K ✓ Ⓦ 2 ● (1991)
4347 No Current Listing
4368 Claus Kyle J & Dawn M ✓ 12 ● (2012) 218-722-5015
4370 Claus Dale W ✓ 61 ● (1935) 218-729-6578
4378 Lawless John P & Laura J ✓ 9 ● (1935) 218-729-0722
4379 Anderson Paul R & Laura ✓ Ⓦ 18 ● (1935)
4390 Peterson George W & Ardell E ✓ 30 ● (1965) 218-729-6984
4391 Lufholm James E & Patricia A ✓ w 64 ● (1935) 218-729-5759
Stockinger Gary ✓ 7 ● (1991)
Stockinger Susan L w
4393 Reynolds Gavin B ✓ 19 ● (1935)
4394 Ekstrand Amy K 22 ● (1991)
+ BOULDER DR ENDS
4442 Ankarlo Gayle 7
Nicholls Brittany 8
+ ALPINE DR ENDS
4452 Eikam Michael J ✓ 7 ● (1930) 218-729-6384
w 218-729-6384
4455 Nordquist Lisa M ✓ Ⓦ w 14 ● (1935) 218-206-7567
4462 Ⓖ Saese Nikolaus ✓ Ⓦ w
4465 Ⓖ Nelson Laura ✓
Peterson Nicholas C & Laura E ✓ w 8 ● (1935)
4471 McNamara Kelly R ✓ 20 ● (1935)
4472 Foster Veronica J 7 ● (1991)
Foster Jessica
4477 CETERA ADVISOR NETWORKS investment securities ✓ 218-727-4767
HFCU MORTGAGE SOLUTIONS real estate loans ✓ Ⓦ 218-729-7733
4478 Lavalla Joey 13
4480 Gilmore Thomas & Chelsey ✓ 4 ● (1991)
+ ADELE DR ENDS
+ MILLER TRUNK HWY INTERSECTS

• ZIP CODE 55811 CAR-RT R001

4622 Klint Allan A & Nicole L ✓ Ⓦ 64 ● (1977)
4648 Ⓖ Klint Nicole ✓ ● (1978)
4650 McNulty Madonna C ✓ Ⓦ 2 ● (1975)
4656 No Current Listing
4657 Pagnac Robert H ✓ 34 ● (1920) 218-729-8983
Pagnac Robert M 218-729-8983
4666 Kaye Jamie R ✓ 19 ● (1956)
Kaye Stephanie
4667 No Current Listing
4682 Schnorr Kevin M Ⓦ w 49 ● (1965)
+ SEVILLE RD INTERSECTS
+ SAMUELSON JUNCTION RD BEGINS
+ LAVAQUE BYPASS RD ENDS
BUSINESSES 8 HOUSEHOLDS 145

LAVAQUE BYPASS RD (DULUTH)

• ZIP CODE 55811 CAR-RT R001

4707 Patnaude Margaret R ✓ 33 ● (1962) 218-729-5775
4721 Thieling Jeremy & Michele ✓ w 9 ● (1961)
4735 Bloom Joe J ✓ Ⓦ w 12 ● (1961)
Bloom Tiffany M
4746 Jacobs Jean E ✓ 32 ● (1961) 218-729-9619
Rautio Judith ✓ 9 ● (1961)
4748 Jacobs Nora ✓ 64 ● (2012)
Jacobs Lon A w
4798 Oswell Steven C & Rose M ✓ 33 ● (1961) 218-729-5343

LAVAQUE BYPASS RD Cont'd

SIGN DECISIONS LLC communications consultants ✓ Ⓦ 218-729-9878
4829 Poupore-Haats Toni P ✓ 39 ● (1962) 218-729-8920
Poupore-Haats Susan E 218-729-8920
+ SAMUELSON JUNCTION RD ENDS
+ LAVAQUE RD INTERSECTS
BUSINESSES 1 HOUSEHOLDS 8

LAVAQUE BYPASS RD (HERMANTOWN)-FROM 4561 UGSTAD RD NORTH

• ZIP CODE 55811 CAR-RT R001

4514 Hermanson Scott C & Deanna C ✓ Ⓦ 6 ● (1978) 218-206-7761
NORTH COUNTRY WATER TREATMENT water treatment equip serv ✓ Ⓦ 218-729-7757
4518 No Current Listing
4538 Lentz Claudette L & Gregory ✓ w 29 ● (1926) 218-729-5923
4648 Dolentz Sondra S 27 ● (1962)
4655 Unzan Robert J & Brandy L ✓ w 6 ● (1989)
4656 Eilefson Charles R & Linda D ✓ 33 ● (1962)
4663 Gilbertson Gary J & Tami ✓ w 25 ● (1962)
4666 Peterson Sarah D & Nicholas R ✓ 4 ● (2003)
4670 Carlson Jacqueline P ✓ 34 ● (1962) 218-729-8057
Carlson Erin E 218-729-8057
4677 Krause Alan J & Susan E ✓ Ⓦ w 27 ● (1999)
4678 Jones Bradley J & Mary M 16 ● (1978)
+ SEVILLE RD INTERSECTS
BUSINESSES 1 HOUSEHOLDS 11

LAVAQUE JUNCTION RD (DULUTH)-FROM 4251 LAVAQUE RD WEST

• ZIP CODE 55811 CAR-RT C106

5211 Koepp Dennis E 32 ● (1991)
5217 Callahan Patricia A ✓ 33 ● (1959) 218-729-6249
5223 Williams Jake S & Marisa J ✓ 5 ● (1959)
5227 Lindquist Kathleen L ✓ w 64 ● (1955) 218-729-7875
Lindquist Clarence J Jr 218-729-7875
5233 Grimm David M Sr ✓ 18 ● (1952) 218-733-0460
5247 Dawe Eric E ✓ 8 ● (1978)
Dawe Natalie w
5253 Ahlberg Margaret ✓ 33 ● (1987) 218-729-6721
5259 Baker Justin J ✓ w 9 ● (1961)
Baker Elli K
5271 Quesenberry Jane E ✓ 64 ● (1935) 218-729-5027
5275 Muench Randall L & Robin K ✓ 24 ● (1960) 218-729-0014
5281 Vandyke Roger A & Diane M ✓ Ⓦ 39 ● (1975) 218-729-6879
+ UGSTAD RD INTERSECTS
HOUSEHOLDS 11

LAVAQUE JUNCTION RD (HERMANTOWN)

• ZIP CODE 55811 CAR-RT C106

5144 Bloom Bradford C & Becky A ✓ Ⓦ w 38 ● (1935) 218-729-7665
5147 Kucza Wallace F & Beverly O ✓ 30 ● (1965) 218-729-6541
5150 Foro Scott J & Debra L ✓ 29 ● (1997)
5153 Carlson Delaine A Ⓦ 33 ● (1963)
Carlson Dale
5154 Johnston Lori A ✓ Ⓦ w 21 ● (1935)
5158 Lucarelli Ryan M & Heather A ✓ w 7 ● (1991)
5159 Carlson Donald H ✓ Ⓦ 34 ● (1970) 218-729-9265
Carlson Donald A w 218-729-9265
5167 Bloom Constance C ✓ 34 ● (1959) 218-729-6693
Bloom Becky A 218-729-6693
5170 Kucza Kevin J & Beth A ✓ 27 ● (1935) 218-729-5678
5177 Murphy Mitzi M ✓ w 34 ● (1965)
5180 No Current Listing
5182 Vanloon Marlene J ✓ Ⓦ 30 ● (1975) 218-729-9082
Vanloon Susan J 218-729-9082
5189 Peterson Molly w 2
5192 Pierce Candice C ✓ 26 ● (1935) 218-729-1058
5194 Rutka Ronald L & Kathryn A ✓ 29 ● (1979)
5195 Johnejack Mark J & Gail M ✓ 19 ● (1991) 218-729-7737
5196 Vittorio Anthony A & Debora J ✓ 64 ● (1980)
5197 Rish Andrea K ✓ w 11 ● (1991) 218-722-1516
Wright Ryan S ✓ w 9
5204 Tatarowicz Kazimierz E & Halina E ✓ Ⓦ w 64 ● (1935) 218-724-4033
5216 Brown Carol A & Charles D ✓ 64 ● (1991) 218-729-6309
5222 Williams Brian D & Jill M ✓ 25 ● (2000) 218-729-5891
5228 Letchworth Sharlene T ✓ 64 ● (1969)
Letchworth Audra
5236 Borgeson Carol L ✓ 33 ● (1991)
Ⓖ Mac Donell C ✓ ● (1991)
Macdonall Casey E ✓ w 14 ● (1935)
5242 Sulin Kevin J & Joann M ✓ w 24 ● (1935) 218-729-0462
5248 No Current Listing
5252 Iola Joyce E ✓ Ⓦ w 33 ● (1975) 218-729-9316
5264 Eklund Douglas J & Veronica L ✓ w 29 ● (1960)
5290 Wraziddo Laura L ✓ Ⓦ 14 ● (2009)
HOUSEHOLDS 31

LAVELL RD (MEADOWLANDS)

• ZIP CODE 55765 CAR-RT R021

1321 No Current Listing
1344 Brincefield Tommy 8 ● (1978)
1365 Hill David U & Donna L ✓ Ⓦ w 37 ● (1960) 218-427-2296
1393 No Current Listing
HOUSEHOLDS 4

LAVIS RD (DULUTH)-FROM 5597 LESTER RIVER RD WEST

• ZIP CODE 55804 CAR-RT R008

2914 Johnson Rodney A ✓ 13 ● (2002)
Johnson Kiarstan L
2935 Ojala Julia A ✓ w 2 ● (1994)
Ojala Jake
2950 Twight Kathleen R ✓ w 33 ● (1969)
2964 Sullivan Timothy R & Frances P Ⓦ w 28 ● (1969)
2971 Twight Bryan D & Ruth A 17 ● (1980)
2985 Henry Barbara A ✓ Ⓦ 33 ● (1969) 218-525-1891
Henry Steven J 218-525-1891
3001 Gustafson Kathy A ✓ Ⓦ 18 ● (2007) 218-525-1223
3008 Kuenzel Terrence E & Miranda 9 ● (1980)
3028 Gustafson Trevor ✓ Ⓦ 33 ● (1969)
3061 LANGLIE SAMANTHA JO PA physicians assistants 218-686-2449
Robin Kevin A ✓ 5 ● (2013)
3071 No Current Listing
3078 Nelson Stephen J & Tammy L ✓ w 33 ● (1969) 218-525-7170
3081 No Current Listing
+ N TISCHER RD INTERSECTS
BUSINESSES 1 HOUSEHOLDS 13

LAVOY RD (BROOKSTON)-FROM 9399 HIGHWAY 2

• ZIP CODE 55711 CAR-RT H085

4650 Lund Teri L ✓ Ⓦ w 34 ● (1971)
Lund Amber L

STREET GUIDE

2018 Duluth/North Shore, MN - Polk City Directory

LAURIE ST (DULUTH) Continued from prior page
LAURIE ST Cont'd
• ZIP CODE 55803 CAR-RT C033
102 Karstens Gretchen N ✓ 5 ▲ (1923)
106 N Madden Kathleen L ✓ ▲ (1939)
110 Bankers Kristen M @ 4
Vallez John ✓ 2
114 Kalstrom Jeffrey 8 ▲ (1939)
130 Moran Kenneth J & Jacqueline A ✓ 53 ▲ (1916) 218-728-4320
134 Hammond Brian P & Bethany A ✓ 4 ▲ (1921)
138 Laliberte Jacqueline ✓@ 59 ▲ (1916) 218-728-5378
Laliberte Mark 218-728-5378
HOUSEHOLDS 8

LAVAQUE RD (DULUTH)
• ZIP CODE 55810 CAR-RT C037
1601 Blaskowski Jeffrey R & Wanda L ✓@ 2 ▲ (1994) 218-206-7044
1605 McGowan Todd A & Charisha M ✓ 5 ▲ (2000)
+ SAINT LOUIS RIVER RD INTERSECTS
1607 Murphy Scott D & Colleen R ✓ 30 ▲ (1941) 218-628-3496
1630 N Beckner Lisa R ✓ ▲ (1982)
1635 Swanson Janelle K ✓@ 17 ▲ (1920)
Swanson Janelle N
1637 Merrier Glen R & Danielle S ✓@ 27 ▲ (1940)
1641 Lavato Thomas L & Gloria M ✓@ 59 ▲ (1976) 218-628-3497
1650 Makarrall Rachel R ✓ 9 ▲ (1982) 218-728-2485
1657 Anderson Monte ✓ 2 ▲ (1982)
Cook John R & Joanne M ✓ 59 ▲ (1974)
1660 Erkkila Lorraine G ✓ 44 ▲ (1973) 218-624-2363
Schmidt Gene P ✓ 10 ▲ (1982)
1661 Swensson Gregory B & Cheryl L ✓ 24 ▲ (1955) 218-624-4960
1665 N Arnal Daniel E ✓ ▲ (1982)
1680 Haugen Kristopher M & Tara L ✓ 21 ▲ (1990) 218-624-9456
1681 Bibeau Leona P & Wayne C ✓ 30 ▲ (1982) 218-624-3394
1687 Nelson Eric T ✓ 8 ▲ (1955)
1693 Johnson Evald L ✓@ 59 ▲ (1950) 218-624-2254
+ JOHNSON RD BEGINS
+ VENICE ST BEGINS
1717 Nordby Lukas R ✓ 3 ▲ (1982)
Nordby Anita
Terneus Jenna S ✓ 8 ▲ (1982)
+ PINE AVE ENDS
1721 Hobbs Heather 2 ▲ (1982)
1735 Lalone Carlie A & Benjamin A ✓ 9 ▲ (1960) 218-206-7112
1740 Leonard Deborah M & Daniel K ✓ 22 ▲ (1993) 218-628-3062
1754 Laflamme Lori A ✓ 19 ▲ (1982)
Schwartz Brady H ✓@ 5 ▲ (1973)
Schwartz Christina M
1760 Rotenberger Jeffrey P ✓@ 4 ▲ (1980)
Rotenberger Melissa S
• ZIP CODE 55811 CAR-RT R001
4708 VAN GUILDER CONTRACTING INC genl contractors ✓ 218-729-7893
Vanguilder James A & Debra R ✓ 59 ▲ (1965)
4718 Boggio Randsom S & Sabrina ✓ 25 ▲ (1965) 218-729-8055
4741 Spaeth Bert A & Dawn M ✓ 2 ▲ (1999)
4748 Walburg Erik E & Laura J ✓@ 8 ▲ (1960)
4749 Gundstrom Robert K & Chelsey ✓ 11 ▲ (1978)
+ LAVAQUE BYPASS RD ENDS
4756 Backstrom Kenneth D & Paula J ✓ 28 ▲ (1921) 218-729-9808
4759 No Current Listing
4771 Templer Debra D ✓ 28 ▲ (2003)
Templer Breana
4772 Sironen Lonny D ✓ 7 ▲ (1974)
4773 Armstrong Vickie L ✓@ 59 ▲ (1965)
Armstrong Steven J
4774 No Current Listing
4814 Swansen Jeffrey P & Rhonda L ✓ 28 ▲ (1973) 218-729-8044
4830 Halvorson Jaime C ✓@ 21 ▲ (1974)
4834 Avenall Jaime C ✓@ 3 ▲ (1974)
Avenall William C
4844 Scott Brian W & Roslyn D ✓ 19 ▲ (1979) 218-729-6882
4852 Paavola Martin H & Janet M ✓ 59 ▲ (1975) 218-729-5488
4878 1 Koivisto Mary 26
2 - 3 No Current Listing (2 Apts)
4880 Grimwood Kurt ✓ 4 ▲ (1974) 218-729-7329
Knudsen Sally J ✓ 17 ▲ (1974)
4881 N Hlivala Mark A & Stephenie ✓ ▲ (1975)
4882 No Current Listing
4895 Williams Leslie W ✓ 5 ▲ (1975)
Williams Pegf
+ MARTIN RD INTERSECTS
+ CHRISTIANSON RD CONTINUES
• ZIP CODE 55803 CAR-RT R004
5193 Cich Deanna L & Richard M ✓@ 22 ▲ (1975)
5195 No Current Listing
5197 CONSTRUCTION SERVICE INC genl contractors ✓ 218-729-9510
5248 Lagarde Bobbie J ✓ 6 ▲ (1975)
Lagarde Davon
5256 No Current Listing
5262 Britton Jennifer L & Larry J ✓ 12 ▲ (1940)
5274 Demenge Brooke ✓@ 3 ▲ (1975)
Judnick Anthony J ✓ 8 ▲ (1975)
5293 No Current Listing
+ LOCKWOOD LN ENDS
5309 Stafford Robert W & Angeline J ✓ 28 ▲ (1977) 218-729-8827
5408 Olson Amanda J ✓ 29 ▲ (1990)
5500 Stabs Bruce A ✓ 10 ▲ (1990) 218-721-4286
Stabs John W 218-721-4286
5505 Nylen Thomas M & Nancy D ✓ 28 ▲ (1971) 218-721-4023
5506 No Current Listing ✓
+ MCCOMBER RD INTERSECTS
• ZIP CODE 55803 CAR-RT R013
5601 Laine Janice M ✓ 14 ▲ (1975)
Solem Dale O ✓ 24 ▲ (1971) 218-721-3741
5613 Larsen William T & Mary ✓@ 9 ▲ (1975)
5614 Williams Tara S & Jason ✓ 2 ▲ (1975) 218-721-4349
+ SCHULTZ RD INTERSECTS
5748 N Cronin Corrine ✓ ▲ (1990)
Hobbs Daniel C & Corrine A ✓ 5 ▲ (1994)
5760 Stabs John W & Lynn M ✓ 59 ▲ (1971) 218-721-5287
5767 Knudsen Aaron S & Angela L ✓ 5 ▲ (1982)
5782 Archambeau Kari 8 ▲ (1990)
5788 Kriske Leonard C & Barbara A ✓ 12 ▲ (1990)
Schaper Barbara A ✓ 9 ▲ (1990)
5796 N Stippel Tanner J ✓ ▲ (1990)
Stippel Krista
5799 Neumann Shawn 16 ▲ (1990)
5811 Holmes Ronald F & Diane C ✓ 29 ▲ (1990) 218-525-3892
5821 Sich Kevin L ✓ 12 ▲ (2006)
Sich Molly A
5839 Satterlund Harlan K ✓ 24 ▲ (1971)
5870 No Current Listing

LAVAQUE RD Cont'd
5880 Bragee Danielle 4 ▲ (1990)
5888 Kraml Ronald D & Beth A ✓ 39 ▲ (1971)
+ W LISMORE RD BEGINS
5937 Flewell Darwin J ✓ 11 ▲ (1990)
5938 Ruhanen Steven C & Doreen S ✓@ 26 ▲ (1990) 218-721-3532
5940 Kyrola Scott D & Dawn R ✓ 13 ▲ (2007) 218-729-5721
5942 Kyrola Duane A & Barbara J ✓ 6 ▲ (2011) 218-729-9885
5948 Shaw Duane A & Hope A ✓ 28 ▲ (1971) 218-721-4665
5952 McVean Robert W & Tania S ✓ 59 ▲ (1971)
5955 Fulkerson Richard G & Bobbie-Mae L ✓@ 8 ▲ (1990)
5960 Haney Kevin R & Amy J ✓@ 59 ▲ (1990)
5978 N Ravelli Brittany ✓ ▲ (1990)
5981 Johnson Jean M ✓ 5 ▲ (1990) 218-721-4473
+ STUBERUD RD ENDS
6007 NORTHERN LIGHTS LANDSCAPING landscape contractors ✓
.....218-728-6053
6027 Kaneski Gregory J & Kathleen A ✓ 8 ▲ (2012)
6035 Kaneski Gregory J & Kathleen A 7 ▲ (1990)
LAKEHEAD TRUCKING sand & gravel ✓ 218-721-3521
6040 Kaneski Gregory J ✓ 46 ▲ (1965)
Kaneski Carla J
6060 Busch Gary R & Linda H ✓ 30 ▲ (1990) 218-721-4736
6064 Hoglund Brett E & Jennifer J ✓ 2 ▲ (1990) 218-724-5188
6073 No Current Listing
6079 Kaneski Paul D & Gloria J ✓ 59 ▲ (1990)
6082 Lennartson Steven R & Luann ✓ 59 ▲ (1990)
+ USIAK RD INTERSECTS
6103 EAGLE'S NEST RESORT resorts ✓ 218-721-4147
Fink Michael D & Rebecca ✓ 3 ▲ (1990)
Jauert David A ✓ 31 ▲ (1928)
6139 BLUE MAX RESORT resorts ✓ 218-721-4255
6150 Hennessy Mark M ✓ 3 ▲ (1957)
Preston Paul ✓ 4 ▲ (1957)
Preston Whitney
Zweifel Kyle W & Julie H ✓@ 18 ▲ (1957)
+ DAHLBERG RD ENDS
6200 Aune Andrew J ✓ 2 ▲ (1990)
Aune Kristen
6204 N Richardson Kyle J ✓ ▲ (1990)
6220 Budisalovich Helen J ✓ 59 ▲ (1990)
Budisalovich James K
6222 N Bowman David F ✓@ ▲ (1990)
Godmare Brooke E ✓ 14 ▲ (1990)
N Stanius Taylor A ✓ ▲ (1990)
6223 N Bunnell Anthony ✓ ▲ (1990)
Johnson Vincent W & Betty M ✓@ 28 ▲ (1971)
6229 Hagglund Karl H Jr & Kari ✓ 3 ▲ (2004)
6231 Honer Mark A & Julie V ✓@ 9 ▲ (1993)
Martin Brenda R ✓ 59 ▲ (1990)
N Reinke Juellie ✓ ▲ (1990)
6232 BOB'S BULLSEYE AUTO GLASS glass ✓ 218-721-3263
Smerdon Robert S & Tamara L ✓ 59 ▲ (1971)
6236 Schliep Jeffrey S ✓ 11 ▲ (2007)
Schliep Ashley C
6240 Barker Julie ✓ 3 ▲ (1990)
Lietz Gregory M ✓ 8 ▲ (1990)
Lietz Emily
6243 N Brandon Carl ▲ (1990)
Carl Torey L ✓ 59 ▲ (1971)
Swanson Nancy ✓ 4 ▲ (1990)
6244 Nelson Myron K & Janet H ✓ 59 ▲ (1976) 218-721-3476
6257 J M TRANSMISSION transmissions-auto ✓@ 218-393-1153
Martindale James K & Sherry L ✓@ 25 ▲ (1971) 218-721-4972
6262 ABI ELECTRIC electric contractors ✓@ 218-721-3928
Adams Gordon G & Tyra M ✓@ 31 ▲ (1990) 218-721-3928
6265 Engberg Keith W ✓ 28 ▲ (1996) 218-721-4218
6288 Kallberg Darin L ✓ 15 ▲ (1990)
Kallberg Christine
McNamara Kelly L ✓ 17 ▲ (1990)
Tibbetts Deanna S ✓@ 5 ▲ (1990)
Tibbetts Robin D
6290 Happy Steven C ✓ 27 ▲ (1971) 218-721-4039
Kempffer Susan L ✓ 10 ▲ (1990)
STEVE'S SEPTIC SYST PUMPING septic tanks/sys- cleaning/rpr ✓
.....218-721-4039
6291 McKeever Rodger W ✓ 12 ▲ (1990) 218-721-4111
McKeever Hugh T 218-721-4111
6298 N Crane Brandy ✓ ▲ (1990)
N Wilta Timothy A ✓@ ▲ (1990)
6299 Wigg David R 8 ▲ (1990)
6339 No Current Listing
6360 Carlson Timothy E & Lynette R ✓@ 59 ▲ (1971) 218-721-4069
6367 Archer Thomas J ✓@ 11 ▲ (1990)
FREDENBERG VOLUNTEER FIRE DEPT fire departments ✓
.....218-721-3614
+ FISH LAKE RD INTERSECTS
+ ISLAND LAKE DAM RD INTERSECTS
BUSINESSES 11 **HOUSEHOLDS 140**

LAVAQUE RD (HERMANTOWN)-FROM 5099 HANSON RD NORTHWEST
• ZIP CODE 55810 CAR-RT C037
3503 Kozlowski Jeffrey J ✓ 35 ▲ (1959) 218-624-8952
3504 No Current Listing ✓
Gaidis Kent M & Tasha R ✓ 20 ▲ (1980)
3509 Lowinski James J ✓ 7 ▲ (1954)
Lowinski Erin
Sinnott Erin C ✓ 9 ▲ (1982)
Sinnott Robin
3517 No Current Listing
+ WILLOUGHBY LN INTERSECTS
+ SHERIDAN DR INTERSECTS
3554 Dahl Richard J & Diana J ✓ 30 ▲ (1980) 218-624-3841
3562 Cadotte Steven J & Anne M ✓ 38 ▲ (1979) 218-628-1720
3580 Rudolph Calvin H & Diane T ✓ 59 ▲ (1997) 218-624-5178
3584 Michael Radakovich ✓ 5 ▲ (1982)
Radakovich Marguertie A ✓@ 25 ▲ (1970)
3613 Johnson Daniel P ✓ 29 ▲ (1987)
Johnson Jillian
3615 Hansen Steven L & Sandra K ✓@ 28 ▲ (1979) 218-624-4303
3616 Lundequam Daniel G ✓ 14 ▲ (1980)
Lundequam Tirina R
+ THOMPSON RD ENDS
+ HANSON RD ENDS
3656 Hanson Gail M ✓ 28 ▲ (1982)
Hanson Jon M
3669 Johnson Benjamin A & Brandi L ✓ 11 ▲ (1982)
+ SECORA RD INTERSECTS
+ BENSON RD ENDS
+ MORRIS THOMAS RD INTERSECTS
• ZIP CODE 55810 CAR-RT R007
3707 HERMAN TOWN LUMBER dry wall contrs equip/supl ✓@ 218-729-8600
Sundquist Gerald W & Margie A ✓ 21 ▲ (1982)

LAVAQUE RD Cont'd
3721 Mesojedec David M & Melanie C ✓ 8 ▲ (1978)
3724 Flaten Marie S & Lon M ✓ 5 ▲ (2014)
3726 Latuska Walter D & Kelli ✓ 2 ▲ (2014) 218-729-8137
3747 Theobald Martin J & Teresa F ✓ 6 ▲ (2011)
3748 Peterson Dolly M ✓ 28 ▲ (1965)
Swanson Tyler ✓@ 4 ▲ (1982)
3750 Peterson Thomas R & Linda R ✓ 59 ▲ (1987) 218-729-6477
3754 Shetka Mark A & Rachel A ✓ 59 ▲ (1978)
3764 Linnum Ross E ✓ 59 ▲ (1975)
Wolffe Becky ✓ 2 ▲ (1982)
3768 N Kachinske Brian D & Kristy L ✓ ▲ (1982)
N Sawyer Angela ✓ ▲ (1982)
+ COUNTRY RD INTERSECTS
3783 Kleist Christopher S ✓ 11 ▲ (1970)
Kleist Jamie L
3787 N Frick Mark A & Cyndi M ✓ ▲ (1982) 218-206-7575
3790 N Rossiter Rachel ▲ (1982)
+ HERMANTOWN RD INTERSECTS
• ZIP CODE 55811 CAR-RT C018
3810 Ronquist Neal R & Renae L ✓ 5 ▲ (2011)
3845 Kaspszak Brian M & Veronica J ✓@ 15 ▲ (2004) 218-624-5498
3886 Geier Thomas F & Sandra A ✓ 28 ▲ (1980)
3891 McLachlan Robert J & June D ✓@ 21 ▲ (1998) 218-729-7248
3940 Reno Rick R & Cynthia R ✓ 28 ▲ (1992) 218-729-6522
3953 Bullyan Joseph M & Peggy L ✓ 15 ▲ (1971) 218-729-5799
Myers Mitchell R ✓ 18 ▲ (1982)
Myers Kelli L
3954 Rohlader Matthew D & Janet L ✓ 5 ▲ (2005)
3960 Aho Robert A & Lois L ✓ 16 ▲ (1980)
3961 DULUTH CONSTRUCTION CO home builders ✓ 218-729-0587
Gustofson Roger G & Peggy S ✓ 59 ▲ (1997) 218-729-0587
3969 Dirksen Alan R & Kris M ✓ 32 ▲ (1971)
3975 Kero William J & Jennifer L ✓@ 13 ▲ (2004) 218-729-0263
3976 N Gray Alexander W ✓ ▲ (1982)
Johnson Jessie ✓ 59 ▲ (1977) 218-729-7809
Johnson Larry W 218-729-7809
3977 Thompson Brian J ✓ 4 ▲ (1982)
3978 Reid Justin M & Sara M ✓ 3 ▲ (2003) 218-729-6900
3988 Xu Dan ✓ 8 ▲ (2004)
3995 Biondich Nicholas D & Nicole C ✓ 13 ▲ (2005) 218-727-4881
3998 Willoughby Mark J & Jennifer J ✓ 20 ▲ (2003) 218-729-3398
3999 Merschman Anthony P & Holly T ✓@ 11 ▲ (1973) 218-206-7156
4002 Bahr Richard V & Kathleen M ✓ 14 ▲ (2005)
4009 Alwan Sabah J ✓@ 13 ▲ (1978)
Alwan Caterina R
4017 Wourms Nathan B & Janelle ✓ 8 ▲ (1965)
4025 Fadum Brenton J & Luann G ✓ 6 ▲ (1968)
Gislason Nicole M ✓ 7 ▲ (1982)
Gislason Luann
4026 Johnson Kurt W & Teresa A ✓ 28 ▲ (1973) 218-729-0134
4035 Hane Richard C & Judith J ✓@ 59 ▲ (1977) 218-729-9114
4036 Lavalley Shawn M & Michelle L ✓ 11 ▲ (1974)
4038 Johnson J ✓ 9 ▲ (1982) 218-729-3371
4039 Bodell Dan N ✓ 28 ▲ (1956)
4041 Moen Ronald J Jr ✓ 59 ▲ (1982)
4044 Thomas Joseph & Christine E 14 ▲ (1982)
4050 Linde Daniel D & Jessica A ✓ 7 ▲ (2006)
4051 No Current Listing
4054 Daniels Gary A ✓@ 7 ▲ (2006)
Daniels Pamela J
4061 Kildahl Michael L & Susan ✓ 2 ▲ (1992)
4071 Lepage Jamie A ✓@ 15 ▲ (1992) 218-729-7137
Lepage Randine 218-729-7137
4081 Wolfgram Jessica ✓ 2 ▲ (1982) 218-206-7121
Wolfgram Jess 218-206-7121
4089 Butorac Matthew D & Mary K ✓ 20 ▲ (1981)
+ MAPLE GROVE RD INTERSECTS
• ZIP CODE 55811 CAR-RT C042
4114 Zimmerman Lyle F & Joyce M ✓ 28 ▲ (1965) 218-729-6780
4122 Takes Charles J ✓ 2 ▲ (1992)
Takes Shannon
4128 N Jaski Phillip J ✓ ▲ (1969)
Jorgensen Katie L ✓ 2
4134 Soderburg Robert P & Heather ✓ 19 ▲ (1965) 218-729-0763
+ BEAVER LN BEGINS
4190 Dailey James R & Sharyl A ✓ 9 ▲ (2006)
4198 Tyson Stephen E & Brigette M ✓@ 5 ▲ (2006)
+ BEAVER CREEK RD BEGINS
4201 Koski Darlene D ✓ 24 ▲ (1969)
4206 Nielcen Trina R & Traves J ✓ 8 218-206-7201
4212 Polcaro Michael J ✓ 13 ▲ (2002) 218-729-0283
Polcaro Junal D 218-729-0283
4213 No Current Listing ✓
4214 Sawyer Darrin ✓ 9 ▲ (1969)
4220 Bakken Dennis L & Bernadine J ✓@ 28 ▲ (1965) 218-729-5612
4223 No Current Listing
4228 N Heitke Ruth & David ✓@ ▲ (1969)
4229 Larson Steve E Jr & Billie J ✓ 3 ▲ (1935)
4235 Jenny Gary M & Della K ✓ 59 ▲ (1965) 218-729-5059
4238 N Nordling Daniel W & Brianna L ✓
4245 Fish Philip J ✓ 28 ▲ (1965)
Fish J
4248 Dingels Peter J ✓ 2 ▲ (1930)
+ LAVAQUE JUNCTION RD BEGINS
4255 No Current Listing
4262 Murphy Gregg T ✓ 26 ▲ (1965)
4263 No Current Listing ✓
4264 - 4266 No Current Listing (2 Hses)
4268 Cottrell Harry S & Claudia C ✓ 17 ▲ (1983)
Gannucci Robert A ✓ 11 ▲ (1969)
Gannucci Annette E
4271 Dixon Christopher M & Eileen N ✓ 21 ▲ (1965)
4272 N Fraser Rhiannon D ✓
Hillman Eric D ✓ 7 ▲ (1969)
4274 N Martz Christopher ✓ 218-206-7531
4275 Kellerhuis Brian L & Pamela S ✓@ 30 ▲ (1988)
4280 Anderson Eric J & Amy E ✓@ 7 ▲ (1985)
4286 CIRCLE OF LIFE CHIROPRACTIC chiropractors dc ✓ 218-740-3379
+ W ARROWHEAD RD INTERSECTS
4308 Erickson Margaret S ✓@ 27 ▲ (1965) 218-729-7927
Erickson Kelly M 218-729-7927
4313 Monson Rodney A & Saundra D ✓ 12 ▲ (2007) 218-729-6216
4323 SOUMIS CONSTRUCTION INC construction companies ✓ 218-391-2052
Soumis Jesse R & Amanda M ✓@ 9 ▲ (2009)
4333 Aho Ryan E & Natalie L ✓ 13 ▲ (1963)
4337 Nelson Ida C ✓ 29 ▲ (1965) 218-729-6268
4347 Bergum Mike A ✓ 5 ▲ (1923) 218-206-7215
Campbell Mary ✓ 2
4368 Claus Kyle J & Dawn M ✓ 7 ▲ (2012) 218-722-5015
4370 Claus Dale W ✓ 56 ▲ (1935) 218-729-6578
4378 Lawless John P & Laura ✓ 17 ▲ (1935) 218-729-0722

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LAVAQUE RD Cont'd
4379 Anderson Paul R ✓ @ 10 ▲ (1935)
Anderson Katie M
Hanson Laura A ✓ 8 ▲ (1969)
4390 Peterson George W & Ardell E ✓ 28 ▲ (1965) 218-729-6984
4391 Lufholm James E & Patricia A ✓ 59 ▲ (1935) 218-729-5759
Stockinger Gary ✓ @ 2
Stockinger Susan
4393 No Current Listing
4394 Ekstrand Amy K ✓ 17 ▲ (1969)
+ BOULDER DR ENDS
4442 Ankarlo Gayle 2
+ ALPINE DR ENDS
4452 Eikam Michael J & Lynne A ✓ 2 ▲ (1930) 218-729-6384
4455 Kaufman John D 9 ▲ (1969)
4462 Ambom Patricia J ✓ 29 ▲ (1965) 218-729-6136
Ambom Roy O 218-729-6136
4465 Olson Benjamin J & Jessica A ✓ @ 59 ▲ (1965)
Peterson Nicholas C ✓ 3 ▲ (1935)
Peterson Laura E
4471 McNamara Kelly R ✓ 15 ▲ (1935)
4472 Foster Veronica J ✓ @ 2
4477 ATKINS NEILL-FNCL NTWRK investment securities ✓
CETERA ADVISOR NETWORKS mutual funds ✓
HERMANTOWN FEDERAL CU credit unions ✓ @ 218-729-7733
HFCU MORTGAGE SOLUTIONS real estate loans ✓ @ 218-729-7733
MOVEMENT MORTGAGE real estate loans ✓ 925-938-9642
4478 Rutka Laurie L ✓ 21 ▲ (1969)
Valure Dawn ✓ 3 218-206-7535
4480 Chiovitte Leroy B & Joanne E ✓ @ 56 ▲ (1965) 218-729-6219
+ ADELE DR ENDS
+ MILLER TRUNK HWY INTERSECTS
• ZIP CODE 55811 CAR-RT R001
4622 Klint Allan A & Nicole L 59 ▲ (1977)
4650 No Current Listing
4656 Lepard Todd & Janet V ✓ 28 ▲ (1965) 218-729-7337
4657 Pagnac Robert H ✓ 3 ▲ (1920) 218-729-8983
Pagnac Robert M 218-729-8983
4666 Keye Jamie R ✓ 8 ▲ (1956)
Keye Stephanie
4682 Schnorr Leroy F & Patricia A ✓ 43 ▲ (1965)
+ SEVILLE RD INTERSECTS
+ SAMUELSON JUNCTION RD BEGINS
+ LAVAQUE BYPASS RD ENDS
BUSINESSES 9 **HOUSEHOLDS 138**

LAVAQUE BYPASS RD (DULUTH)
• ZIP CODE 55811 CAR-RT R001
4707 Patnaude Thomas D & Margaret R ✓ 28 ▲ (1962) 218-729-5775
4735 Schirmer Tiffany M ✓ 11 ▲ (1978)
4746 Jacobs Jean E ✓ 27 ▲ (1978) 218-729-9619
4748 Jacobs Nora ✓ 59 ▲ (2012)
Jacobs Lee A
4798 Oswell Steven C & Rose M ✓ 28 ▲ (1978) 218-729-5343
SIGN DECISIONS LLC communications consultants ✓ 218-729-9878
4829 Poupore-Haats Antoinet M ✓ 25 ▲ (1962) 218-729-8920
Poupore-Haats Susan E 218-729-8920
+ SAMUELSON JUNCTION RD ENDS
+ LAVAQUE RD INTERSECTS
BUSINESSES 1 **HOUSEHOLDS 6**

LAVAQUE BYPASS RD (HERMANTOWN)-FROM 4581 UGSTAD RD NORTH
• ZIP CODE 55811 CAR-RT R001
4514 No Current Listing
4518 Ⓝ White Allyson ✓ ▲ (1974)
4538 Farleigh Stephannie ✓ 5 ▲ (1974)
Lentz Claudette L & Robert J ✓ 24 ▲ (1926) 218-729-5923
4648 Dolentz Sondra S 22 ▲ (1962)
4655 Ⓝ Unzen Robert J ✓ ▲ (1978)
Unzen Brandy L
4656 Eilefson Charles R & Linda D ✓ 28 ▲ (1962)
4663 Gilbertson Gary J & Tami ✓ 20 ▲ (1962)
4666 Escher Chad L & Rachel 5 ▲ (2003)
4670 Carlson Jacqueline P ✓ 29 ▲ (1962) 218-729-8057
Carlson Erin E 218-729-8057
4677 Krause Alan J & Susan E ✓ 22 ▲ (1999)
Twite Meridith ✓ 2 ▲ (1978)
4678 Jones Bradley J & Mary M ✓ 10 ▲ (1974)
+ SEVILLE RD INTERSECTS
HOUSEHOLDS 13

LAVAQUE JUNCTION RD (DULUTH)-FROM 4251 LAVAQUE RD WEST
• ZIP CODE 55811 CAR-RT C042
5211 Koepp Dennis E & Sheila M ✓ 27 ▲ (1969)
5217 Callahan Patricia A ✓ 28 ▲ (1959) 218-729-6249
5223 Ⓝ Williams Jake S ✓ ▲ (1969)
Williams Marisa J
5227 Lindquist Clarence J & Kathleen L ✓ 59 ▲ (1955) 218-729-7875
5233 Grimm David M Sr ✓ 13 ▲ (1952) 218-733-0460
5247 Ⓝ Talaga Stephen J & Melanie L ✓
5253 Ahlberg Wesley A & Margaret ✓ 28 ▲ (1987) 218-729-6721
5259 Baker Justin J ✓ 4 ▲ (1961)
Baker Elli K
5271 Quesenberry Jane E ✓ 59 ▲ (1935) 218-729-5027
5275 Muench Randall L & Robin K ✓ 19 ▲ (1960) 218-729-0014
5281 Vandyke Roger A & Diane M ✓ 28 ▲ (1975) 218-729-6897
+ UGSTAD RD INTERSECTS
HOUSEHOLDS 11

LAVAQUE JUNCTION RD (HERMANTOWN)
• ZIP CODE 55811 CAR-RT C042
5144 Bloom Bradford C & Becky A ✓ 8 ▲ (1935)
5147 Kucza Wallace F & Beverly O ✓ 28 ▲ (1965) 218-729-6541
5150 No Current Listing
5153 Carlson Delaine A ✓ @ 28 ▲ (1963)
Carlson Dale

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LAVAQUE JUNCTION RD Cont'd
5154 Edblad Jaryn ✓ @ 16 ▲ (1935)
Edblad Nick
Johnston Lori A ✓ @ 16 ▲ (1935)
5158 Ⓝ Munjanja Amanda ✓
Stern Kevin J ✓ 59 ▲ (1991)
5159 Carlson Donald H ✓ 59 ▲ (1970) 218-729-9265
Carlson Donald A 218-729-9265
5167 Bloom Constance C ✓ 29 ▲ (1959) 218-729-6693
5170 Kucza Kevin J & Beth A ✓ 22 ▲ (1935) 218-729-5678
5177 Murphy Paul J & Mitzi M ✓ 29 ▲ (1965) 218-729-6428
5180 No Current Listing ✓
Ⓝ Diggs Lauren ✓
Ⓝ Van Loon K ✓
5182 Vanloon Marlene J ✓ @ 25 ▲ (1975) 218-729-9082
Vanloon Susan J 218-729-9082
5189 Moyle Sherri L ✓ 11 ▲ (1968)
Ⓝ Slattengren Aaron ✓
5192 Pierce Candice C ✓ @ 21 ▲ (1935) 218-729-1058
5194 Rutka Ronald L & Kathryn A ✓ 24 ▲ (1979)
5195 Johnejack Mark J & Gail M ✓ 8 ▲ (1969) 218-729-7737
5196 Vittorio Anthony A & Debora J ✓ 59 ▲ (1980)
5197 Rish Andrea K ✓ 6 ▲ (1969) 218-722-1516
5204 Tatarowicz Anna ✓ @ 56 ▲ (1935) 218-724-4033
Tatarowicz Kazimierz E 218-724-4033
5216 Brown Carol A & Charles D ✓ 59 ▲ (1969) 218-729-6309
5222 Williams Brian D & Jill M ✓ 20 ▲ (2000) 218-729-5891
5228 Letchworth Sharlene T ✓ 59 ▲ (1969) 218-729-9418
Letchworth Audra 218-729-9418
Roper Brittany ✓ @ 22 ▲ (1969)
Roper Maggie
5236 Borgeson Carol L ✓ 28 ▲ (1969)
Macdonell Casey E ✓ 9 ▲ (1935)
5242 Sullin Kevin J & Joann M ✓ 19 ▲ (1935) 218-729-0462
5248 Billings Matthew R ✓ 4 ▲ (1996)
Billings Katie L
5252 Iloia Joyce E ✓ 28 ▲ (1975) 218-729-9316
5264 Eklund Douglas J & Veronica L ✓ @ 24 ▲ (1960)
5290 MAID TO SHINE maid & butler serv 218-428-4343
Wrazidlo Laura L ✓ @ 9 ▲ (2009)
BUSINESSES 1 **HOUSEHOLDS 35**

LAVELL RD (MEADOWLANDS)
• ZIP CODE 55765 CAR-RT R001
1321 Meyer Richard A & Nedram F ✓ @ 6 ▲ (1971) 218-427-2201
1365 Hill David U & Donna L ✓ 32 ▲ (1960) 218-427-2296
1393 Leino Mark W & Diane M ✓ 18 ▲ (1971)
Stampohar Jake ✓ 9 ▲ (1971)
HOUSEHOLDS 4

LAVIS RD (DULUTH)-FROM 5597 LESTER RIVER RD WEST
• ZIP CODE 55804 CAR-RT R011
2914 Johnson Rodney A & Kiersten L ✓ @ 6 ▲ (2002) 218-724-4836
2935 Cook Jacquelyn ✓ 8 ▲ (1974)
Ⓝ Crist Michelle L ✓ ▲ (1974)
UP NORTH LANDSCAPING landscape contractors ✓ 218-525-5807
2950 Twight Bryan D & Kathleen R ✓ @ 28 ▲ (1969)
2964 Sullivan Timothy R & Frances P ✓ @ 23 ▲ (1969)
2971 Twight Bryan D ✓ 12 ▲ (1974)
2985 Henry Barbara A ✓ @ 28 ▲ (1969) 218-525-1891
Henry Steven J 218-525-1891
Komanti Ralph M ✓ 11 ▲ (1970)
3001 Gustafson Kathy A ✓ 13 ▲ (2007) 218-525-1223
Gustafson Joann E 218-525-1223
3028 Gustafson Trevor ✓ @ 28 ▲ (1969)
3061 Flatt April H ✓ @ 15 ▲ (2013)
3071 Simmons Muriel E ✓ 28 ▲ (1969) 218-525-7752
3078 Nelson Stephen J & Tammy L ✓ 28 ▲ (1969) 218-525-7170
3081 Simmons James 2 ▲ (1974)
+ N TISCHER RD INTERSECTS
BUSINESSES 1 **HOUSEHOLDS 14**

LAVOY RD (BROOKSTON)-FROM 9399 HIGHWAY 2
• ZIP CODE 55711 CAR-RT H085
4650 Lund Teri L ✓ 29 ▲ (1971)
Lund Amber L
4662 Vanderscheuren Mandy ✓ 8 ▲ (1978)
HOUSEHOLDS 2

LAW DR (SILVER BAY)-FROM 2 LEE CIR WEST
+ NELSON DR CONTINUES
• ZIP CODE 55614 CAR-RT C002
11 Sando Robert M & Geri G ✓ @ 29 ▲ (1963) 218-226-3807
12 SILVER BAY BAPTIST CHURCH churches ✓ 218-226-4202
13 Mitchell Jeremiah J ✓ 9 ▲ (1965)
Mitchell Kathleen M
15 Ⓝ Johnson Wayne E ✓ ▲ (1965)
16 Connor Robert J & Joanne M ✓ 56 ▲ (1960) 218-226-3377
17 - 19 No Current Listing (3 Hses)
+ EDISON BLVD INTERSECTS
20 Hansen Darryl M ✓ @ 3 ▲ (1960)
21 Zupancich Brian B ✓ 21 ▲ (1967)
Zupancich Bernard J
22 Grensing Norma J ✓ 54 ▲ (1960) 218-226-3841
Grensing Carl R 218-226-3841
23 Dubbin Dallas V & Sandra K ✓ 29 ▲ (1967)
24 Rathbone Charles D & Jeannine C ✓ 59 ▲ (1960) 218-226-3230
26 Larson Duwayne D & Kerry S ✓ @ 59 ▲ (1960) 218-226-3811
27 Thomas Raymond C ✓ 48 ▲ (1965) 218-226-4397
28 Hohman Stacey K 2 ▲ (1960)
29 Belanger Lawrence K ✓ 29 ▲ (1962) 218-226-4025
30 Johnson Andy & Suzy 2
31 McKinney Billy L ✓ @ 14 ▲ (1967) 218-226-3583
McKinney Leesyl 218-226-3583
32 Jasperson Todd H ✓ @ 24 ▲ (1960) 218-226-3702
Jasperson Cathleen J 218-226-3702
33 Lund Hans J ✓ 3 ▲ (1965)
Napper Susanne A ✓ @ 5 ▲ (1978)
Napper Kristin
34 Derosier William B ✓ 21 ▲ (1960) 218-226-4097
+ LEE CIR BEGINS
36 Ⓝ Fashion Hy
Gale Roger P & Dorothy J ✓ 59 ▲ (1961) 218-226-3906
37 Ⓝ Coley Chelsey K ✓ ▲ (1965)
38 Danielson Ward R & Vicki J ✓ 20 ▲ (1961)
Henjum Haley ✓ 16 ▲ (1965)
Henjum Vicki J
Ⓝ Schmidt Ashley ✓
38 A Wittmer Leah T ✓ 8 ▲ (1965)
39 Oltman David R & Barbara J ✓ @ 59 ▲ (1979) 218-226-0120
40 Johansen Christine M ✓ @ 9 ▲ (1962)

LAW DR Cont'd
Johansen Leah
Ronhovde Gwendolyn O ✓ 33 ▲ (1965) 218-226-3461
42 Ludwig Amanda E ✓ 8 ▲ (1965)
Mayne Justin J ✓ 8 ▲ (1962)
Mayne Marc
44 Ⓝ Kentala Eugene E & Mary A ✓ ▲ (1965)
Knaffla Dale C & Janey A ✓ 59 ▲ (1975)
46 Duresky James D ✓ @ 32 ▲ (1977) 218-226-4697
Duresky Veronica A 218-226-4697
Geddes Marty A ✓ 20 ▲ (1965)
48 No Current Listing
49 Koster Roger E & Jolene F ✓ 40 ▲ (1966) 218-226-3468
50 Hynes Edward M & Lois J ✓ 49 ▲ (1962) 218-226-3896
51 Ⓝ Champlin Erin ✓
Ⓝ Obrien Justin D ✓ ▲ (1965)
52 Whiteford Robert G ✓ 54 ▲ (1962) 218-226-3074
56 Cooper Karen J ✓ 12 ▲ (1967)
Sanford Joyce E ✓ 50 ▲ (1965) 218-226-3226
+ EDISON BLVD INTERSECTS
+ MARKS DR INTERSECTS
+ NELSON DR INTERSECTS
BUSINESSES 1 **HOUSEHOLDS 46**

LAWN ST (DULUTH)
+ UNIVERSITY DR INTERSECTS
+ W COLLEGE ST CONTINUES
• ZIP CODE 55812 CAR-RT C057
1908 Li Zhengxin 3
1912 Ario Peter M & Lois J ✓ 59 ▲ (1926) 218-724-6886
1914 Ⓝ Reed Abigail
1916 - 1918 No Current Listing (2 Hses)
1920 Flanagan Kathleen M ✓ 33 ▲ (1960) 218-728-5232
Flanagan Alicia J 218-728-5232
1922 Artim Joseph K ✓ @ 15 ▲ (1928)
1924 Furo Candace A ✓ @ 12 ▲ (1933) 218-722-3857
1926 Morrell Meaghan E ✓ 8 ▲ (1939)
1928 Long Mikala ✓ 2
Westrom Irma E ✓ @ 31 ▲ (1931)
Westrom Melanie J
1930 Dennis Patricia M ✓ 56 ▲ (1927) 218-728-6238
1932 No Current Listing
1936 Caple Ronald ✓ 59 ▲ (1926) 218-728-3087
1938 Ⓝ Sylamaki Marian S
Syrjamaki-Kucht Marian R ✓ 26 ▲ (1926) 218-724-4833
1940 Crowson Adrienne ✓ 5
Eliasen Adrianne M 27 ▲ (1926)
1942 Radosevich George J III ✓ 8 ▲ (1926)
1944 Ⓝ Tufte Riley ✓
2013 Flagler Robert L ✓ 8 ▲ (1955) 218-724-2893
Othman Noraini B ✓ 8 ▲ (1939)
+ N 20TH AVE E INTERSECTS
+ N 19TH AVE E INTERSECTS
+ N 87TH AVE W INTERSECTS
• ZIP CODE 55810 CAR-RT C037
8701 Ⓝ Altonen Jerry A ✓ @
Shykes Patrick J ✓ @ 9 ▲ (1921)
Shykes Jeremy
• ZIP CODE 55810 CAR-RT C001
8702 Johnson Cheryl E ✓ 9 ▲ (2000) 218-624-7567
Johnson Clareen B 218-624-7567
Kopec Krzysztof A ✓ 5 ▲ (1939)
Stanhope Carrie E 8 ▲ (1939)
8715 Linne Mark T & Karen G ✓ @ 59 ▲ (1959) 218-624-7310
8719 Ⓝ Poferl Kenneth L ✓ ▲ (1977)
8725 Keppers Tracy L ✓ 10 ▲ (1921)
Ruotsalainen Jody W & Tracy L ✓ @ 10 ▲ (1977)
Tauzell Dylan C ✓ 11 ▲ (1977)
Trottier Linda D ✓ 57 ▲ (1921)
Trottier Ld
+ PORTAL AVE INTERSECTS
9101 Kiminski Theresa M ✓ @ 24 ▲ (1993)
9113 Preston John W & Betty J ✓ 31 ▲ (1927) 218-624-5038
9117 Martin Jeffrey D & Terry E ✓ @ 30 ▲ (1926)
9120 Miller Dale E & Esther A ✓ 59 ▲ (2005) 218-624-8181
9123 Johnson James P & Diane J ✓ 28 ▲ (1925)
9125 Vanarman Michael B ✓ 59 ▲ (1925)
9133 Strand Alicia ✓ 2
Strand Ali
9134 Parks Barbara J ✓ @ 19 ▲ (1954) 218-624-7400
Parks Lila H 218-624-7400
9142 Higgins Joseph A ✓ 11 ▲ (1939)
9143 Matetich Kevin J & Shelly ✓ @ 19 ▲ (2002)
9146 Frank Tyler ✓ 5 ▲ (1939)
Michalski Timothy M & Renee C ✓ 27 ▲ (1927)
+ MIDWAY RD ENDS
9201 Fremling Michelle K & Ted ✓ 59 ▲ (1935)
Nelson Tammy A & Timothy D ✓ @ 9 ▲ (1935)
9202 Ⓝ Schweiger Drew D ✓ ▲ (1939)
Ⓝ Sundquist Jessica ✓ ▲ (1939)
9221 Talago Aaron M ✓ 5 ▲ (1959)
9229 Ⓝ Benrud Jesse L ✓ ▲ (1977)
9231 Cartwright Katheryn L ✓ @ 26 ▲ (1923) 218-624-3933
9232 Lincowski Linda M ✓ 11 ▲ (1994)
9237 Valure Duane A ✓ @ 5 ▲ (1918)
Valure Ashley
9239 Kachelmyer Dennis J ✓ 27 ▲ (1961)
9242 Bryant Kristopher J & Tara A ✓ @ 23 ▲ (1973)
+ 6TH ST INTERSECTS
HOUSEHOLDS 56

LAWNWOOD RD (DULUTH)-FROM 4071 TURNER RD NORTH
• ZIP CODE 55803 CAR-RT R012
6761 Behning David S ✓ 28 ▲ (1984)
6767 Nesgoda Blane R & Bobbi S @ 9 ▲ (1984)
6781 Allinger Lisa E ✓ 3 ▲ (1984)
Ⓝ Estepp Lisa ✓ ▲ (1984)
6795 Ringsred Robert M & Carolyn J ✓ 25 ▲ (2000) 218-721-4858
6813 Belfry Keith S & Diane C ✓ 2 ▲ (1984) 218-721-4066
Strand Alyson M ✓ 4 ▲ (1984)
6815 Johnson David M & Rebecca A ✓ 3 ▲ (1982) 218-464-0921
6817 Desanto Lana L & John E ✓ @ 2 ▲ (2005)
6831 Olson Sheryl ✓ 2 ▲ (1984)
6839 Bartlett Lawrence D & Mary L ✓ 28 ▲ (1989) 218-721-3822
6841 No Current Listing
6845 Hylden Eric D ✓ 23 ▲ (1990)
Hylden Hannah
6849 Lofdahl Lisa ✓ 2 ▲ (1984)
Lofdahl Nicole
Shrake Carol J ✓ 59 ▲ (1984)

LAVAQUE RD Cont'd

Paavola Martin H 218-729-5488
4878 1 Koivisto Mary K ✓ 21 218-729-0805
2 ◍ Lampela Davin ✓
3 Labud Virginia I ✓ 23 218-729-8333
4880 Knudsen Sally J ✓@ 12 ☗(1967) 218-729-9339
4881 Eisenach Dawn M ✓ 9 ☗(1973) 218-729-7885
Kuettel Charles D ✓ 10 ☗(1973)
4882 ◍ Johnson Michael P ✓ ☗(1967)
+ MARTIN RD INTERSECTS
+ CHRISTIANSON RD CONTINUES
• ZIP CODE 55803 CAR-RT R004
5193 Cich Deanna L & Richard M ✓ 17 ☗(1973)
5195 Pauna Shelly M @ 2 ☗(1973)
5197 ACI SALES & SVC sandblasting ✓@ 218-729-8156
CALVARY CRUSHING & RECYCLING recycling centers @ 218-723-1294
CICH SERVICES INC serv ✓@ 218-729-9091
CSI CONSTRUCTION SVC INC genl contractors ✓@ 218-729-9105
◍ Kostrzewski Leah ✓
5248 Hanson Brenda L ✓@ 22 ☗(1973)
◍ Lagarde Bobbie J ✓@ ☗(1973)
5256 No Current Listing
5262 Britton Jennifer L & Larry J 7 ☗(1973)
5274 Anderson Sheryll K ✓@ 19 ☗(1971)
5293 Hagadorn Joey J ✓ 6 ☗(1973)
+ LOCKWOOD LN ENDS
5309 Stafford Robert W & Angeline J ✓ 23 ☗(1973) 218-729-8827
5408 Olson Amanda ✓ 3 ☗(1981)
5410 Olson Rick J & Annette S ✓ 24 ☗(1971)
5500 Bosiacki Richard A Jr ✓ 10 ☗(1981)
Stabs Bruce A ✓ 5 ☗(1981) 218-721-4286
Stabs John W 218-721-4286
5505 Nylen Thomas M & Nancy D ✓@ 23 ☗(1971) 218-721-4023
5506 No Current Listing ✓
+ MCCOMBER RD INTERSECTS
• ZIP CODE 55803 CAR-RT R013
5601 Laine Janice M ✓ 9 ☗(1973)
Solem Dale O ✓ 19 ☗(1971) 218-721-3741
5613 Larsen William T ✓ 3 ☗(1973)
Larsen Mary
5614 Turcotte Rolland G & Janis A ✓@ 12 ☗(1971) 218-721-4212
+ SCHULTZ RD INTERSECTS
5748 ◍ Hobbs Daniel ✓ ☗(1981)
5760 Stabs John W ✓ 54 ☗(1971) 218-721-5287
Stabs Bruce A 218-721-5287
5767 Hansen Dale W & Kathleen A ✓ 23 ☗(1981) 218-721-4830
5782 Archambeau Kari ✓ 3 ☗(1981)
Kmiech Daniel J ✓ 7 ☗(1981)
Kmiech Lois F
5788 Kriske James L Jr & Barbara A ✓ 7 ☗(1981)
5796 ◍ Morales Steven ✓@ ☗(1981)
5799 ◍ Harris Timothy ✓ ☗(1981)
Harris Craig
5811 Holmes Ronald F & Diane C ✓ 24 ☗(1981) 218-525-3892
5821 Sich Kevin L & Molly A ✓@ 7 ☗(1981) 218-721-4836
5839 Satterlund Harlan K & Cyrene ✓ 19 ☗(1971)
5870 Larson Scott A ✓ 6 ☗(1981)
Saari Lora J ✓ 24 ☗(1971) 218-721-3015
5880 No Current Listing
5888 Kraml Ronald D & Beth A ✓ 54 ☗(1971) 218-721-3861
+ W LISMORE RD BEGINS
5937 Flewell Darwin J & Cheryl M ✓ 8 ☗(1981)
5938 Ruhanen Steven C & Doreen S ✓ 21 ☗(1981) 218-721-3532
5940 Kyrola Scott D & Dawn ✓@ 8 ☗(1981) 218-729-5721
5948 Shaw Duane A & Hope A ✓ 21 ☗(1971) 218-721-4665
5952 McVean Robert W & Tania S ✓@ 54 ☗(1971) 218-721-4028
5955 Fulkerson Wiley J & Bobbie-Mae L ✓@ 3 ☗(1981) 218-721-4070
5960 Haney Kevin R & Amy J ✓@ 54 ☗(1981)
5978 Chilberg Eric P 6 ☗(1981)
5981 Kaneski Lance G ✓ 16 ☗(1971) 218-721-5168
Kaneski Carol E 218-721-5168
Lundberg Carol E ✓ 15 ☗(1971)
+ STUBERUD RD ENDS
+ STUBERUD RD ENDS
6007 NORTHERN LIGHTS LANDSCAPING landscape contractors ✓@ 218-728-6053
6035 Kaneski Gregory J & Kathleen A ✓ 2 ☗(1981) 218-721-4446
LAKEHEAD TRUCKING & EXCAVATORS excavating contractors ✓@ 218-721-3521
6040 Kaneski Stephen A & Carla J ✓ 41 ☗(1981)
6060 Busch Gary R & Linda H ✓@ 25 ☗(1981) 218-721-4736
6064 LEE K OLDER JR state government ✓@ 218-721-3070
6073 Armstrong Sherry A ✓@ 19 ☗(1981) 218-721-3115
Armstrong Christopher 218-721-3115
6079 Kaneski Paul D & Gloria J ✓ 54 ☗(1981)
6082 Lennartson Steven R ✓ 54 ☗(1981)
Stephenson Luann O ✓ 54 ☗(1981)
+ USIAK RD INTERSECTS
6103 EAGLE'S NEST RESORT campgrounds ✓ 218-721-4147
Jauert David A ✓@ 26 ☗(1981)
JAUERT INC resorts ✓@ 218-721-4147
6139 BLUE MAX RESORT resorts ✓@ 218-721-4255
6150 ART STUDIO & GALLERY-FISH LAKE art galleries & dlrs ✓@ 218-721-5253
HAIR RESORT INC SALON & ART beauty salons ✓@ 218-721-5253
Zweifel Julie H ✓ 13 ☗(1981)
+ DAHLBERG RD ENDS
6200 Clark Carole J ✓@ 54 ☗(1971)
Kolden Daniel L & Tracy L ✓ 2 218-729-8636
6204 No Current Listing
6220 Budisalovich James K ✓ 54 ☗(1981)
6222 Godmare Brooke E ✓@ 9 ☗(1981)
6223 Johnson Vincent W & Betty M ✓@ 28 ☗(1971)
6229 ◍ Blair Erik D ✓

LAVAQUE RD Cont'd

Blair Gina
6231 Honer Mark A & Julie V ✓@ 2 ☗(1981) 218-721-4403
6232 MOLAND AUTO GLASS auto glass- serv & installation ✓@ 218-727-7031
Smerdon Robert S & Tamara L ✓ 54 ☗(1971)
6236 Schliep Jeffrey S ✓ 6 ☗(1981)
6240 Chesney Martin W ✓@ 3 ☗(1981)
Chesney Sara
6243 Carl Torey L ✓ 54 ☗(1971) 218-721-3185
6244 Nelson Myron K & Janet H ✓ 54 ☗(1981) 218-721-3476
6257 J M TRANSMISSIONS transmissions-auto ✓@ 218-393-1153
Martindale James K & Sherry L ✓ 20 ☗(1971) 218-721-4972
6262 Adams Gordon G & Tyra M ✓@ 26 ☗(1981) 218-721-3928
6265 Engberg Keith W ✓ 21 ☗(1981)
6288 Kallberg Darin L ✓@ 10 ☗(1981)
◍ Tibbetts Deanna ✓@ ☗(1981)
6290 Happy Steven C ✓ 22 ☗(1971) 218-721-4039
Happy David W 218-721-4039
Kempffer Susan L ✓ 5 ☗(1981)
STEVE'S SEPTIC PUMPING SVC septic tanks ✓@ 218-721-4039
6291 McKeever Rodger W & Lorraine B ✓ 7 ☗(1981) ..218-721-4111
6298 Kallberg Christine ✓@ 2 ☗(1981)
6299 Wigg David R ✓ 3 ☗(1981)
+ W PIONEER RD ENDS
6339 Older Christopher L ✓ 14 ☗(1971)
6360 Carlson Timothy E & Lynette R ✓ 54 ☗(1971) 218-721-4069
6367 Archer Thomas J ✓ 6 ☗(1981)
Archer Stephanie
+ FISH LAKE RD INTERSECTS
+ ISLAND LAKE DAM RD INTERSECTS

BUSINESSES 18 **HOUSEHOLDS 128**

LAVAQUE RD (HERMANTOWN)-FROM 5099 HANSON RD NORTHWEST
• ZIP CODE 55810 CAR-RT C037
3503 Kozlowski Jeffrey J ✓ 30 ☗(1983) 218-624-8952
3504 No Current Listing ✓
Gaidis Kent M & Tasha R ✓ 18 ☗(1983)
Hubert Christophe T ✓ 54 ☗(1983)
3509 Sinnott Erin C ✓@ 4 ☗(1983)
3517 Koski Elaine F ✓ 43 ☗(1983)
+ WILLOUGHBY LN ENDS
+ WILLOUGHBY LN CONTINUES
+ SHERIDAN DR INTERSECTS
3554 Dahl Richard J & Diana J ✓ 29 ☗(1983) 218-624-3841
3562 Cadotte Steven J & Anne M ✓ 33 ☗(1983) 218-628-1720
3580 Rudolph Calvin H & Diane T ✓ 54 ☗(1983) 218-624-5178
3584 Radakovich Marguertie A ✓ 26 ☗(1983)
3613 Johnson Daniel P ✓ 24 ☗(1983)
3615 Hansen Steven L & Sandra K ✓ 23 ☗(1983) 218-624-4303
3616 Lundequam Daniel G & Tina R ✓ 9 ☗(1983) 218-723-1183
+ THOMPSON RD ENDS
+ HANSON RD ENDS
3656 Hanson Gail M ✓ 23 ☗(1983) 218-729-9137
Hanson Jon M 218-729-9137
3669 Kjerstad Brandi L ✓ 5 ☗(1983) 218-733-0402
+ SECORA RD INTERSECTS
+ BENSON RD ENDS
+ MORRIS THOMAS RD INTERSECTS
• ZIP CODE 55810 CAR-RT R007
3707 HERMAN TOWN LUMBER lumber-retail ✓@ 218-729-8600
Sundquist Margie ✓ 16 ☗(1983)
3721 Mesojedec David M & Melanie C ✓@ 9 ☗(1983)
3748 Peterson Dolly M ✓ 23 ☗(1965) 218-729-7767
3750 Peterson Thomas R & Linda R ✓ 54 ☗(1983) 218-729-6477
3754 Shetka Mark A & Rachel A ✓ 54 ☗(1983) 218-729-9794
3764 Linnum Ross E ✓@ 54 ☗(1983)
3768 Virnig Glen J & Lisa M ✓@ 2 ☗(1983) 218-206-0187
+ COUNTRY RD INTERSECTS
3783 Kleist Christophe S & Jamie L ✓@ 6 ☗(1983)
3787 Zeleznikar Daniel J & Natalie R ✓ 12 ☗(1983) 218-722-2875
3790 Kausch Hilde M ✓ 23 ☗(1965) 218-729-9611
Kausch Archibald W 218-729-9611
+ HERMANTOWN RD INTERSECTS
+ HERMANTOWN RD INTERSECTS
• ZIP CODE 55811 CAR-RT C018
3845 Kaspszak Brian M & Veronica J ✓@ 10 ☗(1983) ..218-624-5498
3886 Geier Thomas F & Sandra A ✓ 23 ☗(1983) 218-729-9651
3891 McLachlan Robert J ✓ 16 ☗(1983) 218-729-7248
McLachlan June D 218-729-7248
3940 Reno Rick R & Cynthia R ✓@ 21 ☗(1983) 218-729-6522
3953 Bullyan Joseph M & Peggy L ✓ 10 ☗(1983) 218-729-5799
3954 Gray Kevin Z & Colleen A ✓ 9 ☗(1983)
3960 Aho Robert A & Lois L ✓ 11 ☗(1983)
Dzuck Dennis J ✓ 19 ☗(1983)
3961 DULUTH CONSTRUCTION CO home builders ✓@ 218-729-0587
Gustofson Kyle ✓@ 54 ☗(1983) 218-729-0587
Gustofson Roger G 218-729-0587
3969 Dirksen Alan R & Kris M ✓ 27 ☗(1983) 218-729-5120
3975 Kero William J & Jennifer L ✓@ 8 ☗(1983) 218-729-0263
3976 Johnson Larry W & Karen J ✓@ 54 ☗(1983) 218-729-5961
3977 ◍ James Robert B & Cathy L ✓ ☗(1983)
3978 Schultz Nicholas P & Gina M ✓ 3 ☗(1983)
3988 No Current Listing
3995 Biondich Nicholas D & Nicole C ✓ 8 ☗(1983) 218-727-4881
3998 Willoughby Mark J & Jennifer J ✓@ 15 ☗(1983) ..218-729-3398
3999 Merschman Anthony P & Holly T ✓ 9 ☗(1983) 218-206-7156
4002 Bahr Richard V & Kathleen M ✓ 9 ☗(1983) 218-729-7771
4009 Alwan Sabah J ✓@ 8 ☗(1983) 218-729-8490
Alwan Caterina R 218-729-8490
4017 Johnson Wallace V & Susan L ✓ 6 ☗(1983)
4025 ◍ Fadum Brenton J ✓ ☗(1983)
4026 Johnson Kurt W & Teresa A ✓ 23 ☗(1983) 218-729-0134
4035 Hane Richard C & Judith J ✓ 54 ☗(1983) 218-729-9114
4036 Lavalley Shawn M & Michelle L ✓ 8 ☗(1983) 218-729-5318
4038 Johnson J ✓ 4 218-729-3371

LAVAQUE RD Cont'd

Maurer Gerald P ✓ 6 ☗(1983)
4039 Bodell Scott J ✓ 23 ☗(1983)
Bodell Daniel M
4041 Moen Ronald J Jr ✓ 54 ☗(1983)
4044 Thomas Quintin L & Christine E 9 ☗(1983)
4050 Linde Daniel D & Jessica A 2 ☗(1983)
4051 Greeman Sarah ✓ 54 ☗(1983) 218-729-5552
Greeman David C 218-729-5552
4054 Daniels Gary A ✓@ 2 ☗(1983)
Daniels Pamela J
4061 ◍ Kuseske Jerry L ✓@ ☗(1983)
4071 Lepage Jamie A ✓ 10 ☗(1983) 218-729-7137
Lepage Randine 218-729-7137
4081 Giernot Bruno B ✓ 24 ☗(1983)
4089 Butorac Matthew D & Mary K ✓ 15 ☗(1983) 218-729-5214
+ MAPLE GROVE RD INTERSECTS
+ MAPLE GROVE RD CONTINUES
• ZIP CODE 55811 CAR-RT C042
4114 ◍ Gallagher Joy L ✓ 218-729-9486
Zimmerman Lyle F & Joyce M ✓ 23 ☗(1965) 218-729-6780
4122 Sohlstrom Paul G & Jamie A ✓ 19 ☗(1978) 218-729-9206
4128 Amundson Bryan D & Sheri L ✓ 54 ☗(1978) 218-729-1539
4134 Soderburg Robert P ✓ 14 ☗(1965) 218-729-0763
+ BEAVER LN BEGINS
4190 Dailey James R & Sharyl A ✓@ 4 ☗(1978) 218-206-7092
Pylka Melvyn T ✓ 8 ☗(1978)
4198 Huls Luke D & Nichole W ✓ 2 ☗(1978) 218-729-7158
+ BEAVER CREEK RD BEGINS
4201 Koski Darlene D ✓ 19 ☗(1978)
4206 No Current Listing
4212 Polcaro Michael J ✓ 9 ☗(1978) 218-729-0283
Polcaro Junal D 218-729-0283
ROYALE AIR SVC air courier serv ✓@ 218-721-0405
4213 No Current Listing ✓
◍ Zacher Tammy K ✓
4214 ◍ Puhl Michael ✓ ☗(1978)
4220 Bakken Dennis L & Bernadine J ✓@ 21 ☗(1965) 218-729-5612
4223 Thomas Jeffrey G ✓@ 2
Thomas Gloria
4228 Dasher Eugene E & Julie A ✓ 42 ☗(1965) 218-729-7093
4229 Stockinger Susan L ✓ 25 ☗(1965)
Stockinger Gary W
4235 Jenny Gary M & Della K ✓ 54 ☗(1965) 218-729-5059
4238 Carlson Tessa ✓@ 54 ☗(1965) 218-729-6694
Carlson Daniel L 218-729-6694
4245 Fish Philip J ✓ 21 ☗(1965)
4248 ◍ Carlson Pam ✓
Fish Anthnet P ✓ 32 ☗(1965) 218-729-5774
Fish Tim 218-729-5774
+ LAVAQUE JUNCTION RD BEGINS
+ LAVAQUE JUNCTION RD CONTINUES
4255 No Current Listing
4262 Murphy Gregg T ✓ 21 ☗(1965) 218-729-7469
4263 No Current Listing ✓
4264 - 4266 No Current Listing (2 Hses)
4268 Gannucci Robert A ✓ 6 ☗(1978)
◍ Johnson Dennis S ✓
4271 Dixon Christopher M & Eileen N ✓@ 16 ☗(1965)
4272 INNOVATIVE LIVING INC residential care homes ✓@ 218-729-8427
4274 No Current Listing
4275 Kellerhuis Brian L & Pamela S ✓@ 25 ☗(1978)
4280 Anderson Eric J & Amy E ✓@ 2 ☗(1978)
4286 CIRCLE OF LIFE CHIROPRACTIC chiropractors dc ✓@ 218-740-3379
Cottrell Harry S & Claudia C ✓@ 12 ☗(1978)
+ W ARROWHEAD RD INTERSECTS
4308 Erickson Margaret S & Jeffrey G ✓@ 22 ☗(1965) 218-729-7927
4313 Monson Rodney A & Saundra D ✓ 7 ☗(1978) 218-729-6216
4323 SOUMIS CONSTRUCTION INC construction companies ✓@ 218-391-2052
Soumis Jesse R & Amanda M ✓@ 4 ☗(1978) 218-729-9027
4333 Aho Ryan E & Natalie L ✓ 8 ☗(1978)
4337 Nelson Eugene G & Ida C ✓ 24 ☗(1965) 218-729-6268
4347 No Current Listing
4370 Claus Dale W & Mary L ✓ 51 ☗(1978) 218-729-6578
4378 Lawless John P & Laura ✓ 12 ☗(1978) 218-729-0722
4379 Anderson Paul R & Kathy ✓@ 5 ☗(1978) 218-206-7126
4390 Peterson George W & Ardell E ✓ 23 ☗(1965) 218-729-6984
4391 Lufholm James E & Patricia A ✓ 54 ☗(1978) 218-729-5759
4393 Reynolds Gavin B ✓ 9 ☗(1978)
4394 Ekstrand Amy K 12 ☗(1978)
+ BOULDER DR ENDS
4442 BEL-AIR MOBILE MANOR mobile homes- park developers ✓@ 218-729-9477
Borgen Walter W Jr & Margaret E ✓ 33 ☗(1965)
+ ALPINE DR ENDS
4452 Miskowski Lorraine H ✓ 54 ☗(1965)
4455 Kaufman John D ✓ 4 ☗(1978)
Nordquist Lisa M ✓ 4 ☗(1978)
Nordquist John
4462 Amborn Patricia J ✓ 24 ☗(1965) 218-729-6136
Amborn Roy O 218-729-6136
4465 Fecker Steven C & Peggy A ✓ 16 ☗(1978) 218-729-9501
4471 Worthington Sean M 6
4472 Voigt Ray E ✓ 21 ☗(1965)
4477 ◍ Busch Natalie ✓
HERMANTOWN FEDERAL CU credit unions ✓@ ..218-729-7733
4478 ◍ Grussendorf James D ✓
Grussendorf Rhonda L
Leveille Sherry ✓@ 3
Leveille Joey
◍ Nielsen Scott ✓@
◍ Nielsen Sherry ✓ 218-206-7135
Rutka Laurie L ✓ 16 ☗(1978)

PKST 431622

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LAVAQUE RD Cont'd

4480 Chiovitte Leroy B & Joanne E ✓ 51 ☗(1965) 218-729-6219
+ ADELE DR ENDS
+ MILLER TRUNK HWY INTERSECTS
• ZIP CODE 55811 CAR-RT R001
4622 Dennis Nicole L ✓ 11 ☗(1967)
Klint Allan A & Nicole L ✓ 54 ☗(1967)
4629 Duff M ✓ 23 ☗(1965) 218-729-8348
4656 Lepard Janet V ✓ 23 ☗(1965) 218-729-7337
4657 Pagnac Robert M & Allison L ✓ 24 ☗(1967) 218-729-8983
4659 Pagnac Brent R & Melissa A ✓@ 10 ☗(1967) 218-729-9347
4666 Keye Jamie R ✓ 9 ☗(1967)
Keye Stephanie
4682 Schnorr Leroy F & Patricia A ✓@ 38 ☗(1965) 218-729-9066
+ SEVILLE RD INTERSECTS
+ SEVILLE RD CONTINUES
+ SAMUELSON JUNCTION RD BEGINS
+ LAVAQUE BYPASS RD ENDS
BUSINESSES 8 **HOUSEHOLDS 133**

LAVAQUE BYPASS RD (DULUTH)
• ZIP CODE 55811 CAR-RT R001
4707 Patnaude Thomas D & Margaret R ✓ 29 ☗(1962)
.....218-729-5775
4735 Schirmer Tiffany M 6 ☗(1973)
4746 Jacobs Jean E ✓ 22 ☗(1973) 218-729-9619
4748 No Current Listing
4798 Oswell Steven C & Rose M ✓ 23 ☗(1973) 218-729-5343
4829 Poupore-Ha Scott C ✓ 20 ☗(1962) 218-729-8920
Poupore-Haats Antoinet M ✓ 20 ☗(1962) 218-729-8920
Poupore-Haats Susan E 218-729-8920
+ SAMUELSON JUNCTION RD ENDS
+ SAMUELSON JUNCTION RD ENDS
+ LAVAQUE RD INTERSECTS
HOUSEHOLDS 7

LAVAQUE BYPASS RD (HERMANTOWN)-FROM 4581 UGSTAD RD NORTH
• ZIP CODE 55811 CAR-RT R001
4514 Bujold Theodore J ✓ 4 ☗(1967)
4518 No Current Listing
4538 Lentz Claudette L & Gregory T ✓ 19 ☗(1967) 218-729-5923
4648 Dolentz Sondra S ✓ 17 ☗(1962) 218-729-0047
Dolentz Nathan A 218-729-0047
4655 Gould Brandon G & Angela J ✓ 2 ☗(1973) 218-724-0322
4656 Eilefson Charles R & Linda D ✓ 23 ☗(1962) 218-729-8906
4663 Gilbertson Gary J & Tami ✓@ 15 ☗(1962) 218-729-0354
4666 McConnell Austin R & Sarah J 3 ☗(1967)
4670 Carlson Jacqueline P ✓ 24 ☗(1962) 218-729-8057
Carlson Justin P 218-729-8057
4677 Krause Alan J & Susan E ✓ 17 ☗(1973)
4678 Jones Bradley J & Mary M ✓@ 5 ☗(1967)
+ SEVILLE RD INTERSECTS
HOUSEHOLDS 11

LAVAQUE JUNCTION RD (DULUTH)-FROM 4251 LAVAQUE RD WEST
• ZIP CODE 55811 CAR-RT C042
5211 Youngblom Adam 6 ☗(1978)
Youngblom Karri
5217 Callahan Patricia A & James T ✓ 23 ☗(1978) 218-729-6249
Kish George E Jr & Sue M ✓@ 4
5223 Patterson Joel S & Katrina M ✓ 11 ☗(1978)
5227 Lindquist Kathleen L ✓@ 54 ☗(1978) 218-729-7875
Lindquist Clarence 218-729-7875
5233 Grimm David M Sr ✓ 8 ☗(1978) 218-733-0460
5247 Broman Gerald A ✓ 24 ☗(1978) 218-729-7260
Broman Nicole 218-729-7260
5253 Ahlberg Wesley A & Margaret ✓ 23 ☗(1978) 218-729-6721
5259 Erickson Arlene A ✓ 24 ☗(1978) 218-729-9536
5271 Quesenberry Jae ✓@ 54 ☗(1978) 218-729-5027
Quesenberry Jane E 218-729-5027
5275 Muench Randall L & Robin K ✓ 14 ☗(1978) 218-729-0014
5281 Vandyke Roger A & Diane M ✓@ 29 ☗(1978) 218-729-6879
+ UGSTAD RD INTERSECTS
HOUSEHOLDS 12

LAVAQUE JUNCTION RD (HERMANTOWN)
• ZIP CODE 55811 CAR-RT C042
5144 Bloom Bradford C & Becky A ✓@ 23 ☗(1978)
5147 Kucza Wallace F & Beverly O ✓ 23 ☗(1978) 218-729-6541
5150 Foro Scott J & Debra L ✓@ 19 ☗(1978)
5153 Carlson Delaine A ✓@ 23 ☗(1978) 218-729-7474
5154 Edblad April ✓ 11
Johnston Lori A ✓ 10 ☗(1978)
5158 Stern Kevin J & Julia A ✓@ 54 ☗(1978) 218-729-7496
5159 Carlson Donald H ✓ 54 ☗(1978) 218-729-9265
Carlson Donald A 218-729-9265
5167 Bloom Constance C ✓ 24 ☗(1978) 218-729-6693
Bloom Becky A 218-729-6693
5170 Kucza Kevin J & Beth A ✓ 17 ☗(1978) 218-729-5678
5177 Murphy Paul J & Mitzi M ✓ 24 ☗(1978) 218-729-6428
5180 @ Hodge Matthew C ✓@ ☗(1978) 218-206-7093
Hodge Amy 218-206-7093
5182 Vanloon Marlene J ✓ 20 ☗(1978) 218-729-9082
Vanloon Susan J 218-729-9082
5189 Kallberg James E ✓ 54 ☗(1978)
5192 Pierce Candice C ✓ 16 ☗(1978) 218-729-1058
5194 Rutka Ronald L & Kathryn A ✓ 19 ☗(1978) 218-729-0753
5195 Hummel Mark J ✓ 3 ☗(1978)
Johnejack Mark J & Gail M ✓ 3 ☗(1978) 218-729-7737
5196 Korby Debora J ✓ 5 ☗(1978)
Vittorio Anthony A & Debora J ✓ 54 ☗(1978)
5197 Buxbaum Denise D ✓@ 7 ☗(1978)
Buxbaum Charla
5204 Tatarowicz Kazimierz E & Halina ✓ 54 ☗(1978) 218-724-4033
5216 Brown Charles D & Carol A ✓@ 54 ☗(1978) 218-729-6309
5222 Williams Brian D & Jill M ✓@ 15 ☗(1978) 218-729-5891
5228 Letchworth Sharlene T ✓ 54 ☗(1978) 218-729-9418
5236 Borgeson Carol L ✓ 23 ☗(1978)
@ Macdonell Casey E ✓ ☗(1978)
5242 Sullin Kevin J & Joann M ✓ 14 ☗(1978) 218-729-0462

LAVAQUE JUNCTION RD Cont'd

5248 Becks Steven J & Susan J ✓@ 18 ☗(1978)
5252 Ilola Joyce E ✓ 23 ☗(1978) 218-729-9316
5264 Eklund Douglas J & Veronica L ✓@ 19 ☗(1978) ..218-729-0131
5290 Wrazidlo Laura L ✓ 4
HOUSEHOLDS 32

LAVELL RD (MEADOWLANDS)
• ZIP CODE 55765 CAR-RT R001
1365 Hill David U & Donna L ✓@ 27 ☗(1960) 218-427-2296
1393 Leino Mark W ✓@ 19 ☗(1964)
Leino Diane
HOUSEHOLDS 2

LAVIS RD (DULUTH)-FROM 5597 LESTER RIVER RD WEST
• ZIP CODE 55804 CAR-RT R011
2914 Johnson Rodney A & Kiersten L ✓@ 3 ☗(1973) ..218-724-4836
2935 Messer Randy L & Debra J ✓ 21 ☗(1969)
UPNORTH LANDSCAPING landscape contractors ✓@
.....218-525-5807
2950 Twight Kathleen R ✓ 23 ☗(1969)
2964 Sullivan Timothy R & Frances P ✓@ 18 ☗(1969)
2971 Twight Bryan D ✓ 7 ☗(1973)
2985 Henry Barbara A ✓@ 23 ☗(1969) 218-525-1891
Henry Steven J 218-525-1891
Komanti Ralph M ✓ 6 ☗(1973)
LAKEWOOD TOWING wrecker serv ✓@ 218-391-2747
3001 Gustafson Kathy A ✓ 8 ☗(1973) 218-525-1223
Gustafson Joann E 218-525-1223
3028 Gustafson William G ✓@ 23 ☗(1969) 218-525-2274
Gustafson George L 218-525-2274
3061 Flatt April H ✓@ 10 ☗(1973)
Jacques Todd R ✓ 9 ☗(1973)
3071 Kochevar Michele M ✓ 22 ☗(1969)
3078 Nelson Stephen J & Tammy L ✓ 23 ☗(1969) 218-525-7170
3081 Pertile Paul R & Sandra L ✓@ 54 ☗(1969)
+ N TISCHER RD INTERSECTS
BUSINESSES 2 **HOUSEHOLDS 14**

LAVOY RD (BROOKSTON)-FROM 9399 HIGHWAY 2
• ZIP CODE 55711 CAR-RT H085
4650 Lund Teri L ✓ 24 ☗(1971)
Lund Haley M
TERI'S GREENHOUSE greenhouses ✓@ 218-348-4754
4662 Vanderscheuren Mandy 3
BUSINESSES 1 **HOUSEHOLDS 2**

LAW DR (SILVER BAY)-FROM 2 LEE CIR WEST
+ NELSON DR CONTINUES
• ZIP CODE 55614 CAR-RT C002
11 Sando Robert M & Geri G ✓@ 24 ☗(1963) 218-226-3807
12 SILVER BAY BAPTIST CHURCH churches ✓ 218-226-4202
13 Mitchell Jeremiah J & Tracie ✓ 4 ☗(1965) 218-353-5255
15 Wycoff Amber L 6 ☗(1975)
16 Connor Robert J & Joanne M ✓ 51 ☗(1960) 218-226-3377
17 - 18 No Current Listing (2 Hses)
19 Meissner Linda J ✓ 9 ☗(1967)
+ EDISON BLVD INTERSECTS
20 Gumtow Darrin J ✓ 19 ☗(1965)
21 Ramli Tayeb ✓ 2 ☗(1965)
Sampson Michael J ✓ 11 ☗(1965)
Zupancich Brian B ✓ 16 ☗(1967) 218-226-4374
22 Grensing Norma J ✓ 49 ☗(1960) 218-226-3841
23 Dubbin Dallas V & Sandra K ✓@ 24 ☗(1967) 218-226-4338
@ Hipple Paul ✓
24 Rathbone Charles D & Jeannine ✓ 54 ☗(1960) 218-226-3230
26 Larson Duwayne D & Kerry S ✓ 54 ☗(1960) 218-226-3811
27 Thomas Raymond C & Barbara ✓ 43 ☗(1965) 218-226-4397
28 Munson Lillian M ✓ 9 ☗(1965)
29 Belanger Lawrence K ✓ 24 ☗(1962) 218-226-4025
30 @ Redfield Jon M ☗(1960)
31 McKinney Billy L ✓ 9 ☗(1967) 218-226-3583
McKinney Leesyl 218-226-3583
32 Jasperson Todd H ✓@ 19 ☗(1960) 218-226-3702
Jasperson Cathleen J 218-226-3702
33 McCumsey Scott L & Cori L ✓ 14 ☗(1978)
@ Napper Susanne A ✓@
34 Derosier William B ✓ 16 ☗(1960) 218-226-4097
+ LEE CIR BEGINS
36 Gale Roger P & Dorothy J ✓@ 54 ☗(1961) 218-226-3906
37 Szkliniarz Paul R ✓@ 9 ☗(1965)
38 Danielson Ward R & Vicki J ✓@ 15 ☗(1961)
39 Oltman Baruch ✓@ 54 ☗(1979) 218-226-0120
Oltman David R 218-226-0120
40 Ronhovde Gwendolyn O ✓ 28 ☗(1965) 218-226-3461
42 Mayne Justin J ✓ 3 ☗(1962)
44 Knaffla Jessie L ✓ 54 ☗(1975) 218-226-3395
Knaffla Dale C 218-226-3395
46 Duresky James D ✓ 27 ☗(1977) 218-226-4697
Duresky Veronica A 218-226-4697
Geddes Marty A & Veronica A ✓ 15 ☗(1965)
48 No Current Listing
49 Koster Roger E & Jolene F ✓ 35 ☗(1966) 218-226-3468
50 Hynes Edward M & Lois J ✓@ 44 ☗(1962) 218-226-3896
51 Hedin Donald L & Glenda G ✓ 54 ☗(1965) 218-226-4385
52 Whiteford Robert G ✓ 49 ☗(1962) 218-226-3074
56 @ Sanford Joyce E ✓ ☗(1965) 218-226-3226
+ EDISON BLVD INTERSECTS
+ MARKS DR INTERSECTS
+ NELSON DR INTERSECTS
BUSINESSES 1 **HOUSEHOLDS 40**

LAWN ST (DULUTH)-FROM 2999 MIDWAY RD WEST
+ UNIVERSITY DR INTERSECTS
+ W COLLEGE ST CONTINUES
• ZIP CODE 55812 CAR-RT C057
1908 @ George Helen M ✓ ☗(1939)
1912 Ario Peter M & Lois J ✓ 54 ☗(1926) 218-724-6886
1914 @ Anderson Bradley C ✓ ☗(1939)
1916 Albert Betsy ✓ 3 ☗(1939)

LAWN ST Cont'd

Carlson Kenton D ✓ 54 ☗(1929) 218-724-3763
1918 @ Valentine Nancy ✓@
1920 Flanagan Kathleen M ✓ 28 ☗(1960) 218-728-5232
1922 Artim Joe K ✓@ 10 ☗(1928)
1924 Furo Candace A ✓@ 7 ☗(1933) 218-722-3857
1926 No Current Listing
1928 Westrom Edward S & Melanie J ✓ 26 ☗(1931)
1930 Dennis Patricia M ✓ 31 ☗(1927) 218-728-6238
1932 No Current Listing
1936 Caple Ronald ✓ 54 ☗(1926) 218-728-3087
Icks Elizabeth K & Abett ✓ 19 ☗(1926)
1938 Kuchta Garrett ✓@ 21 ☗(1926) 218-724-4833
Kuchta Abigail P 218-724-4833
Syrjamaki-Kucht Marian R ✓@ 21 ☗(1926) 218-724-4833
1940 @ Johnson Nicole A ✓@
1942 @ Lemoine-Horton Alexandra ✓@
@ Radosevich George J ☗(1939)
1944 @ Mihalek Rachel ✓
2013 Flagler Robert L ✓ 3 ☗(1955) 218-724-2893
Othman Noraini B ✓ 3 ☗(1939)
Othman Ani
+ N 20TH AVE E INTERSECTS
+ N 19TH AVE E INTERSECTS
+ N 87TH AVE W ENDS
• ZIP CODE 55810 CAR-RT C037
8701 Shykes Patrick J & Deanne L ✓ 4 ☗(1921)
• ZIP CODE 55810 CAR-RT C001
8702 Johnson Clareen B ✓ 4 ☗(1948) 218-624-7567
Johnson Cheryl 218-624-7567
Stanhope Carrie E ✓ 3
8715 Linne Mark T & Karen G ✓@ 54 ☗(1959) 218-624-7310
8719 Morse Betsey F ✓ 51 ☗(1928) 218-628-1359
Morse Gregory A IV 218-628-1359
8725 Keppers Tracy L ✓@ 5 ☗(1921)
+ PORTAL AVE INTERSECTS
9101 Kiminski Theresa M ✓ 19 ☗(1993)
9113 Preston John W & Betty J ✓ 26 ☗(1927) 218-624-5038
9117 Martin Jeffrey D & Terry E ✓ 25 ☗(1926) 218-628-2957
@ Marttila Ronald ✓
Marttila Bernadine
9120 Miller Darrell E & Jean M ✓ 54 ☗(1948) 218-624-8181
9123 Johnson James P & Diane J ✓ 23 ☗(1925) 218-624-5438
9125 Vanarman Michael B ✓@ 54 ☗(1925)
9133 Hansen Troy R ✓ 54 ☗(1918)
9134 Parks Barbara J ✓ 14 ☗(1948)
9136 Larson David C ✓ 22 ☗(1917) 218-624-7010
9142 Gradin Tori A ✓@ 4 ☗(1948)
Peterson Sarah ✓ 6 ☗(1948)
Peterson Jennifer
9143 Matetich Kevin J & Rochelle M ✓ 14 ☗(2002)
9146 Michalski Timothy M & Renee C ✓ 22 ☗(1927) 218-624-9608
+ MIDWAY RD ENDS
9201 Fromling Michelle K ✓@ 64 ☗(1935)
Nelson Tammy A ✓ 3 ☗(1960)
9202 Waller Duane G ✓ 17 ☗(2003)
9221 Dardis John D & Robyn A ✓@ 34 ☗(1959) 218-624-3967
9229 Nelson Timothy D ✓ 15 ☗(1926)
9231 Cartwright Katheryn L ✓ 21 ☗(1960) 218-624-3933
9232 Lincowski Linda M ✓ 8 ☗(1994) 218-624-8119
Lincowski M L 218-624-8119
Seliga Steven ✓ 9 ☗(1948)
@ Wotczak Dorothy M ✓ ☗(1948)
9237 Pearson Brenda L ✓ 34 ☗(1918) 218-624-7920
9239 Kachelmyer Dennis J ✓ 22 ☗(1961)
Pawson Suzanne M ✓ 21 ☗(1960)
9242 Bryant Kristopher J & Tara A ✓ 18 ☗(1973) 218-624-2296
+ 6TH ST INTERSECTS
HOUSEHOLDS 56

LAWNWOOD RD (DULUTH)-FROM 4071 TURNER RD NORTH
• ZIP CODE 55803 CAR-RT R012
6761 Behning Alma ✓@ 23 ☗(1979) 218-721-4410
Behning David S 218-721-4410
6767 Nesgoda Blane R ✓@ 4 ☗(1979)
6781 O'Donnell Jerome C & Patricia A ✓@ 21 ☗(1979)
.....218-721-4261
6795 Ringsred Robert M & Carolyn J ✓ 20 ☗(1979) 218-721-4858
6813 @ Ohara Eric J ✓ ☗(1979)
Ohara Kristal
6815 Kolasinski James R & Connie J ✓@ 10 ☗(1979) ..218-721-0344
6817 Murray James R & Judith R ✓ 19 ☗(1979) 218-721-4724
6831 Holte Richard W ✓ 4 ☗(1979) 218-721-3633
6839 Bartlett Lawrence D & Mary L ✓ 23 ☗(1979) 218-721-3822
6841 No Current Listing
6845 Hylden Eric D ✓@ 18 ☗(1979)
6849 Covert Mark W ✓ 8 ☗(1979)
Shrake Roy L ✓ 54 ☗(1979)
6853 Beatty Owen J & Bette J 54 ☗(1979)
HOUSEHOLDS 14

LAX LAKE RD (FINLAND)
• ZIP CODE 55603 CAR-RT H001
6145 Ostman Maria I & Rudy ✓ 29 ☗(1957) 218-353-7391
6167 Nelson Mark C & Katherine A ✓ 27 ☗(1958) 218-353-7596
6185 Cunningham Robert P ✓ 21 ☗(1966)
MAXWELL'S WOODLAND NURSERY nurserymen ✓@
.....218-353-7726
Maxwell Sandy ✓ 9 ☗(1961)
6346 Anderson Brent 14 ☗(1998)
6383 Weeks Brian L ✓ 14 ☗(1958) 218-353-7315
Weeks Holly 218-353-7315
6388 Mead Kurt P & Betsey L ✓ 14 ☗(1997) 218-353-7443
6389 Morgan Frederick K ✓ 4 ☗(1972)
Tibbetts Gregory A & Lisa M ✓@ 14 ☗(1966) 218-353-7674
BUSINESSES 1 **HOUSEHOLDS 9**

LAX LAKE RD (SILVER BAY)
• ZIP CODE 55614 CAR-RT H002

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LAVAQUE RD Cont'd
5505 Nylen Thomas M & Nancy D 19 ▲ 218-721-4023
5506 No Current Listing
+ MCCOMBER RD INTERSECTS
• ZIP CODE 55803 CAR-RT R013
5601 Laine Janice M 5 ▲
5614 Turcotte Rollard G 8 ▲ 218-721-4212
Turcotte Janis A 218-721-4212
+ SCHULTZ RD INTERSECTS
5748 No Current Listing
5760 Stabs John W 50 ▲ 218-721-5287
Stabs Bruce A 218-721-5287
5767 Hansen Dale W 19 ▲ 218-721-4830
5782 Kmiech Daniel ▲
5796 Geving Steven A ▲
Trumpold Elizabeth
5799 No Current Listing
5811 Holmes Ronald F & Diane C 20 ▲ 218-525-3892
5821 Sich Kevin L & Molly A 2 ▲ 218-721-4836
5839 Satterlund Harlan K 15 ▲
5870 Saari Lora J 20 ▲ 218-721-3015
Saari Leroy G 218-721-3015
5880 Pietila Harvey L ▲
Pietila Gina
5888 Kraml Ronald D & Beth A 30 ▲ 218-721-3861
+ W LISMORE RD BEGINS
5937 Lawrence Jason C ▲
5938 Ruhanen Steven C & Doreen S 17 ▲ 218-721-3532
5940 Kyrola Scott D 4 ▲
Kyrola Dawn
5948 Shaw Duane A & Hope A 17 ▲ 218-721-4665
5952 McVean Robert W 50 ▲ 218-721-4028
McVean Ronald W 218-721-4028
5955 No Current Listing
5960 Haney Kevin R & Amy J 50 ▲ 218-721-3239
5981 Kaneski Lance G 12 ▲ 218-721-5168
Kaneski Carol E 218-721-5168
+ STUBERUD RD ENDS
+ STUBERUD RD ENDS
6007 NORTHERN LIGHTS LANDSCAPING landscape contractors 218-728-6053
6035 LAKEHEAD TRUCKING & EXCAVATORS excavating contractors 218-721-3521
6040 No Current Listing
6060 Busch Gary R & Linda H 21 ▲ 218-721-4736
6064 Older Lee K Jr & Lucia A 50 ▲ 218-721-3070
6073 Armstrong Sherry A 15 ▲ 218-721-3115
Armstrong James A 218-721-3115
6079 Kaneski Paul D & Gloria J 50 ▲ 218-721-3077
6082 Stephenson Luann O 50 ▲ 218-721-4085
+ USIAK RD INTERSECTS
6103 EAGLE'S NEST RESORT campgrounds 218-721-4147
Jauert David A 22 ▲ 218-721-5011
6139 BLUE MAX restaurants 218-721-5300
6150 ART STUDIO & GALLERY-FISH LAKE art galleries & dirs 218-721-5253
HAIR RESORT INC ART GALLERY beauty salons 218-721-5253
Zweifel Kyle W & Julie H 9 ▲ 218-721-5253
+ DAHLBERG RD ENDS
6200 Clark Dennis R & Carole J 50 ▲ 218-721-4421
6204 Halverson David B & Paula S 9 ▲ 218-729-7316
6220 No Current Listing
6222 Godmare Brooke E 5 ▲ 218-721-3064
6223 Johnson Vincent W & Betty M 19 ▲ 218-721-3641
6229 Severson Kristy & Michael P 50 ▲ 218-721-4967
6231 Kempffer Susan L ▲
Simarie Lawrence P ▲
6232 BOB'S BULLSEYE AUTO GLASS glass-rpr 218-721-3263
Smerdon Tamara L 50 ▲
Smerdon Robert S
6240 No Current Listing
6243 Carl Torey L 50 ▲ 218-721-3185
6244 Nelson Myron K & Janet H 50 ▲ 218-721-3476
6257 Martindale James K & Sherry L 16 ▲ 218-721-4972
6262 Adams Gordon G & Tyra M 22 ▲ 218-721-3928
6265 No Current Listing
6288 Kallberg Darin L & Nicole M 6 ▲
6290 Happy Steven C 18 ▲ 218-721-4039
STEVE'S SEPTIC PUMPING SVC septic tanks/sys- cleaning/rpr 218-721-4039
6291 McKeever Rodger W & Lorraine B 37 ▲ 218-721-4111
6297 No Current Listing
6298 Reno Jerry R Jr ▲
6299 McKeever Kenneth W 13 ▲ 218-721-5039
+ W PIONEER RD ENDS
6339 No Current Listing
6360 Carlson Timothy E & Lynette R 50 ▲ 218-721-4069
6367 ARCHER PROPERTIES real estate investments 218-727-7559
+ FISH LAKE RD INTERSECTS
+ ISLAND LAKE DAM RD INTERSECTS
BUSINESSES 12 HOUSEHOLDS 111

LAVAQUE RD (HERMANTOWN)-FROM 5099 HANSON RD NORTHWEST
• ZIP CODE 55810 CAR-RT C037
3503 No Current Listing
3504 Gaidis Kent M & Tasha R 11 ▲
3509 Koski Edward W 19 ▲ 218-624-2617
Koski Roger J 218-624-2617
3517 Koski Elaine F 39 ▲ 218-624-1221
Koski Dale R 218-624-1221
+ WILLOUGHBY LN ENDS
+ WILLOUGHBY LN CONTINUES
+ SHERIDAN DR INTERSECTS
3554 Dahl Richard J & Diana J 21 ▲ 218-624-3841
3562 Cadotte Steven J & Anne M 29 ▲ 218-628-1720
3580 Rudolph Calvin H & Diane T 50 ▲
3584 Radakovich Michael J & Marguertie A 16 ▲ 218-624-8827

LAVAQUE RD Cont'd
3613 No Current Listing
3615 Hansen Steven L & Sandra K 19 ▲ 218-624-4303
3616 Lundequam Daniel G & Tirina R ▲ 218-723-1183
+ THOMPSON RD ENDS
+ HANSON RD ENDS
3656 No Current Listing
3669 Johnson Benjamin A 2 ▲
Johnson Brandi L
+ SECORA RD INTERSECTS
+ BENSON RD ENDS
+ MORRIS THOMAS RD INTERSECTS
• ZIP CODE 55810 CAR-RT R007
3707 HERMANTOWN LUMBER lumber-retail 218-729-8600
3721 K & K KREATIONS florists-retail 218-729-8658
Klosowsky Anthony R 19 ▲ 218-729-8658
Klosowsky Carolyn 218-729-8658
3748 Peterson Dolly M 19 ▲ 218-729-7767
3750 Peterson Thomas R & Linda R 50 ▲ 218-729-6477
3754 Shetka Mark A & Rachel A 50 ▲ 218-729-9794
3755 No Current Listing
3764 Linnum Ross E 50 ▲ 218-729-1977
3768 Huls Nichole W & Luke D 50 ▲ 218-729-7158
+ COUNTRY RD INTERSECTS
3783 Kleist Christophe S 2 ▲ 218-624-0012
Kleist Jamie 218-624-0012
3787 Zeleznikar Daniel J & Natalie R 3 ▲ 218-722-2875
3790 Kausch Hilde M 19 ▲ 218-729-9611
Kausch Archibald W 218-729-9611
+ HERMANTOWN RD INTERSECTS
+ HERMANTOWN RD INTERSECTS
• ZIP CODE 55811 CAR-RT C042
3845 Heckman Fabian N & Joyce A 50 ▲
3886 Geier Thomas F & Sandra A 19 ▲ 218-729-9651
3891 McLachlan Robert J & June D 12 ▲ 218-729-7248
3940 Reno Rick R & Cynthia R 17 ▲ 218-729-6522
3953 Bullyan Joseph M & Peggy L 6 ▲ 218-729-5799
3954 Sundstrom Timothy W & Cynthia A 3 ▲ 218-729-7482
3960 Aho Robert A & Lois L 7 ▲
3961 Gustafson Roger G & Peggy S 50 ▲ 218-729-0587
3969 Dirksen Alan R & Kris M 23 ▲ 218-729-5120
3975 Kero William J & Jennifer L 4 ▲ 218-729-0263
3976 Johnson Larry W & Karen J 50 ▲ 218-729-5961
3977 Glockle Nathan K ▲
3978 Siljendahl Eric J & Jodi L 50 ▲ 218-729-7416
3988 Erickson Jason A 5 ▲
3995 Biondich Nicholas D 6 ▲ 218-727-4881
3998 Willoughby Mark J & Jennifer J 11 ▲ 218-729-3398
3999 No Current Listing
4002 Bahr Richard V & Kathleen M 5 ▲ 218-729-7771
4009 Alwan Sabah J 4 ▲
Alwan Caterina R
4017 Johnson Wallace V & Susan L 2 ▲ 218-722-8022
4025 Nielsen John C & Anna M ▲
4026 Johnson Kurt W & Teresa A 19 ▲ 218-729-0134
4035 Hane Richard C & Judith J 50 ▲ 218-729-9114
4036 Lavalley Shawn M & Michelle L 3 ▲ 218-729-5318
4039 Bodell Daniel M 19 ▲ 218-729-8179
Bodell Scott J 218-729-8179
4041 Moen Nan 50 ▲
Moen Ronald J Jr
4044 Thomas Christine E 5 ▲
4050 Rolle Jason & Amanda L 5 ▲ 218-729-8197
4051 No Current Listing
4061 Anderson Patrick S ▲
4071 Lepage Jamie A & Randine 6 ▲ 218-729-7137
4081 Giernot Bruno B & Erma P 20 ▲ 218-729-5184
4089 Butorac Matthew D & Mary K 11 ▲ 218-729-5214
+ MAPLE GROVE RD INTERSECTS
+ MAPLE GROVE RD CONTINUES
4114 Zimmerman Lyle F & Joyce M 19 ▲ 218-729-6780
4122 Safstrom Jon S & Gretchen L 218-721-4027
4128 Amundson Bryan D & Sheri L 50 ▲ 218-729-1539
4134 Soderburg Robert P & Heather 10 ▲ 218-729-0763
+ BEAVER LN BEGINS
4190 Pylka Fern E & Melvyn T 4 ▲ 218-729-8302
4198 Ruprecht Jeffrey J 4 ▲ 218-729-1700
Ruprecht Traci 218-729-1700
+ BEAVER CREEK RD BEGINS
4201 Koski Darlene D 15 ▲
4206 Renaud George 23 ▲ 218-729-7773
Renaud Ovide G 218-729-7773
4212 ROYALE AIR SVC air courier serv 218-721-0405
4213 No Current Listing
4214 Polling Charles E 18 ▲
Polling Alan J
4220 Bakken Dennis L 17 ▲ 218-729-5612
4223 No Current Listing
4228 Dasher Eugene E & Julie A 38 ▲ 218-729-7093
4229 Stockinger Susan L 21 ▲ 218-729-9711
4235 Jenny Gary M & Della K 50 ▲ 218-729-5059
4238 Carlson Daniel L & Pamela D 50 ▲ 218-729-6694
4245 Fish Philip J 17 ▲
4248 Fish Anthnet P 28 ▲ 218-729-5774
+ LAVAQUE JUNCTION RD BEGINS
+ LAVAQUE JUNCTION RD CONTINUES
4255 No Current Listing
4262 Murphy Gregg T 17 ▲ 218-729-7469
4263 No Current Listing
4268 SUPERIOR VIEW ASSISTED LIVING residential care homes 218-624-8324
4271 Dixon Christopher M & Eileen N 12 ▲
4272 INNOVATIVE LIVING INC nonclassified establishments 218-729-8427
4274 No Current Listing
4275 Kellerhuis Brian L & Pamela S 21 ▲ 218-729-5952
4280 Young Douglas H & Mary M 11 ▲ 218-729-6075
4286 Cottrell Harry S & Claudia C 8 ▲ 218-729-8652

LAVAQUE RD Cont'd
+ W ARROWHEAD RD INTERSECTS
4308 Erickson Margaret S 18 ▲ 218-729-7927
4313 Monson Rodney A & Saundra D ▲ 218-729-6216
4333 Aho Ryan E 4 ▲ 218-729-6563
Aho Natalie L 218-729-6563
4337 Nelson Eugene G 20 ▲ 218-729-6268
Nelson Ida C 218-729-6268
4347 Hubert Wayne F & Frances G 47 ▲ 218-729-9588
4370 Claus Dale W & Mary L 47 ▲ 218-729-6578
4378 Lawless John P 8 ▲ 218-729-0722
Lawless Laura 218-729-0722
4379 Anderson Paul R & Kathy ▲ 218-729-3491
4390 Peterson George W & Ardell E 19 ▲ 218-729-6984
4391 Lufholm James E 50 ▲ 218-729-5759
4393 Reynolds Gavin B 5 ▲
4394 Erickson Zac A 8 ▲
Erickson Amy K
+ BOULDER DR ENDS
4442 BEL-AIR MOBILE MANOR mobile homes- park developers 218-729-9477
Borgen Walter W Jr & Margaret E 29 ▲ 218-729-9477
+ ALPINE DR ENDS
4452 Miskowski Lorraine H 50 ▲ 218-729-6701
Miskowski John A 218-729-6701
4455 Kaufman John D
Nordquist Lisa M
4462 Ambom Roy O 20 ▲ 218-729-6136
4465 Fecker Steven C & Peggy A 12 ▲ 218-729-9501
4471 McNamara Kelly R 6 ▲
4472 Voigt Ray E 17 ▲
4477 HERMANTOWN FEDERAL CU credit unions 218-729-7733
4478 No Current Listing
4480 Chiovitte Leroy B & Joanne E 47 ▲ 218-729-6219
+ ADELE DR ENDS
+ MILLER TRUNK HWY INTERSECTS
• ZIP CODE 55811 CAR-RT R001
4622 Dennis Nicole L 7 ▲
Klint Allan A & Nicole L 50 ▲
4650 - 4656 No Current Listing (2 Hses)
4657 Pagnac Robert M & Allison L 6 ▲ 218-729-8983
4666 Ugstad Olof R 17 ▲ 218-729-7580
4682 Schnorr Leroy F & Patricia A 34 ▲ 218-729-9066
+ SEVILLE RD INTERSECTS
+ SEVILLE RD CONTINUES
+ SAMUELSON JUNCTION RD BEGINS
+ LAVAQUE BYPASS RD ENDS
BUSINESSES 7 HOUSEHOLDS 111

LAVAQUE BYPASS RD (DULUTH)
• ZIP CODE 55811 CAR-RT R001
4707 Patnaude Thomas D & Margaret R 19 ▲ 218-729-5775
4735 Schirmer Tiffany M 2 ▲
4746 No Current Listing
4748 Jacobs Lee A & Tracy L 50 ▲ 218-729-0641
4798 Oswell Steven C & Rose M 19 ▲ 218-729-5343
4829 Poupore-Haats Susan E 16 ▲ 218-729-8920
Poupore-Haats Haats A 218-729-8920
+ SAMUELSON JUNCTION RD ENDS
+ SAMUELSON JUNCTION RD ENDS
+ LAVAQUE RD INTERSECTS
HOUSEHOLDS 5

LAVAQUE BYPASS RD (HERMANTOWN)-FROM 4581 UGSTAD RD NORTH
• ZIP CODE 55811 CAR-RT R001
4514 Usan Lillian ▲
4518 VIKING MICROGRAPHICS microfilming serv equip/supl 218-726-1645
4538 Lentz Claudette L & Robert J 15 ▲ 218-729-5923
4648 Dolentz Sondra S 13 ▲ 218-729-0047
Dolentz William 218-729-0047
4655 Swanson Jeffrey R 16 ▲ 218-729-6378
Swanson Cari 218-729-6378
4656 Eilefson Charles R 19 ▲ 218-729-8906
4663 Gilbertson Gary J 11 ▲ 218-729-0354
Gilbertson Tamera 218-729-0354
4666 Hodges Gerald D & Terri L 3 ▲
4670 Carlson Jacqueline P 20 ▲ 218-729-8057
4677 Krause Alan J & Susan E 19 ▲ 218-729-5070
4678 Jones Bradley J & Mary M ▲ 218-729-4747
+ SEVILLE RD INTERSECTS
BUSINESSES 1 HOUSEHOLDS 10

LAVAQUE JUNCTION RD (DULUTH)-FROM 4251 LAVAQUE RD WEST
• ZIP CODE 55811 CAR-RT C042
5211 No Current Listing
5217 Callahan Patricia A & James T 19 ▲ 218-729-6249
5223 Patterson Joel S & Katrina M 7 ▲ 218-729-5257
5227 Lindquist Clarence J & Kathleen L 50 ▲ 218-729-7875
5233 Grimm David M Sr 4 ▲ 218-733-0460
5247 Broman Gerald A & Judith A 20 ▲ 218-729-7260
5253 Ahlberg Wesley A 19 ▲ 218-729-6721
5259 Erickson William A & Arlene A 20 ▲ 218-729-9536
5271 Quesenberry Jane E 50 ▲ 218-729-5027
5275 Muench Randall L & Robin K 10 ▲ 218-729-0014
5281 Vandyke Roger A & Diane M 19 ▲ 218-729-6879
+ UGSTAD RD INTERSECTS
HOUSEHOLDS 11

LAVAQUE JUNCTION RD (HERMANTOWN)
• ZIP CODE 55811 CAR-RT C042
5144 Bloom Bradford C & Becky A 10 ▲ 218-729-7665
5147 Kucza Wallace F & Beverly O 19 ▲ 218-729-6541
5150 Foro Scott J & Debra L 15 ▲
5153 Carlson Delaine A 19 ▲ 218-729-7474
Carlson Dolores M 218-729-7474
5154 Johnston Lori A 6 ▲
Johnston John N
5158 Stern Kevin J & Julie A 50 ▲ 218-729-7496

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LAVAQUE RD Cont'd

3975 Kero William J & Jennifer L 2 218-729-0263
3976 Johnson Larry W & Karen J 48 218-729-5961
3978 Siljendahl Eric J & Jodi L 48 218-729-7416
3995 Biondich Nicholas D 218-727-4881
3998 Willoughby Mark J & Jennifer J 0 218-729-3398
3999 Marshall Mary L 20 218-729-9290
Marshall Michael D 218-729-9290
4002 Bahr Richard V & Kathleen M 218-729-7771
4009 Alwan Sabah J 2
Alwan Caterina
4017 Miller Marilyn A 23 218-729-5813
4025 Lovejoy Perry E & Fae P 26 218-729-5090
4026 Johnson Kurt W & Teresa A 17 218-729-0134
4035 Hane Richard C & Judith J 48 218-729-9114
4036 Foster Barbara J & Jeffrey A 18 218-729-5393
4039 Bodell Nancy 17 218-729-8179
Bodell Daniel M 218-729-8179
4041 Moen Nan 48
Moen Ronald J Jr
4044 Thomas Quintin L & Christine E 3
4050 Rolfe Jason
4051 No Current Listing
4061 Nagle Larry L & Martha J 2 218-729-9234
4071 Lepage Jamie A 4 218-729-7137
4081 Giernot Bruno B & Erma P 18 218-729-5184
4089 Butorac Matthew D & Mary K 9 218-729-5214
+ MAPLE GROVE RD INTERSECTS
4114 Zimmerman Lyle F & Joyce M 17 218-729-6780
4122 Sohlstrom Paul G & Jamie A 13 218-729-8545
4126 Amundson Bryan D & Sheri L 48 218-729-1539
4134 Soderburg Robert P & Heather 8 218-729-0763
Summers Daniel P 10
+ BEAVER CREEK RD BEGINS
4201 Koski Darlene D 13
4206 Renaud Ovide G & Iris J 31 218-729-7773
4212 Taylor Ryan L 3 218-729-6106
Taylor Julie A 218-729-6106
4213 No Current Listing
4214 Polling Charles E 16 218-729-7261
Polling Alan J 218-729-7261
4220 Bakken Dennis L & Bernadine J 15 218-729-5612
4223 Simonson Lyle E 18 218-729-9236
4228 Dasher Eugene E & Julie A 36 218-729-7093
4229 Stockinger Susan L 19 218-729-9711
Stockinger Gary W 218-729-9711
4235 Jenny Gary M & Della K 48 218-729-5059
4238 Carlson Daniel L & Pamela D 48 218-729-6694
4245 No Current Listing
4248 Fish Anthnet P & William E 26 218-729-5774
+ LAVAQUE JUNCTION RD BEGINS
+ LAVAQUE JUNCTION RD CONTINUES
4255 Tallakson Joseph H 18 218-729-6366
4262 Murphy Gregg T 15 218-729-7469
4263 No Current Listing
4268 Gannucci Robert A
4271 Dixon Christopher M & Eileen N 10
4272 - 4274 No Current Listing (2 Hses)
4275 Kellerhuis Brian L & Pamela S 18 218-729-5952
4280 Young Douglas H & Mary M 9 218-729-6075
4286 Cottrell Harry S & Claudia C 6 218-729-8652
+ W ARROWHEAD RD INTERSECTS
4308 Erickson Margaret S 16 218-729-7927
4313 No Current Listing
4333 Bluedorn Kenneth G & Sharry L 27 218-729-5802
4337 Nelson Eugene G 18 218-729-6268
Nelson Ida C 218-729-6268
4347 Hubert Wayne F & Frances G 45 218-729-9588
4370 Claus Dale W & Mary L 45 218-729-6578
4378 Lawless John P 6 218-729-0722
Lawless Laura 218-729-0722
4379 Bryant Lee A 3 218-729-4860
Bryant Mike 218-729-4860
4390 Peterson George W & Ardell E 17 218-729-6984
4391 Lufholm James E & Patricia A 48 218-729-5759
4393 Reynolds Gavin B 3 218-729-7727
4394 Ekstrand Amy K 6 218-729-0762
+ BOULDER DR ENDS
4442 BEL-AIR MOBILE MANOR mobile homes- park developers 218-729-9477
Borgen Margaret E & Walter W 27 218-729-9477
+ ALPINE DR ENDS
4452 Miskowski Lorraine H 48 218-729-6701
Miskowski John A 218-729-6701
4455 Bobek Raymond J & Monica D 18 218-729-0342
4462 Ambom Patricia J 18 218-729-6136
Ambom Roy O 218-729-6136
4465 Fecker Peggy A & Steven C 10 218-729-9501
4471 McNamara Kelly R 4 218-729-6083
Worthington Sean M
4472 Voigt Ray E 15 218-729-9866
4477 HERMANTOWN FEDERAL CU credit unions 218-729-7733
4478 Rutka Laurie L 10 218-729-4997
4480 Chiovitte Leroy B & Joanne E 45 218-729-6219
+ ADELE DR ENDS
+ MILLER TRUNK HWY INTERSECTS
• ZIP CODE 55811 CAR-RT R001
4618 Vanguilder James A 21
4622 Klint Allan A 48
4650 Lepard Viola G 17 218-729-6596
4656 Lepard Todd 17 218-729-7337
4657 Pagnac Robert M & Allison L 18 218-729-8983
4659 Pagnac Brent & Melissa 2 218-729-9347
4666 Ugstad Olof R 15 218-729-7580
4682 Schnorr Leroy F & Patricia A 32 218-729-9066
+ SEVILLE RD INTERSECTS
+ SEVILLE RD CONTINUES
+ SAMUELSON JUNCTION RD BEGINS

LAVAQUE RD Cont'd
+ LAVAQUE BYPASS RD ENDS
BUSINESSES 4 HOUSEHOLDS 112

LAVAQUE BYPASS RD (DULUTH)
• ZIP CODE 55811 CAR-RT R001
4707 Patnaude Thomas D & Margaret R 17 218-729-5775
4735 No Current Listing
4746 Jacobs Larry A & Jean E 16 218-729-9619
4748 Jacobs Lee A & Tracy L 48 218-729-0641
4798 Oswell Steven C & Rose M 17 218-729-5343
4829 Poupore-Ha Scott C 14 218-729-8920
+ SAMUELSON JUNCTION RD ENDS
+ SAMUELSON JUNCTION RD ENDS
+ LAVAQUE RD INTERSECTS
HOUSEHOLDS 6

LAVAQUE BYPASS RD (HERMANTOWN)-FROM 4581 UGSTAD RD NORTH
• ZIP CODE 55811 CAR-RT R001
4514 Gagne Bruce W 17 218-729-5881
4518 VIKING MICROGRAPHICS-BUSIN ESS bank equip/supl 218-726-1645
4538 Lentz Claudette L & Robert J 13 218-729-5923
4648 Dolentz Sondra S 11 218-729-0047
4655 Swanson Jeffrey R 17 218-729-6378
Swanson Cari 218-729-6378
4656 Eilefson Charles R 17 218-729-8906
4663 Gilbertson Gary J 9 218-729-0354
Gilbertson Tamera 218-729-0354
4666 Hodges Gerald D & Terri L
4670 Carlson Jacqueline P & Warren T 18 218-729-8057
4677 Krause Alan J & Susan E 11 218-729-5070
4678 Rinker Thomas R 17 218-729-6120
+ SEVILLE RD INTERSECTS
BUSINESSES 1 HOUSEHOLDS 10

LAVAQUE JUNCTION RD (DULUTH)-FROM 4251 LAVAQUE RD WEST
• ZIP CODE 55811 CAR-RT C042
5211 DENNY'S DRILLING drilling & boring contractors ..218-729-6363
5217 Callahan Patricia A & James T 17 218-729-8249
5223 Patterson Joel S & Katrina M 5 218-729-5257
5227 Lindquist Clarence J & Kathleen L 48 218-729-7875
5233 Grimm David M Sr 2 218-733-0460
5247 Broman Gerald A & Judith A 19 218-729-7260
5253 Ahlberg Wesley A 17 218-729-6721
5259 Erickson William A & Arlene A 16 218-729-9536
5271 Quesenberry Jane E 48 218-729-5027
Quesenberry Aaron J 218-729-5027
5275 Muench Randall L & Robin K 8 218-729-0014
5281 Vandyke Roger A & Diane M 17 218-729-6879
+ UGSTAD RD INTERSECTS
BUSINESSES 1 HOUSEHOLDS 10

LAVAQUE JUNCTION RD (HERMANTOWN)
• ZIP CODE 55811 CAR-RT C042
5144 Bloom Bradford C & Becky A 17 218-729-7665
5147 Kucza Beverly O & Wallace F 17 218-729-6541
5150 Foro Scott J & Debra L 13 218-729-6581
5153 Carlson Arthur H & Delaine A 17 218-729-7474
5154 Johnston Lori A 4 218-729-3388
5158 Stern Kevin J & Julie A 48 218-729-7496
5159 Carlson Donald H 48 218-729-9265
Carlson Donald A 218-729-9265
5167 Bloom Carl A & Anita C 18 218-729-6693
5170 Kucza Kevin J 11 218-729-5678
5177 Murphy Paul J & Mitzi M 18 218-729-6428
5180 No Current Listing
5182 Vanloon Susan J 14 218-729-9082
Vanloon Marlene J 218-729-9082
5189 Kallberg James E 48 218-729-6586
5192 Pierce Candice C 10 218-729-1058
5194 Rutka Ronald L & Kathryn A 13 218-729-0753
5195 Puhl Michael J & Sheila R 13 218-729-7289
5196 Vittorio Anthony A 48 218-729-5692
5197 Buxbaum Denise
5204 Tatarowicz Kazimierz E & Halina 48 218-724-4033
5216 Brown Carol A 48
5222 Williams Brian D 8 218-729-5891
5228 Letchworth George T & Sharlene T 48 218-729-9418
5236 No Current Listing
5242 Sulin Kevin J & Joann M 8 218-729-0462
5248 Becks Steven J & Susan J 12 218-729-8930
5252 Ilola Joyce E 17 218-729-9316
5264 Eklund Douglas J & Veronica L 13 218-729-0131
HOUSEHOLDS 27

LAVELL RD (MEADOWLANDS)
• ZIP CODE 55765 CAR-RT R001
1344 No Current Listing
1365 Hill David U & Donna L 21 218-427-2296
1393 No Current Listing
HOUSEHOLDS 3

LAVIS RD (DULUTH)-FROM 5597 LESTER RIVER RD WEST
• ZIP CODE 55804 CAR-RT R011
2914 Lipe Troy A & Angela L 14 218-525-6708
NORTHERN ELECTRIC CONTRACTOR electric contractors 218-525-6708
2935 Messer Randy L & Debra J 15
2950 Twight Bryan D & Kathleen R 17 218-525-4502
2964 Sullivan Timothy R & Fp 12 218-525-9207
2971 Klitsch Philip L 9 218-525-3831
2985 Henry Barbara A 17 218-525-1891
Henry Shannon M 218-525-1891
3028 Gustafson William G 17 218-525-2274
3061 Jacques Todd R 9
3071 Archambeau Laura L 12
Simmons James F 17 218-525-7752
3078 Nelson Stephen J & Tammy L 17 218-525-7170
3081 Pertile Paul R & Sandra L 48

LAVIS RD Cont'd
+ N TISCHER RD INTERSECTS
BUSINESSES 1 HOUSEHOLDS 12

LAVOY RD (BROOKSTON)-FROM 9499 HIGHWAY 2
• ZIP CODE 55711 CAR-RT H085
4646 Holmes Robert 3 218-453-5055
4650 Lund Teri L 18 218-453-5636
4662 No Current Listing
HOUSEHOLDS 3

LAW DR (SILVER BAY)-FROM 2 LEE CIR WEST
+ NELSON DR CONTINUES
• ZIP CODE 55614 CAR-RT C002
11 Sando Robert M & Geraldine G 18 218-226-3807
12 SILVER BAY BAPTIST CHURCH churches 218-226-4202
13 Bond Arin M & Michael F 11
15 Brennan Patrick M 16 218-226-4571
16 Connor Joanne M & Robert J 45 218-226-3377
17 No Current Listing
18 Auger Florence M & William J 45 218-226-3773
19 Berry William J & Patricia F 16 218-226-4621
20 Dettmann David S 7 218-226-3482
+ EDISON BLVD INTERSECTS
21 Frank Theresa L 3
Zupancich Brian B 10 218-226-4374
22 Grensing Norma J 49 218-226-3841
Grensing Carl R 218-226-3841
23 Dubbin Dallas V & Sandra K 18 218-226-4338
24 Nelson Jeannine C 45
26 Larson Kerry S 49 218-226-3811
Larson Duwayne D 218-226-3811
27 Johnson Shannon L 7
28 No Current Listing
29 Belanger Lawrence K 18
30 Wilkinson Howard V & Sheila R 48 218-226-3954
31 Berglund Kevin M 10 218-226-3975
32 Jasperson Cathleen J & Todd H 13 218-226-3702
33 McCumsey Corry L 8 218-226-3105
McCumsey Scott L 218-226-3105
+ LEE CIR BEGINS
34 Twanoski James E 7
36 Gale Dorothy J & Roger P 48 218-226-3906
37 No Current Listing
38 Danielson Ward R 9
Henjum Vicki J 5 218-226-3380
38 A Vongoertz Christian
39 Oltman Barbara J & David R 48 218-226-0120
40 Ronhovde Gwendolyn O 22 218-226-3461
42 No Current Listing
44 Knaffla Dale C & Janey A 48 218-226-3395
46 Duresky James D 21 218-226-4697
48 No Current Listing
49 Koster Jolene F & Roger E 29 218-226-3468
50 Hynes Edward M 28 218-226-3896
51 Hedin Donald L 48 218-226-4385
52 Whiteford Robert G & Shirley A 43 218-226-3074
56 Sanford Joyce E 39 218-226-3226
+ EDISON BLVD INTERSECTS
+ MARKS DR INTERSECTS
+ NELSON DR INTERSECTS
BUSINESSES 1 HOUSEHOLDS 38

LAWN ST (DULUTH)-FROM 2999 MIDWAY RD WEST
+ UNIVERSITY DR INTERSECTS
+ W COLLEGE ST CONTINUES
• ZIP CODE 55812 CAR-RT C057
1908 No Current Listing
1912 Arlo Peter M & Lois J 48 218-724-6886
1914 Rukavina Joseph R & Marian R 41 218-724-7328
1916 Carlson Kenton D 48
1918 Finstrom Keith A 4 218-728-2945
Finstrom Erik K 218-728-2945
1920 Flanagan Kathleen M 23 218-728-5232
1922 Artim Joe K 4
1924 Furo Candace 218-722-3857
1926 Welinski James J & Barbara A 11 218-728-4174
1928 Westrom Irma E 20 218-724-8024
Westrom Melanie 218-724-8024
1930 Dennis Patricia M 25 218-728-6238
1932 No Current Listing
1936 Caple Ronald 48 218-729-3087
1938 Syrjamaki-Kuchta M 2 218-724-4833
1940 Eliasen Adrianne M 16 218-724-4338
1942 Wilson Lucille S 40 218-724-5572
1944 No Current Listing
2013 Mount Miriam A 39 218-724-2658
+ N 20TH AVE E INTERSECTS
+ N 19TH AVE E INTERSECTS
+ N 87TH AVE W ENDS
• ZIP CODE 55810 CAR-RT C037
8701 Dromeshaus Robert A 48
• ZIP CODE 55810 CAR-RT C001
8702 Ciesla John J
Ciesla Cheryl
8715 Linne Mark T & Karen G 48 218-624-7310
8719 Morse Carlton S & Betsey F 45 218-628-1359
8725 Trottier Linda D 46 218-624-2060
Trottier Ld 218-624-2060
+ PORTAL AVE INTERSECTS
9101 Kiminski Theresa M 13 218-624-3439
9113 Preston John W & Betty J 20 218-624-5038
9117 Martin Jeffrey D & Terry E 19 218-628-2957
9120 Miller Darrell E & Jean M 48 218-624-8181
Novacinski Joyce E
9123 Johnson James P & Diane J 17 218-624-5438
9125 SIMPLY FIX IT CONSTRUCTION genl contractors 218-624-2346
Vanarman Brandy 48 218-628-1728

STREET GUIDE

MARINE EQUIPMENT & SUPPLIES
1101 JOHN AVENUE
SUPERIOR, WI 54880

SLM CORPORATION

MACHINE WELDING & FABRICATION SHOP
(715) 394-4444
FAX (715) 394-6199

LAVAQUE RD (D)

Vanguildar James A & Debra (N)+ 729-7893
4718 Boggio Randsom S (N)+ 729-8055
Boggio Karin D 729-8055
+SAMUELSON RD BEGINS
4741 Miller Alvin S (N) 729-1609
4748 Gundstrom Chelsey (N)+ 729-8798
4749 Lindquist David E (N)+ 729-9472
Lindquist Olive M 729-9472
+LAVAQUE BYPASS RD ENDS
4756(N)Backstrom Kenneth D 729-9608
4759 Broich Daniel A & Sharon (N)+ 729-6060
4771 Not Verified
4772 Pierce Larry R (N)+ 729-8993
4773 Armstrong Vickie L (N)+ 729-6823
Greenman Richard E (S)
4774 Backstrom Bernard G (N)+ 729-8798
4798(N)Oswell Jame S
Oswell Rose M
+MARTIN RD ENDS
4814 Swansen Jeffrey P (N)+ 729-8044
Swansen Rhonda L 729-8044
4830 Olsen James C (N)+ 729-9124
Olsen Janet L 729-9124
4844(N)Scott Brian 729-6982
4852(N)Paavola Martin 729-5488
4878 Felix Evelyn E (N)+ 729-8699
Kolvisto Mary 729-0805
Labud V H 729-8333
4880 Kettelhut Evelyn C (N) 729-6305
D Not Verified
4881 Williams Margaret F (N)+ 729-7378
Williams Brad M 729-7378
4882 Not Verified

- ZIP CODE 55803 CAR-RT R004
5147 Kucza Wallace F 729-8541
5150-5159 Not Verified (3 Hses)
5167 Bloom Carl A (S) 729-6693
5177 Murphy Paul J (N)+ 729-6428
Murphy Mitzi 729-6428
5180 Not Verified
5182 Vanloon Wilford M (N)+ 729-9082
Vanloon Alan W 729-9082
5189 Kallberg James E (S) 729-6586
5192 Pierce C (S) 729-1058
5193 Cich Richard M (N)+
5194 Rutka Ronald L (S) 729-0753
5197 ARROWHEAD INDUSTRIAL SERVICE 729-9076
D C ENTERPRISES OF NOTHERN MINNESOTA
bldg demolition 729-9105
J & D ENTERPRISES 729-9091
5204 Eastvold Clifford A (S) 729-6838
5216 Aamodt Jon (S) 729-6861
5223 Bloomer Virginia P & Roy (S) 729-8200
5227 Lindquist C J (S) 729-7875
5228 Letchworth George T (S) 729-9418
5242 Sullin Kevin (S) 729-0462
5247 Broman Gerald A 729-7260
5248 Becks Steve 729-8930
Hanson Wesley J (S) 729-4955
Hanson Brenda L 729-4955
5250 Hanson Amy 729-9610
5252 Ilola J (S) 729-9316
5256 Hanson Yvonne 729-1084
5262 Peterson Morton V (N)+ 729-6460
5274(N)Anderson Margaret J 729-5291
5275 Muench R (S) 729-0014
5281 Vandyke Roger A (S) 729-6879
5293 Balen David J (S) 729-6087
Balen Krista M 729-6087
+LOCKWOOD LN ENDS
5309(N)Stafford Robert W 729-8827
5410(N)Olson Rick J 721-4040
5500 Amundson Mary A (S) 721-4412
Amundson Christina M 721-4412

- ZIP CODE 55803 CAR-RT R013
5505(N)Nylen Thomas M 721-4023
5506 Not Verified
+MCCOMBER RD ENDS
5601 Solem Barbara L (N)+ 721-3741
Solem Dale O 721-3741
5614 Loney Adam D (N)+
+SCHULTZ RD ENDS
5748 Carter Terry D & Gayle (N)+ 721-4933
5760 Stabs Bruce A (N)+ 721-5287
Stabs John W 721-5287
5767(N)Hansen Dale W 721-4830
5799 Hansen Robert M & Victoria (N)+ 721-4445
5839 Satterlund James P (S) 721-4923

LAVAQUE RD

Satterlund Eugene M 721-4823
5870 Saari Lora J (N)+ 721-3015
Saari Tammy L 721-3015
5880 Labelle Rick 721-5911
Occhino Gina M (S)
5888(N)Kraml Ronald 721-3861
+W LISMORE RD INTERSECTS
5938(N)Ruhanen Steven C 721-3532
5948 Shaw Duane A & Hope (N)+ 721-4665
5955 Matiatos James G (N)+
5960 McVean Ronald W (N)+ 721-3606
McVean Nancy M 721-3606
5962 GENERAL ELECTRIC COMPANY electl or electronic e 533-5885
McVean R 721-4026
5981 Kaneski Cheryl M (S) 721-5168
+STUBERUD RD ENDS
6035 LAKEHEAD TRUCKING local trucking 721-3521
6060 Busch Gary R & Linda (N)+ 721-4736
6064 Not Verified
6073 Armstrong Sherry A (S) 721-3115
Armstrong James A 721-3115
6079 Kaneski Gloria J (N)+ 721-3077
Kaneski Paul D 721-3077
6082 Lennertson Steven 721-4085
Stephenson Luann C (N)+ 721-4085
Stephenson Ryan L 721-4085
+USIAK RD BEGINS
6103 EAGLES NEST RESORT 721-4147
Jauert David A & Kristin (N)+ 721-5011
Nelson Georgia 721-4660
6139 BLUE MAX RESORT eating places 721-4235
6150 Zweifel Kyle W (Z) 721-5253
Zweifel Julie H 721-5253
+DAHLBERG RD ENDS
+LARSON LN BEGINS
6200 Caine Jeremy A (S)
6204 D J'S AUTO & TRUCK REPAIR genl truck repr 721-4807
(N)Johnsen Dennis 721-4807
6205 Johnson Albert F (N)+
Rothe Todd C (S) 721-3649
Rothe Laura L 721-3649
6220 Budisalovich Duane J (N)+ 721-4958
Budisalovich Helen J 721-4958
6222 Langlois Scott D (S) 721-5136
Sapp Jeffrey A (Z)
6223 Johnson Vincent W (N)+ 721-3641
6231(N)Saverson James 721-4679
6232 BOB'S BULLSEYE auto glass replacement 721-3263
(N)Smerdon Bob 721-3393
6240(N)Nelson Lowell H 721-3475
6243 Carl Torey L (N) 721-3185
6244 Nelson Janet H (N)+ 721-3476
6257 Martindale Shannon L (Z) 721-4972
8262(N)Adams Kristen L 721-3928
Adams Gordon G 721-3928
6288(N)Hoyum Jeff 721-3813
6290 Happy Steven C (N)+ 721-4039
6291 McKeever Kenneth W (N)+ 721-4111
McKeever Hugh T 721-4111
6297 Not Verified
6299(N)McKeever Kenneth W 721-5039
+W PIONEER RD ENDS
6339 CLEARWATER MEATS meat markets/freezer p 721-3489
Mosier Jeffrey S (N)+
Mosier Roy
6360(N)Carlson Tim 721-4089
+FISH LAKE RD INTERSECTS
+ISLAND LAKE DAM RD BEGINS
BUSINESSES 15 HOUSEHOLDS 130

LAVAQUE RD (HERMANTOWN)-

- ZIP CODE 55810 CAR-RT C037

3503-3504 Not Verified (2 Hses)
3509 Koski Florence E (S) 624-2617
Koski Edward W 624-2617
3517 Koski Dale R (N)+ 624-0203
Koski Jeanine R 624-0203
+WILLOUGHBY LN BEGINS
+SHERIDAN DR BEGINS
3554 Dahl Richard J (N)+ 624-3841
3582 Cadotte Michael J (N)+ 628-1720
Cadotte David 628-1720
3580 Rudolph Calvin H & Diane (S) 624-5178
3584(N)Radakovich Peggy 624-8827
3613 Johnson Daniel P (N)+
3616(N)Blumquist Peter 624-3043
+THOMPSON RD ENDS
+HANSON RD BEGINS
3656 Hanson Tracy D (N)+ 729-9137

LAVAQUE RD (H)

Hanson Jon M 729-9137
TRIPLE H BLACKTOP SEALING blacktop contr 729-5080
+SECORA RD ENDS
+MORRIS THOMAS RD ENDS

- ZIP CODE 55810 CAR-RT R007

3721 Klosowsky Anthony R (N)+ 729-8658
Klosowsky Cara D 729-8658
3748(N)Peterson Roy L 729-7767
3750(N)Peterson Thomas R 729-6477
3754 Streu Daniel P & Debra (N)+ 729-8326
3755 Lindberg Wirth W (N)+ 729-9632
3764 Scott Jeanne I (S) 729-8751
3768 Lockett Larry R (S) 729-6379
Lockett Phillip D 729-6379
+COUNTRY RD BEGINS
3783(N)Smith R M 729-7436
3787 Johnson Darrell B & Cynthia (N)+ 729-8494
3790(N)Kausch Archibald W 729-9611
+HERMANTOWN RD ENDS

- ZIP CODE 55811 CAR-RT C042

3886 Geier Sandra A & Thomas (N)+ 729-9651
3891 Erickson Kari D (N) 729-4040
3940(N)Reno Rick 729-8522
3953(N)Myers Mitch 729-5799
3960 Dzuck Dennis J (Z)
3961(N)Gustafson Roger 729-0597
3969 Dirksen Alan R & Kris (N)+ 729-9298
3976(N)Gardonio Michael A 729-7802
3999 Marshall Marylou L (N)+ 729-5807
Marshall Michael D 729-5807
4009(N)Martinson Samla 729-5247
Soderholm Scott 729-9703
4017(N)Miller M A 729-5813
4025(N)Lovejoy Perry E 729-5090
4026 Johnson Kurt (S) 729-0134
4035(N)Hane Rev Richard C 729-9114
4036 Foster Michelle L (S) 729-8018
Foster Brian P 729-8018
4041 Bodell Ann (Z) 729-8179
Bodell Nancy L 729-8179
4044 Dahl Peter D & Diane (N)+ 729-8694
4051 Not Verified
4061(N)Kangas Peter J 729-6687
4071 Frestedt David A & Patricia (N)+ 729-7907
4081(N)Giernot Erma 729-5184
4089 Butorac Matthew D (Z) 729-5214
Lundgren Jennifer L (Z)
McLean M 729-5214
4114(N)Zimmerman Lyle F 729-6780
4122(N)Engstrom John 729-7434
4128 Amundson Bryan D (Z) 729-1539
Amundson Sheri L 729-1539
4134 Soderburg Robert P (S) 729-0763
4201 Krenik Joseph J (N)+ 729-5046
4206 Renaud Iris J & Ovide (N)+ 729-7773
4213(N)Kimball Jim 729-0414
4214 Pijut M C (S) 729-7261
4220(N)Bakken Dennis 729-5812
4223 Simonson Lyle E (N)+ 729-9236
4228 Dasher Eugene E & Julie (N)+ 729-7093
4229 Fresacher Susan L (S)
Fresacher Blake S
Stockinger Susan L (N)+ 729-9711
Stockinger Gary 729-9711
4235 Jenny Gary M & Della (N)+ 729-5059
4238-4245 Not Verified (2 Hses)
4248 Fish William E & Anthnet (N)+ 729-5774
4255 Tallakson Joseph H (N)+ 729-6366
4262(N)Murphy Gregg 729-7469
4263 Mercier Scott (S)
Mercier Lisa M
4270 Prichard Percy L (N)+
4271 Dixon Christopher M (S)
Dixon Eileen N
4275 Kellerhuis Pamela S (N)+ 728-5952
Kellerhuis Brian 729-5952
4280(N)Young Doug 729-6075
4301 Hansen Henry N (N)+
4306(N)Erickson Margaret 729-7927
4313 McMann Elaine P (Z) 729-3490
McMann James L 729-3490
4333(N)Bluedorn Kenneth G
Bluedorn Kenneth G (N)+ 729-5802
Bluedorn Sharry L 729-5802
4337 Nelson Eugene G (N)+ 729-6268
4347 Hubert Guy W (N)+ 729-9588
Hubert Adam G 729-9588
4370 Claus Lori (N)+ 729-6578

LAVAQUE RD

4370(N)Lawless John P 729-0722
4379 Eisenach Dawn M (S) 729-5733
Eisenach Scott 729-5733
4380 Not Verified
4390(N)Peterson George 729-6984
4391 Bodell Daniel M (S)
Lufholm James E & Patricia (N)+ 729-5759
4393(N)Shepard Richard 729-1792
4394(N)Haugen Cedric 729-9484
4442 BEL AIR MOBILE MANOR apts 729-9477
Borgen Walter W (N)+ 729-9477
5088 Not Verified
4452 Miskowski John A (N)+ 729-6701
Miskowski Lorraine H 729-6701
4455(N)Haakenson Delbert 729-0955
4462 Amborn Patricia J (N)+ 729-6136
4485 Olson Peggyann A (N)+
Olson Lyndsay K
4471 Johnson Brodie 729-0179
4472 Foster Veronica J (N)
Voigt Ray 729-9866
4478 Rutka Gary L (Z) 729-4997
4480 Chiovitte Leroy B (N)+ 729-8219
Chiovitte Joanne E 729-6219

- ZIP CODE 55811 CAR-RT R001

4622 Walczynski Paul J & Carol (N)+
4629 Duff M (N)+ 729-5714
4650 Lepard Viola G (N)+ 729-6596
4658(N)Lepard Jerry L 729-7337
Lepard Todd 729-7230
4657(N)Paglusch Robert M 729-8983
4659 Craney James U (N)+ 729-7106
4666 Ugstad Ann (N)+ 729-7580
4682 Schnorr Kevin M (N)+
Schnorr Patricia A 729-9066
BUSINESSES 2 HOUSEHOLDS 106

LAVAQUE RD (PROCTOR)-

- ZIP CODE 55810 CAR-RT C037

1860 ERKKILA LORRAINE HAIR DESIGN 624-2363
BUSINESSES 1

LAVAQUE ST (DULUTH)-FROM 799 S 63RD AVE W WEST

LAVAQUE BYPASS RD (DULUTH)-
+SEVILLE RD INTERSECTS

- ZIP CODE 55811 CAR-RT R001

4707 Patnaude Thomas D (N)+ 729-5775
Patnaude Margaret R 729-5775
4735 Peterson Laura L (N)+ 729-5288
4746(N)Jacobs Larry A 729-9619
4748(N)Jacobs Lee 729-0641
4799 Oswell Jake S (N)+ 729-5343
4825(N)Poupore Heats S 729-8920
POUPORE SUSAN E eating places 729-8920
+SAMUELSON RD INTERSECTS
+LAVAQUE RD ENDS
BUSINESSES 1 HOUSEHOLDS 6

LAVAQUE BYPASS RD (HERMANTOWN)-FROM 4601 UGSTAD RD NORTHEAST

- ZIP CODE 55811 CAR-RT R001

4514 Gagne Bruce W (S) 729-5881
4518(N)Carlson William 729-7064
4536 Lentz Claudette L & Robert (S) 729-5923
4648 Dolentz Jacqueline M (S) 729-0047
4655 Swanson Jeffrey R (N)+ 729-8378
4656 Ellefson Linda D (N)+ 729-8906
Ellefson Kelly M 729-8906
4663 Gilbertson Gary J (S) 729-0354
4670 Carlson Warren T (N)+ 729-8057
Carlson Jacqueline P 729-8057
4677(N)Krause Alan 729-5070
4678 Rinker Marjorie S (N)+ 729-6120
+SEVILLE RD INTERSECTS
HOUSEHOLDS 10

LAVAQUE JUNCTION RD (DULUTH)-FROM 4251 LAVAQUE RD WEST

- ZIP CODE 55811 CAR-RT C042

5211 DENNY'S DRILLING metal mining serv 729-6363
Koepp Sheila (N)+
5217 Callahan James (N)+ 729-6249
Callahan Patricia A 729-6249
Shaw Allen R (S)

LAVAQUE JUNCTION RD (D)

5223 Not Verified
5227 Lindquist James (N)+ 729-7875
Lindquist Bradley J 729-7875
5233 Hicks George S & Velma (N)+ 729-6966
5247 Not Verified
5253 Ahlberg Wesley A & Margaret (N)+ 729-6721
5259 Erickson Jeffrey T (N)+ 729-9536
5271 Quesenberry Jane E (N)+ 729-5027
Quesenberry Amanda J 729-5027
5275 Vandyke Kenneth W (S)
5281 Vandyke Sarah L (N)+ 729-6879
+UGSTAD RD INTERSECTS
BUSINESSES 1 HOUSEHOLDS 12

LAVAQUE JUNCTION RD (HERMANTOWN)-

- ZIP CODE 55811 CAR-RT C042

5144 Bloom Bradford C (N)+ 729-7665
Bloom Carl R 729-7665
5147 Not Verified
5150 Foro Scott J & Debra (Z) 729-6581
5153 Carlson Arthur H (N)+ 729-7474
5154 Sandomierski James L (N)+ 729-0711
5158 Stern Kevin J & Julie (N)+ 729-7496
5159 Carlson Dale W (N)+ 729-9265
Carlson Donald H 729-9265
5167 Bloom Anita C (N)+ 729-6693
5170(N)Kucza Kevin J
5177-5180 Not Verified (2 Hses)
5182 Vanloon Kevin M (N)+ 729-9082
Vanloon Derin J 729-9082
5189-5194 Not Verified (3 Hses)
5195 Puhl Sheila R (N)+ 729-7289
5196 Vittorio Anthony A (N)+ 729-5692
5204 Not Verified
5216(N)Brown Charles D
(N)Wagner Carol A
5228-5242 Not Verified (3 Hses)
5248 Koski-Pavelich Susan J (Z)
5252 Kangas Aarre A (Z) 729-9316
5264 Eklund Douglas J (N)+ 729-0131
Eklund Veronica L 729-0131
HOUSEHOLDS 26

LAVELL RD (MEADOWLANDS)-FROM 1301 HIGHWAY 83 WEST

+OVERTON RD ENDS

- ZIP CODE 55765 CAR-RT R001

1344(N)Chase Terry J
Chase Gary A
1365 Hill David U (N)+ 427-2296
Hill Donna L 427-2296
1393 Leino Carol J (Z)
Leino Scott W
+SAILOR RD BEGINS
+OJA RD BEGINS
HOUSEHOLDS 3

LAVIS RD (DULUTH)-FROM 5597 LESTER RIVER RD WEST

- ZIP CODE 55804 CAR-RT R011

2935 Messer Debra J & Randy (N)+ 525-5807
2950(N)Twight Bryan 525-4502
2964(N)Sullivan Timothy 525-9207
2971 Dahl Robert A (Z) 525-5229
Klitsch Phil 525-5229
Weaver Julie A (S)
2985(N)Henry Barb 525-1891
3028(N)Gustafson William G 525-2274
3071(N)Simmons James F 525-7752
3078 Nelson Tammy L & Stephen (N)+ 525-7170
3081 Pertile Paul R & Sandra (N)+
+N TISCHER RD INTERSECTS
HOUSEHOLDS 11

LAVOY RD (BROOKSTON)-FROM 9501 HIGHWAY 2

- ZIP CODE 55711 CAR-RT H075

4646 Not Verified
4650 Lund Len N (N)+ 453-5636
Lund Teri L 453-5636
HOUSEHOLDS 2

LAW DR (SILVER BAY)-FROM 2 NELSON DR NORTHEAST

- ZIP CODE 55614 CAR-RT C002

11 Sando Robert M (N)+ 226-3807
Sando Grant G 226-3807
12 SILVER BAY BAPTIST CHURCH baptist ch 226-4202
13 Larson David R (Z) 226-4342
Larson Deanna M 226-4342

—CONTINUATION OF—

• LAKEWOOD RD •
55804

5832 ANDERSON C 93 525-2896
5860 LEVANEN GRANT 91 525-4001
5871 DEXTER JAMES W 90 525-3680
5895 DEXTER DANIEL J 90 525-2184
5921 ULTICAN R M 93 525-2114
5954 TALUS DAVID 92 525-3808
5965 FROST EUGENE 92 525-4462
5965 * LAKEWOOD MASONRY 92 525-4462
5966 KARAKTSOULIS DAVID 96 525-6029 -
5996 ALRICK S 90 525-1202
5996 ANDERSON M 90 525-1202
6020 NESGODA B 95 525-9222
6043 BAKER ROBERT J 93 525-6564
6043 * GUTHRIE-HUBNER INC 96 525-6564 □
6060 SLATTERY DAVID 92 525-2235
6083 KINNEAR WILLIAM 90 525-4477
6093 TRISKA WILLARD 93 525-6208
6133 - - -
6141 CLARK JOSEPH 96 525-7509 □
6151 MACDONALD DOUGLAS 91 525-2655
6166 MARSHALL ALAN J 92 525-7747
6171 STURDEVANT DENNIS 92 525-5505
6179 STROMGREN JOHN R 92 525-5006
6194 WITZMAN ROBERT D 91 525-4529
6206 STANEK DALE 93 525-4056
6236 HOLAPPA EDWARD 93 525-2194
6246 HOLAPPA EDWIN 93 525-7111
6267 VODDEN DANIEL 94 525-7214
6268 HOLAPPA KEITH L 93 525-2284

• LAKEWOOD RD SOUTH •
55804
TRACT 2 $ ★★★

5 * NORTH SHORE BAPTIST 525-4756

• LAKEWOOD JUNCTION RD •
55804
TRACT 105 $ ★★★

2850 BRADLEY JOHN E 90 525-1001
2850 BRADLEY MIKE T 92 525-4627
2855 PARKER RAYMOND W 90 525-4153
2870 DALBACKA JILL 90 525-4906
2870 PEERSON THOMAS G 91 525-4906
2871 - - -
2879 CHOC GEORGE A 525-4130

• LAKEWOOD JUNCTION RD EAST •
55804

2743 DANIELSON JEFF 92 525-2514
2746 KILLSTROM ERNIE 90 525-4932
2769 ROGERS C 90 525-6247
2776 HRYCIA GUS 90 525-2227
2803 NEVALA LYLE 94 525-3407

• LARCH DR •
55810

13 PETERSON ALLEN N 94 626-0249
14 BOURGEAULT STEVEN 96 624-0099 -
15 GUSS JAMES B 94 628-1581
16 LIND CLAYTON 94 624-2676
17 LIESEN LEONA 95 626-3505
18 MADEJ DENICE 95 624-0666
19 SHORT GARRY 93 626-1623
20 - - -
21 BROWN L C 93 626-1090
22 KLEPPE W KEITH 92 624-7831
23 SOUFFLET JEROME C 94 628-2140
25 NELSON M M 94 624-3488
26 BROMAN JACK V 92 624-1725
28 BOND CALEB 96 624-2433 -
28 POWELL C 96 624-2433 □
29 LAGIOS GEORGE 93 626-1667
30 HUNNEWELL EUGENE 93 624-8091
31 PETOLETTI BERTHA 93 624-0812
32 OLSON RONALD L 95 624-0075
33 SHOVEIN ALLEN 93 624-0087
34 HAUGEN ARNOLD 93 624-0300

• LARSON DR •
55810

3000 HALLFRISCH TOM 96 878-3429 -
3020 DENZLER ROBERT L 86 879-9643
3031 ECONOMY DAVID 86 879-4485
3035 ROTHMEIER WILLIAM 88 879-2438
3035 - - -
3042 ERICKSON RONALD 90 879-6873

• LARSON LN •
55803

5120 MAAS JAMES 90 721-3309
5136 OLSON B JR 90 721-4517
5140 ZOBITZ CHUCK 90 721-3637
5158 SUMMERS RICK 91 721-3484
5166 ENG STEVE A 92 721-4351
5172 BUERKE GEORGE 94 721-3760
5184 - - -
5196 GRINDAHL LLOYD 721-4795 +
5246 RAPP GLENN A 90 721-3761
5266 HALLAMEK JIM 91 721-3620

• LAUREN RD •
55804

2507 SUNDBERG GERALD L 90 525-4133
2583 SNYDER DALE 96 525-3259 □
2643 HERRICK ERROL 90 525-1380
2646 SWENSON DAVID 95 525-3723
2654 - - -
2711 VANGILDER M L 96 525-4191 □
2714 BLAIR CHRIS 90 525-3344
2724 RISE LIEF 525-4100
2740 BERG BRADLEY 91 525-4194
2754 SALMI LEO 90 525-2189
2801 ROBERTSON W 90 525-5424

• LAURIE ST •
55803
TRACT 5 $ ★★★★

102 TARAN ZACHARY C 94 724-8582
106 LEBLANC LARRY 92 724-6109
113 HARDESTY LYNN 87 728-1394
114 EVERETT E B 724-3615
120 MORAN KENNETH J 728-4320
131 COBB J M 83 724-3254
139 LONMAN TOM 92 724-6039

• LAVAQUE RD •
55810
TRACT 103 $ ★★★

1601 SEDERSKI C S 95 624-9516
1604 - - -
1607 MURPHY S 90 628-3496
1630 * ELVINAS BEAUTY TOWN 84 628-2449
1630 WIGINGTON DON 87 628-2449
1635 PRINCE ALFRED R 624-3530
1637 MERRIE GLENN 624-5953
1641 LAVATO THOMAS L 78 628-3497
1650 EALES MIKE 89 624-1064
1657 COOK JOHN R 78 624-2134
1660 * ERKKILA HAIR DESIGN 95 624-2363
1680 ERKKILA JAMES 78 624-2363
1681 SWENSSON GREGORY B 94 624-4960
1665 CHAPINSKI MARTIN J 628-2726
1680 JOHNSON KIM 91 624-1180
1681 BIBEAU WAYNE 88 624-3394
1687 STACY MAC 624-0730
1693 JOHNSON EVALD L 624-2254
1717 FOSSUM RALPH 624-4375
1721 SJODIN CARL E 81 628-3339

ODD - TRACT 29 $ ★★

1735 GODSWELL GARY 90 624-2861
1740 LEONARD DANIEL 96 628-3062 □
1754 CHAPINSKI DANIEL S 628-1439
1760 HULTSTROM CARL L 83 624-2148
1804 - - -
3503 KOZLOWSKI T S 90 624-5054
3504 BECK STEVEN J 90 628-3203
3509 KOSKI ED W 90 624-2617
3517 KOSKI DALE 90 624-0203
3554 DAHL RICHARD J 90 624-3841
3562 CADOTTE S J 90 628-1720
3584 * RUDOLPHS CONSTR 85 624-5178
3613 - - -
3615 HANSEN STEVE 90 624-4303
3616 ANDERSON MIKE 90 624-2333
3638 - - -
3656 HANSON MICHAEL D 90 729-9137
3662 - - -
3707 * HRMNTWN LUMBER CO 90 729-8600
3721 KLOSOWSKY TONY 90 729-8658
3748 PETERSON ROY L 90 729-7767
3750 PETERSON THOMAS R 90 729-6477
3754 STREU DANIEL 90 729-8326
3755 LINDBERG WIRTH W 90 729-9632
3764 EARLY JEANNE 91 729-8751
3768 LOCKETT LARRY F 90 729-6379
3783 SMITH R M 90 729-7436
3787 JOHNSON DARRELL B 94 729-5564
3790 KAUSCH ARCHIBALD W 90 729-9611

55811

3875 - - -
3886 GEIER THOMAS 90 729-9651
3940 RENO RICK 92 729-6522
3941 - - -
3953 CRUM STEPHEN S 95 729-0755
3960 ANDERSON TIM B 90 729-5531
3969 DIRKSEN AL 729-5120
3976 GARDONIO MICHAEL A 90 729-7802
3999 MARSHALL MARY LOU 93 729-5807
4009 BLOM G 96 729-0729 -
4017 MILLER M A 90 729-5813
4025 LOVEJOY PERRY F 90 729-5090
4026 - - -
4035 HANE RICHARD C REV 90 729-9114
4036 FOSTER BRIAN 91 729-8018
4036 FOSTER JEFF A 90 729-5393
4039 BODELL PAUL 90 729-6179
4041 BODELL JOE J 93 729-6751
4044 DAHL PETER D 90 729-8694
4061 KANGAS PETER J 93 729-6687
4071 FRESTEDT DAVID 93 729-7907
4081 GIERNOT ERMA 90 729-5184
4089 MICHELSON MARVIN G 90 729-9780

TRACT 106 $ ★★★

4114 ZIMMERMAN LYLE F 90 729-6780
4122 ENGSTROM JOHN 95 729-7434 -
4128 NARJU RODNEY C 96 729-9621 □
4163 - - -
4177 - - -
4201 KRENIK JOE J 92 729-5046
4206 RENAUD O G 90 729-7773
4213 - - -
4214 PUUT M C 95 729-7261 □
4220 LAWRENCE DAN W 90 729-5056
4223 SIMONSON LYLE E 90 729-9236
4228 DASHER EUGENE 90 729-7093
4229 STOCKINGER S L 90 729-9711
4235 JENNY GARY M 90 729-5059
4236 CARLSON DANIEL 90 729-6594
4245 FISH P 92 729-9037
4246 FISH WILLIAM E 90 729-5774
4255 TALLAKSON DONALD J 90 729-6366
4262 MURPHY GREGG 92 729-7468
4270 PRITCHARD PERCY 90 729-7204
4271 WORDES S 96 729-5904 -
4275 KELLERHUIS BRIAN 91 729-5952
4278 - - -
4280 LAURILA BRUCE 90 729-8295
4286 BLOMDAHL PAUL 90 729-7002
4301 - - -
4308 ERICKSON MARGARET 92 729-7927
4313 NEWSTRAND MITCHELL 90 729-6122
4333 BLUEDORN KEN 90 729-5829
4337 NELSON EUGENE GENE 91 729-6268
4347 HUBERT WAYNE F 90 729-9588
4350 - - -
4360 - - -
4369 - - -
4370 CLAUS DALE W 91 729-6578
4377 - - -
4378 JOHNSON ROBERT H 90 729-9429
4379 TAFS GERALD E 90 729-6096
4390 PETERSON THEODORE C 90 729-8984
4391 LUFHOLM JAMES 90 729-5759
4393 HANSEN HENRY N 91 729-6452
4394 HAUGEN CEDRIC 95 729-9484
4442 * BEL-AIR MBL MANOR 91 729-9477
4442 BORGEN WALTER 92 729-9477
4452 MISKOWSKI WALTER 90 729-6701
4455 HAAKENSON DELBERT 95 729-0955
4462 AMBORN ROY O 90 729-6136
4465 OLSON JOHN M 90 729-9501
4471 SCHROEDER D 93 729-5012
4472 VOIGT RAY 92 729-9866
4480 CHIOVITTE LE ROY B 90 729-6219
4529 - - -
4539 - - -
4555 - - -
4566 - - -

TRACT 3 $ ★★

4618 - - -
4622 WALCZYNSKI PAUL 90 729-5383
4629 DUFF M 93 725-5714
4650 LEPARD VIOLA MRS 90 729-6596
4656 LEPARD JERRY L 90 729-7337
4656 LEPARD TODD 96 729-7230 -
4657 PAGNAC ROBERT M 90 729-8983
4659 CRANEY JAS U 91 729-7106
4666 UGSTAD OLOF R 93 729-7580
4682 SCHNORR LEROY F 90 729-9066
4708 * VANGUILDER CONTRCTG 94 729-7893
4708 VANGUILDER JAMES A 729-7893
4718 BOGGIO RANDY 93 729-8055
4746 GUNDSTROM ROBERT K 90 729-6796
4749 LINDQUIST DAVID E 90 729-9472
4756 BACKSTROM KENNETH D 90 729-5806
4756 REGAS DEMO 90 729-9349
4759 BROICH DANIEL 90 729-6060
4771 - - -
4772 PIERCE E KAY 91 729-8993
4773 ARMSTRONG V 93 729-6823
4774 - - -
4782 - - -
4814 SWANSEN JEFF 90 729-8044
4830 OLSEN J C 90 729-9124
4844 KAAS B J 90 729-9349
4852 PAAVOLA MARTIN 90 729-5488
4878 FELIX E E 90 729-8699
4878 KOVISTO GREGG 94 729-0805
4878 LABUD V H 90 729-8333
4880 KETTELHUT E C 94 729-6305
4881 WILLIAMS LESLIE W 90 729-7378
4882 PERKINS RON 96 729-8825 -

55803

5193 CICH RICK 95 729-9815
5193 * KDC EXCAVATING 96 729-9815 -
5197 * J&D ENTERPRISES INC 91 729-9091
5246 - - -
5250 LINDGREN JASON 95 729-0832
5256 SHARKEY CHERYL 93 729-5156
5256 STEVENS MICHAEL J 93 729-5156
5262 PETERSON MORT 90 729-6460
5264 - - -
5274 ANDERSON MARGARET J 95 729-5291
5309 STAFFORD ROBERT W 90 729-8827
5410 OLSON RICK J 90 721-4040
5505 NYLEN THOMAS M 90 721-4023
5506 BERGQUIST CHUCK 90 721-3201
5601 SOLEM DALE 95 721-3741
5661 - - -
5739 - - -
5746 CARTER TERRY 94 721-4933
5760 GEVING MERLE 90 721-3452
5767 HANSEN DALE W 91 721-4830
5770 - - -
5799 HANSEN ROBERT 95 721-4445
5800 - - -
5839 JOHNSON HARLOW J 91 721-4728
5870 SAARI ORA 94 721-3015
5880 KUZNIA JEFF 95 721-5027
5888 KRAMI RONALD 91 721-3861
5938 RUHANEN STEVEN C 92 721-3532
5948 SHAW DUANE A 93 721-4665
5955 - - -
5960 - - -
5962 MCVEAN RONALD 96 721-3606 □
6000 - - -
6030 FREDENBURG M I 88 721-3517
6035 * LAKEHEAD TRUCKING 88 721-3521
6040 KANESKI STEVE CARLA 96 721-5047 -
6058 - - -
6060 BUSCH GARY 88 721-4736
6064 OLDER LEE K JR 90 721-3070
6073 MCVEAN R 96 721-4028 -
6079 KANESKI PAUL D 721-3077
6082 STEPHENSON L OLDER 85 721-4085
6103 * EAGLES NEST RESORT 87 721-4147
6103 JAUERT DAVID 96 721-5011 -
6103 LARSON GLEN 96 721-4349 □
6104 - - -
6139 * BLUE MAX RESORT 721-4235
6148 - - -
6150 WATSON DANIEL 96 721-3850 □
6199 - - -
6200 CLARK DENNIS 721-4421
6204 * DJS AUTO TRUCK REPR 96 721-4807 -
6205 BUHL TRACEY 96 721-3540 -
6220 BUDISALOVICH H J 721-3331
6222 - - -
6230 JOHNSON VINCENT 91 721-3641
6231 SEVERSON JAMES 94 721-4679
6232 * BOBS AUTO GLASS 94 721-3263
6240 NELSON LOWELL H 78 721-3475
6243 CARL TOREY 93 721-3165
6244 NELSON MIKE 90 721-3476
6244 NELSON MYRON K 91 721-3476
6257 MARTINDALE JAMES K 96 721-4972 □
6262 ADAMS GORDY 96 721-3928 -
6288 HOYUM JEFF 94 721-3813
6290 * HAPPY STEVE 93 721-4039
6291 MCKEEVER ROGER 78 721-4111
6299 MCKEEVER KENNETH W 96 721-5039 -
6339 MOSIER ROY 78 721-3489
6360 DARLSON TIM E 90 721-4069

• LAVAQUE BYPASS RD •
55811
TRACT 103 $ ★★★

4514 GAGNE BRUCE W 90 729-5881
4516 - - -
4516 CARLSON WILLIAM 91 729-7064
4520 - - -
4525 PAPPAS GARY 90 729-8389
4538 - - -
4590 - - -
4594 - - -
4623 - - -
4648 ROOS DORWIN M 91 729-6831
4655 SWANSON JEFF 90 729-8378
4656 EILEFSON CHARLES R 90 729-8906
4670 CARLSON JACQUELINE 90 729-8057
4678 RINKER THOMAS R 91 729-6120
4707 PATNAUDE THOMAS D 90 729-5775
4735 PETERSON LAURA 90 729-5288
4746 JACOBS LARRY A 90 729-9615
4798 OSWELL STEVEN 90 729-5343
4829 POUPORE S 90 729-8920

• LAVAQUE JUNCTION RD •
HERMANTOWN
55811
TRACT 103 $ ★★★

5144 BLOOM BRADFORD C 90 729-7665
5147 KUCZA WALLACE F 90 729-6541
5150 FORD S 96 729-6581 □
5153 CARLSON ARTHUR H 729-7474
5154 SANDOMIERSKI JAMES 94 729-0711
5158 STERN KEVIN 94 729-7496
5159 CARLSON DONALD H 90 729-9265
5167 BLOOM CARL A 729-6693
5170 JOHNSON CLAYTON MRS 90 729-6579
5177 MURPHY PAUL J 90 729-6426
5180 VANLOON LAUREN 96 729-0208 □
5182 VANLOON WILFORD 96 729-9282 -
5189 KALLBERG JAMES E 90 729-6586
5192 GULBRANSON KENNETH 90 729-6307
5194 RUTKA RONALD L 95 729-0753
5195 PUHL M 94 729-7289
5196 VITTORIO ANTHONY A 90 729-5692
5204 EASTVOLD CLIFFORD A 91 729-6838
5211 * DENNYS DRILLING 91 729-6363
5211 KOEPP DENNIS 91 729-6363
5216 LARSON M E 90 729-9408
5217 CALLAHAN JAMES 90 729-6249
5223 BLOOMER ROY 90 729-8200
5227 LINDQUIST C JAMES 90 729-7875
5228 LETCHWORTH GEORGE T 90 729-9418
5233 HICKS GEORGE 90 729-8966
5242 WITIKKO NEIL 93 729-8661
5247 BROMAN GERALD A 91 729-7260
5252 ILOLA J 90 721-9316
5252 KANGAS AARRE 96 729-9316 □
5253 AHLBERG WESLEY A 90 729-6721
5259 ERICKSON WILLIAM A 92 729-9536
5264 EKLUND DOUGLAS J 94 729-0131
5271 OLIESENBERRY JANE 90 729-5027
5275 VANDYKE CLIFFORD M 90 729-9459
5281 VANDYKE ROGER A 90 729-6879

• LAVIS RD •
55804

2935 MESSER RANDY 93 525-5807
2950 TWIGHT BRYAN 90 525-4502
2964 SULLIVAN TIMOTHY 95 525-9207
2971 STEVENS TRACY 95 525-2693
3028 GUSTAFSON WILLIAM G 90 525-2274
3071 SIMMONS JAMES F 90 525-7752
3076 NELSON STEPHEN 91 525-7170
3081 - - -

• LAWN ST •
55812
TRACT 8 $ ★★

1908 - - -
1912 ARIO PETER M 724-6686
1914 RUKAVINA JOSEPH R 93 724-7328
1916 GUROVITSCH ALLAN J 85 724-6511
1916 MICHAELIS BRIAN 96 725-2265 -
1920 FLANAGAN K M 85 726-5232
1922 BLATNIK MICHAEL 91 724-5560
1924 KRUEGER DON 96 724-5397 □
1926 WELINSKI JIM 96 726-4174 -
1928 WESTROM ELDON 724-8024
1930 DENNIS PAT 82 726-6239
1932 BEATTIE JAMES W 78 724-5074
1936 CAPLE RONALD 94 726-3087
1936 ICKS ABETT 94 726-3087
1938 SYRJAMAKI-KUCHTA M 91 724-4833
1940 ELIASEN ADRIANNE 91 724-4338
1942 WILSON GORDON L 724-5572
1944 JOHN DONALD 87 724-5618
2013 MOUNT M A 724-2658

55810
ODD - TRACT 101 $ ★★
EVEN - TRACT 29 $ ★★

6701 BERG CLAYTON 86 628-2083
6702 - - -
6715 LINNE MARK 88 624-7310
6719 - - -
6725 TROTTIER BETTY 90 624-3427
9101 NIMINSKI T 94 624-3439
9113 PRESTON JOHN W 87 624-5038
9117 MARTIN JEFF 96 628-2957 -
9123 JOHNSON JAMES P 624-5438
9125 JOHNSON R T 91 626-2786
9133 QUIDING H D 82 624-7273
9134 RYDER JACK 78 624-7400
9136 * LARSON CONSTRUCTION 93 624-7450
9136 LARSON DAVID C 92 624-7460
9142 FORSHAW ROBT 628-1644
9146 MICHALSKI TIM 92 624-9608
9201 FREMLING TED 624-2786
9221 DARDIS JOHN D 78 624-3967
9229 ELLESTAD JOHN JR 624-1415
9231 - - -
9237 PEARSON DENNIS L 78 624-7920
9239 - - -
9242 EVENSON EDWARD H 92 624-7479

• LAWNWOOD RD •
55803

6761 BEHNING DONALD R 90 721-4171
6767 KEPPERS GEORGE 92 721-4439
6781 ODONNELL JEROMA 90 721-4261
6813 HEB DARVIN 91 721-3324
6815 FICKAR FRANK 90 721-3508
6823 THOMPSON DONALD A 93 721-3940
6831 HEREID S P 90 721-3574
6832 - - -
6839 BARTLETT LAWRENCE 90 721-3822
6841 ANDERSON WALTER 90 721-3223
6843 JOHNSON ROBERT C 90 721-3578
6845 HYLDEN ERIC 95 721-3619
6848 SHRAKE ROY 94 721-4888
6853 BEATTY OWEN 91 721-3273

• LEICESTER AVE •
55803
TRACT 5 $ ★★★★

306 REGAN KATE 93 725-2087
307 DENTINGER STANLEY F 724-3898
311 STROMME K 88 724-9222
314 OLIN JACK 94 724-6374
320 JONES GARY W 88 724-2215
321 JOHNSON LAWRENCE 90 724-2044
322 HALL RICHARD L 93 728-3322
324 MONSON ROBERT D 724-5664
325 HANSON W G 89 724-4531
328 LUND JAMES 95 724-3551
329 LEWIS SUSAN 96 728-1349 □
332 STOCKE VERN L 78 728-5624
337 MCCARTHY DENNIS M 87 726-2225
340 - - -
344 LEMKE ARMOND E 86 724-2677
345 MORRIS RICHARD A 724-7356
348 BREU THEODORE 96 724-6905 -
352 OSTOVICH STEVE 85 724-1191
356 DECKER ALAN 91 728-3829
360 SCHEIBE M 96 724-1519 □
361 - - -
364 GALLINGER BEN E 724-3864
401 HALVORSON CHESTER 724-3072
402 AMATO JOSEPH R 91 724-3739
405 SMITH PHILEMON REV 78 724-5832
406 JEANETTA WENDY 92 724-8397
412 MICHELA JOSEPH F 78 728-5574
420 EBERHARDT ERIKA 87 724-2958
426 FLAHERTY MARK C 84 724-4557
430 STEWART JAMES ATTY 91 728-2470
430 STEWART JAS H ATTY 95 728-2470
431 QUENEMOEN L E 96 724-9096 -
435 MERRITT DOUGLAS P 86 724-8100
438 DENNIS CHARLES E 96 724-4608 □
439 BALL LEE 724-0417
439 BALL ROBERT E 92 724-8274
444 WILSON DAVID G 89 724-4057
450 - - -
502 FURTMAN MICHAEL 82 728-1991
503 ABRAHAMSON KATHLEEN 91 728-1524
512 GABLER JACK 78 724-2128
520 FYPHRIE LAMBERT 724-6294
521 BOBEN JERRY 90 724-8594
523 SHERNER B L 90 724-0941
530 SHEARER JAMES A 78 728-4835
605 PITOSCIA JOHN 89 728-1332
607 JAEGER GREG 93 728-4120
607 WELLER JODY 93 728-4120

CONTINUATION OF

• LAKEWOOD RD •
55804

1506 MARSHALL ALAN J 86 525-7741
1517 STURDEVANT DENNIS 78 525-5505
1589 STROMMEN JOHN R 525-5009
1608 ---
1620 STANEK DALE 78 525-4056
1650 HOLAPPA EDWARD 525-2194
1660 HOLAPPA EDWINAMARY 89 525-7111
1669 WODDEN DANIEL 90 525-7214
1670 HOLAPPA KEITH E 78 525-2284
5041 HARPER WALTERSUSAN 90 525-5828
5051 LARSON GERALD A 90 525-1106
5055 ANDERSON JIM 90 525-9329
5061 MAXHAM GLENN 90 525-5910
5069 LEBEAU MICHAEL J 91 525-2528-
5089 UPDEGRAFF G 91 525-2528o
5079 SWANSON GEORGE A 90 525-3573
5083 ANDERSON ARTHUR S 90 525-2875
5083 ANDERSON T C S 91 525-3219-
5089 SMATTO STAN 90 525-8790
5117 HELLESVIG JEFFERY A 91 525-6721o
5133 AILI EDWIN A 90 525-5934
5139 SEELEY DENNIS C 90 525-2382
5149 HARTTMAN DON R J 91 525-7107-
5163 PETERSON KENNETH M 90 525-5701
5183 RICARD RONALD J 90 525-5922
5191 HAINES LAWRENCE SGT 90 525-3352
5198 MCLANDER M F 90 525-7657
5209 MORINVILLE MAURICE 90 525-1180
5219 SCHLIEP DONALD V 525-5921
5235 GEVING STEVEN 90 525-5744
5245 PIERING E A 90 525-5576
5259 LUKE EDWARD J 90 525-3616
5268 GILBERT MARY M MRS 90 525-5200
5279 MORRELL JAMES 90 525-2389
5282 SCHENDEL GREG 90 525-5278
5287 SUGARS RICHARD 90 525-6021
5304 SOMSEN STEPHEN D 91 525-6049o
5310 LILLEGAARD DANIEL 90 525-1263
5326 HAGHAN MICHAEL 90 525-3639
5332 DANIELS JAMES J 78 525-1057
5340 HOFFMAN M C 91 525-1781-
5379 MROZIK J ROBERT 90 525-3771
5504 ---
5507 KRAGSETH WAYNE C 90 525-6728
5524 HACKING JAMES R 90 525-3545
5609 ---
5834 CADOTTE DONALD 90 525-5760
5690 STONE EUGENE E 90 525-5613
5693 HICKS J R 90 525-5070
5709 KILLSTROM WARREN 90 525-4117
5766 PERO MIKE A 90 525-2135
5769 CLARK ROY I 90 525-2123
5776 FROST BRIAN D 90 525-7540
5787 ARNOLD HAROLD M 90 525-4051
5797 KUPCZYNSKI CHARLES 90 525-1751
5809 JOHNSON SCOTT R 90 525-6881
5810 OLESON JONATHAN E 90 525-3510
5827 NORDIN LEE 90 525-7588
5860 LEVANEN GRANT 91 525-4001o
5971 DEXTER JAMES M 90 525-3680
5895 DEXTER DANIEL J 90 525-2184
5996 ALRICK S 90 525-1202
5996 ANDERSON W 90 525-1202
6020 BECKER LINDA 91 525-5582-
6083 KINNEAR WILLIAM 90 525-4477
6133 SCHMEIGER BURT 91 525-4905o
6151 MACDONALD DOUGLAS 91 525-2856o
6184 WITZMAN ROBERT D 91 525-4529o
OSTROSKI GERALD 91 525-2091o
UPPER MONST FLMSTRP 78 525-6256

• LAKEWOOD RD SOUTH •
55804
TRACT 2 $***

15-NORTH SHORE BAPT CH 525-4756

• LAKEWOOD JUNCTION RD •
55804
TRACT 105 $***

2850 BRADLEY JOHN E 90 525-1031
2855 PARKER RAYMOND M 90 525-4153
2870 DALBACKA JILL 90 525-4906
2870 REIERSON THOMAS G 91 525-4906-
2871 HENDRICKS DOUG 91 525-6467o
2879 CHOC GEORGE A 525-4130

• LAKEWOOD JUNCTION RD EAST •
55804

2748 KILLSTROM ERNIE 90 525-4932
2769 ROGERS C 90 525-6247
2776 HIRVOLA GUS 90 525-2227

• LARSON DR •
55810

3000 SUNDSTROM TIMOTHY 91 879-1738o
3020 DENZLER ROBERT L 86 879-9643
3031 ECONOMY DAVID 86 879-4488
3035 ROTHMEIER WILLIAM 88 879-2438
3039 ---
3042 ERICKSON RONALD 90 879-6873

• LARSON LN •
55803

5120 MAAS JAMES & DONNA 90 721-3309
5138 OLSON B JR 90 721-4517
5140 ZOBITZ CHARLES 90 721-3937
5154 SUMMERS RICK & JOAN 91 721-3484o
5166 ---
5173 CHERRA GERALD 90 721-3994
5184 MCHANDS CHARLES P 90 721-4454
5186 GRINDAHL LLOYD 88 721-4513
5246 PAPP GLENN A 90 721-3761
5266 MALLAMEK JIM 91 721-3620o

• LAUREN RD •
55804

2507 SUNDBERG GERALD L 90 525-4133
2563 PLUMMER MIKE 90 525-7645
2643 MERRICK S 90 525-1380
2654 ---
2711 WRIGHT ARTHUR 90 525-1186
2714 BLAIR CHRIS 90 525-3344
2724 RISE LIEF 525-4100
2740 BERG BRADLEY &TRUDY 91 525-4194o
2754 SALMI LEO 90 525-2188
2801 ROBERTSON M 90 525-5424

• LAURIE •
55803
TRACT 5 $****

106 JOHANSON WAYNE O 724-0145
120 HARQUEST LYNN 87 728-1354
114 EVERETT E B 724-3615
130 MORAN KENNETH J 726-4320
134 COBB J M 83 724-3254
138 FLAHERTY MARY M 724-1197

• LAVAQUE RD •
55810
TRACT 101 $**

1604 ---
1607 MURPHY S 90 628-3486
1630•ELVINA TOWER OF BTY 84 628-2449
1630 MIGINGTON DON A E 87 628-2449
1635 PRINCE ALFRED R 624-9530
1637 SIMONSON LAWRENCE M 90 624-1413
1641 LAVATO THOMAS L 78 628-3497
1650 EALES MIKE & KATHY 88 624-1064
1657 COOK JOHN R 78 624-2134
1660•ERKKILA JAMES A L 87 624-2363
1660 ERKKILA JAMES D 78 624-2363
1660•LORRAINE ERKKILA HR 86 624-2363
1651 LUCIA DAVID E 85 624-0243
1665 CHAPINSKI MARTIN J 628-2726
1680 JOHNSON KIM & LINDA 91 624-1180o
1681 BIBEAU WAYNE&LEONA 88 624-3394
1687 STACY MAC 624-0730
1693 JOHNSON EVALD L 624-2254
1717 FOSSUM RALPH 624-4375
1721 SJODIN CARL E 91 628-2329

ODD - TRACT 29 $**
EVEN - TRACT 101 $**

1735 COGSWELL GARY 90 624-2863
1754 CHAPINSKI DANIEL S 628-1439
1760 HULTSTROM CARL L 83 624-2148

TRACT 103 $***

1904 ---
3503 KOZLOWSKI T S 90 624-5054
3504 BECK STEVEN J 90 628-3203
3509 KOSKI ED W 90 624-2617
3517 KOSKI DALE 90 624-2603
3554 DAHL RICHARD J 90 624-3841
3562 CADOTTE S J 90 628-1720
3584•RUDOLPH CALVIN 91 624-5178-
3584•RUDOLPH'S CONSTN 85 624-5178
3584•UNIVERSAL FABRCTN 91 624-4382-
3603 JOHNSON D P 90 624-0515
3615 HANSEN STEVE 90 624-2303
3616 ANDERSON WIKERSANDY 90 624-2333
3638 HANSON VERNA 90 729-8804
3656 HANSON MICHAEL D 90 729-9137
3662 ---
3707•HERMANTOWN LUMBER 90 729-8600
3721 KLOSOWSKY TONY 90 729-8658
3748 PETERSON ROY L 90 729-7767
3750 PETERSON THOMAS R 90 729-6477
3754 STREU DANIEL 90 729-8326
3755 LINDBERG MIRTH M 90 729-9832
3764 EARLY JEANNE 91 729-8751o
3768 LOCKETT LARRY B 90 729-6378
3783 SMITH R M 90 729-7436
3790 KAUSCH A M CAPT 90 729-9611

55811

3975 ---
3986 GEIER THOMAS 90 729-9651
3941 BODELL JOE J 729-6751
3953 PETERSON STEVE 90 729-7150
3960 ANDERSON TIM B 80 729-5531
3960 ANDERSON TIM B 729-6120
3969 DIRKSEN AL-KRIS 729-7802
3976 GARDONIO MICHAEL A 90 729-7807-
3999 MARSHALL MARYLOU 91 729-5807-
4009 FORRESTAL BERNARD M 90 729-8255
4017 MILLER M A 90 729-5813
4025 LOVEJOY PERRY E 90 729-5090
4026 BAHR RICHARD V 90 729-7771
4035•HANE RICHARD C REV 90 729-9114
4036 FOSTER BRIAN 91 729-8019-
4036 FOSTER JEFF A 90 729-5393
4039 BODELL PAUL 90 729-8178
4044 DAHL PETER D 90 729-8684
4081 GIERNOT ERMA 90 729-5184
4089 NICKELSON MARVIN G 90 728-9780

TRACT 106 $***

4114 ZIMMERMAN LYLE F 90 729-6780
4153 ---
4177 ---
4201 SCHNEIDER LEONARD 90 729-7374
4206 RENAUD O C 90 729-7773
4213 CHRISTENSEN JACK D 90 728-8678
4214 ANICK STEVE 90 729-8485
4220 LAWRENCE DAN M 90 729-5056
4223 SIMONSON LYLE E 90 729-9236
4228 DASHER EUGENE 90 729-7093
4229 STOCKINGER S L 90 729-9711
4235 JENNY GARY M 90 729-5059
4238 CARLSON DANIEL 90 729-6694
4245 ---
4248 FISH WILLIAM E 90 729-5774
4255 TALLAKSON DONALD J 90 729-6366
4270 PRITCHARD PERCY 90 728-7204
4271 DAVIS WERNER T 91 729-6350o
4275 KELLERHUIS BRIAN 91 729-5952o
4278 ---
4280 LAURILA BRUCE 90 729-6296
4288 BLOMDAHL PAUL 90 729-7002
4303 ---
4313 NEMSTRAND MITCHELL 90 729-6122
4333 BLUEDORN KEN 90 729-5802
4337 NELSON EUGENE 91 729-8268-
4347 HUBERT WAYNE F 90 729-9588
4350 ---
4360 ---
4369 ---
4370 CLAUS DALE M 91 729-6578o
4377 ---
4378 JOHNSON ROBERT M 90 729-9429
4379 TAFS GERALD E 90 729-6095
4390 PETERSON THEODORE C 90 729-6984
4391 LUFHOLM JAMES 90 729-5759
4393 HANSEN HENRY M 91 729-6452o
4394 AMYS CEASAR 90 729-9674
4442•BEL-AIR MOBILE MNR 91 729-9477o
4442 BORGEN WALTER 91 729-9477-
4452 MISKOWSKI WALTER 90 729-5701
4455 HANSHER CHARLES B 91 729-6088o
4462 AMBORN ROY O 90 729-6138
4465 OLSON JOHN M 90 729-9501
4471 MCLARTY A M 90 729-6376
4472 LINDBERG HENRY M 90 729-9094
4480 CHIOVITTE LEROY B 90 729-6219
4529 DUFF M 89 729-5714
4539 ---
4555 ---
4566 UGSTAD OLAF R 729-7580
4618 ---
4622 MALCZYNSKI PAUL 90 729-5383
4650 LEPARD VIOLA MRS 90 729-6596
4656 LEPARD JERRY L 90 729-7327
4657 PAGNAC ROBERT M 90 729-8983
4659 CRANEY JAS U 91 729-7105o
4682 SCHNORR LEROY F 90 729-9066
4708 VANGUILDER JAMES A 729-7893
4708•VANGUILDER-CONTRACT 86 729-7893
4718 VANGUILDER VERNIE 90 729-7516
4748 GUNDSTROM ROBERT K 90 728-8798
4749 LINDQUIST DAVID E 90 729-9472
4756 BACKSTROM KENNETH D 90 729-9808
4758 REGAS DEMO 90 729-9348
4759 BROTCH DANIEL 90 729-6060
4771 TEMPLER D 90 729-6234
4772 PIERCE E KAY 91 729-8993-
4774 ---
4782 ---
4814 SWANSEN JEFF 90 729-8044
4830 OLSEN J C 90 729-9124
4844 KAAS B J 90 729-9349
4852 PAAVOLA MARTIN 90 729-5488
4870 FELIX S C 90 729-8699
4878 LABUD V H 90 729-8333
4878 PETERSON SHERYL 91 729-8779-
4880 MIGINGTON RUSSELL 90 729-7858
4881 WILLIAMS LESLIE M 90 729-7378

55803

5085 ---
5095•BEST READY MIX 89 729-5023
5193 CTCH DEANNA 91 729-8815-
5197•J & D ENTERPRISES 91 729-9091o
5248 HANSON WESLEY JR 90 729-5347
5262 PETERSON MORT 90 729-6460
5264 ---
5309 STAFFORD ROBERT M 90 729-8827
5410 OLSON RICK J 90 721-4040
5505 NYLEN THOMAS M 90 721-4023
5508 BERGQUIST CHUCK 90 721-3201
5601 LARSEN WALTER T 90 721-4890
5661 ---
5739 ---
5760 GEVING MERLE 90 721-2482
5767 HANSEN DALE M 91 721-4830o
5770 ---
5800 ---
5839 JOHNSON HARLON J 91 721-4728o
5870 DALE 91 721-3015o
5880 ---
5898 KRAML RONALD 91 721-3861o
5960•GENERAL ELEC SERV 88 721-4886
5980 MCVEAN RONALD 78 721-3606
6000 ---
6030 FREDENBURG M I 88 721-3517
6035•LAKEHEAD TRUCKING 88 721-3521
6040 KANESKI GREGORY J 721-4446
6058 ---
6060 BUSCH GARY 88 721-4736
6064 OLDER LEE K JR 90 721-3070
6073 KANESKI PAUL J SR 82 721-4763
6079 KANESKI PAUL D 721-3077
6082 STEPHENSON L OLDER 83 721-4085
6103•EAGLES NEST RESORT 87 721-4147
6103 KSICINSKI JEAN 91 721-3616-
6138•BLUE MAX RESORT 721-4235
6150 LUND GEORGE 721-4062
6200 BRANDENBURG HERMAN 86 721-4421
6200 CLARK DENNIS 91 721-4844-
6205 JOHNSON E M 721-4180
6220 BUDISALOCICH M J 87 721-3331
6222 MULIARES WAYNE 90 721-3873
6223 JOHNSON VINCENT 91 721-3641-
6232•BOBS BULLSEYE NOVUS 91 721-3263-
6232•NOVUS BOBS BULLSEYE 91 721-3263-
6240 NELSON LOWELL H 78 721-3475
6244 NELSON MIKE & JAN 90 721-3476
6244 NELSON MYRON K 91 721-3476-
6257 JOHNSON THEODORE S 78 721-4270
6262•ABI ELECTRIC INC 87 721-3279
6288 RILEY TIMOTHY E 78 721-3819
6291 MCKEEVER RODGER 78 721-4111
6339 MOSIER ROY 78 721-3489
6360 CARLSON TIM E 80 721-4069

• LAVAQUE BY-PASS RD •
55811
TRACT 103 $***

4514 GAGNE BRUCE M 90 729-5801
4516 ---
4518 CARLSON WILLIAM 91 728-7064o
4520 ---
4525 PAPPAS GARY 90 728-8389
4538 MOORE D 90 729-5948
4590 ---
4594 ---
4823 ---
4848 ROOS DORWIN M 91 729-6831o
4655 SWANSON JEFF 90 729-6378
4656 EILEFSON CHARLES R 90 729-8906
4670 CARLSON WARREN T 90 729-8057
4678 RINKER THOMAS R 91 729-6120o
4707 PATNAUDE THOMAS D 90 729-5775
4735 PETERSON LAURA 90 728-5288
4746 JACOBS LARRY A 90 729-9619
4798 OSWELL STEVEN 90 729-5343
4829 POUPORE-HAATS SCOTT 90 729-8920

• LAVAQUE JUNCTION RD •
HERMANTOWN
55811
TRACT 103 $***

5144 BLOOM BRADFORD C 90 729-7685
5147 KUCZA WALLACE F 90 729-6541
5153 CARLSON ARTHUR H 729-7474
5154 MARTIN WILLIAM A 90 729-9087
5159 CARLSON DONALD H 90 729-9265
5167 BLOOM CARL A 90 729-8693
5170 JOHNSON CLAYTON MRS 90 729-8579
5177 MURPHY PAUL J 90 729-6428
5180 ---
5182 VANLOON MARLIN 90 729-9237
5182 VANLOON WILFORD 90 729-9237
5189 KALLBERG JAMES E 90 729-6586
5192 GULBRANSON KENNETH 90 729-6307
5194 OLSON ROBERT D 90 729-5828
5195 WELIN GARY 90 729-8927
5196 VITTORIO ANTHONY A 90 729-5692
5204 EASTVOLD CLIFFORD A 91 728-6839o
5211•DENNY'S DRILLING 91 729-6363o
5211 KOEPP DENNIS 91 729-6363-
5216 LARSON M E 90 729-9406
5217 CALLAHAN JAMES 90 729-6249
5223 BLOOMER ROY 90 729-8200
5227 LINDQUIST C JAMES 90 729-7875
5228 LETCHWORTH GEORGE T 90 729-9418
5233 HICKS GEORGE 90 729-6968
5242 BUSSA STANLEY 90 729-9355
5247 BROMAN GERALD A 91 729-7260o
5252 ILOLA J 90 729-9316
5252 KANGAS AARRE 90 729-9316
5253 AHLBERG WESLEY A 90 729-6721
5259 ERICKSON MM A JR 91 729-9536-
5264 EKLUND RICHARD 90 729-7723
5271 QUESENBERRY JANE 90 729-5027
5275 VANDYKE CLIFFORD M 90 729-9459
5281 VANDYKE ROGER A 90 729-6879

• LAVIS RD •
55804

2935 NEMGREN RANDY R C 91 525-3694-
2850 TWIGHT BRYAN 90 525-4502
2964 ESSELSTROM J S 90 525-1888
2971 KEARNEY DENNIS 90 525-1234
3028 GUSTAFSON WILLIAM G 90 525-2274
3071 SIMMONS JAMES F 90 525-7752
3078 NELSON STEPHEN 91 525-7170o
3081 PERTILE S 90 525-4960

• LAWN •
55812
TRACT 8 $**

1908 CARROLL CHRISTOPHER 91 724-2551o
1912 ARIO PETER M 724-6886
1914 RUKAVINA JOSEPH R 724-7328
1916 GUROVITSCH ALLAN J 85 724-6611
1918 ---
1920 FLANAGAN K M 85 728-5232
1922 BLATNIK MICHAEL 91 724-5560-
1924 BOLANDER E L 724-2319
1926 LAITINEN LINDA SUE 78 724-2468
1928 WESTROM ELDON 724-8024
1930 DENNIS PAT 82 728-6238
1932 BEATTIE JAMES M 78 724-5074
1936 FLEMING ROBERT 90 728-2505
1938 SYRJAMAKI-KUCHTA M 91 724-4833-
1940 ELIASEN MORIANNE 91 724-4838-
1942 WILSON GORDON L 724-5572
1944 JOHN DONALD 87 724-5616
2013 MOUNT M A R G R 724-2658

55810
TRACT 29 $**

8701 BERG CLAYTON 86 628-2083
8702 ---
8715 LINNE MARK & KAREN 88 624-7310
8719 MORSE CARLTON S 628-1359
8719 MORSE GREGORY A 91 628-1078-
8725 TROTTIER BETTY 90 624-3427
9113 PRESTON JOHN M 87 624-5038
9117 MILLER TERRY 89 628-2957
9123 JOHNSON JAMES P 91 624-5438o
9125 JOHNSON R T 91 628-2786-
9133 QUIDING H O 82 624-7273
9134 RYDER JACK 78 624-7400
9136 HILLMAN PATTY 628-1380
9142 FORSMAN ROBY 628-1644
9146 BONKOWSKE JON 86 624-0952
9201 FREMLING TED 624-2786
9221 DARDIS JOHN D 78 624-3967
9228 ELLESTAD JOHN JR 86 624-4988
9231 ---
9237 PEARSON DENNIS L 78 624-7920
9239 ---
9242 EVENSON EDWARD H 87 624-7479

• LAWNWOOD RD •
55803

6761 BEHNING DONALD R 90 721-4171
6781 ODONNELL JEROMA 90 721-4261
6813 HIEB ORVIN 91 721-3324o
6815 PISKAR FRANK 90 721-3508
6831 HERELD S P 90 721-3574
6832 THOMPSON DONALD A 90 721-3840
6839 BARTLETT LAWRENCE 90 721-3822
6841 ANDERSON WALTER 90 721-3223
6843 JOHNSON ROBERT C 90 721-3578
6845 CARLSON GLEN 90 721-3812
6845 CARLSON GLEN&MARNEY 90 721-3048
6853 BEATTY OMEN & BETTE 81 721-3273o

• LEICESTER AVE •
55803
TRACT 5 $****

306 ROBBINS G 91 728-6242-
307 DENTINGER STANLEY F 724-2898
311 STROMME K 88 724-9222
314 FRYKHOLM MARK 83 724-2938
320 JONES GARY M & PAT 88 724-2215
321 JOHNSON LAWRENCE 90 724-2044
321 TINDERHOLM L 90 724-2044
323 BERGELAND BILL 85 724-8904
324 MONSON ROBERT D 724-6864
325 HANSON M G 89 724-4531
328 LOFSTUEN J 83 724-3024
329 PETERSON ARTHUR C 724-2358
332 STOCKE VERN L 78 728-5624
337 MCCARTHY DENNIS M 87 728-2225
340 SANDY JOHN & RITA 87 724-0679
344 LEMKE ARMOND E 88 724-2877
345 MORRIS RICHARD A 724-7356
348 GUSTAFSON HERBERT 724-2217
352 OSTOVICH STEVE & K 85 724-1191
356 DECKER ALAN 91 728-3829-
360 HOIVIK JOHN ALEANNE 91 728-6562o
361 BILDERBACH H E 82 729-4748
364 GALLINGER BEN E 724-3864
401 HALVORSON CHESTER 724-3072
402 AMATO JOSEPH R 91 724-3738o
405 SMITH PHILEMON REV 79 724-5832
408 HALBERT JOHN 91 728-5589-
412 MICHELA JOSEPH P 78 728-5574
420 EBERHARDT ERIKA 87 724-2958
426 FLAHERTY MARK C 84 724-4557
430 STEWART JAMES H 91 728-2470o
431 NYLANDER JON D 78 724-9754
435 MERRITT DOUGLAS P 86 724-0100
438 BROWN HARRY C 728-1886
439 BALL ROBERT E 724-0417
444 NILSON DAVID G 89 724-4057
450 WOEN CLINTON 89 728-1195
502 FURTMAN MICHAEL 82 728-1991
503 ABRAHAMSON KATHLEEN 91 728-1524-
512 GABLER JACK 78 724-2128
520 FYHRIE LAMBERT 724-6294
521 BOBEN JERRY 90 724-8594
523 SHERNER B L 90 724-0941
526 SHEARER JAMES A 78 728-4835
605 PITOSCIA JOHN 89 728-1332
607 ---
619 DOELL P 91 728-2960-
620•ARMCO BLDG SYSTEMS 83 728-4456
620•BARLO BLDRS INC 91 728-4456-
620 LARSON BERTIL G 724-7524
620•SYSTEM-BILT STRUCTR 93 728-4456
625 KEENEY G L 89 724-4136
631 STRUM GERALD L 728-2630
636 JOHNSEN PAUL A 78 724-1714
637 HACKEY JAMES R 728-4543
640 HILL ROGER K 90 724-0859
643 NICKOLAJAK ROBERT 728-2976
644 SPOELHOF DAVID 83 724-2055
649 ---
650 ---
658 MCLEOD JAMS 89 728-1026
662 SCHARNOTT SANDRA L 84 728-6136
662 SIMPSON JERRY R 78 728-6136
666 ROBINS AL 82 724-6090

• LEISTE RD •
CLOQUET
55720

3922 EILEFSON GENE 90 729-6764
3958 JOHNSON EDWARD 90 729-9523
3965 BRADBURY THOMAS E 90 729-7812
3982 SIIRO FRANK D 90 728-8382
3998 WALKER ROE 90 729-6864
4007 ECKSTROM DALE 90 729-5033
4040 JULIN RANDALL E 90 729-7486

LOCATION SECTION

TELEPHONE SUBSCRIBERS ARRANGED BY STREET ADDRESS

LAUREN RD CONTD

511 PLUMMER MIKE&LINDA 525-7445
597 SUNDBERG GERALD L 525-4133

LAURIE 55803

106 JOHANSON JANICE R 724-0145
106 JOHANSON WAYNE D 724-0145
110 SRIMSTAD JOHN T 724-2096
114 EVERETT E B 724-3615
130 MORAN KENNETH J 724-5448
134 COBB J M 724-3254
138 FLAHERTY DILLON JR 724-1197

LAVAQUE RD 55810

1607 ISAACSON CARL A 624-0012
1630*ELVINA TOWER OF BTY 628-2449
1635 PRINCE ALFRED R 624-9530
1637 SIMONSON L W 624-1413
1641 WAITO THOMAS L 628-3497
1650*FLINT MASONARY 624-2465#
1650 TALARICO JOHN 624-1717
1657 COOK JOHN R 624-2134
1660 ERKKILA JAMES O 624-2363
1660*LORRAINE ERKKILA HR 624-2363-
1661 LUCIA DAVID E 624-0243
1665 CHAPINSKI MARTIN J 628-2728
1681 REDD LOUIS D & MARLEE 624-0052-
1687 STACY MAC 624-0730
1693 JOHNSON EVALD L 624-2254
1717 FOSSUM RALPH 624-4375
1721 SJODIN CARL E 628-3339
1735 HART K L 624-7588
1754 CHAPINSKI DANIEL S 628-1439
1760 ULTSTROM CARL L 624-2164
1805 MOZLOWSKI T S 624-9083
1810 BECK STEVEN J 628-3203
1817 KOSKI ED W 624-2617
1823 MOE HAROLD W 624-5401
1832 SANDSTROM STEVE 624-9034
1840 CARDTTE S J 628-1720
1843 GEYES MARY A 628-3537
1904 RUDOLPH CALVIN 624-5168
1904*RUDOLPH'S CONSTN 624-5178
1935 HANSEN STEVE 624-4303
1936 ANDERSON MIKE 624-2333
1980 HANSON VERNA 729-6804
2000 HANSON MICHAEL D 729-9137
3609*HERMANTOWN LUMBER 729-8600
3623 KOSKINEN TONY 729-8658
3654 PETERSON ROY L 729-5767
3658 STREU DANIEL 729-8326
3661 LINDBERG WIRTH W 729-9632
3662 EARLY JEFFREY 729-8751
3664 LOCKETT LARRY R 729-6379
3681 SMITH R M 729-7436

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3770 GEIER THOMAS 729-9651
3867 PETERSON STEVE 729-7150
3868 ANDERSON TIM B 729-5531
3875 STOCKE PAUL E 729-6417
3879 GARDNER MICHAEL A 729-7802
3901 BELICH RODNEY 729-5587
3911 FORRESTAL BERNARD M 729-8255
3915 MILLER M A 729-5813
3917 LOVEJOY PERRY E 729-5090
3919 BAHR RICHARD V 729-7771
3919 HANE RICHARD C REV 729-9114
3920 CONANT JAMES 729-8842
3931 DEFEW PAUL 729-8171
3941 BODELL JOE J 729-6751
3942 DAHL PETER D 729-8694
3942*ELECTRO-GAMES 722-1569-
3995 MICKELSON MARVIN G 729-9780
4097 SCHNEIDER LEONARD 729-7374
4098 RENAUD O G 729-7773
4101 CHRISTENSEN JACK D 729-6678
4102 PANICKO STEVE P 729-6685
4108 OLSON ARTHUR E 729-6769
4109 SIMONSON LYLE E 729-9236
4116 DASHER EUGENE 729-7093
4117 PRICE DONALD V 729-6775
4119 JENNY GARY M 729-5059
4126 CARLSON DANIEL&PAM 729-6694-
4129 OLSON OSBORNE G 729-9497
4130 FISH PETER 729-5409-
4137 CARLASON DONALD J 729-6566
4160 PRITCHARD PERCY 729-7204
4163 DAVIS WERNER T 729-6359
4180 LAURILA BRUCE 729-6296
4184 BLONDAHL PAUL 729-7002
4225 BLUEDORN KEN 729-5802
4227 NELSON EUGENE 729-6268-
4231 RUBERT WAYNE F 729-9588
4278 CLAUS DALE W 729-6578
4286 BEELER LARRY 729-9538#
4287 TAFS GERALD E 729-6096
4292 PETERSON THEODORE C 729-6984
4293 CURTIS C K 729-9616
4301 HANSEN HENRY N 729-6452
4306 AMTS CEASAR 729-9674
4345 ANICK JAMES J 729-5874
4350*BEL AIR MOBILE MANR 729-9477
4350 BLATNIK MICHAEL L 729-5940
4350 BORGEN WALTER 729-9477
4350 BURESH S D 729-8912
4350*CARE FREE HOMES 729-9477
4350*CUSTOM UPHOLSTERY 729-9477
4350 KUJAWA ROBERT L 729-6206
4350 MARTENS J H 729-8866
4350 PATRICK FLOYD NEAL 729-5234
4360 MISKOWSKI WALTER 729-6701
4369 OLSON JOHN M 729-9501
4370 AMBORN ROY O 729-6136
4377 MCCARTY C H 729-6376
4380 LINDBERG HENRY W 729-9094
4384 ANDRES WILLIAM F 729-9432
4388 CHRISTY LEROY B 729-6219
4528 WALZYNSKI PAUL 729-5383
4539 HAMSHER CHARLES B 729-6089
4553 PAGNAC ROBERT M 729-8983
4554 LEPARD VIOLA MRS 729-6596-
4555 CRANEY JAS U 729-7106
4556 LEPARD JERRY L 729-7337
4566 UGSTAD OLAF R 729-7560
4582 SCHNARR LEROY F 729-9066
4594 NELSON KIM A 729-8061
4618*VANGUILDER-CARDINAL 729-7593-
4624 VANGUILDER VERNIE 729-7516
4652 GUNDSTROM ROBERT K 729-8798
4657 LINDQUIST DAVID 729-9472
4662 BACKSTROM FRED 729-7688
4663 DELVAS JAMES L 729-6619
4666 BACKSTROM KENNETH D 729-9808
4670 BACKSTROM BERNARD 729-8558-
4681 KOSKI D D 729-7382
4708 SWANSEN JEFF 729-8044
4756 OLSEN J C 729-9124
4760 PAAVOLA MARTIN 729-5488
4782 FELIX F E 729-8699
4782 IKOLA J 729-7244-
4782 MCDONNELL MIKE 729-7261#
4782 PAPPAS GUS A 729-8247
4783 WILLIAMS LESLIE W 729-7378
5085 CICH PICK 729-8155
5085*CICH TRUCKNG&EXCVTG 729-9091
5095*APPLE READY MIX CO 729-6964

5095*CANOSIA CONCRETE 729-6964
5095*J & D ENTERPRISES 729-9105
5095*ZERVAS INDUST PETRL 729-7307
5095*ZERVAS TOM G 729-7307
5154 HANSON WESLEY JR 729-5347
5156 FORRESIAL ROBERT 729-5412-
5162 PETERSON MORT 729-6460
5164 KRAUSE TED 729-6842
5215 STAFFORD ROBERT W 729-8827

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5400 ANSELL STEVE 721-3079
5499 LARSEN WALTER T 721-4690
5560 GEWING MERLE 721-3662
5661 HANSEN DALE W 721-4858
5739 JOHNSON HARLOW J 721-4728
5770 SAARI DALE 721-3015
5800 KRAML RONALD 721-3861
5960 MCVEAN RONALD 721-3606
6000 GLIX JEFFREY P 721-3194
6060 KANESKI GREGORY J 721-4446
6070 KANESKI JOHN 721-3070
6060 OLEARY WILLIAM 721-4193
6073 KANESKI PAUL J SR 721-4763
6079 KANESKI PAUL D 721-3077
6082 STEPHENSON L OLDER 721-4085
6135*BLUE MAX RESORT 721-4235
6150 LUND GEORGE 721-4062
6152 SCHAFFER GERALD A 721-4686-
6200 BRANDENBURG HERMAN 721-4421-
6200 CLARK DENNIS R 721-4844
6205 JOHNSON E M 721-4180
6220 BUDISALOVICH LOUIS 721-3331
6222 HULIARES WAYNE M 721-3764
6225 MILLER EVERETT L 721-4250
6240 NELSON LOWELL H 721-3475
6244 GUROVICH STEVE 721-3461
6257 JOHNSON THEODORE S 721-4270
6262 ADAMS GORDON G 721-3278
6288 RILEY TIMOTHY E 721-3819
6291 MCKEEVER ROGGER 721-4111
6339 MOSIER ROY 721-3689
6360 POISSANT LOUIS M 721-3597
6779 MURPHY PAUL J 729-9478
6791 MELIN GARY 729-8927
6820 LARSON M E 729-9406
*FREDENBRG CNUTY CTR 721-3991
*LAKEHEAD BRICK SUPL 721-3521
*LAKEHEAD TRUCKING 721-3521

LAVAQUE BY-PASS RD 55811

4350 LAWRENCE DAN W 729-5056
4516 ROOS DORWIN M 729-6831
4520 EILEFSON CHARLES R 729-8906
4590 CARLSON WARREN T 729-8057
4685 PETERSON LAURA 729-5288
4688 JACOBS JERRY A 729-9019#
4702 KUHNLY LOREN 729-5801
4725 PEARSON RONALD L 729-6033
4782 LABUD V H 729-8333

LAVAQUE JUNCTION RD 55811

6738 BLOOM BRADFORD C 729-7665
6751 KUCZA WALLACE F 729-6541
6757 CARLSON ARTHUR H 729-7474
6760 MARTIN WILLIAM A 729-9087
6761 CARLSON DONALD H 729-9265
6767 BLOOM CARL A 729-6693
6770 JOHNSON CLAYTON A 729-6572
6780 RUSU ROBERT CARL T 729-6904-
6788 VANLOON WILFORD 729-9257
6789 KALLBERG JAMES E 729-6586
6790 GULBRANSON K S 729-6307
6792 OLSON ROBERT D 729-5828
6796 VITTORIO ANTHONY A 729-5692
6807*DENNY'S DRILLING 729-6363
6807 KOEPP DENNIS 729-6363
6808 EASTVOLD CLIFFORD A 729-6838
6819 CALLAHAN JAMES 729-6249
6820 LARSON STANLEY M 729-9052
6823 BLOOMER ROY 729-8200
6827 LINDQUIST C JAMES 729-7875
6830 LETCHWORTH GEORGE T 729-9418
6841 HICKS GEORGE 729-6966
6844 BUSSA STANLEY 729-9355
6851 BROMAN GERALD A 729-7260
6859 AHLBERG WESLEY A 729-7721
6861 ERICKSON WILLIAM A 729-9536-
6866 EKLUND RICHARD 729-7723
6869 QUESENBERRY DAVID 729-5027
6875 VANDYKE CLIFFORD M 729-9459
6879 VANDYKE ROGER A 729-6879

LAVIS RD 55804

19 PERTILE S 525-4960-
22 HALL MARVIN J 525-2480
31 FLATT ROBERT 525-4195
70 GUSTAFSON WILLIAM G 525-2274
111 MCDANIEL N N 525-1362
119 KOMANTI R MIKE 525-7102
138 ESSELSTROM J S 525-1888
138 ESSELSTROM WERNER A 525-5055

LAWN 55812

1908 SLOAN HARRY&DEBBIE 728-3593
1912 ARLO PETER M 724-6886
1914 RUKAVINA JOSEPH R 724-7328
1916 GUROVITSCH ALLAN J 724-6511
1918 OLSON RICHARD 724-2340
1920 FLANAGAN K M 728-5232
1922 ZALLAR GRETCHEN M 724-1094
1924 BULANDR DANIEL N 724-2319
1926 LAITINEN LINDA SUE 724-2468
1928 WESTROM ELDON 724-8024
1930 DENNIS PAT 728-6238
1932 BEATTIE JAMES W 724-5074
1936 ROUFS TIMOTHY G 728-3224
1938 KUCHTA RANDALL 724-1564
1940 WEGREN THOMAS J 724-8189
1942 WILSON GROVE L 724-5522
1944 DUMAS RICHARD 724-2328
2013 MOUNT M A 724-2658

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8701 BERG CLAYTON 628-2083-
8719 MORSE CARLTON S 628-1359
8725 TROTTIER SIMON G 624-3427
9115 OLLAR RICK 624-7668
9117 PULCZINSKI A M 624-1312
9123 JEANNETTE JOS A 624-0746
9125 HANSEN PETER H 624-1180
9135 QUIDLING H D 624-7273
9134 RYDER JACK 624-7400
9136 WILMOT JEFF 624-4380
9142 FORSHAW ROBT 628-1644
9146 BOWROWSKE JON 624-0528
9201 FREMLING TED 624-2786

9221 DARDIS JOHN D 624-3967
9229 ELLESTAD JOHN JR 624-4988#
9231 MADAUS STEVEN 624-2912
9237 PEARSON DENNIS L 624-7920
9239 MARNICH ROBERT J 628-1336

LAWNWOOD RD 55803

40 BENNING DONALD R 721-4171
100 BIRES RENEE 721-4869-
100 JESTER ANNA 721-4869-
124 PICKAR FRANK 721-3508-
168 HEREID S P 721-3574-

LEICESTER AVE 55803

306 KELLY JOHN D 728-3116
307 DENTINGER STANLEY F 724-2898
311*JACOBS MANUFACTRNG 724-1873-
311 LEIMER F K 728-5374-
316 REINHOLM MARK 724-2858
320 QUELLO PETER REV 724-3450
320*TRINITY LUTHRN CHCH 728-3450
321 HUBERT DAVID 724-0835
323 BERGELAND BILL 724-8904
324 MONSON ROBERT D 724-6664
325 TORP GLEN R 724-6392
328 LOFSTUEN J 724-3624
329 PETERSON ARTHUR C 724-5858
332 STOCKE VERN L 728-5624
337 STRUDWICK SCOTT 728-6096-
340 OCONNOR JOSEPH J 724-6213
344 LEMKE ARMOND S 724-2877-
345 MORRIS RICHARD A 724-7356
348 GUSTAFSON HERBERT 724-2217
350 OSTOVICH STEVE & K 724-3191
356 HIGHOLT JOHN 728-3211
360 PEARSON ROBERT C 724-6769
361 BILDERBACH H E 728-4748
364 GALLINGER BEN E 724-3864
431 HALVORSON CHESTER 724-3072
402 WALLIN RICHARD C 724-7644
403 SMITH PHILEMON REV 724-5832
408 HALBERT J MD 724-0831
412 MICHELA JOSEPH F 728-5574
420 PATTISON RICHARD JR 724-0590
426 FLAHERTY MARK C 724-4557
430 SCOTT HOWARD B 728-5654
431 NYLANDER JON D 724-8754
436 MERRITT DOUGLAS P 724-8100#
438 BROWN HOPE E 728-1569
439 BALL ROBERT E 724-0419
444 VAUPEL J C 724-6456
450 SHOWALTER CLAYTON 728-5205-
502 FURTMAN MICHAEL 728-1991
503 RADAKOVICH MICHAEL 728-1524
512 GABLER JACK 724-2128
520 FITHRIE LAMBERT 724-6294
521 MICHELSON PAUL 728-3818-
523 EBERNARDT ERIKA 724-2958-
530 SHEARER JAMES A 728-4835
607 BLACK MARK 724-8612-
607 LATOUR STEVEN 724-8612-
607 MARNICH TED 724-8612-
619 ODELL JOSEPH A JR 728-2960
620*ARMCO BLDG SYSTEMS 728-4456
620 LARSON BERIL G 724-7524
620*ROOF SYSTMES INC 728-4456@
620*SYSTEM-BILT STRUCTR 728-4456
625 HITI RANDY 728-4015#
631 STRUM GERALD L 728-2530
636 JOHNSEN PAUL A 724-1714
637 MACKEY JAMES R 728-4543
640 MCDUFFIE M L 724-3580
643 NICKOLOFF MARK 728-3876
644 SPOELHOF DAVID 724-2855
650 SHORT DAVID L 728-2866
658 KEMP MICHAEL O 728-4833
662 SCHARNOTT SANDRA L 728-6136
662 SIMPSON JERRY R 728-6136
666 ROBINS AL 724-6090

LEISTE RD 55720
CLOQUET

610 EILEFSON GENE 729-6764#
628 JOHNSON EDWARD 729-9523
629 ALDRIDGE BARRY 729-9359
640 SIIRO FRANK O 729-8382
643 LEISTE PETER J 729-7202
649 JULIN RANDALL E 729-7460
680 PUHL LARRY 729-8212
694 WALKOWIAK LISA 729-5764
697 LEISTE AVALT E 729-8653

LEMON 55811
(OR LEMON W)

20 GUSTAFSON HOWARD F 722-5279
25 HALLFRISCH BRUCE 727-8554
32 FAWCETT RAYMOND J 727-6563
39 RANDALL SCOTT W 726-0988
40 OGSTON ALLEN E 722-9097
102 VINCENT TED 723-1715
114 LINDBERG JOHN 722-6151
115 FOLEN CLIFFORD L 727-3629
117 BRENNAN MARK 726-0092-
130 SCHRAMM GLENN 722-8166

LENROOT 55808

8622 NEWMAN MARGARET 626-1105
8815 ZUCK A O 626-2338
8822 MARTIN LEROY 626-2871
8904 SCOTT LEROY W 626-1579
8910 ONTVEDT HAROLD 626-1192
8914 REINERTSON ROBERT S 626-2573
8924 PIKE JOHN 626-3106
9002 MALLORY MICHAEL G 626-3148
9005 JARVI ALAN & JOANNE 626-2081

LEONARD 55811

2140 KLEMMACK G M 723-8389
2141 MIDTHUN JAMES R 722-6251
2144 CARLOCK L L 727-7730
2202 KELLY JAMES R 727-2117
2210 OLSON RICHARD 727-4302
2222 GELLERSTEDT H O 722-0310
2226 BURBUL JOSEPH 722-4259
2232 SWANSON JAS H 727-7542
2240 PAPLIN JOHN GEORGE P 727-5487
2241 WICK RAYMOND E 722-3689
2306 POISSANT L A 722-9603
2314 OSSE ARTHUR 722-8753
2315 MEDJO ERLING A 722-2414
2323 SMART ERNEST B 722-5902
2334 MATTSON G 722-2033
2325 SWANSON HAROLD F 722-0796
2328 TERSINI RONALD E 722-0342
2333 MITCH DAN S 727-3925
2355 DESMEDT RICHARD A 724-7665
2409 ANDERSON FLORENCE 727-9602

2409 ANDERSON SCOTT R 727-3324
2409 BELSKI PETER CONRAD 727-5517
2409 BOLINDER MR J 727-9989
2409 CAPRIGLIONE L 727-2481
2409 DANDREA D 727-1431
2409 EDWARDS LILLIAM 727-4695#
2409 ELSTAD DALE 726-1989
2409 ERICKSON L M 722-2111
2409 FORSEN CARROLL L 726-0245
2409 HANSEN STEVEN F 722-5704
2409 HARMS D 727-9468-
2409 HEINONEN D 722-5666
2409 JENNINGS K 723-8585
2409 JOHNSON E M 722-1674
2409 JONES N 722-9779-
2409 KONSTI O A 722-4332
2409 LEDOUX BRENDA 726-0303-
2409 MACKIE SHELLY 722-5372
2409 MAREK DEAN A 726-1431
2409 MASON D 722-8084
2409 MATTEN JOHN 722-0390-
2409*MERIDIAN 722-2629
2409 MOODY GERALDINE 723-1285-
2409 QUAM WILLIAM 727-4486
2409 SCHENK J D 727-6788
2409 SNYDER RUTH M 727-4656
2409 WINKIALA DAVID 723-1699
2409 WOLD DENNIS L 722-9818
2501 ALLAN M D 722-1270#
2501 BAUERS D M 727-7062
2501 BERGH THOMAS 726-0272
2501 BLACKMAN G A 722-0723
2501 BOSLACKI KEVIN 722-9035-
2501 CARLSON M E 722-9168-
2501 CLARK GEORGE S 727-4608
2501 CONRY L F 727-4420#
2501 CUDAHY DON M 722-6791
2501 CUSICK GLEN 727-7062-
2501 GROTE STEVE 722-3391
2501 GROTH SANDRA 722-6765
2501 HANSEN J 726-1614
2501 HEGG C M 722-1184
2501 HEGGESTAD TODD A 722-6795
2501 HILL I G 722-0341
2501 HOLLEMAN OWEN 720-3350-
2501 JOHNSON ARVID R 727-2692#
2501 JOHNSON RANDY L 727-5671-
2501 JOSEPHSON J A 722-7162
2501 KARLEN RICHARD 727-0234#
2501 KLEMKE MICHAEL 722-6027-
2501 KOLENDA ROBIN 722-4903-
2501 LEHET JOHN A 727-4405
2501 MICHELIZZI WALLY 727-8608-
2501 OLSON I J 723-1955
2501 PIEDMONT MANOR 722-9902
2501 WARNER E A 726-1274
2501 WRIGHT G V 722-9775#
2501 ZANDER S M 727-1860

LESTER 55804

5101 HASLERUD CHARLES 525-3418
5131 KEUTEN GERALD G 525-7558

LESTER RIVER RD 55804

1860 BILLINGSLEY B 525-1872-
1877 JOHNSON DENNIS O 525-2402
1887 BURKE JACK 525-2250
1889*CHAMPION CHLDRS HME 525-1165
1889 CHAMPION LAURENCE 525-1165
2170 MARSHALL LYMAN T JR 525-4867
2180 FEDLER BRUCE J 525-5622
2210 HILLIARD BILLY 525-3641
2230 KAMPA FRANK J 525-6753
2244 HEINKILA MARVIN E 525-3586
2244 ATOL GORDON 525-3075
2249 JOHNSON STANLEY O 525-5728
2299 THOMPSON RICHARD J 525-1386
2323 MUSICK TIMOTHY 525-7343
2333 JOHNSON ROBERT G 525-5957
2401 WIEMANN ANDREW J 525-4503
2429 BUCK MACK 525-4067
2449 PETERS LYLE 525-2854
2457 GUJER ROBERT H 525-3854
2463 LUHM FRED H 525-6328
2596 COTTON GERALD E 525-4473
2621*PLEASANT VLY FARM 525-1762
2621 RONINGEN HENRY N 525-1762
2710 LUNDAHL RUDY 525-5268
2774 BORGREN THOMAS 525-7538
2796 SKOOG NANCY 525-3550
2901 MCLEOD E F 525-3660
2901 NICOLAI TED R 525-4260
2942 BUCK DON 525-7641
2949 GRAY ROBERT 525-3987
2960 DALLUM ERNEST 525-4104
2968 BUCK LEO A 525-4198
2980 SEAVEY ALVIN 525-6185
3009 SORENSEN P & E 525-2108
3019 SCHAFER EDWARD G 525-3348
3030 SUSNIK JOHN 525-3954
3033 BLOOMQUIST CARL A 525-4972
3040 DIORIKSON WILLIAM 525-5433
3049 CARLSON JOHN B 525-6248
3050 ARNOLD SYLVIA A 525-2248
3070 HOMOLA RICHARD 525-5382
3100 KOSTRZAB RONALD 525-4044
3110 ANDERSON DUANE 525-4951
3119 BACIG THOMAS 525-4840
3929 WRIGHT BRUCE 525-5590-
3939 DANIELSON ERNIE D 525-2209
3950 MACDONALD DOUGLAS 525-4402
3960 CULAS ROGER 525-7738
*AMERICAN LEGION 525-2957
*LESTER GOLF COURSE 525-1400

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102 BOISJOLI ROBERT J 724-4761
119 MCCABE THOMAS C 724-8070
172 MACARTHUR J D 724-1865
202 LITMAN R 724-7120
202 OLSON THOMAS R 724-3165
210 HUSZAR MICHAEL C 728-2393
214 HEIM J 724-8809
217 BIELE M B 724-0449
224 SUND ROBT M 724-3484
227 JOHNSON BRUCE R 724-0227
233 STEIN WILLIAM A MD 728-2867
232 NICKERT LEWIS J JR 728-1621
236 CARLSON ROGER M 724-9458
240 ANDERSON ROBERT P 724-7075
244 MORSE THOMAS 728-6107
248 LEROY F JEAN 724-3447-
306 BURKE RICHARD M 728-4123
314 GRAVELLE WILIAM 724-7661-
318 SPEHAR RICHARD 724-2268
411 MEYER SUSAN K 724-5675
463 RUNQUIST P D 724-7876

LEXINGTON 55807

5911 PALO GEORGE H 624-1271
5913 LEWIS F B 628-1197
5913 WARK SANDRA R 624-1184
6217 WALLER JAMES A 624-1947

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LAKEWOOD RD CONTD

433 LARSON GERALD A 525-1106
405 ANDERSON JIM 525-3329
439*GREAT LAKE GAZETTE 525-6256-
439 MAXHAM GLENN 525-5910
409*UPPER MDWST FLMSTRP 525-6256
503 SWANSON GEORGE A 525-3573
507 ANDERSON ARTHUR S 525-2875
509 COBB P L 525-6790
535 AILI EDWIN A 525-5934
535*YOUNG'S JANITORIAL 525-6461-
537 SEELEY DENNIS C 525-2382
541 BROWN DOUGLAS 525-5362
547 PETERSON KENNETH W 525-5701
567 RICARD RONALD J 525-5822
571 HAINES L D SGT 525-3352
605 MORINVILLE MAURICE 525-1180
609 SCHLIEP DONALD V 525-5921
639 PIERING E A 525-5576
660 GILBERT MARY M MRS 525-5200
666 STENNES MANFORD 525-1847
675 SUGARS RICHARD 525-6021
700 NYGARD WALTER E COL 525-3502
720 LUHRSEN MIKE 525-5132-
730 MAGHAN MICHAEL 525-3639-
734 DANIELS JAMES J 525-1057
740 SHOGREN RICHARD R 525-6175
748 WATTS HERMAN 525-1342
771 MROZIK J ROBERT 525-3771
898 OSTROSKI GERALD 525-3356
901 KRAGSETH WAYNE C 525-6728
919 SHERNER STEPHEN D 525-2802
1009 CADOTTE JAMES 525-4033
1020 CADOTTE DONALD 525-5760
1078 STONE EUGENE E 525-5613
1099 HICKS RICHARD G 525-5070
1109 NIEMI WALFRED A 525-4117
1110 STONE ARTHUR 525-5496
1139 ANDREWS PERRY 525-7394#
1169 CLARK ROY I 525-2123
1170 PERO MIKE A 525-2135
1199 ARNOLD HAROLD W 525-4061
1203 KUPCZYNSKI CHAS J 525-1751
1209 SPEARS CHARLIE 525-2119
1210 OLESON JONATHAN E 525-3510
1219 SCANLON EUGENE 525-2230
1269 WISEN S A 525-7375-
1270 ASPERHEIM ELWIN S 525-4018
1303 DEXTER DANIEL J 525-2184
1329 ULTICAN JAMES D 525-2114
1360 FROST EUGENE 525-4462@
1360*FROST EUGENE 525-4462-
1370 KARAKATSOULIS DAVID 525-6029-
1400 REHN J G 525-1775
1420 GUSTAFSON T L 525-4423
1449 BAKER ROBERT J & J 525-6564
1480 PRUDHOMME CHARLES A 525-4104
1497 KUBOW JOHN 525-5924
1551 NELSON LARRY R 525-4547
1559 MACDONALD DOUGLAS 525-2855
1576 DAVERN T R 525-4256
1577 STURDEVANT DENNIS 525-5505
1589 STROMGREN JOHN R 525-2882
1589*TAMARACK CONSTR 525-2882
1608 WITZMAN ROBERT D 525-4529
1620 STANEK DALE 525-4056
1650 HOLAPPA EDWARD 525-2194
1670 HOLAPPA KEITH L 525-2284

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219 CHOC GEORGE A 525-4130
231 BLANCHET R J 525-2261
232 REIERSON THOMAS G 525-4906
249 PARKER RAYMOND W 525-4153
260 BRADLEY JOHN E 525-1031
330 HIRVOLA GUS 525-2227
360 KILLSTROM ERNIE 525-4932

LARSON RD 55810

47 CHERRA JULIUS 721-3994
59 MCMANUS CHARLES P 721-4464

LAUREN RD 55804

309 COX THOMAS W 525-1596
309 ROBERTSON W 525-5424
350 SALMI LEO 525-2189
362 MATTSON RAUHA C 525-4074
370 RISE LIEF 525-4100
379 BEEDE BRYAN 525-2033
440 HAUS M 525-2137
440 TSCHIDA M K 525-2657-
511 HEURUNG ALOIS 525-4138
597 SUNDBERG GERALD L 525-4133

LAURIE 55803

102 TARAN ZACHARY C 724-6797
106 JOHANSON WAYNE D 724-0145
110 GRIMSTAD JOHN T 724-2096
114 EVERETT E B 724-3615
124 COBB PHILIP 724-3254-
130 MORAN KENNETH J 724-5448
138 FLAHERTY DILLON JR 724-1197

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1607 ISAACSON CARL A 624-0012
1630 LANE ROY J JR 628-3455-
1635 PRINCE ALFRED R 624-9530
1637 SIMONSON L W 624-1413
1641 LAVATO THOMAS L 628-3497
1650 TALARICO JOHN 624-4752
1657 COOK JOHN R 624-2134
1660 ERKKILA JAMES O 624-2363
1661 WATTERS LAVERNE JR 624-1446
1665 CHAPINSKI MARTIN J 628-2728
1687 STACY MAC 624-0730
1693 JOHNSON EVALD L 624-2254
1717 FOSSUM RALPH 624-4375
1721 SJODIN CARL E 628-3339#
1735 HART K L 624-7588
1754 CHAPINSKI DANIEL S 628-1439
1805 MOE ROBT G 624-7549
1817 KOSKI ED W 624-2617
1823 MOE HAROLD W 624-5401
1840 CADOTTE S J 628-1720
1904 RUDOLPH CALVIN 624-5178
1904*RUDOLPHS CONSTRUCTN 624-5178-
1904*RUDOLPHS CONSTRUCTN 624-5178
1935 HANSEN STEVE 624-4303
1980 HANSON TERRY 729-8586
1980 HANSON VERNA 729-8804-
2000 HANSON MICHAEL D 729-9137
3609*HERMANTOWN LUMBER 729-8600
3623 KLOSOWSKY TONY 729-8376
3654 PETERSON ROY L 729-7767
3658 STREU DANIEL 729-8526
3661 LINDBERG WIRTH W 729-9632
3662 EARLY JEFFREY 729-8751
3664 LOCKETT LARRY R 729-6379#
3681 POIRE DOUGLAS 729-7082-
3681 SMITH R M 729-7436

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3867 PETERSON STEVE 729-7150-
3868 ANDERSON TIM B 729-5531
3875 STOCKE PAUL E 729-6417
3876 STEELE DONALD L 729-9229
3901 BELICH RODNEY 729-5807#
3911 FORRESTAL BERNARD M 729-8255
3915 WILLIAMS M A 729-5813#
3917 LOVEJOY PERRY E 729-5090
3918 BAHR RICHARD V 729-7771
3919 WINDROSS KEITH S 729-8792
3920 SULLIVAN DAVID P 729-9778
3937 BODELL SCOTT 729-8179
3941 BODELL JOE J 729-6751
4097 SCHNEIDER LEONARD 729-7374
4098 RENAUD O G 729-7773
4101 CHRISTENSEN JACK D 729-6678
4102 ANICK STEVE P 729-6485
4108 OLSON ARTHUR E 729-6769
4109 SIMONSON LYLE E 729-9236
4116 DASHER EUGENE 729-7093
4117 PRICE DONALD W 729-6775
4119 MALWICK OSCAR E 729-6947
4129 OLSON OSBORNE G 729-9497
4130 FISH P J 729-6694-
4137 TALLAKSON DONALD J 729-6366
4160 PRITCHARD PERCY 729-7204
4163 DAVIS WERNER T 729-6359
4219 MEAD GEORGE 729-6882-
4225 BLUEDORN KEN 729-5802-
4227 NELSON B EUGENE 729-6268
4231 HUBERT WAYNE F 729-9588
4278 CLAUS DALE W 729-6578
4286 OLSON DAN & PAT 729-6097-
4287 TAFS GERALD E 729-6096
4292 PETERSON THEODORE C 729-6984
4293 KOSKI C K 729-9616-
4301 HANSEN HENRY N 729-6452
4302 AMYS CESAR 729-9674
4350 AMYS DOUGLAS R 729-8335
4350 ANDERSON A P 729-5235#
4350 ANICH JAMES J 729-5814-
4350 BAKER JEFFERY 729-5339
4350 BECTHOLD PAUL 729-7814
4350*BEL AIR MOBILE MANR 729-9477
4350 BORGEN JACKIE 729-5016
4350 BORGEN WALTER 729-9477-
4350 BORGEN WALTER 729-9477
4350 CARLSON JEFF 729-9012
4350 FASCIA S C 729-5895-
4350 FROMM D R 729-5890-
4350 FROVARP MICHAEL 729-5343-
4350 HALLFRISCH BRUCE 729-8221
4350 HERRICK BRET A 729-5567
4350 HYNNEK AL F 729-6187
4350 JACOBS CHRIS 729-5832-
4350 KALL JOSEPH 729-8392-
4350 KNUDSEN ROBERT 729-5325
4350 KUJAWA WAYNE 729-8980-
4350 LAURILA STEVEN 729-5630-
4350 LIKNESS GARY 729-6575-
4350 PETERSON JAMES L 729-8491
4350 SAZAMA D 729-5448
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4369 OLSON JOHN M 729-9501-
4370 AMBORN ROY O 729-6136
4377 MCCARTY C H 729-6376
4380 LINDBERG HENRY W 729-9094
4384 ANDRES WILLIAM F 729-9432
4388 CHIOVITTE LEROY B 729-6219
4528 MERCIL JOSEPH L 729-6455
4529 LINDBLAD WM R 729-8533
4539 HAMSHER CHARLES B 729-6089
4553 PAGNAC ROBERT M 729-8983
4555 CRANEY JAS U 729-7106
4556 LEPARD JERRY L 729-7337
4556 LEPARD VIOLA MRS 729-6596
4566 UGSTAD OLAF R 729-7580
4580 SCHNORR LEROY F 729-9066
4594 NELSON KIM A 729-8061
4618 VANGUILDER JAMES A 729-7893
4624 VANGUILDER VERNIE 729-7516
4652*PAULSON CONTRACTING 729-9547
4652*PAULSON R R JR 729-9547
4652 PAULSON R R JR 729-9547
4657 LINDQUIST DAVID 729-9472
4662 BACKSTROM FRED 729-7688
4663 GAUS B M 729-9463
4665 ROHLF J M 729-7739#
4666 BACKSTROM KENNETH D 729-9808
4681 KOSKI D D 729-7382
4708 SWANSEN JEFF 729-8044#
4756 OLSEN J C 729-9124
4760 LOFGREN ARNOLD 729-9022
4782 IDE MARK 729-5661
4782 LOVSHIN MICAHEL 729-5424
4782 MARTIN ROBERT E JR 729-7743-
4782 PAPPAS GUS A 729-8247
4783 WILLIAMS LESLIE W 729-7378
5085*CICH TRUCKNG&EXCVTG 729-9091
5085 JASKI JIM 729-5699-
5162 PETERSON MURT 729-6460
5215 STAFFORD ROBERT W 729-8827

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5400 KARO WALTER T 721-3966
5499 LARSEN WALTER T 721-4690
5660 GEVING MERLE 721-3462-
5739 JOHNSON HARLOW J 721-4728
5770 HILL EDWARD 721-4750
5800 KRAML RONALD 721-3861
5960 MCVEAN RONALD 721-3606
6040 KANESKI GREGORY J 721-4446
6058 OLDER LEE K JR 721-3070
6060 OLEARY WILLIAM 721-4195
6079 KANESKI PAUL D 721-3077
6082 STEPHENSON LUANN 721-4085#
6101 CLARK SUSAN MARY 721-4517
6139 BOURGEAULT ROBERT A 721-4046
6150 LUND GEORGE 721-4062
6152 PLUM MARY 721-4335
6200 BRANDENBURG H W 721-4421
6200 CLARK DENNIS R 721-4844#
6205 JOHNSON E M 721-4180
6222 HULIARES WAYNE M 721-3764
6223 MILLER EVERETT L 721-4250
6240 NELSON LOWELL H 721-3475
6244 NELSON MYRON K 721-3476
6257 JOHNSON THEODORE S 721-4270
6262 ADAMS GORDON G 721-3278
6288 RILEY TIMOTHY E 721-3819
6291*MCKEEVER BLDG MNTNC 721-3719-
6291 MCKEEVER ROGGER 721-4111
6339 MOSIER ROY 721-3489
6360 POISSANT LOUIS M 721-3597
6791 MELIN GARY 729-8927
6820 LARSON M E 729-9406
*FREDENBERG SCHOOL 721-3991
JOHNSON B D 721-3199
*LAKEHEAD BRICK SUPL 721-3521-
*LAKEHEAD TRUCKING 721-3521

LA VAQUE BY PASS RD 55811

4516 ROOS ALDINA 729-7202
4516 ROOS DORWIN M 729-6831
4520 EILEFSON CHARLES R 729-8906
4590 CARLSON WARREN T 729-8057
4685 PETERSON LAURA 729-5288
4702 KINNLY LOREN 729-5801-
4725 PEARSON RONALD L 729-6033

LA VAQUE JCT RD 55811

6738 BLOOM BRADFORD C 729-7665
6751 KUCZA WALLACE F 729-6541
6757 CARLSON ARTHUR H 729-7474
6760 MARTIN WILLIAM A 729-9087
6761 CARLSON DONALD H 729-9265
6767 BLOOM CARL A 729-6693
6770 JOHNSON CLAYTON A 729-6579
6779 MURPHY PAUL J 729-6428
6780 JOHNSON ELMER L 729-6905
6788 VANLOON WILFORD 729-9237
6789 KALLBERG JAMES E 729-6586
6790 GULBRANSON K S 729-6307
6792 OLSON ROBERT D 729-5828-
6792 VITTORIO ANTHONY 729-5692
6807*DENNYS WELL DRILLNG 729-6363
6807 KOEPP DENNIS 729-6363
6808 EASTVOLD CLIFFORD A 729-6838
6819 CALLAHAN JAMES 729-6249
6820 LARSON STANLEY M 729-9052
6823 NOLDIN RICHARD 729-6792
6827 LINDQUIST C JAMES 729-7875
6830 LETCHWORTH GEORGE T 729-9418
6841 HICKS GEORGE 729-6966
6844 BUSSA STANLEY 729-9355
6853 BROMAN GERALD A 729-7260
6859 AHLBERG WESLEY A 729-6721
6860 STOCKE L E 729-6397
6861 ERICKSON WM A JR 729-9536
6866 FKLUND RICHARD 729-7723
6869 QUESENBERRY DAVID 729-5027
6875 VANDYKE CLIFFORD M 729-9459
6879 VANDYKE ROGER A 729-6879

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19 ANDERSON L M 525-6554
22 HALL MANVIN J 525-2480
31 FLATT ROBERT 525-4195
70 GUSTAFSON WILLIAM G 525-2274
116 ENGEN DUANE 525-2293
129 HILLSTROM NESTOR 525-4030
138 ESSELSTROM J S 525-1888
138 ESSELSTROM WERNER A 525-5055
150 GRAVELLE ALICE 525-1706

LAWN 55812

1908 SLOAN HARRY&DEBBIE 724-3593
1912 ARIO PETER M 724-6886
1914 RUKAVINA JOSEPH R 724-7328
1916 FERRELL J 724-5352
1916 LUND C 724-5352
1918 OLSON RICHARD 724-2340
1922 LARES EDNA M MRS 724-2545
1924 BOLANDER E N 724-2319
1926 LAITINEN LINDA SUE 724-2468
1928 WESTROM ELDON 724-8024
1930 GRAVES RICHARD C 724-6326
1932 BEATTIE JAMES W 724-5074
1936 ROUFS TIMOTHY G 728-3224
1938 VICK BRAD 728-6288-
1940 WEGREN THOMAS J 724-8189
1942 WILSON GORDON L 724-5572
1944 DUMAS RICHARD 724-1228
2013 MOUNT DONALD I 724-2658

55810

8701 BERG CLAYTON 624-2573
8702 ROYER KIP 628-3847
8719 MORSE CARLTON S 628-1359
8725 TROTTIER SIMON G 624-3427
9101 DAEDA WILLIAM R 624-4247
9113 OLLAH RICK 624-7668-
9123 JEANNETTE JOS A 624-0746
9125 HANSEN PETER H 624-1180
9133 QUIDING RICHARD T 624-7273
9134 RYDER JACK 624-7400
9142 FORSHAW ROBT 628-1644
9146 DROBNICK TONY J 624-0810
9201 FREMLING TED 624-2786
9221 DARDIS JOHN D 624-3967
9229 SCHUMACHER C W 624-7728
9231 MADAUS STEVEN 628-2932
9237 PEARSON DENNIS L 624-7920
9242 KIVI HENRY 624-1277-

LAWNWOOD 55803

60 SHAW HOWARD L JR 721-3755
185 BJERKLIE J 721-3494-
LOY HUBERT M 721-3731

LEICESTER AVE 55803

306 KELLY JOHN D 728-3116
307 DENTINGER STANLEY F 724-2898
311 SPONNICK C C 724-2992
314 LUNDMARK STEVE 728-5205
320 QUELLO PETER REV 728-3450
321 HUBERT DAVID 724-0835
323 PETERSON STEWART J 724-2322
324 MONSON ROBERT D 724-6664
325 TORP GLEN R 724-6392
328 LOFSTUEN JOHN J 724-3024
329 PETERSON ARTHUR C 724-2358
329 PETERSON ARTHUR C 724-2358-
332 STOCKE VERN L 728-5624
337 KOLU AL 724-2964
340 OCONNOR JOSEPH J 724-6213
344 MCCARTHY M M 728-4116
345 MORRIS RICHARD A 724-7356
348 GUSTAFSON HERBERT 724-2217
352 HENDRICKSON DALE R 724-3207
356 HIGHOLT JOHN 728-3211
360 PEARSON ROBERT C 724-4769
360 PEARSON ROBERT C 724-4769-
364 GALLINGER BEN E 724-3864
401 HALVORSON CHESTER 724-3072
402 WALLIN RICHARD C 724-7644#
405 SMITH PHILEMON REV 724-5832
408 HALBERT J J MD 724-0831
412 MICHELA JOSEPH P 728-5574
420 PATTISON RICHARD JR 724-0390
426 PEARSON A N 724-1503
430 SCOTT HOWARD B 728-5654
431 NYLANDER JON D 724-8754

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HAGBERG ST Cont'd

2529 Haglin Robert J ✓ 19 ● (1950)
2533 Obrien Joseph S ✓ 27 ● (1950) 218-720-6397
2534 Barootian Maren E ✓ w 3 ● (1948)
2537 Granmo Gregory A ✓ 32 ● (1956)
Granmo Arlene J
2540 Karwath Robert D III ✓ 3 ● (1947)
2543 Williams Debra J 18 ● (1942)
2544 No Current Listing
2545 Johnson Nicole D ✓ 37 ● (1952) 218-722-0398
Johnson Jamie w 218-722-0398
2547 Malandar Lola D ✓ @ 97 ● (1952) 218-727-5417
Malandar Diane L 218-727-5417
2601 Michaelson Adam C 6 ● (1952)
2604 No Current Listing
2605 Mahnke Robert A & Lynetta C ✓ w 49 ● (1953) 218-723-8537
2610 Pasak Steven W ✓ 32 ● (1955)
Pasak Joanne C
2613 Johnson Alyssa 2 ● (1955)
Ⓘ Persson Taylor ✓
2616 Erie Maty ✓ 3 ● (1955)
Lampi Colton 5 ● (1955)
Maty Erie ✓ 3 ● (1955)
2619 No Current Listing
2622 Slattery Nicholas C ✓ w 12 ● (1955)
2627 Erickson Martin T ✓ @ 9 ● (1954)
2630 Hubert Daniel L ✓ 64 ● (1972) 218-722-0607
2633 Hubert Genaviave M ✓ 61 ● (1957)
Hubert Michael L w
2637 Hendrickson Dylan G ✓ 3 ● (1957)
2641 Goodreau Roger C & Heather M ✓ @ 25 ● (1957)
2644 Taylor Michael L ✓ w 29 ● (1959)
2645 Kinney Keith K @ 53 ● (1941)
+ ANDREW ST ENDS
2701 Michaelson Vincent D & Carol A ✓ 64 ● (1950) 218-727-1754
2707 No Current Listing
2719 Crusan Brandon J ✓ 6 ● (1951)
+ HUTCHINSON RD INTERSECTS
2732 Ⓘ Arnold Brittany M ✓ ● (1959)
2801 Ⓘ Boman Donna ✓ 218-464-5235
Jacobson Verdella L ✓ w 46 ● (1912) 218-464-5235
Jacobson Gloria A 218-464-5235
2802 Vezina Randy S & Kim P ✓ @ w 64 ● (1905)
2807 Tilsen Edward O ✓ @ w 11 ● (1958)
Tilsen Amber
2809 Henson Mike ✓ 2 ● (1955)
Henson Ciela
2810 Holl Theodore A & Debra L ✓ @ 90 ● (1957)
2816 Dwyer Patricia J ✓ @ 3 ● (1955)
2821 Dahl Arthur J ✓ 61 ● (1957) 218-722-0950
2822 Carlson Quinn A 6 ● (1958)
2830 No Current Listing
2838 Graves Alyssa 4 ● (1955)
2840 Gathje Alec J ✓ 3 ● (1955)
Wichmann Paul ✓ w 3 ● (1918)
+ KARL AVE INTERSECTS
+ RIVENESS RD CONTINUES
• ZIP CODE 55811 CAR-RT C104
3011 No Current Listing
3023 Adamczak Joseph E & Shirley A 19 ● (2006)
3035 No Current Listing
3042 Gustafson Mary E & Gary W ✓ 12 ● (1955)
+ HAINES RD INTERSECTS

HOUSEHOLDS 53

HAGEN RD (DULUTH)-FROM 6451 FRENCH RIVER RD
• ZIP CODE 55804 CAR-RT R008
2948 No Current Listing
2949 Le Page ✓ 4 ● (1990) 218-525-4177
2984 Lundin Charles N & Linda M ✓ @ 64 ● (1969) 218-525-4020

HOUSEHOLDS 3

HAHN RD (HERMANTOWN)-FROM 5399 HIGHWAY 2 NORTH
+ SAINT LOUIS RIVER RD INTERSECTS
+ US HWY 2 ENDS
• ZIP CODE 55810 CAR-RT R007
3505 Vanderscheuren Charles J & Lois M 20 ● (2007)
3510 Stahl Emerson G & Nomi ✓ @ 33 ● (1964) 218-624-2355
3511 Hinnenkamp Bret A & Sara L w 15 ● (1950)
3525 Ealas James E & Carolyn J ✓ 14 ● (1989)
3539 Ealas Timothy J & Jodi L ✓ @ w 27 ● (1964)
3544 Heehn Jeffrey W 5 ● (1930)
+ W SKYLINE PKWY INTERSECTS
+ MARY LANE DR BEGINS

HOUSEHOLDS 6

HAINES RD (DULUTH)
• ZIP CODE 55811 CAR-RT C104
3710 Ellison Teri w 5 ● (1955)
Ellison Esther
3711 Rocknasemkow Kallista @ w 3 ● (1964)
3713 Schramm Robert A & Grace G ✓ @ 34 ● (1950) 218-722-7365
3714 Johnson Dean A & Julie A ✓ 34 ● (1971) 218-727-1268
3717 Blazejak James E & Barbara J ✓ 33 ● (1960) 218-727-1977
3718 Bradshaw John W ✓ 3 ● (1968) 218-464-5284
Priolo Nancy ✓ 6 ● (1968)
3721 Gray Judith R ✓ 9 ● (1941) 218-724-1450
3722 Brunnar Tara L ✓ w 5 ● (1979)
3723 Kemble Jack A & Jessica L ✓ w 11 ● (1936)
3727 Lane Jeffrey ✓ 2 ● (1964)
3728 No Current Listing
3733 Deckman Goon C ✓ 3 ● (1964) 218-206-7790
Goon Karl A ✓ 3 ● (1909)
Goon Char D
3735 Rissanen John R w 64 ● (1947)
3743 Sharp Win A ✓ 29 ● (1964) 218-727-0576
Sharp Lori 218-727-0576
3744 Lutkevich Alan J & Deb A ✓ 19 ● (1950) 218-733-0250
3750 Miller Dale L & Karla S @ 3 ● (1915)
3756 Samuelson Edna V ✓ 12 ● (2004) 218-727-2217
3762 Schmidt Nolan w 2 ● (1933)
3764 Swanson Jeffrey A & Karen M ✓ 33 ● (1949) 218-727-2016
3768 Anderson Scott B ✓ w 22 ● (1954) 218-727-2403
3772 Krueger Richard L ✓ @ w 16 ● (1955)
3776 Gilbert Michael G & Alicia ✓ @ w 28 ● (1934)
3782 No Current Listing
3804 Wynne Renee 5 ● (1927)
3826 Benson Donn D 34 ● (1958)
3852 Lundquist Claudia A 2
1 No Current Listing
2 Hatfield Robert 2

HAINES RD Cont'd

3882 APOSTOLIC GOSPEL CHURCH churches ✓ 218-727-6058
• ZIP CODE 55811 CAR-RT C107
3906 Rajanen Eugene W & Sandra P ✓ 28 ● (1958) 218-464-4505
3912 No Current Listing
3920 Millar Denise M ✓ 26 ● (1933)
3928 Bittner Kathleen G ✓ w 4 ● (1959)
3936 Bowstring Sereane ✓ 5
Ward Andrew ✓ 11 ● (1959)
3940 Hendrickson Anne D 6 ● (1933)
3966 No Current Listing
3994 Foxx Elizabeth & Victor ✓ w 3 ● (1959)
4004 Karth-Pearson Renee C ✓ 2 ● (1925)
4024 Linstrand Sarah C 10 ● (1895)
Ⓘ Stian Melissa ✓
Vanack Alex ✓ 7
4026 Arnell Reginald F ✓ @ 64 ● (1950)
4030 Dalquist Mallory S 2 ● (1948)
4034 McCormack Diane L ✓ @ w 2
McCormack Arianna
4042 MATTERHORN RIDGE CONDOMINIUMS condominiums @ ..218-279-3600
101 Severance Ruth A ✓ 5 ● (2005) 218-729-6725
102 Ramsay Jim F & Shirley M ✓ w 8 218-481-7803
103 No Current Listing
104 Hartley David & Carman A ✓ 11 ● (2005) 218-729-7639
105 Wolff Hallie J ✓ 6 218-522-4535
106 Gephart John S & Jane C ✓ @ w 8 ● (2005)
108 Kustritz Christine M 2 ● (2005)
109 Anderson Karen H ✓ 19 ● (2005) 218-728-2841
109 Anderson Kyle 218-728-2841
110 Boban Pamela J ✓ @ 19 ● (2005)
110 Boban Pj J
110 Weatherby Donald B ✓ 6 ● (2005)
110 Weatherby Gregory D
111 Ⓘ Smith Harold C ✓ w ● (1959)
111 Smith Carol C
112 Hestetune Daniel G & Beth ✓ 8 ● (2005) 218-464-4102
201 Collins John C & Eleanor M ✓ 44 ● (2005) 218-724-5929
202 Ⓘ Yokel Benjamin ✓ ● (1959)
203 No Current Listing
204 Poirier David C & Marilyn M ✓ @ 4 ● (2005)
205 No Current Listing
206 Kumm Edith 8
207 Johnson Marge ✓ 17
208 Ⓘ Custard Yvonne M w ● (2005)
209 Auble Allan J & Shirley M ✓ w 8 ● (2005)
210 - 211 No Current Listing (2 Apts)
212 Knudson Diane J ✓ 17 ● (1959)
212 Krysiak Joyce A ✓ 11 ● (2005)
213 Ⓘ Antonson Steve ✓ @
213 Ⓘ Peterson Timothy D ✓ w ● (1959)
301 Sampson Larry B & Catharine E ✓ 3 ● (2005)
302 No Current Listing
303 Ⓘ Reynolds Wayne G & Patricia A ✓
304 Scott Cleopha M 17 ● (1959)
304 Scott Klao
305 - 307 No Current Listing (3 Apts)
308 Ⓘ Jindra Dennis R & Cynthia F ✓ @ w
309 *Swanson Jane M ✓* 6 ● (2005)
310 No Current Listing
311 Johnson Darlene L ✓ 7 ● (2005) 218-724-8728
311 Sipper Julee A ✓ @ 10
312 Johnson Julius ✓ 16 ● (2005) 218-727-1707
313 No Current Listing
4050 Kolquist Wallace N & Caryl E ✓ @ 22 ● (1958) 218-727-2833
Ⓘ Youngblom Haley M ✓
4056 Wells Terry ✓ 9
1 Patrick Beverly A 3
2 Semerau Mary E ✓ 2
3 Stocks Paul E & Peggy J ✓ @ 5 218-464-1255
4 Paplior Judith T ✓ 7 218-464-0828
4060 TEXAS MARKER LLC posters ✓ 218-728-5560
101 Ⓘ Holappa Albert E & Virginia L ✓
102 Raisanen Steven M & Rachell A ✓ w 9
103 Bee Patricia M ✓ 4 218-722-5997
103 Bee Charles M 218-722-5997
104 Dodge Mary C ✓ 4
201 Semerau Marcia K w 3
202 Johnson Anna N ✓ w 29
203 Kriska Barbara J w 13
204 Geissler Carmyn M ✓ 11 218-722-9356
301 - 302 No Current Listing (2 Apts)
303 Swanson Herman 2
304 Cashin Patricia A ✓ w 16
304 Line Roy D ✓ 14 218-722-2015
304 Line Cashin P 218-722-2015
4072 GRAMERCY PARK CO-OP residential care homes ✓ 218-720-6275
100 Hutchings Philip D ✓ 6
100 Hutchings Agnes E
101 Ⓘ Foster Jerry R & Mary M ✓
102 Engblom Dale C & Mary L @ 9
103 No Current Listing
104 Olafson Kimberly ✓ 25 ● (1959)
105 Turner Robert D Jr ✓ w 6
105 Turner Patricia L
106 Barratt Mary J ✓ 10 218-464-1128
107 Tapper Joan J ✓ 24 218-279-3810
108 Wendling Michael J & Pamela F ✓ w 9
109 Cavers Pamela M @ w 4
110 Schaibe Margaret H 4
111 Kaczmark Michael C & Shirley J ✓ 3
112 Ⓘ Lavarnaki Willa K ✓ @ w
113 Dahl Julie 10
114 No Current Listing
115 Fawcett Raymond J & Jacqualine L ✓ 3
116 Arnell Daniel F w 12
117 No Current Listing
118 Wong Kamlin L ✓ 8
119 Scott Ronald W ✓ 4
119 Scott Judi w
120 Miller Elaine P ✓ 14
121 No Current Listing
122 Carlson Sandra L 7
123 No Current Listing
200 Swanson Roger D & Susan J ✓ 2
201 Hill Lynda L 3
202 Gerjets Leon N & Carole L ✓ @ 4
203 - 206 No Current Listing (4 Apts)
207 Fanasalle June M 12
208 Koss Clayton N & Nancy L ✓ 7
209 No Current Listing

HAINES RD Cont'd

210 Proudlock James & Peggy ✓ 7 218-464-4144
211 - 214 No Current Listing (2 Apts)
215 Olson Jon A @ 5
215 Olson Diane L
216 Ⓘ Frederick Mike & Patricia A ✓
217 Sega Patricia M ✓ 3
218 Ⓘ Michalizzi Jerry F & Audrey J ✓
219 Benjaminson Steve M & Cheryl A ✓ w 7 218-727-8198
220 No Current Listing
221 Resberg Mary J ✓ @ w 3
222 - 223 No Current Listing (2 Apts)
224 Conklin Betty ✓ 2
225 Erickson Betsy A 9
300 Nodgaard Gloria F ✓ 23
300 Sutton Kenneth C & Nancy M @ 3
301 Ward Barbara J ✓ 3
302 - 303 No Current Listing (2 Apts)
304 Hart Karen L ✓ 10
305 Lewis Janet F ✓ 8
306 Swanson Arnold F & Shirley M ✓ 11
307 Gagne Alfred J & Joyce T ✓ 6
308 Lyla Marcia A ✓ w 7
309 Hicken Sharon L ✓ 23
310 Martenson Martha F ✓ w 26
310 Martenson Marlys J
311 Pasak Joann C ✓ @ 14 218-729-6658
311 Pasak Holly A 218-729-6658
312 - 313 No Current Listing (2 Apts)
314 Ⓘ Lockwood James ✓
314 Ⓘ Peterson Marilyn ✓
315 No Current Listing
316 Bauers Ronald J & Kathleen A ✓ 7
316 Pass Roman F & Elcisa ✓ 7
317 Ⓘ Hodnick Daniel F & Susan L ✓
318 No Current Listing
319 Ⓘ Carlson Kenneth F & Mary L ✓ w
320 No Current Listing
321 Hayes Marjorie A ✓ 36 218-722-6771
322 Cleary Patrick J 2
323 No Current Listing
324 Tourville John R & Beverly J 6
325 Lyshar Leroy P & Karyn A 4
325 w
4082 ACCESSIBLE SPACE INC homes- cognitive disability @ 218-727-8788
102 Fechner Robin M ✓ @ w 7
103 Hawthorne Ava M ✓ 15
103 McMullen Shawn N ✓ 64 ● (1959)
104 No Current Listing
105 Marczak Tina ✓ 6
106 - 203 No Current Listing (5 Apts)
204 Woodhull Janice ✓ 16
205 Nichols Shawn L 11
206 - 207 No Current Listing (2 Apts)
208 Nobis Mika ✓ 8
209 No Current Listing
210 Essen Patricia R ✓ 11
301 - 306 No Current Listing (6 Apts)
307 Knight Kay M ✓ @ w 6
310 Larsen Valerie ✓ @ w 4
310 Larsen Desmond
311 No Current Listing
4088 CROSSROADS adult care facilities ✓ @ 218-727-8818
4145 ELECTRIC CHARGING STATION electric charging station ✓
KWIK TRIP convenience stores ✓ 218-727-8176
4160 KRENZEN HONDA auto dlrs-new cars ✓ @ 218-724-6632
4180 WELLS FARGO banks ✓ 218-723-2790
4258 JOHNSON MERTZ QUALITY APPL CTR appliances-hshld- major-dlrs ✓
.....218-722-5803
4270 ABS AUTO SOLUTIONS auto/trucks dlrs- used ✓ 218-722-8713
BRAKE SHOP OF DULUTH brake serv
EVERYTHING AUTOMOTIVE auto rpr & serv ✓ 218-722-1348
• ZIP CODE 55811 CAR-RT C021
4311 TITAN MACHINERY-HERMANTOW N farm equip ✓ @ 218-727-3038
4313 ADVANTAGE EMBLEM & SCREEN PTG embroidery ✓ @ 218-626-4948
BENTLEYVILLE TOUR OF LIGHTS tours- operators & promoters @
4334 Roberts Bobby L ✓ 14 ● (1978)
ST LOUIS COUNTY JAIL government offices-county ✓ @ 218-726-2345
4402 AT HOME LIVING ITS HOUSE residential care homes ✓ @ ..218-727-1958
1 BUILDING BLOCKS LEARNING CTR child care serv ✓ 218-722-2252
1 Ⓘ Patrich Holly ✓ w
3 Rhodes Stacey 6
4408 FJS DISTRIBUTORS INC distribution serv ✓ @ 218-727-1181
SPEEDEE DELIVERY SVC INC delivery serv ✓ @ 320-251-6697
4414 RENT-A-SPACE storage- household & commercial ✓ 218-722-7581
4418 MUELLER 1 AT A TIME CUSTOM furniture-dlrs- retail 218-391-8687
400 VISHAY HIREL SYSTEMS electronic power supl-mfrs @
.....218-727-3115
500 LAKE SUPERIOR LAWN CARE INC lawn & grounds maintenance
700 INTERIM HEALTHCARE home health serv ✓ 218-722-0053
1200 ESSENTIA HEALTH-MED EQPT-SUPLS physicians & surgeons equip
✓ @ 218-722-3420
1200 MEDICAL SERVICE CO nonclassified establishments ✓
.....218-722-3430
4424 HORNGREN MANAGEMENT INC apartments ✓ @ 218-727-1000
4428 1854 AUTHORITY grain hauling ✓ @ 218-722-8907
1854 TREATY AUTHORITY government offices ✓ @ 218-722-8907
4434 YOUR HOME IMPROVEMENT CO roofing contractors ✓ 218-727-1740
4436 MARNICH BOB AGENCY insurance ✓ @
Wolff Duane R 7 ● (1978)
4438 LOYEAR CLEANING & RESTORATION building restrtn/prsrvtn ✓
.....218-724-5800
LOYEAR DISASTER RESTORATION carpet & rug cleaners @
.....218-724-5800
4444 HALLMARK BUSINESS CONNECTIONS advertising- direct mail ✓ @
.....218-464-4075
USPS BLUE COLLECTION BOX mailing & shipping kiosks ✓
+ AIRPORT RD INTERSECTS
4525 No Current Listing
+ DEUCE AVE BEGINS

BUSINESSES 36 **HOUSEHOLDS 215**

HAINES RD (HERMANTOWN)-FROM 2199 SUNDBY RD NORTH
• ZIP CODE 55811 CAR-RT C104
3511 Lea Doris ✓ 33 ● (1979) 218-727-5917
LEE HOUSE RAISING & MOVING house & building movers ✓
.....218-727-5917
3525 Benedict Patricia M & Patric ✓ @ w 34 ● (1968) 218-727-3393
3531 No Current Listing
3545 Royer Clyde V & Branda L w 64 ● (1951)

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HAINES RD Cont'd
325 Martin J 218-724-8979
4082 ACCESSIBLE SPACE INC home health serv ✓ 218-720-2832
Ⓝ Ziebell Kelly ✓ 218-722-4122
102 Fechner Robin ✓ @ [2]
103 McMullen Shawn N ✓ [59]
104 No Current Listing
105 Ⓝ Marczak Tina ✓ 218-628-6197
106 Ⓝ Dishneau Judy
107 No Current Listing
201 Bourgeault James ✓ [2]
201 Nelson Joann ✓ [3] 218-722-0649
202 Dillon Patrick E ✓ @ [16]
203 No Current Listing
204 Woodhull Janice @ [11]
205 Nichols Shawn ✓ @ [8]
206 No Current Listing
207 Kimball Gary ✓ [9]
208 Rohn Adam W ✓ [10] 218-722-2102
209 No Current Listing
210 Essen Patricia R ✓ [8]
301 - 304 No Current Listing (4 Apts)
305 Jennings Kay A ✓ [11] 218-723-8585
306 Lyons Jason P ✓ [19]
307 Ⓝ Knight Kay M ✓
310 Ⓝ Kruzan Darren ✓
311 No Current Listing
4088 CROSSROADS business serv 218-727-8818
James Michael F ✓ [2]
4160 KRENZEN HONDA auto dlrs-new cars ✓ @ 218-724-6632
4180 WELLS FARGO BANK banks ✓ @ 218-723-2790
• **ZIP CODE 55811 CAR-RT C001**
4250 ELKS CLUB fraternal org ✓ 218-727-0111
ELKS LODGE fraternal org ✓ 218-727-0111
4258 JOHNSON MERTZ APPLIANCE INC refrigerators & freezers-dlrs ✓ @ 218-722-5803
4270 EVERYTHING AUTOMOTIVE auto rpr & serv ✓ 218-722-1348
• **ZIP CODE 55811 CAR-RT C021**
4311 Macdougall Warren ✓ [5] ▲(1974)
ST JOSEPH EQUIPMENT contractors- equip/supl ✓ 218-727-3038
TITAN MACHINERY INC farm equip ✓ @ 218-727-3038
4313 ADVANTAGE EMBLEM & SCREEN PTG embroidery ✓ 218-626-4948
Gonhue Robert H [9] ▲(1974)
Gonhue Earl W
Lewis Kathy [2] ▲(1974)
Oconnor Desiree ✓ [8] ▲(1974)
4334 Gengler Peter J ✓ [9] ▲(1974)
Gilbert Rachel L ✓ [9] ▲(1974)
ST LOUIS COUNTY JAIL government offices-county ✓ 218-726-2345
Starks Caine R [8] ▲(1974)
4402 AT HOME LIVING FACILITIES home builders ✓ 218-728-1189
AT HOME LIVING ITS HOUSE residential care homes ✓ 218-727-1958
BELLAGRACE PROPERTIES LLC real estate ✓ 218-728-1189
BUILDING BLOCKS LEARNING CTR education centers ✓ @ 218-722-2252
3 RHODES STACEY social workers ✓ 218-722-8654
4414 RENT-A-SPACE MINI WAREHOUSE storage- household & commercial ✓ 218-722-7581
Soleim Avamarie ✓ [29] ▲(1955)
4418 400 HIREL SYSTEMS LLC electronic power supl-mfrs ✓ 218-727-3115
1200 MIDWEST MEDICAL EQUIPMENT physicians & surgeons equip ✓ @ 218-722-3420
4424 HORNGREN MANAGEMENT INC apartments ✓ @ 218-727-1000
4428 1854 AUTHORITY envrmntl conservation/ecologcl ✓ @ 218-722-8907
4434 YOUR HOME IMPROVMENT CO roofing contractors ✓ 218-727-1740
4436 BOB MARNICH AGENCY INC insurance ✓ @ 218-625-0050
INSURANCE BROKERS OF MINNESOTA insurance ✓ 218-625-0050
4440 EATON CORP electric equip-mfrs ✓ 218-722-5300
4444 HALLMARK BUSINESS CONNECTIONS advertising- direct mail ✓ 218-336-4200
IRRESISTIBLE INK advertising- direct mail ✓ 218-464-4075
+ AIRPORT RD INTERSECTS
4525 No Current Listing
+ DEUCE AVE BEGINS

BUSINESSES 33 **HOUSEHOLDS 226**

HAINES RD (HERMANTOWN)-FROM 2199 SUNDBY RD NORTH
• **ZIP CODE 55811 CAR-RT C104**
3511 LEE HOUSE RAISING & MOVING INC house & building movers ✓ 218-727-5917
Lee Robert E & Doris ✓ [28] ▲(1979)
3525 Benedict Patricia M ✓ @ [29] ▲(1968)
Benedict Padie M
Ⓝ Getts Leah ✓
3531 No Current Listing
3545 Royer Clyde V & Brenda L ✓ [59] ▲(1951)
3547 Blake Thomas ✓ [2] ▲(1977)
3553 Erdmann David W & Beth A ✓ @ [30] ▲(1960) 218-727-0532
3567 Anderson Eric J & Jackie ✓ [18] ▲(1989) 218-733-1455
3575 Heckathorn Ronald R & Louella J ✓ [59] ▲(1980)
Robison Amanda M ✓ @ [9] ▲(1977)
3579 House Haines [8] ▲(1977)
3581 Leland Terrance D ✓ [28] ▲(1979) 218-722-0749
Leland Loni M 218-722-0749
3585 Buetow Chantel H ✓ [4]
+ BERKELEY RD BEGINS
3605 No Current Listing
+ BERKELEY RD INTERSECTS
3613 Mulek Michael C & Deanna M ✓ @ [10] ▲(1977)
+ PARKWOOD LN INTERSECTS
3631 Williams Larry A ✓ @ [29] ▲(1940) 218-722-0145
Williams Nathaniel D 218-722-0145
3639 Forsberg Gene D ✓ [28] ▲(1930) 218-624-1373
3645 Hill Darlene C ✓ [28] ▲(1940) 218-722-8754
3647 Holm David M & Karlyne M ✓ [24] ▲(1966) 218-720-3767

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www.citydirectory.com

HAINES RD Cont'd
3655 Riggio Violet M ✓ [16] ▲(1976)
Riggio Brian
3661 No Current Listing
3669 Hunter Wendy M & Jason ✓ @ [3] ▲(1950) 218-722-1499
3675 Larson Jan M ✓ [15] ▲(1977)
3679 Ⓝ Hanson Taylor ▲(1977)
+ MORRIS THOMAS RD INTERSECTS
+ HAGBERG ST INTERSECTS
+ CARLSON RD BEGINS
• **ZIP CODE 55811 CAR-RT C025**
3755 Isaacs Brent ✓ @ [7] ▲(1977)
3757 Ⓝ Leimer Chris M ✓ ▲(1977)
3761 Joyal-Miller Kim J ✓ @ [6] ▲(1930)
3769 Anderson Rodney P & Katheryn M ✓ [28] ▲(1962) 218-727-5227
Mihalik Michael J ✓ [16] ▲(1977)
3773 Manson Brittany ✓ [7] ▲(1977)
Manson Christina
3777 Sandstrom Jeanette A & Bruce A ✓ @ [28] ▲(1944)
Ⓝ Saudstiom Jay ✓
3781 No Current Listing
3783 Miller Robert E & Colleen H ✓ @ [23] ▲(1957) 218-722-2188
3785 Krause Peter H [4] ▲(1948)
3789 Fedler Margaret J ✓ [29] ▲(1922) 218-727-2622
Fedler P 218-727-2622
3795 Galatz Russell V & Amy L ✓ [2] ▲(1977)
Podoll Courtney ✓ [15] ▲(1977)
+ PORTLAND RD BEGINS
3807 Billy Kuk ✓ [8] ▲(1977)
Kuk Billy ✓ [5]
Schowalter Diane M ✓ [28] ▲(1959)
3811 Burg Quentin J & Shannon L ✓ [14] ▲(1992) 218-722-3586
3813 Ⓝ Sundberg Collin ▲(1977)
3815 Anderson Larry R & Cynthia L ✓ @ [59] ▲(1978) 218-727-8865
3817 Adamski Leonard D & Stephanie ✓ [59] ▲(1940) 218-727-7683
3825 No Current Listing
3831 Nunez Rafael & Tricia J ✓ @ [12] ▲(1977) 218-206-7539
3835 No Current Listing
3839 Porter Tayler N [2] ▲(1945)
+ HERMANTOWN RD INTERSECTS
+ PIEDMONT AVE INTERSECTS
3841 Ⓝ Smith Jonah P ✓ ▲(1977)
3863 Kachinske Edward S & Frances A ✓ [44] ▲(1962) 218-727-6531
3869 Johnson Gary A & Wendy M ✓ [35] ▲(1948) 218-726-0936
3873 Conway Diana L ✓ [38] ▲(1975) 218-722-7552
3875 Zollar Brittany R ✓ [10] ▲(1952)
3879 Ⓝ Kolberg David ✓ ▲(1977)
Ranthum Darlene L ✓ [24] ▲(1952)
Thompson William S ✓ @ [3] ▲(1977)
3881 Ahlberg Douglas A & Barbara A ✓ @ [59] ▲(1959) 218-727-2112
3885 STEPPING STONES FOR LIVING home health serv ✓ 218-722-3305
3889 Johnson Clayton W & Joyce A ✓ [52] ▲(1962) 218-722-3721
3897 Eggert Ian [3] ▲(1920)
+ ANDERSON RD INTERSECTS
3911 Anderson Hannah D ✓ [2]
Gould Robert G II ✓ [2] ▲(1977)
3917 Hodgkins Benjamin T & Pamela S ✓ @ [59] ▲(1961) 218-720-3003
3919 Capriglione Ralph M ✓ [45] ▲(1961) 218-722-2612
3921 Cottingham John F & Claudia J @ [16] ▲(1977)
3925 Helgemoe James W & Ardis M ✓ [13] ▲(1941)
3931 Olsen William G & Nancy L ✓ [40] ▲(1977) 218-723-1751
3937 Bennett Michelle ✓ [8] ▲(1977)
Ⓝ Surla Miles J ✓ ▲(1977)
3941 Nelson Daniel J ✓ [2] ▲(1951)
3943 Milosevich Jay S ✓ [29] ▲(1951) 218-722-0736
3947 Ⓝ Quittschreiber Jeremy ✓ ▲(1977)
3953 Crom John W & Alanda ✓ [2] ▲(1950)
3959 - 3965 No Current Listing (2 Hses)
3971 Lillberg Susan D ✓ [25]
Lillberg Michael
3977 Mammenga Rolland N & Darlene C ✓ @ [59] ▲(2010) 218-727-5793
3979 Kyle Chelsea ✓ [2]
Ⓝ Lind Victoria ✓ @ ▲(1977)
3985 No Current Listing
3991 Kaczmarek Dale J & Karen D ✓ @ [32] ▲(1940) 218-727-3769
3997 Struck Robert A ✓ @ [59] ▲(1948)
Struck Seth R
4007 Hazaleko Jim ✓ [2]
Sorensen Kenneth E ✓ [43] ▲(1940) 218-722-9303
Sorensen Rose M 218-722-9303
SUIT LLC int decrtrs design/consultants ✓ @ 218-722-7204
4013 Carlson Jason R & Amy M ✓ [23] ▲(1950) 218-729-5655
4017 Eisel Gene J & Elizabeth A ✓ [25] ▲(1954)
4021 Ball Benton N & Lisa A ✓ [16] ▲(1954) 218-722-3504
4027 No Current Listing
4029 Kyle Carol M ✓ [10] ▲(1977) 218-525-5856
4031 Johnson Hazel M ✓ [11] ▲(1977) 218-279-1975
4033 Haines David N & Lorna J ✓ @ [8] ▲(1945) 218-525-1769
4039 Kraskey Andrew T & Lynette M ✓ @ [12] ▲(1970) 218-722-2709
4043 Frink Keith W & Patricia R ✓ [59] ▲(1967) 218-727-8896
4049 Erickson Rebecca ✓ [7] ▲(1977)
4051 Anderson Allen J & Johnnie M ✓ [28] ▲(1955) 218-727-4054
4055 Kunau Val ✓ @ [5] ▲(1977)
Moore Jill L ✓ [24] ▲(1930)
Moore Angie
Slocum Jerry M ✓ @ [22] ▲(1977) 218-723-7869
4059 Oliver Suzanne M [4] ▲(1977)
4061 Wollack Tricia E ✓ [24] ▲(2000) 218-726-0141
4071 Ⓝ Lind Jason M
Lind Robert
4075 Jeffries Melanie ✓ [15] ▲(1977)
4077 Johnson Leslie K ✓ [22] ▲(1977) 218-733-0271
4079 No Current Listing
4081 Simpson Homer [7] ▲(1977)
4083 Minotte Wendy J ✓ [12] ▲(1977)
Minotte Jojo
4085 Kellett Gregory ✓ [8] ▲(1977) 218-722-0994
Kellett Mauranda 218-722-0994
4087 Andrews Christina S ✓ @ [8] ▲(1977)
4089 Bresser Kaye L ✓ @ [20] ▲(1977)
Bresser Gary
4091 Butler Hope ✓ [8] ▲(1977)
Ⓝ Peterson Tyler ✓
4093 Dahl Andrew ✓ [5]
Ⓝ Iverson Jeff ✓
4095 Greene Maria A ✓ [8] ▲(1977)
4097 Ⓝ Morrison Arlene ✓ 218-206-7228
Ⓝ Pursl Laura S ✓ ▲(1977)
4099 Lemplainen Matilda J ✓ [5] 218-206-7024
MAPLE GROVE ESTATES apartments ✓ 218-727-8874
+ MAPLE GROVE RD INTERSECTS
Miller Diana ✓ [3] 218-206-7082
100 - 200 No Current Listing (5 Apts)

HAINES RD Cont'd
201 Gainey Paul @ [7]
202 No Current Listing
203 Richards Rodger A & Lori ✓ [7]
204 Mueller Kenneth O & Dorothy J ✓ [12]
205 Reimer Betty J ✓ @ [14] 218-722-6268
206 No Current Listing
207 Ⓝ Steele Brenda ✓ @
300 Bridges Sandra ✓ [2]
301 No Current Listing
302 Toms Doris ✓ [8]
303 Ⓝ Ciurleo Carol J ✓
304 Smith Loretta M ✓ [6]
305 No Current Listing
306 Twining Patricia J ✓ [16] 218-720-3255
307 Larsen William T [9]
400 No Current Listing
401 Forrest Jean B ✓ [20]
401 Forrest D A
401 Ⓝ Meier Lucille A ✓ 218-624-0335
402 - 403 No Current Listing (2 Apts)
404 Sharpe Alice M ✓ @ [3]
405 Ⓝ McElhannon William ✓
406 Ⓝ Risku Susan L ✓ 218-726-6300
407 - 501 No Current Listing (3 Apts)
502 Gross David E ✓ [9] 218-727-8257
502 Zielin Norbert ✓ [20]
503 No Current Listing
504 Manisto Patricia E ✓ @ [2] 218-786-9953
505 No Current Listing
506 Edberg Steven A ✓ @ [3]
506 Edberg Diana M
507 Clark Judith A ✓ [6]
4147 No Current Listing
4151 GLENWOOD SIGNS & AWARDS INC trophies awards & medals ✓ @ 218-727-4900
JERSEY CITY craft supl ✓ 218-722-8906
+ LINDGREN RD BEGINS
OMUNDSON INSURANCE AGENCY insurance ✓ 218-727-3322
A AMERICAN FAMILY INSURANCE insurance ✓ 218-723-8000
A BELROSE CARTER AGT insurance ✓ 218-723-8000
4157 MOBIL 1 auto lubrication serv ✓ 218-727-5823
MOBIL 1 LUBE EXPRESS auto lubrication serv ✓ 218-727-5823
4161 SUPERIOR CHOICE CREDIT UNION credit unions ✓ 218-727-4315
4163 CORNERSTONE DENTAL dentists ✓ 218-722-2428
+ MALL DR INTERSECTS
+ MALL DR INTERSECTS
• **ZIP CODE 55811 CAR-RT C001**
4189 UNITED RENTALS rental serv- stores & yards ✓ 218-279-2845
4197 Murphy Peter ✓ @ [2]
+ MILLER TRUNK HWY INTERSECTS
+ MILLER TRUNK HWY INTERSECTS
4221 HOLIDAY STATIONSTORES convenience stores ✓ 218-722-8700
4227 CHINA STAR FAMILY RESTAURANT restaurants ✓ 218-740-2751
+ TODD DR INTERSECTS
4255 OUTBACK STEAKHOUSE restaurants ✓ 218-722-2471
4257 Broin Janet ✓ [6]
HOSPITALITY INVESTORS LLC investors ✓ 218-729-9445
A M & J INVESTMENTS OF MINNESOTA financial advisory serv ✓ 218-729-6729
B COUNTRY INN & SUITES hotels & motels ✓ @ 218-740-4500
4259 AIRPORT ANIMAL HOSPITAL animal hospitals ✓ 218-727-0128
CLAPPER RENTZ veterinarians ✓ 218-727-0128
FITZGERALD PAUL DVM veterinarians ✓ 218-727-0128
WICTOR MARY DVM veterinarians ✓ 218-727-0128
+ SUNDBY RD INTERSECTS
4279 PEAK CONSTRUCTION ROOFING construction companies ✓ 218-728-8033
4281 DULUTH AUTO UPHOLSTERY REPAIR upholsterers ✓ 218-727-7963
POOLS OF FUN POOL & SPA CTR hot tubs & spas ✓ 218-727-7963
Potvien Robert M [25] ▲(1957)
4285 ARROWHEAD AUTO BODY auto body- rpr & painting ✓ @ 218-722-2902
Doyle Todd & Suzanne ✓ [7] ▲(1971)
4291 No Current Listing
4295 Ruhnke Kevin L & Lori ✓ @ [28] ▲(1958)
+ W ARROWHEAD RD INTERSECTS
+ SWAN LAKE RD INTERSECTS
+ KRUEGER RD INTERSECTS
+ AIRPARK BLVD INTERSECTS
+ AIRPORT RD INTERSECTS

BUSINESSES 28 **HOUSEHOLDS 163**

HALCYON DELL RD (DULUTH)-FROM 6013 N TISCHER RD WEST
• **ZIP CODE 55804 CAR-RT R011**
3148 Tuttle Jason J ✓ [19] ▲(1952)

HOUSEHOLDS 1

HALIE RD (DULUTH)-FROM 2601 LINDAHL RD WEST
• **ZIP CODE 55810 CAR-RT C025**
5508 Pogorelec Nella M ✓ [56] ▲(1961)
5513 Defoe Bonnie ✓ [59] ▲(1978) 218-628-2636
Defoe David L 218-628-2636
5526 Johnson Chad ✓ @ [5] ▲(1966)
5531 No Current Listing
5542 Musolf Sharon E ✓ [21] ▲(1981)
Musolf Sharie
5558 No Current Listing
5561 Ⓝ Cheslak Richard G ✓ ▲(1966)
Stebner Donna L ✓ [39] ▲(1965)
5566 Forsman Dennis A & Kathryn A ✓ @ [28] ▲(1966) 218-624-4583
5570 Eck Jacqueline A ✓ @ [19] ▲(1949) 218-624-2006
5574 No Current Listing
5577 Okstad Vance C & Kelly Y ✓ [17] ▲(1935) 218-624-6098
5591 Ⓝ Forrestal Angie ▲(1966)
Johnson Leif E & Angie M ✓ [7] ▲(1975) 218-279-2157
5600 Ringdahl Jason L & Jennifer A ✓ [9] ▲(1938) 218-720-3868
5601 Erickson Cynthia L ✓ [56] ▲(1934) 218-624-7834
Erickson Joshuah J 218-624-7834
5602 Torgeson Andrea [7] ▲(1966)
+ ERICKSON RD BEGINS
5608 Ocel Thomas M & Peggy ✓ [3] ▲(1995)
5618 Burnes Andrew J ✓ @ [2] ▲(1957)
Burnes Brynna L
5630 Francisco Leslie C & Brenda J ✓ [25] ▲(1969)
NORTH STAR MAINTENANCE handyman serv @ 218-348-2200
5642 Carr Gerald P & Theresa M ✓ @ [27] ▲(1994)
5654 Sundvick Charles T & Nancy K ✓ [29] ▲(1900)
+ NOPEMING RD BEGINS
5668 Hietala Edward C ✓ [26] ▲(1959)
+ RAILROAD CROSSES
5692 Gagne Zachary E [3] ▲(1957)
Gagne Jared J

HAGBERG ST Cont'd

Ⓓ Anderson Christophe L ✓ ☗(1954)
Anderson Karen A
3035 Burke Dennis L ✓ 7 ☗(1954) 218-722-7807
Herold Sherry M ✓ 6 ☗(1954)
3042 Gustafson Mary E ✓ 2 ☗(1954)
Gustafson Gary W
+ HAINES RD INTERSECTS
BUSINESSES 1 **HOUSEHOLDS 54**

HAGEN RD (DULUTH)-FROM 6451 FRENCH RIVER RD
• ZIP CODE 55804 CAR-RT R011
2948 Dryke Chloe ✓ 54 ☗(1979)
Dryke William C
2949 - 2984 No Current Listing (2 Hses)
HOUSEHOLDS 3

HAHN RD (HERMANTOWN)-FROM 5399 HIGHWAY 2 NORTH
+ SAINT LOUIS RIVER RD INTERSECTS
+ US HWY 2 ENDS
• ZIP CODE 55810 CAR-RT R022
3505 Vanderscheuren Charles J & Lois M ✓ 10 ☗(1960)
3510 Stahl Emerson G & Neoma L ✓ 23 ☗(1964) 218-624-2355
3511 Hinnenkamp Bret A 5 ☗(1960)
Hinnenkamp Sara L
3525 Eales James E & Carolyn ✓ 4 ☗(1960) 218-628-1180
3539 Eales Timothy J ✓ 17 ☗(1964)
3544 Teschner Joan A ✓ 23 ☗(1960) 218-624-7650
HOUSEHOLDS 6

HAINES RD (DULUTH)-FROM 4601 PHANTOM DR
+ W SKYLINE PKWY INTERSECTS
+ MARY LANE DR BEGINS
• ZIP CODE 55811 CAR-RT C025
3710 Ⓓ Carlson Alan ✓ 218-464-1986
Cox William S & Elizabeth M ✓@ 8 ☗(1954)
Ⓓ Ray Ralph M & Syddora L ✓ ☗(1954)
3711 Davis Curtis C Sr ✓ 8 ☗(1957)
3713 Schramm Robert A & Grace G ✓ 24 ☗(1957) 218-722-7365
3714 Johnson Dean A & Julie A ✓ 24 ☗(1971) 218-727-1268
3717 Blazejak Barbara J & Leo E ✓ 23 ☗(1957) 218-727-1977
3718 Mortinsen Leonard W & Beatrice I ✓ 24 ☗(1968) ..218-727-8064
3721 Wise Lee F & Cheryl J ✓ 54 ☗(1957) 218-722-4537
3722 Winterstrom Martha G ✓ 23 ☗(1979) 218-722-3468
3723 Black January A ✓ 11 ☗(1957) 218-206-7071
3727 - 3728 No Current Listing (2 Hses)
3733 Heskin Holly C ✓ 3 ☗(1957)
3735 Rissanen John R ✓ 54 ☗(1957)
3743 Hayward Sally M ✓ 10 ☗(1957)
Hayward Lori
Nyman Loretta A ✓@ 23 ☗(1957)
Sharp Win A ✓@ 15 ☗(1957)
3744 Lutkevich Alan J & Deb A ✓ 8 ☗(1950) 218-733-0250
3750 Poehler Kenneth D & Ellen M ✓ 6 ☗(1915)
3756 Samuelson Edna V ✓ 2 ☗(1954)
3762 Hammerstrom Travis P 19 ☗(1933)
3764 Swanson Jeffrey A & Karen M ✓ 23 ☗(1949) 218-727-2016
3768 Anderson Scott B ✓@ 12 ☗(1954) 218-727-2403
3772 Krueger Richard L 6 ☗(1955)
3776 Ⓓ Gilbert Michael G & Alicia ✓ ☗(1934)
3782 No Current Listing
3804 Wold Barbara J ✓ 54 ☗(1927) 218-727-6414
3826 Benson Donn D & Mary C ✓@ 24 ☗(1958) 218-727-3600
3852 Johnson Kate ✓ 4
3882 APOSTOLIC GOSPEL CHR UPCI churches ✓ 218-729-1576
3906 Rajanen Eugene W & Sandra P ✓ 18 ☗(1958) 218-464-4505
3912 Gunderson Paul K & Maureen E ✓ 54 ☗(1955) 218-722-1803
3920 Miller Denise M ✓ 16 ☗(1933) 218-727-6717
Rainey Richard W ✓@ 2
3928 Risley Justin T & Kate E ✓ 10 ☗(1933) 218-727-1210
3936 Wetzel Jay C 6 ☗(1937)
3940 Thompson Michael J ✓ 54 ☗(1933) 218-726-0637
3966 Ⓓ Beckwith David ✓
3994 Dammer Kyle M 6 ☗(1953)
Dammer Alex
4004 Cashin Donald R & Roberta M ✓ 38 ☗(1925) 218-722-9651
4024 Halverson Nathan T ✓ 2
Koslucher Steven J ✓ 7 ☗(1895)
4026 Arnell Reginald F ✓ 54 ☗(1950)
4030 Braaten Ryan A ✓ 2 ☗(1953)
Braaten Donnalee L
4034 Olson Robert C Jr ✓ 21 ☗(1947) 218-727-4316
Olson Julie A 218-727-4316
4042 MATTERHORN RIDGE CONDOMINIUMS condominiums ✓
.....218-279-3600
Ⓓ Stensgard James & Nancy ✓ 218-464-0050
101 Hieb Alice L ✓ 23 ☗(1953) 218-721-3324
102 Jablonski Catherine E & Alfred L ✓@ 9 ☗(1953)
.....218-722-7274
106 Mitchell John D Jr ✓ 54 ☗(1953) 218-724-3748
106 Mitchell David 218-724-3748
109 Anderson Karen H ✓@ 9 ☗(1953) 218-728-2841
109 Anderson Kevin S 218-728-2841
110 Boben Pamela J ✓ 9 ☗(1953)
110 Boben Helen S
111 Ⓓ Glienke Steven J ☗(1953)
112 Frye Margaret A ✓ 6 ☗(1953)
201 Collins John C & Eleanor M ✓ 54 ☗(1953) 218-724-5929
202 Goodrich James I & Shirley ✓ 19 ☗(1953) 218-727-4075
203 Manderfeld James H & Marilyn P ✓@ 4 ☗(1953)
.....218-525-5429
205 Lindberg Marjorie A & Robert J ✓ 7 ☗(1953)
.....218-729-8272
206 Ley Eugene S & Audrey M ✓ 16 ☗(1953) 218-728-5472
207 Johnson Ruth P ✓@ 7 218-727-1707
208 Fiege June M ✓ 9 ☗(1953) 218-724-5314
210 Peterson Gerald J & Maryann F ✓ 2 218-624-1000
211 Linden Esther B ✓ 7 ☗(1953) 218-722-1914
212 Knudson Diane J ✓ 7 ☗(1953) 218-722-5567

HAINES RD Cont'd

212 Knudson Dj J 218-722-5567
213 Nygaard Donald I & Betty C ✓ 6 ☗(1953)
301 Risberg Marlene M & Raymond A ✓ 6 ☗(1953)
.....218-626-1387
304 Scott Cleopha M ✓ 7 ☗(1953) 218-722-3411
304 Scott Kleo 218-722-3411
306 Mischke William A & Victoria B ✓ 7 ☗(1953)
.....218-724-8371
307 Keeley Erin M ✓ 7 ☗(1953)
307 Ⓓ Lynam Brigid R
307 Winzenburg Cheryl R ✓ 7 218-733-0306
308 Miller Phyllis M ✓@ 7 ☗(1953) 218-727-5494
309 McMillan Shirley M & Leroy J ✓ 6 218-720-6183
310 Ⓓ Jampsa Jolissa L ✓
310 Ⓓ Thielen Andrew J & Kathleen A ✓
311 Gould Marion L & Harold E ✓ 9 ☗(1953) 218-727-4366
312 Johnson Laviere A ✓ 6 ☗(1953)
313 Brethorst Nan L & Eugene R ✓ 6 ☗(1953) 218-720-2984
4050 Kolquist Wallace N & Caryl E ✓ 22 ☗(1958) 218-727-2833
4056 No Current Listing
4060 Ⓓ Lendzyk Taras ✓ 218-260-2657
101 James Robert H & Phyllis M ✓ 54 218-525-1312
102 Walsh James F ✓ 3 218-733-0822
102 Walsh Peggy J 218-733-0822
103 Bee Patricia M ✓ 3 218-722-5997
103 Bee Alice J 218-722-5997
104 Anderson Fred ✓ 6 218-525-3387
104 Anderson Carl F 218-525-3387
201 Magney Virginia R ✓ 2 218-722-3738
202 Johnson Nathalia ✓ 18 218-727-1191
202 Johnson Anna N 218-727-1191
203 Ⓓ Pelofske Donna M & Donald E ✓ 218-464-0103
301 Ramfjord Mary A ✓ 9 218-722-4278
302 Barta Deann E ✓ 4 218-525-7424
303 Smart Dorothy L ✓ 3
304 Cashin Patricia A ✓ 6
304 Line Roy D ✓ 4 218-722-2015
304 Line Cashin P 218-722-2015
4072 GRAMERCY PARK CO-OP retirement communities & homes ✓
@ 218-720-6275
McPheeders Richard ✓ 6 218-727-3418
100 Brophy Evelyn J ✓@ 19 218-727-4557
101 Balcom Anna M & Warren H ✓ 9 218-728-3088
102 Semmelroth Max B & Beverley J ✓ 3 218-624-0320
103 Wiiiliainen Edward ✓ 3 218-722-8833
104 Olafson Kimberly ✓ 15 218-722-3866
105 Spanie Ben F & Beverly J ✓ 25 218-723-1682
106 Dahl Katherine L ✓ 4 218-624-1442
106 Dahl Julie 218-624-1442
107 Tapper Victor D & Joan J ✓@ 14 218-279-3810
108 Kokal Kathleen M ✓ 13 218-727-9197
109 Smith Anne G ✓@ 8 218-727-3169
109 Smith Janice 218-727-3169
110 Yagoda Lorraine G ✓ 10 218-727-2031
111 Johnson Norman E ✓ 21 218-279-5074
112 Lear Maxine ✓ 7 218-727-2113
113 Tanner Roy J & Alda I ✓@ 19 218-727-0869
114 Herold Robert J & Janice A ✓@ 3 218-733-1360
115 Ⓓ Halls Edward D ✓@ 218-729-6977
116 Carroll Sharon L ✓ 2 218-726-1384
117 Beach Lester C & Marlyn A ✓ 5 218-726-1832
118 Hanson Margaret K & Arthur X ✓ 27 218-727-1172
119 McPheeters Emily M ✓ 7
119 McPheeters Marcy W
120 Miller Elaine P & Percy J ✓@ 4 218-525-4289
121 Johnson John F & Carol M ✓@ 3 218-724-7728
122 Bushey Vance & Darlene J ✓ 3
123 McWilliams Joyce L ✓ 8 218-720-5860
201 Saksa George W & Dorothy M ✓ 27 218-279-5312
203 Heikkila Arnold J & Elizabeth A ✓ 17 218-727-4440
204 Bradley Joan M ✓ 5 218-727-1706
205 Johnson Ralph A & Patricia J ✓ 8 218-722-7539
207 Fanaselle June M ✓@ 2 218-624-5619
208 Gollinger Jacqueline M ✓ 13 218-722-9045
209 Swanburn Norma E ✓ 3 218-720-4638
210 Tillman Lloyd C & Shirley M ✓ 15 218-722-7089
215 Jonland Richard W & Blanche M ✓@ 5 218-722-3839
216 Grandahl Ronald A & Gloria A ✓ 9 218-722-3385
217 Wendling Walter G & Delores M ✓ 9 218-724-7562
218 Ⓓ Asperheim Robert D ✓ 218-722-1233
221 Gilbertson Violet M ✓ 3 218-726-1181
222 Peterson Betty D ✓ 4 218-722-4406
224 Niemi Eugene C & Helen H ✓@ 12 218-727-7161
225 Lick Vera A 3
300 Nodgaard Glen L & Gloria F ✓ 13 218-279-3800
301 Ⓓ Hart Maria ✓
302 Mrak Ralph & Elaine A ✓ 5 218-733-3084
303 Anderson Audrey H ✓@ 5 218-525-5355
304 Ronn Clarice M ✓ 19 218-279-3543
305 Dentinger Gerald & Catherine ✓ 4 218-525-4555
306 Ⓓ Swanson Arnold F & Shirley M ✓@ 218-724-9107
307 Harty Marilyn J ✓ 2 218-727-2472
307 Harty Jeffrey K 218-727-2472
308 McLean William H & Martha J ✓@ 24 218-720-3234
309 Hicken Sharon L ✓ 13 218-727-2040
310 Martenson Clinton H & Martha F ✓@ 15 218-722-4777
311 Pasek Joann C ✓ 4 218-729-6658
314 Milbrath Mary A ✓ 6 218-729-8046
315 Conrad Delores E ✓ 19 218-722-9546
316 Pramann Howard J & Dorothy E ✓ 20 218-722-9016
317 St Marie Nancy K ✓ 2 218-624-4812
317 St Marie Thomas R 218-624-4812
318 Bergman Dorothy J ✓ 4
319 Gerard Janine J ✓ 12 218-727-3400
320 Schowalter William C & Marvis M ✓ 19
321 Hayes Marjorie A ✓ 26 218-722-6771
321 Hayes Grant W 218-722-6771

HAINES RD Cont'd

322 Bowe Randall J & Pamela K ✓ 4 218-525-5071
323 Tranvik Burton J & Nancy ✓@ 4
324 Kallio Edwin & Donna R ✓ 54 218-727-8778
325 Martin Hallie M ✓ 5 218-724-8979
4082 ACCESSIBLE SPACE INC residential care homes ✓@
.....218-727-1705
Ⓓ Nichols Shawn ✓ 218-464-0942
102 Speed James ✓@ 3 218-626-1483
103 Houchins Kent & Kim ✓@ 5
104 Wandrey Paul L ✓ 12
106 Green Barbara J ✓@ 3 218-464-1107
107 Ⓓ Benjamin Gabrielle ✓
201 Thompson Marilyn G ✓ 12
202 Dillon Patrick E ✓@ 11
204 Ⓓ Burke Patricia ✓
204 Woodhull Janice ✓ 6
204 Woodhull Cheryl
205 Ⓓ Krumbhaar Carolyn ✓
207 Kimball Gary 4
208 Rohn Adam W ✓@ 5 218-722-2102
208 Ⓓ Suomi Scott D ✓
209 Wulf Clarita M ✓ 2
210 Ⓓ Essen Patricia R ✓
302 Bergquist Catherine J ✓ 3 218-722-3028
305 Jennings Kay A ✓ 6 218-723-8585
306 Lyons Jason P ✓ 14 218-723-8773
310 Ⓓ Mallow Rela ✓@ 218-624-5515
311 Ⓓ Feist Edward L ✓
4088 CROSSROADS business serv ✓@ 218-727-8818
Sipper Carrie M ✓ 16 ☗(1959) 218-727-8818
4145 ICO convenience stores ✓@ 218-722-0069
4160 KRENZEN HONDA auto dlrs-new cars ✓@ 218-724-6632
4180 WELLS FARGO BANK banks ✓@ 218-723-2790
• ZIP CODE 55811 CAR-RT C001
4258 JOHNSON MERTZ APPLIANCE INC refrigerators & freezers-dlrs ✓@ 218-722-5803
4270 EVERYTHING AUTOMOTIVE auto rpr & serv ✓@
.....218-722-1348
SMOKEY'S TOWING II wrecker serv ✓@ 218-729-5252
• ZIP CODE 55811 CAR-RT C021
4311 TITAN MACHINERY INC farm equip ✓@ 218-727-3038
4313 ADVANTAGE EMBLEM & SCREEN PTG embroidery ✓@
.....218-626-4948
Gonhue Robert H & Judy R 4 ☗(1967)
4334 Gilbert Rachel L 4
ST LOUIS COUNTY JAIL county govt ✓@ 218-726-2345
Starks Caine R ✓ 3
4402 AT HOME LIVING FACILITIES home builders ✓@
.....218-728-1189
Ⓓ Priley Kelli ✓
4414 RENT-A-SPACE MINI WAREHOUSE storage- household & commercial ✓@ 218-722-7581
4418 400 HI REL SYSTEMS LLC electronic parts assemblers ✓@
.....218-727-3115
1200 MIDWEST MEDICAL EQUIPMENT physicians & surgeons equip ✓@ 218-722-3420
4422 DUNHAM EXPRESS delivery serv ✓@ 218-727-3755
4428 1854 AUTHORITY envrmntl conservation/ecologcl ✓@
.....218-722-8907
4430 KINETIC CONCEPTS INC hospital equip/supl ✓@
.....218-722-7436
4436 BOB MARNICH AGENCY insurance ✓@ 218-625-0050
4438 GOLDER ASSOCIATES INC engineers- consulting ✓@
.....218-724-0088
4442 HOMETOWN DISTRIBUTING candy & confectionery-mfrs ✓@
.....218-720-3671
4444 HALLMARK BUSINESS CONNECTIONS advertising- direct mail ✓@ 218-336-4200
+ AIRPORT RD CONTINUES
+ DEUCE AVE BEGINS
BUSINESSES 25 **HOUSEHOLDS 183**

HAINES RD (HERMANTOWN)-FROM 2199 SUNDBY RD NORTH
• ZIP CODE 55811 CAR-RT C104
3511 Lee Doris ✓ 23 ☗(1957)
LEE HOUSE RAISING & MOVING INC house & building movers ✓@ 218-727-5917
3525 Benedict Patricia M ✓@ 24 ☗(1957)
Benedict Padie M
3531 No Current Listing
3545 Royer Clyde V & Brenda L ✓@ 54 ☗(1957)
3547 Ortman David R & Debby D ✓@ 21 ☗(1957) 218-722-2421
3553 Erdmann David W & Beth A ✓ 25 ☗(1957) 218-727-0532
3567 Anderson Eric J & Jackie ✓ 10 ☗(1957) 218-733-1455
3575 Heckathorn Ronald R & Louella J ✓@ 54 ☗(1957)
.....218-722-4801
Robinson Amanda M ✓ 4
3579 House Haines 9
3581 Leland Terrance D & Key D ✓ 23 ☗(1957) 218-722-0749
3585 Lundberg Chris L 6
+ BERKELEY RD BEGINS
3605 Kauppinen Jody T @ 4 ☗(1957)
+ BERKELEY RD INTERSECTS
+ BERKELEY RD CONTINUES
3613 Mulek Deanna M ✓@ 5 ☗(1957)
Mulek Michael C
+ PARKWOOD LN INTERSECTS
3631 Williams Larry A ✓@ 23 ☗(1957) 218-722-0145
Williams Jonathon M 218-722-0145
3639 Forsberg Gene D ✓ 23 ☗(1957) 218-624-1373
3645 Hill Darlene C ✓ 23 ☗(1957) 218-722-8754
3647 Holm David M & Karlyne M ✓ 19 ☗(1957) 218-720-3767
3655 Riggio Violet M ✓ 10 ☗(1957)
3661 Davis Curtis C Sr 7 ☗(1957)
3669 Ⓓ Anderson Neil P & Dawn R ✓ ☗(1957) 218-206-7067
3675 Larson Jan M ✓@ 10 ☗(1957)
3679 Mathison Allen M ✓ 2 ☗(1957)

PKST 431622

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HAGBERG ST Cont'd

2630 AMERICAN SEWER DRAIN SVC plumbing contractors 218-727-5557
Hubert Daniel L 50 ♠ 218-722-0607
2633 Hubert William R & Genevieve M 47 ♠ 218-727-5875
2637 No Current Listing
2641 Goodreau Roger C Jr & Heather M 11 ♠ 218-723-8298
2644 Taylor Michael L 15 ♠ 218-722-0087
2645 Kinney Sylvia L & Keith 39 ♠ 218-722-2281
+ ANDREW ST ENDS
2701 Michealson Maren 50 ♠ 218-727-1754
Michealson Vincent D 218-727-1754
2707 Erickson Casey 2 ♠
2719 Alholm Violet 2
+ HUTCHINSON RD INTERSECTS
2732 Foucault James C & Josephine F 19 ♠ 218-727-1468
2801 Jacobson Verdella L 32 ♠ 218-727-6947
2802 Vezina Randy S & Kim P 50 ♠
2807 Hanson Floyd W 45 ♠ 218-727-6138
Hanson Kim W 218-727-6138
2809 No Current Listing
2810 Holl Theodore A & Debra L 18 ♠ 218-726-1477
2816 Deangelis Robert A 29 ♠ 218-722-5206
Deangelis Anna C 218-722-5206
2821 Dahl Ruth M 47 ♠
Dahl Arthur J
2822 Wikstrom Dwight M & Michelle L 6 ♠ 218-722-4755
2830 ⚲ Lieberg Justina
⚲ Schumacher Luke A ♠
2838 No Current Listing
2840 Huard Herbert W & Vivian E 48 ♠ 218-722-4923
+ KARL AVE INTERSECTS
+ RIVENESS RD CONTINUES
3011 No Current Listing
3023 Adamczak Joseph E 5 ♠ 218-279-2779
Adamczak Shirley 218-279-2779
3035 Burke Dennis L 9 ♠ 218-722-7807
3042 Stauber Thomas R & Marlene I 50 ♠ 218-722-1510
+ HAINES RD INTERSECTS
BUSINESSES 1 **HOUSEHOLDS 50**

HAGEN RD (DULUTH)-FROM 6451 FRENCH RIVER RD
• ZIP CODE 55804 CAR-RT R011
2948 Dryke William C & Theresa M 50 ♠ 218-525-3237
2949 Lepage Louis A & Sharon A 50 ♠ 218-525-4177
2984 Lundin Charles N & Linda M 50 ♠ 218-525-4020
HOUSEHOLDS 3

HAHN RD (HERMANTOWN)-FROM 5401 HWY 2 NORTH
+ SAINT LOUIS RIVER RD INTERSECTS
• ZIP CODE 55810 CAR-RT R022
3505 Vanderscheuren Charles J & Lois M 8 ♠ 218-624-5013
3510 Stahl Emerson G 19 ♠ 218-624-2183
3511 ⚲ Hinnenkamp Bret ♠ 218-624-4124
3525 No Current Listing
3539 Eales Timothy J & Jodi L 13 ♠
3544 Teschner Joan A 19 ♠ 218-624-7650
Teschner Gust C 218-624-7650
HOUSEHOLDS 6

HAINES RD (DULUTH)-FROM 4601 PHANTOM DR
+ W SKYLINE PKWY INTERSECTS
+ MARY LANE DR BEGINS
• ZIP CODE 55811 CAR-RT C025
3710 No Current Listing
3711 Davis Curtis C Sr 4 ♠
3713 Schramm Robert A 20 ♠ 218-722-7365
3714 Johnson Dean A & Julie A 20 ♠ 218-727-1268
3717 Blazejak Barbara J & Leo E 19 ♠ 218-727-1977
3718 Mortinsen Leonard W & Beatrice I 20 ♠ 218-727-8064
3721 Wise Lee F & Cheryl J 50 ♠ 218-722-4537
3722 Winterstrom Martha G 19 ♠ 218-722-3468
3723 Black Brian A 7 ♠
Black January A
3727 No Current Listing
3728 Gaffke Lindsay M 3 ♠ 218-722-3506
3733 ⚲ Magoon Christopher M ♠
3735 Rissanen John R 50 ♠ 218-727-3955
3743 Hayward L 6 ♠ 218-727-0576
3744 Lutkevich Alan J 4 ♠ 218-733-0250
Lutkevich Deborah 218-733-0250
3750 Poehler Kenneth 2 ♠
Poehler Ellen M
3756 - 3762 No Current Listing (2 Hses)
3764 Swanson Jeffrey A & Karen M 19 ♠ 218-727-2016
3768 ⚲ Sohlstrom Jamie
3772 No Current Listing
3776 Gilbert Michael G 14 ♠
3782 No Current Listing
3804 Wold William C & Barbara J 50 ♠ 218-727-6414
3826 Benson Donn D & Mary C 20 ♠ 218-727-3600
3852 ⚲ Johnson Bruce
3882 APOSTOLIC GOSPEL CHURCH churches 218-727-6058
3906 Rajanen Eugene W 14 ♠ 218-727-5005
3912 Gunderson Paul K & Maureen E 50 ♠ 218-722-1803
3920 Miller Denise M 12 ♠ 218-727-6717
3928 KATE'S KATERING caterers 218-727-1210
Risley Justin T & Katrina E 6 ♠ 218-727-1210
3936 No Current Listing
3940 Thompson Michael J 50 ♠ 218-726-0637
3966 Dammer Kyle 9 ♠
3994 Dammer Harvey C 2 ♠
4004 Cashin Donald R & Roberta M 34 ♠ 218-722-9651
4024 ⚲ Berg Nancy
Koslucher Steven J 3 ♠
4026 Stein Melissa L 3 ♠
4030 Dolling John G & Jamie L 2 ♠ 218-727-4187
4034 Olson Robert C Jr 17 ♠ 218-727-4316
Olson Joanne N 218-727-4316

HAINES RD Cont'd

4042 Gjovik Elizabeth D 2
MATTERHORN RIDGE CONDOMINIUMS condominiums 218-279-3600
101 Hieb Alice L 19 ♠ 218-721-3324
102 Jablonski Catherine E & Alfred L 5 ♠ 218-722-7274
103 Peterson Leslie A 3 ♠ 218-525-6543
104 Schneider David H & Martha E 2 ♠ 218-733-1475
105 ⚲ Gulstad Ricky ♠
106 Mitchell John D Jr 50 ♠ 218-724-7367
106 Mitchell David 218-724-7367
108 Kubiak Diane M 5 ♠
109 Anderson Karen H 5 ♠ 218-728-2841
109 Anderson Kevin S 218-728-2841
110 Boben Pamela J 5 ♠ 218-727-2230
110 Boben Helen S 218-727-2230
111 Remick Daniel G & June M 2 ♠ 218-724-2037
112 Frye Margaret A 2 ♠ 218-722-1538
112 Frye Karen J 218-722-1538
201 Collins John C & Eleanor M 50 ♠ 218-724-5929
202 Goodrich James I & Shirley 15 ♠ 218-727-4075
203 ⚲ Manderfeld James H ♠
204 Priley Elena M 3 ♠ 218-728-2636
205 Lindberg Marjorie A & Robert J 9 ♠ 218-729-8272
206 Ley Eugene S & Audrey M 12 ♠ 218-728-5472
208 Fiege June M 3 ♠ 218-724-5314
210 ⚲ Scott Gloria L 218-722-4999
210 Scott Elizabet 218-722-4999
211 Linden Esther B 3 ♠ 218-722-1914
212 Knudson Diane J 9 ♠ 218-722-5567
212 Knudson Dj J 218-722-5567
213 Nygaard Donald I 2 ♠ 218-724-8639
301 Risberg Marlene M & Raymond A 3 ♠ 218-626-1387
302 Wright Gloria 2 218-727-0687
303 Kendall Robert W & Frances J 9 ♠ 218-728-3278
304 Scott Jack R & Kleo 3 ♠
305 Larson James A 15 ♠ 218-727-2175
305 Larson Cleo 218-727-2175
306 Mischke William A 3 ♠ 218-724-8371
307 Winzenburg Cheryl R 3 218-733-0306
308 Miller Phyllis M 3 ♠ 218-727-5494
309 McMillan Leroy J & Shirley M 3 218-720-6183
311 ⚲ Eck Heather
311 Gould Marion L & Harold E 5 ♠ 218-727-4366
313 Brethorst Nan L & Eugene R 2 ♠ 218-720-2984
4050 Kolquist Wallace N & Caryl E 19 ♠ 218-727-2833
4056 Wells Terry D 6 ♠
Wells Kim R
4060 ⚲ Kubiak Lawrence C & Diane M 218-729-5166
101 James Robert H & Phyllis M 50 218-525-1312
103 ⚲ Finnin Tom J
104 Anderson Fred 2 218-525-3387
201 Nading John M & Kathleen M 3
202 Johnson Anna N 14 218-726-9500
204 ⚲ Schnorr Fern V
204 ⚲ Undeberg Megan
301 Ramfjord Mary A 5 218-722-4278
302 ⚲ Barta Deann E 218-525-7424
304 ⚲ Line Roy D 218-722-2015
304 Line Pat 218-722-2015
4072 ⚲ Mrak Ralph & Elaine 218-733-3084
100 Brophy Evelyn J 15 218-727-4557
101 Balcom Anna M 5 218-728-3088
102 Dougherty Robert M & Fern E 24 218-722-3054
103 Williainen Edward R 17 218-722-8833
104 Lee Burnett I 8
105 Spanie Ben F 21 218-723-1682
105 Spanie Beverly J 218-723-1682
106 Mattson Thomas A & Viola E 22 218-727-7632
107 Tapper Victor D & Joan J 10 218-279-3810
108 Kokal Kathleen M 9 218-727-9197
109 Smith Russell C & Anne G 3 218-727-3169
110 Yagoda Richard & Lorraine G 15 218-727-2031
111 Johnson Norman E & Claudia M 17 218-279-5074
112 Lear Maxine 9 218-727-2113
113 Tanner Roy J & Alda I 15 218-727-0869
114 Radich Francis 15 218-727-6752
114 Radich Frances A 218-727-6752
115 Borash Leo J & Kathryn J 18 218-722-2252
116 Saxum Grace M 6 218-727-0247
117 ⚲ Beach Lester C & Marlyn A 218-726-1832
118 Hanson Margaret K & Arthur X 23 218-727-1172
120 Mickiewicz Marion E 9 218-727-8305
121 Anderson Raymond D 19 218-727-6289
121 Anderson Norma M 218-727-6289
123 McWilliams Joyce L 5 218-720-5860
200 Hart Marie F 8 218-727-7840
201 Saksa George W & Dorothy M 23 218-279-5312
203 Heikkila Arnold J & Elizabeth A 13 218-727-4440
204 ⚲ Bradley Joan M 218-727-1706
204 Bradley Richard D 218-727-1706
205 ⚲ Johnson Ralph A & Patricia J 218-722-7539
206 Anderson Curtis E & Mary A 20 218-279-3253
207 Oberg Carl W Jr & Doris A 15 218-722-2955
208 Gollinger Jacqueline M 9 218-722-9045
209 Lutkevich Alan J & Deborah J 19 218-727-6228
210 Tillman Lloyd C 11 218-722-7089
214 Gilbertson Stanley A 16 218-726-1181
214 Gilbertson Violet M 218-726-1181
215 ⚲ Jonland Richard W & Blanche M 218-722-3839
216 Grandahl Ronald A & Gloria A 5
217 Harper James 15 218-279-5263
217 Harper Ruth B 218-279-5263
218 Wick Henry L & Margaret D 9 218-722-2758
219 Robinson Olga I 8 218-727-7505
220 Kolquist Clarence O & Gertrude H 13 218-722-2778
221 Cashin Patricia A 8
223 Almquist Mabel E 12 218-279-5955

HAINES RD Cont'd

224 Niemi Eugene C & Helen H 8 218-727-7161
225 Stajer Alida R 14
300 Nodgaard Glen L & Gloria F 10 218-279-3800
303 Rizzi Patrick L 18 218-722-1109
304 Ronn Clarice M 15 218-279-3543
305 Raymond Gregory S 17 218-727-2578
305 Raymond Rory L 218-727-2578
306 Grefenberg Raymond C & Eva A 8 218-727-8690
307 Peterson Mark G & Mildred A 16 218-726-0990
308 McLean William H & Jane 20 218-720-3234
309 Hicken Jack W & Sharon L 9 218-727-2040
310 Martenson Clinton H & Martha F 11 218-722-4777
311 ⚲ Nielsen Helyn C
311 ⚲ Pasek Joann C & Clemence J 218-729-6658
313 Pavlowich Elizabeth C 11
314 Milbrath Cyril M & Mary A 2 218-729-8046
315 Conrad Lawrence A & Delores E 15 218-722-9546
316 Pramann Howard J & Dorothy E 16 218-722-9016
317 Bergman Dorothy J 50 218-722-8592
318 Lick Vera A 8 218-727-7249
319 Gerard Janine J 8 218-727-3400
319 Gerard Jj J 218-727-3400
320 Schowalter William C & Marvis M 15 218-727-7760
321 Hayes Grant W 22 218-722-6771
324 Kallio Edwin & Donna R 50 218-727-8778
325 ⚲ Martin Runcie B Jr & Hallie M 218-724-8979
4082 ACCESSIBLE SPACE INC home health serv 218-727-1705
⚲ Childs Sara 218-727-1756
⚲ Kimball Gary 218-727-3060
⚲ Peterson Randy
102 Krebs Claire 5
103 McMullen Shawn N 50 ♠
104 Johnson Jerry & Dianne C 11 218-727-4669
107 Britton Cindie L 13 218-727-5031
201 Thompson Marilyn G 8 218-727-7311
202 Dillon Patrickjr 7
204 Woodhull Janice 2 218-720-2871
208 ⚲ Flaa Pamela R
208 ⚲ Rohn Adam 218-722-2102
210 ⚲ Wallin Frances 218-722-0613
302 Billman Timothy A & Beverly J 2 218-722-1966
305 Jennings Kay 2 218-723-8585
307 ⚲ Envall Debra K
310 Jabs C 2
4088 Sipper Mark T 12 ♠ 218-727-8818
Sipper Carrie M 218-727-8818
4145 ICO CONVENIENCE STORES serv stations- gasoline & oil 218-722-0069
• ZIP CODE 55811 CAR-RT C007
4152 No Current Listing
4160 KRENZEN HONDA auto dlrs-new cars 218-724-6632
4180 WELLS FARGO BANK banks 218-723-2790
• ZIP CODE 55811 CAR-RT C025
4250 ELKS LODGE fraternal org 218-727-0111
4258 JOHNSON MERTZ APPLIANCE INC appliances-hshld- major-dlrs 218-722-5803
4270 DULUTH PERFORMANCE SOLUTIONS recreational vehicles 218-722-4144
EVERYTHING AUTOMOTIVE INC auto rpr & serv 218-722-1348
SMOKEY'S TOWING II wrecker serv 218-729-5252
• ZIP CODE 55811 CAR-RT C021
4311 ST JOSEPH EQUIPMENT contractors- equip/supl-renting 218-727-3039
4313 No Current Listing
4334 ST LOUIS COUNTY JAIL county govt 218-726-2345
TNETIX nonclassified establishments 218-726-0286
4414 RENT-A-SPACE MINI WAREHOUSE storage- household & commercial 218-722-7581
4418 HI REL SYSTEMS LLC electronic parts assemblers 218-727-3115
Johnson Mike L 2
500 NXC IMAGING x- ray apparatus & supl 218-729-8177
1200 MIDWEST MEDICAL EQUIPMENT physicians & surgeons equip 218-722-3420
4422 DUNHAM EXPRESS delivery serv 218-727-3755
4424 CORPORATE EXPRESS school supl-retail 218-722-0601
4428 1854 AUTHORITY envrmntl conservation/ecologcl 218-722-8907
Beeksma Michele M 9 ♠
BROTHERS FIRE PROTECTION CO fire protection equip/supl 218-727-3996
4430 KINETIC CONCEPTS INC hospital equip/supl 218-722-7436
4434 GEXPRO genl merchandise- retail 218-733-0578
4436 BOB MARNICH AGENCY insurance 218-625-0050
4440 CROWN ERAM electrical power sys 218-733-3990
4442 HOMETOWN DISTRIBUTING candy & confectionery-mfrs 218-720-3671
4444 IRRESISTIBLE INK INC advertising- direct mail 218-336-4200
+ AIRPORT RD CONTINUES
+ DEUCE AVE BEGINS
BUSINESSES 29 **HOUSEHOLDS 176**

HAINES RD (HERMANTOWN)-FROM 2199 SUNDBY RD NORTH
• ZIP CODE 55811 CAR-RT C025
3511 LEE HOUSE RAISING & MOVING INC house & building movers 218-727-5917
Lee Robert E 19 ♠ 218-727-5917
Lee Doris 218-727-5917
3525 Benedict Patricia M & Padie M 20 ♠ 218-727-3393
3531 Murray Jared J & Natalie 9 ♠ 218-720-2929
3545 Royer Clyde V & Brenda L 50 ♠ 218-722-9547
3547 Orman David R & Debby D 17 ♠ 218-722-2421
3553 Erdmann David W & Beth A 21 ♠ 218-727-0532
3567 Anderson Eric J & Jacquelin 6 ♠ 218-733-1455
3575 Heckathorn Ronald R & Louella J 50 ♠ 218-722-4801
3579 No Current Listing

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HAINES RD Cont'd
Garrick Leona K
3735 Rissanen John R [48]▲ 218-727-3955
Rissanen Arthur J 218-727-3955
3743 Hayward L [4]▲ 218-727-0576
3744 Lutkevich Alan J & Deborah J [17]▲ 218-733-0250
3750 King Robert W & Judith A [48]▲ 218-722-4475
3756 Johnson Alfred L [48]▲
3762 No Current Listing
3764 Swanson Jeffrey A [17]▲ 218-727-2016
3768 Anderson Scott B [6]▲ 218-727-2403
3772 Meadows Brenda L [10]▲ 218-722-0031
Meadows Chase E 218-722-0031
3776 Gilbert Michael G [12]▲
3782 No Current Listing
3804 Wold William C & Barbara J [48]▲ 218-727-6414
3818 Gronlund Lois J [13]▲
3826 Benson Donn D & Mary C [18]▲ 218-727-3600
3852 © Kilby Nancy 218-722-4892
Swapinski Nancy A [6]▲
3882 APOSTOLIC GOSPEL CHURCH churches 218-727-6058
3906 Rajanen Eugene W & Sandra P [12]▲ 218-727-5005
3912 Gunderson Paul K & Maureen E [48]▲ 218-722-1803
3920 Miller Denise M [10]▲ 218-727-6717
3928 Risley Justin & Kate [4]▲ 218-727-1210
3936 No Current Listing
3940 Thompson Michael J [48]▲ 218-726-0637
3966 No Current Listing
3994 Westberg Erik A [2]
4004 Cashin Donald R [32]▲
4024 © Koslucher Steven J▲
4026 © Stein Melissa L
4030 © Doffing John G & Jamie L▲ 218-727-4187
4034 Olson Joanne N [15]▲
Olson Robert C Jr
4042 © Larson Berhard 218-727-2175
MATTERHORN RIDGE CONDOMINIUMS condominiums 218-279-3600
© Mischke William A 218-724-8371
© Nygaard Donald I 218-724-8639
© Scott Jack R & Cleopha M 218-722-3411
101 Hieb Orvin M & Alice [17] 218-721-3324
102 © Jablonski Catherine E & Alfred L▲
103 © Peterson Leslie A
103 Peterson Madelyn L
104 © Gableman Paul D & Doreen J▲ 218-727-1151
106 Mitchell John D [48]▲ 218-724-3748
106 Mitchell David 218-724-3748
108 © Kubiak Lawrence C & Diane M▲ 218-729-5166
109 © Anderson Karen H▲
109 © Hansen Harold D
110 © Boben Pamela J▲ 218-727-2230
110 Boben Helen S 218-727-2230
111 © Remick June M
111 Remick Daniel G
201 Collins John C & Eleanor M [48] 218-724-5929
202 Goodrich James I & Shirley [13] 218-727-4075
203 Johnson Warren W & Ruth P [18] 218-728-1181
204 © Priley Elena M 218-728-2636
205 © Lindberg Robert J 218-729-8272
206 Ley Eugene S & Audrey M [10] 218-728-5472
207 Johnson Sven A & Evelyn M [48] 218-727-1707
208 © Fiege June M
211 © Linden Esther B 218-722-1914
212 © Knudson Rm M 218-722-5567
212 Knudson Diane J 218-722-5567
301 © Risberg Marlene M
302 © Savela Paula A
305 Larson James A [13]
305 Larson Cleo
307 © Winzenburg Cheryl R 218-733-0306
308 © Miller Phyllis M 218-727-5494
309 © McMillan Leroy J & Shirley M 218-720-6183
311 © Gould Marion L & Harold E▲ 218-727-4366
4050 Kolquist Wallace N [16]▲ 218-727-2833
4056 Wells Terry D [4]▲
Wells Kim R
4060 © Kush Glen▲
101 James Robert H & Phyllis M [48] 218-525-1312
102 Johnson Wilbert F & Anna N [12] 218-726-9500
103 © Jain Lou A
104 Wyffels Gregory A [2]
201 © Nading John M & Kathleen M
202 © Johnson Marvin
204 © Klenow Vernon 218-279-3742
4072 GRAMERCY PARK COOPERATIVE retirement communities & homes 218-720-6275
© Lear Merrill & Maxine 218-727-2113
© McPheeders Richard 218-727-3418
100 Brophy Evelyn J [13] 218-727-4557
101 Balcom Anna M [2] 218-728-3088
102 Dougherty Robert M & Fern E [22] 218-722-3054
103 Willilainen Edward R [15] 218-722-8833
104 Lee Burnett I [6]
105 Spanie Ben F [19] 218-723-1682
105 Spanie Beverly J 218-723-1682
106 Mattson Thomas A & Viola E [20] 218-727-7632
107 Tapper Victor D & Joan J [8] 218-279-3810
108 Kokal Donald J [7] 218-727-9197
110 Yagoda Richard [13] 218-727-2031
111 Johnson Norman E & Claudia M [15] 218-279-5074
113 Tanner Roy J & Alda I [13] 218-727-0869
114 Radich Francis [13] 218-727-6752
114 Radich Frances A 218-727-6752
115 Borash Leo J & Kathryn J [16] 218-722-2252
116 Saxum Grace M [4] 218-727-0247
117 Patten Margaret M [6] 218-279-5177
118 Hanson Arthur X & Margaret K [21]
120 Mickiewicz Marion E [7] 218-727-8305

HAINES RD Cont'd
121 Anderson Raymond D [17] 218-727-6289
121 Anderson Norma M 218-727-6289
122 Bushey Vance A Jr & Darlene J [12] 218-722-5788
200 Staudohar Lois J [13] 218-722-2825
201 Saksa George W & Dorothy M [21] 218-279-5312
202 Freeman Roger W & Pearl S [12] 218-722-6890
203 Heikkila Arnold J & Elizabeth A [11] 218-727-4440
204 Jensen Mary L [6] 218-726-5979
206 Anderson Curtis E & Norma M [18] 218-279-3253
207 Oberg Carl W Jr & Doris A [13] 218-722-2955
208 Gollinger Jacqueline M [7] 218-722-9045
209 Lutkevich Alex J [17] 218-727-6228
210 Tillman Lloyd C [9] 218-722-7089
211 Leroy Francis J & Clarice C [11] 218-727-8276
214 Gilbertson Stanley A [14] 218-726-1181
215 Cherro Aiteen L [14] 218-722-4167
215 Cherro S 218-722-4167
216 Grandahl Ronald A & Gloria A [5] 218-722-3385
217 Harper James [13] 218-279-5263
217 Harper Ruth B 218-279-5263
218 Wick Henry L [7] 218-722-2758
219 Robinson Olga I [7] 218-727-7505
220 Kolquist Clarence O & Gertrude H [11] 218-722-2778
221 Cashin Patricia A [8] 218-727-1494
223 Almquist John G Sr & Mabel E [10] 218-279-5955
224 Niemi Eugene C & Helen H [6] 218-727-7161
225 Stajer Alida R [12]
300 Nodgaard Glen L & Gloria F [8] 218-279-3800
301 Hart Marie F [6]
302 Peet George B Sr & Margie A [7] 218-279-5396
303 Rizzi Patrick L [16] 218-722-1109
304 Ronn Clarice M [13] 218-279-3543
305 Raymond Gregory S [15] 218-727-2578
305 Raymond Rory L 218-727-2578
306 Grefenberg Raymond C & Eva A [6] 218-727-8690
307 Peterson Mark G & Mildred A [14] 218-726-0990
308 McLean William H & Martha J [18] 218-720-3234
309 Hicken Jack W & Sharon L [7] 218-727-2040
310 Martenson Clinton H & Martha F [8] 218-722-4777
311 Olafson Earl R & Joyce A [9] 218-722-3866
312 Hinzmann Fred A [7] 218-727-0456
313 Pavlowich Elizabeth C [8] 218-727-4406
315 Conrad Lawrence A [13] 218-722-9546
316 Pramann Howard J [14] 218-722-9016
317 Bergman Dorothy J [46] 218-722-8592
318 Lick Vera A [6] 218-727-7249
319 Gerard Janine J [6] 218-727-3400
320 Schowalter William C [13] 218-727-7760
321 Hayes Grant W [20] 218-722-6771
322 © Pearson Robert L 218-724-2262
322 Pearson Colette E 218-724-2262
323 Ericson Wilson W [18] 218-722-5561
324 Kallio Edwin & Donna R [48] 218-727-8778
325 Springsteele Jerome T [7] 218-722-1813
4082 ACCESSIBLE SPACE INC home health serv 218-727-1705
© Billman Timothy 218-722-1966
Dillon Patrick E [5]
© Jabs C 218-722-5285
Pepple Ann [8] 218-733-9511
103 McMullen Shawn N [46]▲
104 Johnson Jerry & Dianne C [9] 218-786-0706
106 Multer Cindy J [8]
107 Britton Cindie L [11] 218-727-5031
201 Thompson Marilyn G [6] 218-727-7311
208 Bourgeault James M [7] 218-722-6153
210 © Rogers Ray R
301 Laurin Claudia R [4] 218-727-0035
303 Holden Betty J [2] 218-624-3171
307 Houchins Doug & Kim [2] 218-624-5354
310 © Siedlecki David B 218-722-4888
4088 Sipper Carrie M [10]▲ 218-727-8818
4145 ICO CONVENIENCE STORES convenience stores 218-722-0069
• ZIP CODE 55811 CAR-RT C007
4152 No Current Listing
4180 WELLS FARGO BANK banks 218-723-2790
• ZIP CODE 55811 CAR-RT C025
4250 ELKS LODGE fraternal org 218-727-0111
4270 ALLSTATE TRANSMISSIONS insurance 218-723-8100
Nelson Peter A [4]▲
• ZIP CODE 55811 CAR-RT C042
4304 Schubitzke Edward [19]▲
4311 ST JOSEPH EQUIPMENT contractors- equip/supl 218-727-3038
4313 Elliott Cy P & Constance S [2]
KELLY JS SEWING CTR & QUILT sewing mach- household 218-724-8781
WILLIS MANUFACTURING INC mfrs 218-726-5930
4334 ST LOUIS COUNTY JAIL county govt 218-726-2345
4414 RENT-A-SPACE MINI WAREHOUSE storage- household & commercial 218-722-7561
4418 HIREL SYSTEMS LLC nonclassified establishments 218-727-3115
500 NXC IMAGING x- ray apparatus & supl 218-729-8177
1200 MIDWEST MEDICAL EQUIPMENT physicians & surgeons equip 218-722-3420
4420 DUNHAM EXPRESS delivery serv 218-727-3755
4424 CORPORATE EXPRESS office supl 218-722-0601
4428 1854 AUTHORITY envrmntl conservation/ecologcl 218-722-8907
4430 KINETIC CONCEPTS INC hospital equip/supl 218-722-7436
4436 BOB MARNICH AGENCY insurance 218-625-0050
4438 DMS HEALTH GROUP x- ray apparatus & tubes 218-727-7203
4440 EATON CORP electrical power sys 218-722-5300
4442 HOMETOWN DISTRIBUTING candy & confectionery-mfrs 218-720-3671
+ AIRPORT RD CONTINUES

HAINES RD Cont'd
+ DEUCE AVE BEGINS
BUSINESSES 24 HOUSEHOLDS 171
HAINES RD (HERMANTOWN)-FROM 2199 SUNDBY RD NORTH
• ZIP CODE 55811 CAR-RT C025
3511 LEE HOUSE RAISING & MOVING INC house & building movers 218-727-5917
Lee Robert E [17]▲ 218-727-5917
3525 Benedict Patricia M & Padie M [18]▲ 218-727-3393
3531 Murray Jared J & Natalie [4]▲ 218-720-2929
3545 Royer Clyde V & Brenda L [48]▲ 218-722-9547
3547 Ortman David R & Debby D [15]▲ 218-722-2421
3553 Erdmann David W & Beth A [19]▲ 218-727-0532
3567 Anderson Eric J & Jackie [4]▲ 218-733-1455
3575 Heckathorn Ronald R & Louella J [48]▲ 218-722-4801
3579 © Doty H▲ 218-727-1132
Doty Gary L 218-727-1132
3581 Leland Terrance D & Key D [17]▲ 218-722-0749
3585 © Lundberg Marsha D▲
Lundberg Chris L
+ BERKELEY RD BEGINS
3605 © Kolenda Richard L▲ 218-727-2320
+ BERKELEY RD INTERSECTS
+ BERKELEY RD CONTINUES
3613 Mosier Kevin M Sr & Teresa L [17]▲ 218-727-1885
+ PARKWOOD LN INTERSECTS
3631 Williams Larry A [17]▲ 218-722-0145
Williams Nathaniel D 218-722-0145
3639 Forsberg Gene D [17]▲ 218-624-1373
3645 Hill Darlene C [17]▲ 218-722-8754
3647 Holm David M [13]▲ 218-720-3767
3655 © Riggio John D Sr▲
3661 © Davis Curtis▲
3669 Sawyer Randy F & Carolyn J [11]▲ 218-727-2859
3675 Larson Jan M [3]▲
3679 Peterson Kristie L [6]▲ 218-720-3132
+ MORRIS THOMAS RD INTERSECTS
+ HAGBERG ST INTERSECTS
+ HAGBERG ST CONTINUES
+ CARLSON RD BEGINS
3755 No Current Listing
3757 Leroux Jay K & Mary J [15]▲ 218-726-1662
3761 No Current Listing
3769 Mihalik Michael J & Michele L [6]▲
3773 Teresi Robert A & Wendy L [48]▲ 218-733-9642
3777 Sandstrom Jeanette A [17]▲ 218-727-1367
3781 No Current Listing
3783 Miller Robert E & Colleen H [12]▲ 218-722-2188
3785 Barry Jeffery M [48]▲ 218-786-0509
Barry Patrick R 218-786-0509
3789 Fedler Earl J Jr & Margaret J [18]▲ 218-727-2622
3795 Zbaracki Robert J [8]▲ 218-727-6762
+ PORTLAND RD BEGINS
3807 Schowalter Scott L & Diane M [15]▲ 218-722-0627
3811 Burg Quentin J [3]▲ 218-722-3586
3813 Larson George E [18]▲ 218-727-0809
3815 Anderson Larry R [48]▲ 218-727-8865
Anderson Michael J 218-727-8865
3817 Adamski Leonard D & Barbara J [28]▲ 218-727-7683
3825 - 3835 No Current Listing (3 Hses)
3839 © Giernett Robert L▲
+ HERMANTOWN RD INTERSECTS
3841 Monroe James [2]▲
Monroe Amy
+ PIEDMONT AVE INTERSECTS
3863 Kachinske Edward S [33]▲ 218-727-6531
3869 Johnson Gary A & Wendy M [24]▲ 218-726-0936
3873 Conway Diana L [27]▲ 218-722-7552
Conway Shawn M 218-722-7552
3875 Stemper Corinne M & Milton [33]▲ 218-727-6003
3879 Ranthum Darlene L [13]▲
3881 Ahlberg Douglas A & Barbara A [48]▲ 218-727-2112
3889 Johnson Clayton W & Joyce A [41]▲ 218-722-3721
3897 © Hartranft Gary▲
+ ANDERSON RD INTERSECTS
3911 Bradley Richard D & Joan M [16]▲ 218-727-1706
3917 Hodgkins Benjamin T & Pamela S [48]▲ 218-720-3003
3919 Capriglione Ralph M [34]▲ 218-722-2612
3921 Larson Carl A [17]▲ 218-727-6363
3925 Nelson Joellen M [2]
3931 Olsen William G & Nancy L [29]▲ 218-723-1751
3937 © Maki Jennifer 218-727-3202
3941 Bergh Helen M [45]▲ 218-727-5994
Bergh Thomas K 218-727-5994
3943 No Current Listing
3947 © Stokke Justin▲ 218-722-4887
3953 Johnson Jeffery R & Paulette J [18]▲ 218-726-1734
3959 Fick Gary P [3]▲ 218-722-5058
© Piekarski Justin A▲
3965 Huttel Marlys V [45]▲ 218-727-4147
Huttel Robert F 218-727-4147
3971 Lilliberg Susan D [14] 218-727-2987
3977 Mammenga Rolland N & Darlene C [46]▲ 218-727-5793
3979 Karlon Peter J [9]▲ 218-726-1219
3985 Israelson Michele L [2]
3991 Kaczmarek Dale J & Karen D [21]▲ 218-727-3769
3997 Struck Alex [46]▲ 218-722-8158
Struck Robert A 218-722-8158
4007 Sorensen Kenneth E [32]▲ 218-722-9303
Sorensen Rose M 218-722-9303
SUIT LLC int decrtrs design/consultants 218-590-6347
4013 Carlson Jason R & Amy M [12]▲ 218-729-5655
4015 Bergh Helen [13]▲
Bergh Karen
4017 Eisel Gene J & Elizabeth A [14]▲ 218-727-4703
4021 Ball Benton N & Lisa A [5]▲ 218-722-3504
4027 © Liljegren Earl R & Janice L▲
4029 © May June M▲ 218-727-5255

STREET GUIDE

HAINES RD (D)

209 Lutkevich Nathaline T 727-6228
210 Not Verified
211 Leroy Francis J & Clarice ⊡ ▲
214 Not Verified
215 Niemela Dagmar M & Arnold ⊡
216Ⓝ Shisler Vera H 727-4724
217 Harper Harry J & Ruth ⊡ 724-5236
218 Not Verified
219 Robinson Olga I ⊡ ▲ 727-7505
221 Not Verified
223 Almquist John G & Mabel ⊡ ▲
300Ⓝ Nodgaard Glen L
300 Nodgaard Gloria F
301Ⓝ Hart Robert W
301 Hart Marie F
302Ⓝ Peet George B 724-7561
302 Peet Margie A 724-7561
305Ⓝ Raymond Gregory S ▲ 727-2578
305 Raymond Jarrod 727-2578
307 Peterson Mark G & Mildred ⊡ ▲ 726-0990
308Ⓝ McLean William H & Martha 720-3234
311 Olafson David E ⊡ ▲ 722-3866
311 Olafson Earl R 722-3866
313Ⓝ Pavlowich Elizabeth C
314Ⓝ Hays Richard & Anne 727-1542
315Ⓝ Freeman Katherine ▲
316Ⓝ Premann Dorothy E & Howard 722-9016
320 Schowalter William C & Marvis ⊡ ▲
321-323 Not Verified (3 Apts)
323 Harris Robert A
324 Flynn Nancy M ⊡
4082 ACCESSIBLE SPACE med help serv 727-1705
Bourgeault James ... 722-6153
Bourgerie Jan 727-9255
Britton Cindie 727-5031
Carl G 723-8113
Curtiss P 722-7865
Ernst Theresa 720-5844
Franklin Linda M ... 720-6044
Hansen Susan 733-9625
Jamison Shirley M.. 727-1651
Johnson D 727-4569
Lundberg Patricia.... 279-1958
Massena Lee A 733-0632
Multer Cindy 723-8829
Swenson C 727-6345
Ⓝ Taylor Morton E & Jessie 727-8919
102 Not Verified
103 McMullen Shawn N ⊡ ▲
104 Johnson Shirley M ⊡ 727-1651
104 Johnson Dianna C 727-1651
206 Not Verified
207 Hughes Marian M ⊡ 727-4322
301 Schaefer Margaret ⊡ 727-6962
303 Lundberg Gary D ⊡
307 Barney Darrell W ⊡ 726-1298
310 Marshall Agnes B ⊡ 720-3562
4088Ⓝ Sipper Carrie 727-8818
4099 203 OLIVER MANAGEMENT SERVICE real estate agt 727-8874
4151 REPUBLIC AUTOMOTIVE PARTS SALES auto sup parts 727-8256
4152 Johnson Alfred L ⊡+ ▲ 727-3462
4157 NORTHLAND LUBE PROS tune-up serv auto... 727-5823
4160 NORWEST BANK MINNESOTA NORTH N A bank 723-2790

- ZIP CODE 55811 CAR-RT C001

4189 PEN autos new used 722-5337
4191 CINEMA ENTERTAINMENT CORPORATION motion picture theater 727-8271
4197 ECONO LODGE AIRPORT motel 722-5522

- ZIP CODE 55811 CAR-RT C025

4250 DULUTH ELKS LODGE 133 eating places 727-0111
4258 VIKING ELECTRIC SUPPLY lighting lamps accsscs 722-9680
4270 SPEEDY AUTO GLASS 727-6601
ZIEBERT APPEARANCE undercoatg'rustproofg 722-8713
4281 DULUTH AUTO UPHOLSTERY REPAIR 727-7963
4285 ARROWHEAD AUTO BODY & STORAGE body shop auto 722-2902
4311 ST JOSEPH EQUIPMENT constn'mining machry 727-3038
4313 SCANHEALTH hosp equip'sup 727-1400

HAINES RD

2 RIETER AUTOMOTIVE NORTH AMERICA 726-5930
4320Ⓝ Bragg Todd 726-0966
Rhoades Carri 726-0966
4334Ⓝ Quinn Shawn M
ST LOUIS COUNTY JAIL 726-2345
ST LOUIS COUNTY SHERIFFS OFFICE 726-2345
TNETIX 726-5999
4414 RENT A SPACE MINI WAREHOUSE comfind bldg oprn 722-7581
4418 UNITED RENTALS earth moving equip rnt ... 722-6333
400 SCHOTT POWER SYSTEMS relays'ind cntrls 727-3115
500 NORTHERN X-RAY COMPANY med'hosp equip 729-8177
600 PRICE CELLULAR tel equip'sys 720-4661
1200 MIDWEST MEDICAL EQUIPMENT AND SUPPLIES med appris'sup 722-3420
4424 CORPORATE EXPRESS 722-0594
4426 BROTHERS FIRE PROTECTION COMPANY fire sprinkler sys 727-3996
SWANSON & YOUNGDALE painting'paper hanging 727-6682
4428 ONE THOUSAND-FIFTY-FOUR AUTHORITY individual'fam serv .. 722-8907
O'DAY EQUIPMENT INCORPORATED serv sls sup petroleum 722-3142
4430 K C I THERAPEUTIC SERVICES med equip rntl 722-7436
4430 Not Verified
4434 CORPORATE EXPRESS DELIVERY SYSTEM local trucking 726-1514
4438 DIAGNOSTIC MEDICAL SYSTEMS x-ray mach tubes 727-7203
4440 CUTLER-HAMMER 722-5300
DALCO ENTERPRISES janitors' sup ... 722-8938
EASY HOUSING OF DULUTH 722-5300
4442 HOMETOWN DISTRIBUTING 720-3671
4444 DAVIDSON PRINTING COMPANY publication prtg litho 733-2590

+HANSON RD CONTINUES
+AIRPORT RD ENDS

BUSINESSES 47 HOUSEHOLDS 125

HAINES RD (HERMANTOWN)

- ZIP CODE 55811 CAR-RT C025

3511 Lee Robert E & Doris ⊡+ ▲ 727-5917
3525 Benedict Padie ⊡+ ▲ 727-3393
Benedict Patricia M 727-3393
3531 Not Verified
3545 Royer Clyde V ⊡+ ▲ 722-9547
Royer Brenda L..... 722-9547
3547Ⓝ Ortman David R ... 722-2421
3553 Erdmann David W & Beth ⊡+ ▲ 727-0532
3575 Heckathorn Ronald R & Louella ⊡+ ▲ 722-4801
3579Ⓝ Compton Kenneth, 733-9007
3581 Leland Terrance D ⊡+ ▲ 722-0749
Leland Key D 722-0749
3585 Anderson Nellie J ⊡ 726-0839
Anderson William A 726-0839
Gulick Tina J ⊡
3605 Little Dana F ⊡..... 722-4389
3613Ⓝ Mosier Kevin 727-1885
3631 Not Verified
3631 Williams Nathaniel D
3639 Forsberg Lois C ⊡+ ▲ 727-2625
3645 Hill Darlene C ⊡+ ▲ 722-8754
3647Ⓝ Holm David 720-3767
3655 Riggio John D Sr ⊡+ ▲
Riggio Violet M
3661 Ferson Jerome P ⊡ ▲ 722-3488
3669 Sawyer Berglund L ⊡ ▲ 727-2859
Sawyer Randy 727-2859
3675 Not Verified
3679 Peterson Nancy L ⊡ 720-3132
Peterson Kristie L... 720-3132
3755Ⓝ Olson Cindy 720-6421
3757 Leroux Jay K ⊡ ▲ 726-1662
Leroux Maria J 726-1662
3761Ⓝ Clark Susan M..... 726-0464
3769 Anderson Kathryn M ⊡+ ▲ 727-5227
3777 Sandstrom Bruce A ⊡+ ▲ 727-1367
3781 Olson Karen M & Orin ⊡ ▲ 529-2484
3783 Miller Robert E & Colleen ⊡+ ▲ 722-2188
3785Ⓝ Barry Donald B..... 727-3383
3789Ⓝ Fedler Earl J..... 727-2622
3791 Not Verified
3795 Heaton N 727-0183
Holmstrand Nancy A ⊡ ▲
Holmstrand Robert E

HAINES RD (H)

Zbarecki Bob..... 727-6762
3807Ⓝ Schowalterm Scott 722-0627
3811 Couture James C & Linda ⊡ 727-9097
3813 Larson June E ⊡+ ▲ 727-0809
Larson Kelly M 727-0809
3815Ⓝ Anderson Larry 727-8865
3817 Adamski Barbara J ⊡+ ▲ 727-7683
Adamski Tricia J..... 727-7683
3825 Gagne Jeanette H ⊡+ ▲ 727-6420
3829-3831 Not Verified (2 Hses)
3835 Hanson Howard G ⊡+ ▲ 727-7525
3839Ⓝ Robertz Julie L.... 720-6107
3841 Krynicki Roberta ⊡+ ▲ 722-4132
3863 Kachinske Edward S & Frances ⊡+ ▲ 727-6531
3869 Johnson Wendy M ⊡+ ▲ 726-0936
Johnson Gary A 726-0936
3873 Conway Diane L ⊡+ ▲ 722-7552
Conway Shawn M.. 722-7552
3875 Stemper Corinne M ⊡+ ▲ 727-6003
Stemper Connie M. 727-6003
3879Ⓝ Meirick Carl B..... 727-4612
3881Ⓝ Ahlberg Douglas .. 727-2112
3889 Johnson Clayton W & Joyce ⊡+ ▲ 722-3721
3897 Laflin James L ⊡.. 733-9399
3911Ⓝ Bradley Richard.... 727-1706
3917 Hodgkins Pamela S ⊡+ ▲ 720-3003
3919 Capriglione Scott A ⊡+ ▲ 722-2812
3921Ⓝ Larson Carl A..... 727-6363
3925 Ugstad Martin ⊡+ ▲ 727-2534
Ugstad Irene L 727-2534
3931Ⓝ Olsen William G.... 723-1751
3937 Sweeney Michael.... 727-7830
3941 Bergh Thomas K ⊡+ ▲ 727-5994
Bergh Helen M..... 727-5994
3943 Milosevich Joyce M ⊡+ ▲ 722-0736
Milosevich Jay S 722-0736
3953 Johnson Jeffery R Jr & Paulette ⊡+ ▲ 726-1734
Wolffe Kenneth C ⊡ ▲
Wolffe Pennie
3959 Caskey Paul D ⊡+ ▲
3965 Huttel Robert F & Marlys ⊡+ ▲ 727-4147
3971 Lillberg Susan D ⊡ 727-2367
3977 Mammenga Jeffrey N ⊡+ ▲ 727-5793
3979 Karlon Peter J ⊡ ▲ 726-1219
3985 Goetts Gordon W & Karen ⊡ ▲ 722-9181
3991 Kaczmarek Dale J & Karen ⊡+ ▲ 727-3769
3997 Struck Robert A ⊡+ ▲ 722-8156
4007 Sorensen Jessica E ⊡+ ▲ 722-9303
4013 Carlson Patricia R ⊡ 727-2194
Carlson Jason R..... 727-2194
Frink Keith W & Patricia ⊡+ ▲
4017Ⓝ Eisel Gene J 727-4703
4021Ⓝ Klenow Vernon..... 279-3742
4033 Tallakson Bruce A & Linda ⊡+ ▲ 722-6879
4039 Sturz Joyce R ⊡+ ▲ 726-0520
Sturz Brian D..... 726-0520
4043Ⓝ Lien Pam..... 279-2783
4049Ⓝ Mitchell Roger 722-0129
4051 Anderson Johnnie M ⊡+ ▲ 727-4054
4055 Moore Jill L ⊡ ▲... 723-7869
Slocum Jerry..... 723-7869
4061 Wollack Patricia E ⊡ ▲ 726-0141
Wollack James W... 726-0141
4071 Not Verified
4077 Boo Erin E ⊡+
Johnson Leslie K ⊡ ▲ 733-0271
4079Ⓝ Bergstrom Tabitha 722-6763
4081 Felten Angela L ⊡ ▲ 722-6503
4083 Johnson Penny L ⊡+ 722-4415
Johnson Bryan..... 722-4415
4085 Kirkman Sarah K ⊡ ▲ 727-2940
4087Ⓝ Salo Johan L
ⓃWarner Lisa M.... 733-0868
4089 Sandstrom Mary K ⊡ ▲
4091 9 Not Verified
4093 Marchand Yvonne... 279-6002
4095Ⓝ Henrickson Daniela 726-0479
4099 Anderson Simone M 727-2966
Cook Margaret L.... 726-1187
Dammer Melvin..... 727-3260
Eid M..... 727-3928
Flynn J D..... 722-5626
Hendrickson Julius A 726-0095
Johnson Carl J 727-2628
Johnson Clarice V.. 720-6594
Johnson I M..... 727-1292
Johnson Lawanda... 722-9686
Johnson R A..... 723-7873
Kyrola S..... 722-8460
Larson L M..... 723-9365
Olson Elsie H ⊡..... 720-3932
Olson Faye..... 720-3932
Plets V L..... 727-2242
Romundstad Betty M ⊡ 722-5459

HAINES RD

Romundstad Thomas L 722-5459
Skoglund Lester A.. 723-8939
Solem Alvin ▲..... 722-4712
Tungren P J 727-2246
Vross B 722-0332
Zielin Donna..... 722-8409
100 Rolson Jeanne Y ⊡+ 727-0425
103 Burge Pearl A ⊡+ ▲ 722-2086
200 Not Verified
201 Donner Clara I ⊡+ 727-3260
201 Donner Melvin.. 727-3260
205 Not Verified
300 Johannesson Lawanda J ⊡+ ▲ 727-2628
300 Johannesson Bjorg D 727-2628
302 Anderson Avis M ⊡+ 722-9093
304 Barsness Wilma S ⊡ 720-6204
305 Not Verified
306 Banozic Tihomir T ⊡ 733-9566
401 Forrest Jean B ⊡ 722-7638
403-404 Not Verified (2 Apts)
500 Peterson Florence E ⊡+ 722-3566
502 Elo Marjorie V ⊡
504 Not Verified
4147 Borg Jan T ⊡+ ▲
Borg Sharon J

- ZIP CODE 55811 CAR-RT C001

4183 EGGEBRECHT CHEVROLET OLDSMOBILE autos new used 727-7481
4191 CINEMA 8 THEATRES 727-5554

- ZIP CODE 55811 CAR-RT C025

4227 AIRPORT AUTO SALES OF DULUTH airport..... 727-2277
4255 Erickson William A. 727-5991
4259 AIRPORT ANIMAL HOSPITAL animal hosps..... 727-0128
4263 Olthoff Earl I & Ellen ⊡+ ▲ 727-6111
5 Not Verified
4271 GRANDMAISON PHOTOGRAPHIC STUDIOS coml photography... 727-4000
4277Ⓝ Adamczak Joseph. 727-6285
4278 Not Verified
4279 RAINSOFT water softeners 726-1833
4281 Potvien Donna S ⊡+ ▲
4291Ⓝ Gilson Katherine J
Hafner Tara 720-4484
ⓃRice Katie J
4295Ⓝ Ruhnke P 727-7340
4313 FIRST CHOICE MEDICAL med equip'sup..... 733-0311
SCAN HEALTH..... 723-4084

BUSINESSES 8 HOUSEHOLDS 147

HALCYON DELL RD (DULUTH)-FROM 6015 N TISCHER RD WEST

- ZIP CODE 55804 CAR-RT R011

3148 Not Verified

HOUSEHOLDS 1

HALIE RD (DULUTH)-FROM 2601 LINDAHL RD WEST

- ZIP CODE 55810 CAR-RT C025

5508Ⓝ Pogorelec Joseph . 624-2519
5513 Defoe Bonita M ⊡+ ▲ 628-2636
Defoe Scott D 628-2636
5531 Not Verified
5542 Musoll Sharon E ⊡ ▲
5545 Brodin Sylvia L ⊡+ ▲ 624-1048
Brodin Elton L..... 624-1048
5559Ⓝ Oresel Tom 628-0862
5561 Stebner Carol A ⊡+ ▲ 624-3269
Stebner Donna L.... 624-3269
5566Ⓝ Forsman Dennis.... 624-4583
5570 Eck Jacqueline A ⊡
5577 Erickson Mark T ⊡ ▲ 624-0396
Pagenkopf Stephanie J ⊡
5591 Erickson Marjorie A ⊡+ 624-1866
ERICKSON CONSTRUCTION OF DULUTH siding contr 624-1866
5600Ⓝ Ronkainen Gerald W 628-1568
5601 Erickson Cynthia L ⊡+ ▲ 624-7834
Erickson Edna B..... 624-7834
5602Ⓝ Nelson Mark..... 628-3901
+ERICKSON RD BEGINS
5608 Not Verified
5616Ⓝ Francisco Ann C... 628-1468
5630 Francisco Lasila C ⊡ ▲ 628-3743
Francisco Brenda J 628-3743
NORTH STAR MAINTENANCE handyman serv 726-0276
5642Ⓝ Carr Gerald..... 624-7384
5654 Sundvick Charles T & Nancy ⊡ ▲ 624-0964
+NOPEMING RD BEGINS
5666 Not Verified
+RAILROAD CROSSES
5692 Sample Paul D ⊡.. 628-1374
+MIDWAY RD INTERSECTS

HALIE RD (D)

BUSINESSES 2 HOUSEHOLDS 22

HALKALA RD (COTTON)-

HALKALA RD (MEADOWLANDS)-

HALL RD (BRIMSON)-FROM 1344 TOWN LINE RD NORTH

- ZIP CODE 55802 CAR-RT H067

3824 Bailey Steven D & Laura ⊡ ▲
3844 Hall Helen I ⊡+ ▲ 848-2252
Hall Fred A 848-2252
3845Ⓝ Maki Oscar O..... 848-2253
Maki Anna O 848-2253
HOUSEHOLDS 3

HALL RD (LUTSEN)-

- ZIP CODE 55812 CAR-RT H003

110Ⓝ Kallberg Jon J 663-0193
239 Faber Keare O ⊡... 663-7067
240 Hall Hans J ⊡+ ▲... 663-8029
256Ⓝ Hall H J..... 663-7377
262 Nickolay Tim ⊡..... 663-8113
272 Hovde Dennis W Jr ⊡ 663-7352
Hovde Cheryl M..... 663-7352
HOVDE CHERYL M indl truck rntl 663-7352
Johnson Nicole L ⊡
BUSINESSES 1 HOUSEHOLDS 7

HALL RD (MEADOWLANDS)-FROM 7349 HIGHWAY 29 SOUTHWEST

- ZIP CODE 55765 CAR-RT H002

10109 Not Verified

HOUSEHOLDS 1

HALSEY ST (DULUTH)-FROM 1901 CARVER AVE WEST

- ZIP CODE 55803 CAR-RT C039

311 Heller John R ⊡+ ▲ 724-3510
315Ⓝ Larsen Vernon 724-4898
317 Lauer James S ⊡
Lauer Tari L
324 Repensky Gregory R ⊡+ ▲ 728-2558
Repensky Deborah A 728-2558
401 Audet Pierre D ⊡ ▲
Jenny Yolande J ⊡+ ▲ 728-6284
Jenny A Y..... 728-6284
HOUSEHOLDS 6

HAMILTON DR (DULUTH)-FROM 701 BONG BLVD WEST

- ZIP CODE 55811 CAR-RT C003

801 Hamilton Aileen E ⊡ ▲ 727-6650
802 Dawson Ann L ⊡+ ▲ 727-4987
Dawson Neal P 727-4987
803 Berry Barbara L ⊡ ▲ 722-4094
805Ⓝ Nelson J E..... 722-1337
806Ⓝ Mattila Chris..... 720-2964
807 Lindberg Charles H ⊡+ ▲ 723-1676
808Ⓝ Holmes Eugene D.. 727-1948
809 Dosen Thomas ⊡+ ▲ 720-4676
Dosen Amanda M .. 720-4676
Windorski Thomas M ⊡
810Ⓝ Klun C 727-5226
811 Palen Pamela G ⊡+ ▲ 726-0849
812 Kunkel Joseph R ⊡ ▲ 726-1933
Kunkel Melissa..... 726-1933
Thompson Kelly 726-1933
B-C Not Verified (2 Apts)
813Ⓝ Lane James..... 727-0964
814 Ostern Susan K ⊡.. 720-5892
17-D Not Verified (3 Apts)
815 Judnick Sandra J ⊡ ▲ 727-6705
816 Vierzba Donette M ⊡+ ▲ 720-4452
Vierzba Jody L..... 720-4452
817 Orrick S..... 727-6986
Thro John R ⊡
818 Seybold Dagmar..... 722-8953
B-C Not Verified (2 Apts)
819 Haptonstahl Rev Stephen R ⊡+ ▲ 727-5983
Haptonstahl Adam .. 727-5983
820Ⓝ Robertson James A 722-7354
821 Ostern Scott A ⊡ ▲ 733-9843
822 Karon Goldie M ⊡+ ▲ 723-1510
C-D Not Verified (2 Apts)
823Ⓝ Flokstra Gerald F.... 727-4822
824 Eisenach Ryan S ⊡. 727-4021
Seeley Lori 727-4021
B-D Not Verified (3 Apts)
826 Krzewinski Helen S ⊡+ ▲ 720-4847
Krzewinski Michael J 720-4847
A-C Not Verified (2 Apts)
828 Sowl Allen F ⊡ ▲.... 722-2598
830 Eckert Megan D ⊡... 720-3262
832 King Jack C ⊡+ ▲... 727-4788
+MADISON AVE INTERSECTS

HOUSEHOLDS 45

HANFORD AVE (DULUTH)-

- ZIP CODE 55811 CAR-RT C025

2317Ⓝ Debriyn Lawrence H ▲ 279-3686
2323Ⓝ Warttmen Donald C & Jeanne ▲ 727-4413

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TEL. 724-6743

HAINES RD cont'd

Adamski Dennis R.....727-7683
Adamski Tricia J.....727-7683
3825 Gagne Jeanette H ♠.....727-6420
3826 Benson Donn D & Mary ♠.727-3600
3831 Wollack Ben A & Eleanor ♠
.....727-3265
3835 Hanson Howard G & Ruth ♠
.....727-7525
3839 Lund Henry C & Ida ♠.....722-6226
3841 Krynicki Tara L ♠.....722-4132
+ PIEDMONT AV INTERSECTS 64
+ HERMANTOWN RD INTERSECTS
3852 Sorby Nichole A.....723-0052
Gafner Randy R.....723-0052
Acker Leonard J.....722-8289
3863 Kachinske Edward S & Frances ♠
.....727-6531
3882 APOSTOLIC GOSPEL CHURCH
.....727-6058
3889 Johnson Gary A & Wendy ♠
.....726-0936
3873 Conway Diana L.....722-7552
3875 Stamper C M ♠.....727-6003
3879 Melnick Carl S & Kathleen ♠
.....727-4612
3881 Ahlberg Douglas A & Barbara ♠
.....727-2112
3885 HERMANTOWN STAR INC publ
.....727-0419
CONSTELLATION THE high sch newspaper.....727-0419
Pearson Ray H & Jeanne ♠.727-1161
3889 Johnson Clayton W & Joyce ♠
.....722-3721
3897 Not Verified 30A
+ ANDERSON RD INTERSECTS
3906 Rajanen Eugene W & Sandra
.....727-5005
Rajanen Sandra P.....727-5005
3911 Bradley Richard D & Joan
.....727-1706
3912 Gunderson Paul K & Maureen
.....722-1803
Gunderson Jeffrey P.....722-1803
3917 Hodgkins Benjamin T & Pamela
.....720-3003
Hodgkins Pamela S.....720-3003
3919 Caprigione Ralph M ♠.....722-2612
Caprigione Christopher J.....722-2612
3920 Rose Denise M ♠.....727-6717
3921 Larson Carl A & Beverly ♠.727-6363
3925 Ugstad Irene L ♠.....727-2534
3928 Nikkola Roger E & Leslie ♠
3931 Olson William G & Nancy ♠
.....723-1751
3936 Wikelius C A & Helen ♠.....727-6981
3937 Olsen George ♠.....727-5390
3940 Thompson Mike J ♠.....726-0637
3941 Bergh Helen M ♠.....727-5994
3943 Milosevich Steve P & Joyce ♠
.....722-0736
Milosevich Jay S.....722-0736
3953 Johnson Jeffrey R & Paulette ♠
.....726-1734
3959 Caskey Paul D.....722-4239
3965 Huttel Robert F & Marlys ♠
.....727-4147
3966 Schubitzke Marion M ♠.....722-2974
3971 Not Verified
3977 Mammenga Rolland N & Darlene ♠
.....727-5793
3979 Haxton I.....720-6324
3985 Nelson Cora P ♠.....722-9181
3991 Kaczmarek Dale J & Karen ♠
.....727-3769
Kaczmarek Karen D.....727-5769
3997 Struck Robert A & Barbara ♠
.....722-8158
Struck Barbara R.....722-8158
3994 Score Joseph R Jr & Phyllis ♠
.....722-9164
4004 Cashin Donald R & Roberta ♠
.....722-9851

HAINES RD cont'd

4007 Sorensen Kenneth E & Rose ♠
.....722-9303
4013 Fahlsing Scott A & Leann ♠
.....723-0028
4017 Eisel Gene J & Elizabeth ♠
.....727-4703
4021 Matel Carl J & Margaret ♠.722-9543
4024 Muehlbauer John L & Carol ♠
.....722-2036
4026 Arnell Reginald F ♠.....727-8440
4029 Vacant
4030 Howard Robert T & Sandra ♠
.....727-1775
Howard Sandra M.....727-1775
4033 Tallakson Bruce A & Linda ♠
.....722-6879
4034 Olson Joanne ♠.....727-4316
4039 Sturz Duane F & Joyce ♠.726-0520
4042 Benson Nancy
4043 Lanthier Craig J & Pamela ♠
.....722-8135
4049 Mitchell Roger K & Lorraine
.....722-0129
4050 Kolquist Wallace & Caryl ♠ 727-2833
4051 Anderson Allen J & Johnnie
.....727-4054
4055 Moore Jill L ♠.....723-7869
4056 Not Verified
4059 WAIVER GROUP HOME NO 7
.....727-2950
4060 Heidt Dan A ♠.....727-1028
4071 Mudek Robert E & Rose ♠ 726-0064
4072 Armstrong Jack L.....727-0853
4075 Kirkman Sarah K.....727-2940
4077 Johnson Leslie
4079 Johnson Brodie.....727-0792
Johnson Dawn.....727-0792
4081 Zapp Melissa J.....726-0344
4082 Peterson Dennis J.....727-4191
4083 Johnson Robert B ♠.....722-4415
4085 Bowstring Tawnya.....722-1118
4087 Hoglund Paulette M.....720-3087
4088 Mahla Norman.....727-8818
4089 Borgstrom Marianne.....727-4375
4091 Hecimovich Amanda.....727-9464
4093 Hemesman Doreen M.....720-3971
4095 Cason Rhonda S.....722-2488
4097 Horn Rhonda.....722-0632
4099 MAPLE GROVE ESTATES.....727-8874
100 Rolson Jeanne Y.....727-0425
101 Spehar Clementina.....727-7358
102 Forsell Mildred O.....727-6533
103 Bujrge P A.....722-2088
200 Flynn Julia.....722-5628
201 Donner Clara I.....722-1581
202 Skoglund Alice M.....723-8939
203 Hermerding Marvin A & Delores
.....727-8874
204 Porter Isabella.....722-1734
205 Cook Margaret L.....726-1187
206 Butler Norma E.....726-0802
207 Solem Mildred.....722-4712
300 Johannesson Bjorg.....720-2887
301 Johnson Ida M.....727-1292
302 Anderson Simone M.....727-2966
303 Hubert Esther M ♠.....722-1547
304 Denneweth Viola M.....722-6380
305 Tungren Phyllis.....727-2246
306 Sirois Veronica.....726-1469
307 Mortensen Roy G Jr.....727-8716
400 Kyrola Sophie A.....722-8460
401 Christianson Lucille F.....722-4589
402 Johnson Lawanda J.....722-9686
403 Wilkins Florence.....727-7555
404 Rannila Helen M.....727-6795
405 Hendrickson Tillie K.....726-0095
406 Plets Virginia L.....727-2242
407 Anderson Avis M.....722-9093
500 Peterson Florence E.....722-3566
501 Johnson Violet W.....727-2628
502 Eld Marjorie.....727-3928
503 Dammer Viola E.....727-3260
504 Fedler Julia V.....722-1297
505 Eliason Doris.....722-6899
506 Romundstad Betty.....722-5459

HAINES RD cont'd

507 Larson Lucille M.....723-6365
65
+ MAPLE GROVE RD INTERSECTS
+ EVEN SIDE NUMBERS-DULUTH
+ ODD SIDE NUMBERS-HERMANTOWN
4145 I C O CONVENIENCE PLUS STORE convenience store.....722-0089
4151 O K AUTO PARTS.....727-8256
4147 BURGER STATION restr.....722-7342
+ LINDGREN RD INTERSECTS
4152 Johnson Alfred L & Virginia
.....727-3482
4180 NORWEST BANK.....723-2790
+ MILLER TRK HWY FRONTAGE RD INTERSECTS
+ MALL DR INTERSECTS
4183 EGGEBRECHT CHEVROLET GEO INC
.....727-7481
4189 MILLER HILL CHRYSLER PLYMOUTH JEEP EAGLE ISUZU auto dlrs..722-5307
4191 CINEMA EIGHT theater.....727-5554
4193 HERMANTOWN LIQUOR STORE
.....723-1616
4197 ECONO LODGE AIRPORT.....722-5522
+ MILLER TRUNK HWY INTERSECTS
4227 AIRPORT AUTOS used.....727-2277
4239 Nilda Clifford A & Ruby ♠.727-3536
4250 ELKS LODGE NO 133.....727-0111
4255 Erickson William A & Jo Ann
.....727-5991
4259 AIRPORT ANIMAL HOSPITAL.727-0128
+ TODD DR INTERSECTS
4258 NORTHERN LIGHTS LIGHTING STUDIO comi-res lighting.....722-9660
4263 RAINBOW MOBILE HOME PARK
.....727-6111
Olhoft Earl J & Ellen ♠.....727-6111
4270 ZIEBART TIDY CAR.....722-8713
4271 GRANDMAISON PHOTOGRAPHIC STUDIOS.....727-4000
+ SUNDBY RD INTERSECTS E
4277 Adamczak Joseph E & Shirley ♠
.....727-6285
Adamczak Michael J.....727-6285
4279 A B C WATER PURIFICATION INC - RAINSOFT.....726-1630
4281 POOLS OF FUN pools spas chem & pools sups.....727-7963
DULUTH AUTO UPHOLSTERY REPAIR
.....727-7963
4285 ARROWHEAD AUTO BODY auto body shop.....722-2902
4291 Not Verified
4295 Ruhnke Carl F & Peggy ♠.727-7340
+ W ARROWHEAD RD INTERSECTS 658
4311 ST JOSEPHS EQUIPMENT INC
.....727-3038
4313 1 HEDENBERG A & CO INC bldg contrs.....727-1517
4320 Erickson Bertil A & Esther
.....727-3940
4334 COUNTY JAIL.....726-2345
+ SWAN LAKE RD INTERSECTS
+ KRUGER RD E INTERSECTS
4402 SEARS ROEBUCK (SERV CNTR)
.....727-8631
4408 SPEE DEE DELIVERY SERVICE
4414 RENT-A-SPACE MINI WAREHOUSE
.....722-7581
Solelm Jeffrey W.....722-7581
4418 HAINES RD OFFICE bldg SCHOTT POWER SYSTEMS mfg
.....727-3115
CELLULAR ONE ENGEERING DEPT cellular phones.....720-4661
+ AIR PARK BLVD INTERSECTS
AIR PARK SQUARE (OFCS) (BLDG NOS 442-4440) office complex
4420 A & E BUSINESS PRODUCTS (ADDL SP) show room
4424 A & E BUSINESS PRODUCTS olc supplies & furn.....722-0594
4428 BROTHERS FIRE PROTECTION CO contractor.....727-3906

HAINES RD cont'd

4428 COLE PAPERS paper & paper prod-whol suppli.....723-8730
4430 KINETIC CONCEPTS INC therapeutic-trauma bed sls.....722-7436
4434 LESLIE DON SUP INC addl sp
4436 LESLIE DON SUPPLY INC contrs equip & sups.....727-5078
4438 DIAGNOSTIC MEDICAL SYSTEMS INC x-ray equip.....727-7203
4440-4444 Vacant (3 Hses)
+ AIRPORT RD INTERSECTS E
+ AIR PARK DR INTERSECTS W
BUSINESSES 46 HOUSEHOLDS 179

HALSEY ST -FROM CARVER AV WEST, 3 NORTH OF ST MARIE 45

- ZIP CODE 55803
+ CARVER AV INTERSECTS
311 Heller Robert E & Lois ♠.724-3510
315 Larsen Vernon E & June ♠.724-4898
317 Brooks Evelyn E ♠.....724-7623
324 Repensky Gregory R & Debby ♠
.....728-2558
401 Jenny Yolanda J ♠.....728-6284
Jenny Steve.....728-6284
+ MIDWAY AV INTERSECTS
- ZIP CODE 55811
516 Pederson Kenneth W & Bernice ♠
.....724-3698
HOUSEHOLDS 6

HAMILTON DR -FROM MADISON AV SOUTH 1 WEST SELFRIDGE DR 66

- ZIP CODE 55811
+ MADISON DR INTERSECTS
801 Johnson Eric S.....722-2759
Botterman Matthew A.....722-2759
Marquette Alexander Pl.....722-2759
802 Dawson Ann L.....727-4987
803 Not Verified
804 Fennell Rev Scott B & Caressa
.....720-3922
805 Champagne Michelle M & Gaylene
.....726-1609
Johnson Karina L.....726-1609
806 Carlson Mary B ♠.....727-5618
Carlson Damon A.....727-5618
807 Lindberg Charles H & Jeanne
.....723-1676
808 Holmes Eugene D & Joan ♠
.....720-6300
809 Dosen Amanda M ♠.....720-4676
810 Klun C.....727-5226
811 Palen Pam G.....726-0879
812 Vacant
813 La Fave Kathryn I ♠.....722-4101
814 Nason Marcia L ♠.....722-4023
815 Newman K E.....727-5070
816 Vierzba Michael J & Donette ♠
.....720-4452
817 Orrick Sally J ♠.....727-6988
Thro John B.....727-5988
818 Seybold Dagmar G ♠.....722-8953
819 Haptonstahl Rev Stephen R & Thomasina ♠.....727-5983
820 Robertson James A & June ♠
.....722-7354
821 Mc Rae Kathleen A ♠.....727-2365
822 Karon Judith S ♠.....725-1510
823 Teslaw James F & Jo Ann ♠
.....727-6609
824 Seeley Melissa K ♠
826 Krzewinski Michael J ♠.....720-4847
Krzewinski George A & Helen...720-4847
828 Santa Alice V ♠.....720-3544
830 Dowell Kim
832 King Jack C ♠.....727-4788
+ BONG BLVD INTERSECTS
HOUSEHOLDS 27

HANFORD AV -FROM MORRIS THOMAS RD SOUTH 16

- ZIP CODE 55811
+ PALISADE DR INTERSECTS

HANFORD AV cont'd

+ KARL AV INTERSECTS
+ ECHO LA INTERSECTS
+ TWIN CREEKS CIR INTERSECTS
+ MORRIS THOMAS RD INTERSECTS
+ DEAD END

HANSON RD (HERMANTOWN)-FROM LA VAQUE RD EAST 206

- ZIP CODE 55810
+ THOMPSON RD INTERSECTS
5045 Hanson Terry E & Delores ♠
.....729-8586
Hanson Delores J.....729-8586
Hanson Chinsia A.....729-8586
5049 Hanson Wesley J & Verna ♠
.....729-8804
+ LA VAQUE RD INTERSECTS
HOUSEHOLDS 2

HARBOR DR -FROM 5TH AV W TO COMMERCE ST IN A CIR AROUND ARENA AUDITORIUM 35

- ZIP CODE 55802
+ COMMERCE ST INTERSECTS
323 VISTA FLEET-DULUTH SUPERIOR EXCURSION CO boat chartering & rental servs.....722-6218
327 Vacant
327 DULUTH CURLING CLUB.....727-1851
350 DULUTH ENTERTAINMENT CONVENTION CENTER.....722-5573
+ S 5TH AV WEST INTERSECTS
353 LAKE SUPERIOR CENTER.....720-3033
+ COMMERCE ST INTERSECTS
BUSINESSES 4

HARBOR DR S -FROM COMMERCE ST SOUTH 35

- ZIP CODE 55802
+ COMMERCE ST INTERSECTS
350 S S WM A IRVING tours of retired ore boat.....722-7876
BUSINESSES 1

HARDING AV SOUTH -FROM 2200 HIGHLAND AV NORTH 308

- ZIP CODE 55811
+ E PALM ST INTERSECTS
+ E CENTRAL ENTRANCE INTERSECTS

HARDY ST WEST -FROM W ARROWHEAD RD 77

- ZIP CODE 55803
+ WAVERLY AV INTERSECTS
+ COLUMBUS AV INTERSECTS

HARTLEY LA -FROM HARTLEY PL 77

- ZIP CODE 55803
+ HARTLEY PLACE INTERSECTS
420 Zeleznikar Robert J & Susan
.....724-9393
Zeleznikar Susan L.....724-9393
Zeleznikar Jody M.....724-9393
425 Karon Thomas L & Sharon ♠
.....728-4654
429 Nyquist Alvin ♠.....724-7414
Bloomer K J.....724-7414
433 GRANDMA'S Smith Susan ♠
HOUSEHOLDS 4

HARTLEY PL -FROM 2001 HARTLEY RD EAST 77

- ZIP CODE 55803
430 Johnson Stephen D & Laurie ♠
.....724-4555
Johnson Laurie J.....724-4555
431 Not Verified
436 Kaloski Nancy J ♠.....728-5800
437 Madole Doug E & Jennifer ♠
.....724-6185

HARTLEY PL cont'd

439 Murphy Kevin P & Camille ♠
.....724-4451
Murphy Camille S.....724-4451
440 Pellett C Roger & Lydia ♠.....728-5662
Pellett Rebecca E.....728-5662
444 Johnson Scott W & Suanna ♠
.....724-2321
459 Truedson Chester J & Margaret ♠
.....728-3287
460 Bergeland William R & Anna Marie ♠
.....724-8904
461 Harrison Ardie J & Cynthia ♠
.....728-5517
463 Perlinger Kevin & Julia ♠.....728-6326
469 Waaga Roger K & Mary Beth ♠
.....724-0668
Waaga Marybeth.....724-0668
HOUSEHOLDS 12

HARTLEY RD -FROM ARROWHEAD RD 77

- ZIP CODE 55803
+ W ARROWHEAD RD INTERSECTS
1904 Leppi Peter J ♠.....724-8554
Leppi Katherine.....724-8554
1910 Mars Bruce ♠.....724-3508
Mars Katherine.....724-3508
1911 Gordon Tom J & Corrine ♠.....728-3244
1915 Goor James R & Deborah ♠
.....724-2343
1916 Sauer David L & Deborah ♠
.....724-4618
Sauer Alan L.....724-4618
1921 Bronsel Ann D ♠.....724-1387
1924 Haworth C Brant & Mary ♠
.....724-1266
1925 Waalen Karen G ♠.....728-4395
1930 Fischer Roger A & Susan ♠
.....728-5642
Fisher Timothy L.....728-5642
1933 Kaner Sharon B ♠.....728-5403
Kaner Ian M.....728-5403
Kaner Lee.....728-5403
1934 Alvera Curtis F ♠.....724-1528
+ HARTLEY LA INTERSECTS
1943 Rectenwald David A & Nancy ♠
.....724-7088
1947 Bergerson Donald E & Barbara ♠
.....724-5886
Bergerson Barbara A.....724-5886
1952 Sundeen Lillie R ♠.....728-3273
1955 Curran Irving P ♠.....724-0823
1960 Denney James J & Sue ♠.....724-0092
1963 Hartley Roger C & Jan ♠.....728-1936
1966 Donovan John M & Helen ♠
.....724-5964
1972 Anderson Paul M & Carol ♠
.....728-5853
+ HARTLEY PLACE INTERSECTS
2001 O'Neill John C & Isabel ♠.....724-9440
2002 Hassett John F ♠.....724-7876
2006 Mc Farland Robert L ♠.....724-6342
2014 Sauer Richard A ♠.....724-4046
2015 Anderson Catherine M ♠.....724-6221
2021 Bronson Michael A & Virginia ♠
.....724-9363
Bronson Amy L.....724-9363
Bronson Daniel M.....724-9363
Bronson Rebecca.....724-9363
2026 Young Allen A & Janet ♠.....724-9232
2029 Abalan William D & Barbara ♠
.....728-3712
Abalan Mark.....728-3712
2032 Rutka Robert T & Carole ♠
.....724-4633
+ WOODHAVEN LA INTERSECTS
HOUSEHOLDS 27

HARVARD AV -FROM 400 W LEWIS NORTH, 4 WEST OF WOODLAND AV 77

- ZIP CODE 55803
+ LEWIS ST INTERSECTS
2105 Nyquist Mona B ♠.....724-0897
Myquist Mona B.....724-0897
2115 Kennedy Allan C & Margaret ♠
.....724-5289

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DULUTH, MN. (55802)
The BRASS PHOENIX Night Club
722-7486

● HOMEOWNER

HAINES RD–Contd
4083 Johnson R Bryan 722-4415
4085 Northey Lynne S 722-0441
4087 Gilbelt Dave 722-5442
4089 Taylor Brett G 727-4314
4091 Vacant
4093 Olund Mary C 726-0993
4095★Kelley Arlene J 727-6585
4097 Johnson Sharon 722-4076
4099 Maple Grove Estates Apartments 727-8874
100 Rolson Jeanne 727-0425
101 Saari Marian J Mrs 722-8097
102★Farsell Mildred O 727-6533
103 Acker Clara 727-4498
200 Nelson Wilma V Mrs 722-6011
201 Donner Clara I 722-1581
202 Skoglund Alice M 733-8939
203★Hermerding Marvin A 727-8874
204 Burns Stanley J 728-2809
205 Drill Marygrace C 726-1579
206 Butler Norma E 726-0802
207 Salem Mildred I Mrs 722-4712
300 Anderson Olga E 722-9046
301 Johnson Ida M 727-1292
302 Anderson Simone M 727-9966
303 Hubert Esther 722-1547
304 Deneweth Viola M 722-6380
305 Hiltwein Martha 727-6806
306 Sirois Veronica 762-1469
307 Lindahl Anna A Mrs 722-8667
400 Kyrola S 722-8460
401 Christianson Lucille F 722-4989
402 Erickson Jane 722-7219
403★Wilkins Florence 727-7555
404★Rannila Helen
405 Hendrickson Julius A 726-0095
406★Pleis Virginia 727-2242
407 Anderson Avis 722-9093
500 Petersun Florence E 722-3566
501★Johnson Violet W 727-2628
502 Eid Marjorie 727-3928
503 Dammer Vi 727-3260
504 Fedler Julia V 722-1297
505 Corinnesser Esther M 722-2657
506 Harning Frank H 723-8118
507 Larson Lucille 723-8365
4088 Mahla Norman E ● 727-8818

MAPLE GROVE RD INTERSECTS
LINDGREN RD INTERSECTS
4152 Johnson Alfred L ● 727-3462
4160 Norwest Bank (Br) 733-2790
4183 Rathert Chevrolet Inc 727-7481
4189 Ridgewood Roller Rink amusement place 727-3327
4191 Cinema Five theater
4193 Hermantown Liquor Store 723-1616
4195 Kentucky Fried Chicken restr 722-5353
4197 Prime Rate Motel 722-5522
Theisen Cynthia
MILLER TRUNK HWY INTERSECTS
4227 Airport Auto Sales used 727-2277
4239 Nikka Clifford A ● 727-3536
4250 Elks Lodge No 133 727-0111
4255 Erickson Wm A ● 727-5991
4259 Airport Animal Hospital 727-0128
4263 Rainbow Trailer Park 727-6111
Olthoff Earl I
4270 Ziebart Appearance & Protection Service 722-8713
4271 Grandmaison Photographic Studios Inc 727-4000
4277 Adamczak Jos E ● 727-6285
4281★Smith Thomas W 722-6530
4283 Anderson Paul K 720-3629
4285 Arrowhead Auto Body 723-2902
4291 Goeppinger Fred R ● 727-7717
4295 Ruhnke Carl F ● 727-7340
ARROWHEAD RD INTERSECTS

65-B
4311 Case Power & Equipment 727-3038
4320 Erickson Bertil A ● 727-3940
4313 Hedenberg A & Co Inc bldg contrs 727-1517
SWAN LAKE RD INTERSECTS
4402 Sears Roebuck (Serv Cntr) 727-8335
4408 Spee Dee Delivery Service 729-6827
4414 Rent-A-Space Mini Warehouse 722-7581
AIR PARK BLVD INTERSECTS
4420-4424 Vacant (2 Bses)
4426 Software Solutions comp custom software 722-6319
4428 Vacant
4430 Kinetic Concepts Inc splys medicine co 722-7436
4434 Vacant
4436 Leslie Don Supply Inc contrs equip & supp 727-5078
4438 Diagnostic Medical Systems Inc x-ray equip 727-7203
4440 Dalco janitorial sup 722-8938
4444 Northern Drug Co sales 722-4791

65
HALSEY ST –FROM CARVER AV WEST 3 NORTH OF ST MARIE

ZIP CODE 55803
311 Heller Robt E ● 724-3510
315★Larsen Vernon E ● 724-4898
317 Brooks Evelyn E Mrs ● 724-7621
324 Repensky Greg R ● 728-2553
401 Jenny Yolande J ● 728-6284
MIDWAY AV INTERSECTS
ZIP CODE 55811
516 Pederson Kenneth W ● 724-3698

68
HAMILTON DR –FROM MADISON AV SOUTH 1 WEST SELFRIDGE DR

ZIP CODE 55811
NUMBERED IRREGULAR
832 Vacant
830 De Bolt Eliz J 722-6322
828 Sertich Tim J 727-5707
826★Ostrander Tammy ●
824 Olson Judy K 726-1643
822 Consie Barbara J 727-8449
820★Maguire Michele B 726-0437
818★Cronkhite Stuart C
816 Posthumus Michl A 726-1778
814★Kerr Jas M
812 Mc Tavish Russell 722-8607
810 Grigg David A 727-5628
808★Hasskamp Steven P 727-8574
806 Peterson Roger 727-0901
804 Flynn Roland R 726-0527
802★Muniz David R 722-0187
801★Meyers Mitch 722-6891
803 Hepola Gary M 727-6053
805★Lamusga Jon D 722-9675
807 Lindberg Charles H 723-1676
809 Starkman Scott A 727-4362
811★Moody Drew 726-0222
813 No Return
815 Christensen Jim W 727-1624
817★Reese Lani J 727-6831
819★Simonson Karyn 727-2203
821 Adamec J B 722-9648
823★Uzelac Jas J 720-3652

35
HARBOR DR –FROM 5TH AV W TO COMMERCE ST IN A CIR AROUND ARENA AUDITORIUM

ZIP CODE 55802
323 Vista Fleet-Duluth Superior Excursion Co boat chartering & rental servs 722-6218
325 Duluth Area Chamber of Commerce 722-5501
Service Corp of Retired Executives (S C O R E) organizations-comm socl servs 722-5501
327 Silver Broom Lounge cocktail lounge 722-5573
Duluth Curling Club 727-1851
350 Duluth Entertainment Convention Center 722-5573

80-B
HARDING AV S –FROM 2200 HIGHLAND AV NORTH

ZIP CODE 55811

77
HARDY ST W –FROM 444 ARROWHEAD RD NORTH

ZIP CODE 55803
116 Moore Richd ● 724-7259

77
HARTLEY LA –FROM HARTLEY PL

ZIP CODE 55803
420★Zelesnikar Robt J 724-9393
425 Paszko Steve ● 724-6967
429★Nyquist Alvin S ● 724-0897
433★Duncan Clyde B 724-5921

77
HARTLEY PL –FROM 2001 HARTLEY RD EAST

ZIP CODE 55803
430 Johnson Stephen D ● 724-4555
HARTLEY LANE INTERSECTS
436 Mc Carthy Brian R ● 728-5800
437 Maddie Doug E ● 724-6096
439 Wallin Darl N ● 728-1966
440★Pellett Roger C 728-5662
444 Johnson Scott W ● 724-2321
459★Truedson Chester J ● 728-3287
463 Potter Bruce W ● 724-6115
469 Waage Roger K ● 724-0668

77
HARTLEY RD –FROM W VICTORIA NORTHWEST AND THEN NORTH 1 WEST OF DUNEDIN AV

ZIP CODE 55803
ARROWHEAD RD INTERSECTS
1904 Walsh Steph A ● 728-3290
1910 Salyards Jackie L ● 724-3294
1911 Gordon Tom J ● 728-3244
1915 Good James R ● 724-2343
1916 Strom Fred G ● 724-4881
1921 Bronoel Joel K ● 724-1387
1924 Haworth C Brent ● 724-1266
1925 Waelen Karen G ● 728-4395
1930 Fischer Roger A ● 728-5642

CARTIER AGENCY ◊ INC.
2701 WEST SUPERIOR ST.
INSURANCE & FINANCIAL SERVICES
(218) 727-5992, FAX 727-8501

Bagley & Co. Est. 1885
Fine Jewelry, China and Giftware
315 W. SUPERIOR ST. DOWNTOWN DULUTH
(218) 727-2991
FINE JEWELRY
GIFTWARE
CHINA AND CRYSTAL
• Est. 1885 •

★ NEW NEIGHBOR

HARTLEY RD–Contd
1933 Kaner Sharon B Mrs ● 728-6403
1934 Ahrens Curtis F ● 724-1528
HARTLEY LA INTERSECTS
1943 Powell Tracy Allen ●
1947 Bergerson Donald E ● 724-5886
1952 Sundeen Lillie R Mrs ● 725-3273
1955 Curran Irving P ● 724-0823
1960 Denney James J ● 724-0092
1963 Hartley Roger C ● 728-1936
1966 Donovan John M ● 724-5964
1972 Anderson Paul M ● 728-5853
HARTLEY PLACE INTERSECTS
2001 O'Neill John C ● 724-9440
2002 Nelson Dennis L ● 728-2348
2008 Mc Farland Robt ● 724-6342
2014 Clinkingbeard Bert C ● 724-3829
2015 Anderson Cath M Mrs ● 724-6221
2020 F N I Sales whol floral distr 728-1562
Debyle Roger A ● 728-1562
2021 Bronson Michl A ● 724-9363
2026 Young Allen A ● 724-9232
2029 Abalan Wm D ● 728-3712
2032 Rutka Robt T ● 724-4633
2105★Sharrow James 724-6909

77
HARVARD AV –FROM 400 W LEWIS NORTH 4 WEST OF WOODLAND AV

ZIP CODE 55803
2106 Lukan John K ● 724-1614
2115 Kennedy Allan C ● 724-5289
2125 Schilling John F ● 724-5444
2129 Wipson John E ● 724-7429
2130 Mc Gough Mary C Sister ● 728-2419
2134 Ruth Bradley R ● 724-7722
2144 Nordling Vernol A ● 724-1709
2147 Lothner David C ● 728-5250
2201 Shuit Steven C ● 724-9231
OXFORD ST INTERSECTS
2220 Lease M Harry Jr ● 724-2153

24
HARVEY ST –FROM PIEDMONT AV WEST 1 NORTH OF MORRIS THOMAS RD

ZIP CODE 55811
2410★Johnson Floyd V ● 723-6208
2422 Oak Everett ● 722-9233
2432 Reuter Phyllis B Mrs ● 727-4412
2433 Aro Ervin R ● 727-6243
2436 No Return
2439 Ruby David F ● 722-3958
2444 Sexton Steve V ● 722-8129
Sexton Lynn M Mrs licensed day care wkr
2445 Fredrickson Florence V ● 722-0306
2452 Walker Raymond C ● 722-7578

24-A
CHAMBERSBURG AV INTERSECTS
2510 Landro Lorraine E ● 722-2131
Lower★Folen Karl
2511 Hickey Tim M ● 722-9187
2515 Johnson Dawn Y Mrs 722-5471
2516 Sershon Sue M 722-3322
2519★Tuominen Terrance C ● 727-7590
2522 Breole Raymond J ● 727-4139
2525 Lax Marion L Mrs ● 727-7295
2528 Lindevig Irvin R ● 722-7903
2533 De Roche Michl F ● 727-2403
2534 Molinaro Darl W ● 722-4337
2539 Detoffol David J ● 720-3240
2544 Van Overmeiren Michl J ● 727-6039
2545 Bauers Thos W ● 727-3640
2546 Cibuzar Robt C ● 722-2316
W LILLIAN AV INTERSECTS
2601 Meyers Fred N ● 722-9577
2602 Carlson Lloyd G ● 722-4645
2607 Klick Joseph G ● 722-4065
2610 Carlson Douglas L ● 726-1681
2617 Carlson Gertrude V Mrs ● 727-2588
2619 Schelinder Doris M Mrs ● 722-9392
2627 Peterson Ray I ● 727-3876
2633 Alexander Beverly A 727-1142
2639 Gillaspie Everett C ● 722-7891
HUTCHINSON RD INTERSECTS
2702 Luczak Chester T ● 727-2326
2710 Peterson Frances L Mrs ● 722-8673
2714 Kelly S Joan ● 727-0407
2722 Ward Russell H ● 727-3660
2728 Waisanen Edwin A ● 722-8879
2736 Johnson Mary T Mrs ● 727-1968
2738 Reid John M ● 722-4392
2739 Johnson Alner R ● 727-1723
2751 Pohl Marvin J ● 727-3256
2802 Bubacz Chester J ● 727-3797
2810 No Return
2811 Coombes Mary Mrs ● 722-9426
2816 Olson Guy B ● 727-2621
2821 Bowman Clyde A ● 727-4979
2822 Ellingsen James E ● 722-5103
2827 Zapp Mark W 722-9447
2828 Billings Kenneth G ● 727-3754
2834 Carlson David R ● 722-5097
2840 Miller Agnes L Mrs ● 722-4363
2841 Kubiak Edmund A ● 722-7138
2844 Johnson Emery G ● 727-5470
2845 Bohlin Morris W ● 722-5761
2850 Grammo Dale W ● 727-3975
2851 Anderson Alice M Mrs ● 727-1467
KARL AV INTERSECTS

66-A
HAWKINS ST –FROM BLACKMAN AV EAST 3 NORTH OF BAYLIS

ZIP CODE 55811
FERN AV INTERSECTS
302 O'Brien Geo M ● 728-4838
303 Scheelk Herbert C ● 728-2342
312 Kreutzkampf June E ● 724-6980
313 Schramm Carl W Jr ● 724-6422
320 Kirsch Helen E ● 724-3576
324 Sormunen Seppo A ● 728-4047
325 No Return
326★Harmon Scott ● 724-7354
328 Dunleavy Kerwin J ● 724-8908
333 Bergson Herbt W ● 724-2426
341 Mc Gann Wm ● 728-1451
515 Chelstrom Richd L ●
CLIFF AV INTERSECTS

50
HAWTHORNE RD NORTH –FROM 3100 E SUPERIOR ST NORTH

ZIP CODE 55812
1 Baddin Albert E ● 724-7607
2 Zinsmaster Wm II ● 724-6016
7 Harkness Paul W ● 724-5686
19 Laplante Patricia Mrs ● 724-8755
29 No Return
1ST ST INTERSECTS
101 Irving Stanley D ● 728-3282
124 Tygart Robt L ● 724-3692
131★Rigby Dean K ● 724-1698
2D ST INTERSECTS
202 Baker Dale R ● 728-3849

76
314 Duluth Publishing Inc electronic publ serv 726-6897
Shull H Eugene ● 728-3118
314½★Zbaracki Thos J 724-5066
4TH ST INTERSECTS
404 Freeman K A ● 724-6907
415 Alworth Martha B Mrs ● 724-2987
420 Pogson Dermot M ● 724-4003
424 Maddy Clarence E ● 724-9110
455 Lanigan Wm A ● 728-2032
456 Pollard Wm S ●
LAKE VIEW AV INTERSECTS
518★Stubenvoll Robt W ●
518½★Voels Angie
519 Matuseski Mark J ● 724-8694
622 Thompson Theo M ● 728-3565
VERMILLION RD INTERSECTS
WALLACE AV INTERSECTS
8TH ST INTERSECTS

60
HAWTHORNE RD SOUTH –FROM 3100 E SUPERIOR SOUTH

ZIP CODE 55812
E SUPERIOR ST INTERSECTS
20 Mc Donough Patricia M 724-0625
BRANCH ST ENDS
GREYSOLON PL BEGINS
108 Collins Roger T ● 724-7351
GREYSOLON RD INTERSECTS

8
HAZEL ST –FROM N 77TH AV W WEST 1 NORTH OF ST LOUIS RIVER RD

ZIP CODE 55810

2
HEARD ST EAST –FROM 300 COMMONWEALTH AV EAST

ZIP CODE 55808
16 Smith Gerald G ● 626-1575
99TH AV W INTERSECTS
124 Sibik Victoria M Mrs ● 626-1476
98TH AV W INTERSECTS
315 Townsend Dan J
96TH AV W INTERSECTS
402 White Elwood J ● 626-1595
406 La Fave Louella Mrs ● 626-1556
95TH AV W INTERSECTS

2
HEARD ST WEST –FROM 300 COMMONWEALTH AV WEST

ZIP CODE 55808

9-J
HEARTHSIDE LA –FROM WEST OF 1307 BIRCHWOOD DR

ZIP CODE 55810
35★Stewart Wm W ● 624-3035

70
HEATHER AV –FROM JEAN DULUTH RD NORTHEAST BET BEL AIRE AV AND LOCHAIRE AV

ZIP CODE 55803
CLAYMORE ST INTERSECTS
2220 Under Constn
2201 Champion Alan
2202 Letourneau Donald A ● 525-7407

DULUTH AREA FAMILY Y.M.C.A.
TEL. (218) 722-4745
YMCA 302 W. 1st St.
Duluth (55802)

1986 - Duluth, MN -

Proctor Federal Credit Union
624-5761 628-2841
410 2d AV., PROCTOR, MN. (55810) BRANCH OFFICE, 3924 GRAND AVE., DULUTH, MN 55807

HAINES RD—Contd
3911 Larson Carl A @ 727-6363
3924 Mac Gillivray Mervin R @ 727-3557
3925 Ugstad Martin H @ 727-2534
4003 Olsen Wm C @ 723-1751
4004 Wikelius Clifford A @ 727-6961
4005 Olsen Geo @ 727-5390
4014 Shields Clara K Mrs @ 722-9192
4015 Bergh Richd R @ 727-5994
4017 Milosevich Steve P @ 722-0736
4025★Warner Virgil @
4035 Caskey Paul D 723-4239
4125 Huttel Robt F @ 727-6184
4215 Vacant
4303 No Return
4304 Schubitzke Edw @ 722-2974
4317 Nelson Cora P Mrs @ 722-9181
4403★Archambeau Carolyn
4415 Struck Robt A @ 722-8158
4416 Score Joseph R Jr @ 722-9164
4422★Kolquist Gary K @ 727-2019
4429 Sorensen Kenneth E @ 722-0059
4503 Daugherty Patricia A @ 727-5122
4507 Eisel Gene J @ 727-4703
4531 Matel Carl J @ 722-9543
4532 Dahlberg C Axel @ 722-4552
4604★Nelson Gregg A @ 726-0489
4607 Benson Roy @ 722-1054
4614 Howard Robt T @ 727-1775
4621 Armstrong Miles W @ 727-7965
4622 No Return
4623 Sturz Duane F @ 726-0520
4708 Vacant
4711 Rindahl Wm R @ 727-1710
4715 Mc Laughlin Hugh D @ 722-7802
4717 Anderson Allen J @ 727-4054
4728 Kolquist Wallace @ 727-2833
4729 Gaus Fred W @ 723-9876
4730 Carlsen Lois M Mrs @ 727-5898
4731 Price Donald D @ 722-8407
4802 Hanson Gerald A @ 722-0434
4823 Vacant
4827 Mudek Robt E @ 727-3130
4902 Larson Knute H @ 727-2505
4918 Ahonen Onni A @ 722-5681
4975★Cullen Linda L 723-2338
4977★Butler Jackie A 727-8256
4979★Johnson Robt B 722-4425
4981★Northey Lynne S 722-0441
4983★Pehl Gail A 726-0837
4985 No Return
4987★Potter Anthony 727-2306
4989★Tout Jo Anne 726-0444
4991★Singleton Leslie 722-7885
4993★Olund Mary 726-0996
4995★Sandstrom Sue J 727-7523
4997★Vieau Judy K 727-7254
4999 Maple Grove Estates Apts 727-8874
100★Rolson Jeanne
101★Saari Waino H 722-8097
102★Ostronski Leona M 722-4798
103★Acker Clara 727-4498
200★Nelson Harold A 722-6011
201★Holm Olga C 722-8963
202★Skoglund Alice M 723-8939
203★Johnson Carl J 727-2628
204★Burns Stanley J 726-2809
205★Drill Marygrace C 726-1579
206★Butler Norma E 726-0802
207★Solem Carl A 722-4712
300★Anderson Olga 722-9046
301★Johnson Ida M 727-1292
302★Tomczak Josephine V 726-1224
303★Hubert Esther M 722-1547
304★Deneweth Viola M 722-6380
305★Hill Lillian M 727-0314
306★Sirois V
307★Lindahl Henry W 722-8687
400★Kyrola S 722-8460
401★Christianson Lucille F 722-4989
402★Erickson Jane 722-7219
403★Sunquist Helen S 722-9988
404★Rogers Elsie H 723-1922
405★Hendrickson Julius A 726-0095
406★Liljegren Sadie S 727-4072
407★Carlson V
500★Peterson Florence E 723-3566
501★Karjala Maxine E 723-1239
502★Bey Marcella 727-1445
503★Joyner Verna S 723-1243
504★Fedler Julia V 722-1297
505★Cornmesser Esther M 722-3557
506★Harning Frank H 723-8118
507★Patenaude Beatrice I 723-8215
5014 Mahla Norman E @ 727-8818

65
MAPLE GROVE RD INTERSECTS
5420 Vacant
Vacant
LINDGREN RD INTERSECTS
Johnson Alfred L @ 727-3462
5531 Rathert Chevrolet Inc 727-7461
5600 Norwest Bank (Br) 723-2793
MILLER TRUNK HWY INTERSECTS
5729 Pizza Plus 727-8389
5735 Nikka Clifford A @ 727-3536
5804 Vacant
5911 Erickson Wm A @ 727-5991
5913 Airport Animal Hospital 727-0128
5915 Rainbow Trailer Park 729-9893
1 Running Ronald L Jr 727-0335
2 Von Talge Sara R @ 722-3580
3 Rapp Larry 727-6725
4 Lunde Marietta @ 723-0022
5 Puckett Ronnie L 722-8075
6★Kephart Sue @
7 Moore Willie G Jr 726-0663
8★Myhre Bob D 722-6243
9★Wattenbarger Geo T
10 Vacant
11 Modeen David J 727-0452
12 Durfee Lori K Mrs @ 723-8169
14 No Return
19★Bartaldt Craig R 722-3239
20★Wigchers Robt A
21★Lufholm James
22 Vacant
26 Bodell Mark 727-2902
27 Vacant
29 Shykes Tena Mrs 722-9761
30 Kroll Bertha V @ 727-6397
31 Kochevar Michelle M 727-6845
32★Kruse Jeff C 727-1577
33 Washington Dan E @ 722-7063
35 Nicolai Kath A @ 727-2039
36 Vacant
37★Krekelberg Omer H @ 720-3142
38★Latvala Emelie L 722-0278
39★Erickson Seth E 727-1717
40 Prihoda Randy J 727-4052
41 Bakke Ings N @ 723-8867
42 Marnich Randy 726-1643
43 Norman Ann C 727-0248
44 Tranmel Susan M Mrs @ 722-4369
45 Salo Raymond L @ 722-8148
46★Siemsen Kathie A @ 726-0544
47 Simonson Cecile M @
48 Lake Kenneth G @
49 Drebaugh Larre L @ 727-6063
50 Fearer Gene R @ 722-8527
51 Olthoff Todd M @ 722-8039
5920 Ziebart Appearance & Protection Service 722-8713
6001 Grandmaison Photographic Studio 727-4000
6005 Adamczak Jas E @ 727-3788
6007 Steele Mae E @ 722-6717
6009★Sipe Connie J 727-0907
6015 Goeppinger Fred R @ 727-7717
6019 Ruhnke Carl F @ 727-7340
ARROWHEAD RD INTERSECTS
6501 Case Power & Equipment 727-3038
6502 Erickson Bertil @ 727-3940
6505 Hedenberg A & Co Inc bldg contrs 727-1617
6618 Vacant
6632 Vacant
SWAN LAKE RD INTERSECTS
7214 Rent-A-Space Mini Warehouse 722-7581
Soleim Jeffrey W 722-7581
AIR PARK BLVD INTERSECTS
7414 Vacant
7418 Vacant
7422 Vacant
7426 Terry J G cigarette distr 722-8646
7430 Kerr Mc Gee Co Corp Dist Ofc minerals exploration dist ofc 726-1164
7434 Kerr Mc Gee Co (Addl Sp) 726-1164
7502 G P M Inc eng prods 722-9904
7506 Arrowhead Medical Systems Inc x-ray equip 727-7208
7510 Dales Corp janitorial sup 722-8938
7620 Northern Drug Co sales 722-4791

45
HALSEY ST —FROM CARVER AV WEST 3 NORTH OF ST MARIE

ZIP CODE 55803
311 Heller Robt E @ 724-3510
315 Steen Ella Mrs @ 728-5953
317 Brooks Evelyn E Mrs @ 724-7623
324 Repenaky Greg R @ 728-2558
401 Jenny Yolanda J Mrs @ 728-6284
MIDWAY AV INTERSECTS
ZIP CODE 55811
518 Pederson Kenneth W @ 724-3698

66
HAMILTON DR —FROM MADISON AV SOUTH 1 WEST SELFRIDGE DR

ZIP CODE 55811
612a★Lund Kevin P
812b★Johnson Brian J 723-8442
812c★Fritz Rochelle M 723-0081
812d★La France Jeffrey A
814a★Carlson Kristin L 722-3463
814b★Chmielewski Mark E 726-1947
814c★Maki Laurel L 723-8269
814d★Koenig Jim 727-1226
816a★Melsha Mike 722-4548
816b★Tischler Glen J 726-1466
816c★Berg Pamela K 727-1716
816d★Banka Leon C 726-1930
818a★Durand Brian J 726-0596
818b★Fishback Bruce J 723-8374
818c★Flas Kristin J 724-6230
818d★Smith Gregory R 727-0608
822a★Claus Timothy D 722-9335
822b★Voelker Le Roy L 726-1179
822c No Return
822d★Huss Stephen J 722-7016
824a★Covak Kerry L
824b★Downing Jon R
824c★Murphy Mary E 727-1146
824d★Ronning Mark G 727-5344
826a★Peters Lisa A 722-0576
826b★Swanson Mark 726-1830
826c★Richner Denise M 722-8741
826d★Carlson Wm A
827d★Carlson Wm A 727-6558

35
HARBOR DR —FROM 5TH AV W TO COMMERCE ST IN A CIR AROUND ARENA AUDITORIUM

ZIP CODE 55802
325 Pioneer Hall 722-5573
Duluth Area Chamber Of Commerce 722-5501
327 Silver Broom Lounge 722-5573
Duluth Curling Club 727-1851
325 Service Corp Of Retired Executives 722-5501
353 Duluth Convention & Visitors Bureau 722-6024
Duluth Superior Excursion Co 722-6218

SECURITY STORAGE COMPANY
AGENT FOR ALLIED VAN LINES
3191 MILLER TRUNK HWY. (55811) TEL. 729-6116

30
HARDING AV S —FROM 2200 HIGHLAND AV NORTH

ZIP CODE 55811
112 La Crosse Kenneth L @ 722-5769

77
HARDY ST W —FROM 444 ARROWHEAD RD NORTH

ZIP CODE 55803
116 Moore Richd @ 724-7259

77
HARTLEY PL —FROM 2001 HARTLEY RD EAST

ZIP CODE 55803
457★Beal Clay G @ 724-3633

77
HARTLEY RD —FROM W VICTORIA NORTHWEST AND THEN NORTH 1 WEST OF DUNEDIN AV

ZIP CODE 55803
ARROWHEAD RD INTERSECTS
1904 Walsh Steph A @ 728-3290
1910 Salyards Jackie L @ 724-3294
1911 Gordon Tom J @ 728-3244
1915 Good Jas W Jr @
1916 Saint Germain Thos J @ 724-1311
1921 Bronool Joel K @ 724-1387
1924 Haworth C Brent @ 724-1266
1925 Waelen Gertrude M Mrs @ 728-4395
1930 Fischer Roger A @ 728-5642
1933 Kaner Alan C @ 726-5403
1934 Ahrens Curtis F @ 724-1528
HARTLEY LA INTERSECTS
1943 Browne Charles W @ 724-0986
1947 Bergerson Donald E @ 724-5886
1952 Sundeen Melvin E @ 728-3273
1955 Curran Irving P 724-0823
1960 Denny
1963 Hartley Roger C @ 728-1936
1966 Donovan John M @ 724-5964
LEWIS ST INTERSECTS
1972 Anderson Paul M @ 728-5853
2001 O'Neill John C @ 724-9440
2002 Nelson Dennis L @ 728-2348
2008 Larsen Clarence W @ 724-7106
2014 Mc Gregor John A @ 724-9458
2015 Anderson Cath M Mrs @ 724-6221
2020 De Byle Roger A @ 723-1562
2021 Bronson Michl A @ 724-9363
2026 Young Allen A @ 724-9232
2029 Abalan Wm D @ 728-3712
2032 Brophy Wm C @ 724-4135

77
HARVARD AV —FROM 400 W LEWIS NORTH 4 WEST OF WOODLAND AV

ZIP CODE 55803
2105 No Return
2115 Kennedy Allan C @ 724-5289
2125 Schilling John F @ 724-5444
2129 Wipson John E @ 724-7429
2130 Mc Gough Mary C Sister @ 728-2419
2134 Ruth Bradley R @ 724-7722
2144 Nordling Vernol A @ 724-1709
2147 Lothner David C @ 728-5250
2201 Shult Steven C @ 724-9231
2320 Lease M Harry Jr @ 724-2153

24
HARVEY ST —FROM PIEDMONT AV WEST 1 NORTH OF MORRIS THOMAS RD

ZIP CODE 55811
2422 Oak Everett @ 722-9238
2432 Reuter Phyllis B Mrs @ 727-4412
2433 Aro Ervin R @ 727-6243
2436 No Return
2439★Ruby David F @ 722-3958
2444 Hoed Mary L Mrs @ 722-8129
2445 Fredrickson Florence V @ 722-0306
2452 Walker Raymond C @ 722-7578
CHAMBERSBURG ST INTERSECTS
2510 Landro Lorraine E Mrs @ 722-2131
2511 Hickey Tim M 722-9187
2515 Johnson Marjorie L 727-7654
2516 Vacant
2519 Spence Dagne M Mrs @
2522 Breole Raymond J @ 727-4139
2525 Lax Roy W @ 727-7295
2528 Lindevig Irvin R @ 722-7903
2533 Meier Joseph @ 727-3869
2534 Molinaro Danl W @ 722-4337
2539★Detaffol David J @ 720-3240
2544 Schlichting Alvin L @ 727-2282
2545 Bauers Thos W @ 727-3640
2546 Cibuzar Robt C @ 722-2316
W LILLIAN AV INTERSECTS
2601 Meyers Fred N @ 722-9577
2602 Carlson Lloyd G @ 722-4645
2607 Klick Joseph G @ 722-4065
2610 Carlson Douglas L @ 726-1681
2617 Carlson Axel B @ 727-2588
2619 Schelinder Doris M Mrs @ 722-9392
2627 Peterson Ray I @ 727-3876
2633 Stockland Robt A Rev @ 727-6906
2639 Gillespie Everett C @ 723-7891
HUTCHINSON RD INTERSECTS
2702 Luczak Chester T @ 727-2228
2710 Peterson Kenneth V @ 722-8673
2714 Novek Karl J @ 723-1908
2722 Hjulstad Viola S Mrs @ 727-1913
2728 Waisanen Edwin @ 722-8879
2736 Johnson Mary T Mrs @ 727-1968
2738 Reid John M @ 722-4392
2739 Johnson Alner R @ 727-1723
2761 Frink Nancy M Mrs @ 727-3268
2802 Bubacz Chester J @ 727-3797
2810 Youngberg Allen J @ 727-7138
2811 Coombes Bradley R @ 722-8436
2816 Olson Guy B @ 727-2621
2821 Bowman Clyde A @ 727-4978
2822 Ellingsen James E @ 722-5103
2827 Zapp Mark W 722-9447
2828 Billings Kenneth G @ 727-3754
2834 Carlson David R @ 722-5097
2840 Miller Robt C @ 722-4353
2841 Kubiak Edmund A @ 722-7138
2844 Johnson Emery G @ 727-5470
2845 Bohlin Morris W @ 722-5761
2850 Granmo Dale W @ 727-3978
2851 Anderson Alice M Mrs @ 727-1467

66
HAWKINS ST —FROM BLACKMAN AV EAST 3 NORTH OF BAYLIS

ZIP CODE 55811
FERN AV INTERSECTS
302 O'Brien Geo M @ 728-4838
303 Scheelk Herbert C @ 728-2342
312★Kreutzkampf June E @ 724-8380
313 Schraman Carl W Jr @ 724-8422
320 Kirsch Alex C @ 724-3576
324 Vacant
325 Broman John D @ 724-0143
326 Hendrickson Le Roy E @ 724-5044
328 Dunleavy Kerwin J @ 724-8938
333 Kauchick Jody A @ 724-4779
341 Tusler Robt G @ 724-5069
515 Chelstrom Richd L @ 728-2673

50
HAWTHORNE RD NORTH —FROM 3100 E SUPERIOR ST NORTH

ZIP CODE 55812
1 Baddin Albert E @ 724-7607
2 Zinsmeister Wm II @ 724-6016
7 Harkness Paul W @ 724-5686
19 Laplante Patricia Mrs @
29 Moulder Wm A 724-4774
1ST ST INTERSECTS
101 Irving Stanley D @ 728-3282
124 Tygart Robt L @ 724-3692
131 Kronzer Paul F @ 724-5400
2D ST INTERSECTS
202★Baker Dale R @

76
314★Shull James
314½ Vacant
4TH ST INTERSECTS
404 No Return
415 Alworth Royal D Jr @ 724-2967
420 Udesen Jerry H @ 724-4451
424 Maddy Clarence E @ 724-9110
455 Lanigan Wm A @ 728-2032
456 Pollard Wm S @
LAKE VIEW AV INTERSECTS
518 Hartley S M @ 724-1776
518½ Behning Patricia J
519 Blackman James R @ 724-2346
622 No Return
VERMILLION RD INTERSECTS
WALLACE AV INTERSECTS
8TH ST INTERSECTS

50
HAWTHORNE RD SOUTH —FROM 3100 E SUPERIOR SOUTH

ZIP CODE 55812
29 Mc Donough Patricia M 724-0628
BRANCH ST ENDS
GREYSOLON PL BEGINS
108 Collins Roger T @ 724-7351
GREYSOLON RD INTERSECTS

9
HAZEL ST —FROM N 77TH AV W WEST 1 NORTH OF ST LOUIS RIVER RD

ZIP CODE 55810

2
HEARD ST EAST —FROM 300 COMMONWEALTH AV EAST

ZIP CODE 55808
16 Smith Gerald G @ 626-1575
99TH AV W INTERSECTS
124★Sobik Victoria M Mrs @ 626-1476
98TH AV W INTERSECTS
315★Raymond Allen L @
96TH AV W INTERSECTS
402 White Elwood J @ 626-1595
406 La Fave Louella Mrs @ 626-1556
95TH AV W INTERSECTS

3
HEARD ST WEST —FROM 300 COMMONWEALTH AV WEST

ZIP CODE 55808

8
HEARTHSIDE LA —

ZIP CODE 55810
35 Nordell Mark D Rev @ 624-3836

70
HEATHER AV —FROM JEAN DULUTH RD NORTHEAST BET BEL AIRE AV AND LOCHAIRE AV

ZIP CODE 55803
2201 No Return
2202 Smith Jeffrey V @ 525-1153
2207 No Return
2215 Bartlett Elfs A @ 525-6111
2221 Viranke Christopher J @ 525-4697
2223★Klopp Michl A @ 525-7751

ANDERSON LINOLEUM
TEL. 728-3661
932 E. 4th St.

TILE & CARPET
Duluth, MN

HAINES RD—Contd
49⋆Hubbell Marlene 722-5274
50⋆Fearer Gene R 722-8527
51⋆Peterson Karen
5920 Ziebart Appearance & Protection Serv 722-8713
6001 Grandmaison Photographic Studio 727-4000
6006 Adamczak Jos E ⊕ 727-3788
6007 Steele Mae ⊕ 722-6717
6008 Wagner Mark A 727-4789
6015 Goeppinger Fred R ⊕ 727-7717
6018 Rubnke Carl F ⊕ 727-7340
6021 Jensen Gordon A ⊕ 723-8417
ARROWHEAD RD INTERSECTS
6501 Zeco Company The contrs equip 722-5568
6502 Erickson Bertil ⊕ 727-3940
6506 Hedenberg A & Co Inc bldg contrs 727-1517
6518 Hanson Electric Bicycle 727-2122
Hanson Arnold M ⊕ 727-2122
6532 Williams John
SUSAN LAKE RD INTERSECTS
7214 Rent-A-Space Mini Warehouse 722-7581
Rds⋆La Montagne Larry A
AIR PARK BLVD INTERSECTS
7414 Budget Rent-A-Car 727-2297
7418 Williams E K & Co bkpg serv 723-1900
7422 Northern Tier Underground 722-3431
7426 A-B-E Environmental Systems mfrs reps 727-1767
7430 Envirotech Process Equipment 722-0806
7502 G P M Inc eng prods 722-6904
7506 Arrowhead Medical Systems Inc x-ray equip 727-7203
7510 Dalco janitorial sup 722-6935
7620 Northern Drug Co whol 723-4791
State Air National Guard 727-6886

45
HALSEY ST —FROM CARVER AV WEST 3 NORTH OF ST MARIE

ZIP CODE 55803
311 Heller Robt E ⊕ 724-3510
315 Steen Ella Mrs ⊕ 728-5963
317 Brooks Evelyn E Mrs ⊕ 724-7623
324 Repinski Greg ⊕ 723-2558
401 Jenny Yolanda J Mrs ⊕ 728-6284
MIDWAY AV INTERSECTS
ZIP CODE 55811
516 Pederson Kenneth W ⊕ 724-3698

35
HARBOR DR —FROM 5TH AV W TO COMMERCE ST IN A CIR AROUND ARENA AUDITORIUM

ZIP CODE 55802
325 Pioneer Hall 722-5573
Duluth Area Chamber Of Commerce 722-5501
Duluth Retail Merchants Assoc 722-5501
Duluth Curling Club 727-1851
Create Jobs Inc emp agcy 722-5501
Duluth Downtown Merchants Assn 722-5501
Service Corp Of Retired Executives 722-5501
353 Duluth Superior Excursion boat serv 722-6218

20
HARDING AV S —FROM 2200 HIGHLAND AV NORTH

ZIP CODE 55811
112 La Crosse Kenneth L ⊕ 722-5789

77
HARDY ST W —FROM 444 ARROWHEAD RD NORTH

ZIP CODE 55803
116 Vacant

77
HARTLEY RD —FROM W VICTORIA NORTHWEST AND THEN NORTH 1 WEST OF DUNEDIN AV

ZIP CODE 55803
ARROWHEAD RD INTERSECTS
1904 Walsh Steph A ⊕ 722-3290
1910⋆Selyarde Jackie L Mrs ⊕ 724-3294
1911 Gordon Thos J ⊕ 723-3244
1915 Good James W ⊕ 728-8273
1916 Saint Germain Thos J ⊕ 724-1311
1921 Broccol Joel K ⊕ 724-1367
1924 Vacant
1925 Waelen Gertrude M Mrs ⊕ 728-4395
1930 Fischer Roger A ⊕ 728-5642
1933 Kaner Alan C ⊕ 728-5403
1934 Ahrens Curtis F ⊕ 724-1523
1943 Browne Charles W ⊕ 724-0966
1947 Bergerson Donald E ⊕ 724-5886
1952 Sundeen Melvin E ⊕ 728-3273
1955 Gollinger Jacqueline K Mrs ⊕ 724-1987
1960 Vacant
1963 Willis Joseph T ⊕ 724-9292
1966⋆Donovan John M ⊕ 724-6984
1972 Anderson Paul M ⊕ 728-5853
2001 O'Neill John C ⊕ 724-9440
2002 Nelson Dennis L ⊕ 728-2548
2008 Larson Clarence W ⊕ 724-7106
2014 Mc Gregor John A ⊕ 724-9458
2015 Anderson Cath M Mrs ⊕ 724-6221
2020 De Byle Roger A ⊕ 728-1562
2021 Bronson Michl A ⊕ 724-6363
2026 Young Allen A ⊕ 724-9232
2029 Abalan Wm D ⊕ 728-3712
2032 Brophy Wm C ⊕ 724-4135

77
HARVARD AV —FROM 409 W LEWIS NORTH 4 WEST OF WOODLAND AV

ZIP CODE 55803
2105 Katz Virginia Mrs
2115 Kennedy Allan C ⊕ 724-5289
2125 Schilling John F ⊕ 724-5444
2129 Wipson John E ⊕ 724-7429
2130 Mc Gogh Mary C Sister 728-2419
2134 Ruth Bradley R ⊕ 724-7722
2144 Nordling Vernol A ⊕ 722-3021
2147 Sandelin Marcia A Mrs ⊕ 728-5250
2201 Trindy Steven
2320 Lease M Harry Jr ⊕ 724-2153

24
HARVEY ST —FROM PIEDMONT AV WEST 1 NORTH OF MORRIS THOMAS RD

ZIP CODE 55811
2418 Under Cosetn
2422 Oak Everett ⊕ 722-9238
2432 Reuter Andrew ⊕ 727-4412
2433 Aro Plumbing contrs 727-7602
Aro Ervin R ⊕ 727-6248
2436 No Return
2439 Berger Anita G Mrs ⊕ 727-1960
2444 Rood Mary L Mrs ⊕ 722-8129
2445 Fredrickson Florence V ⊕ 722-0306
2452 Walker Raymond C ⊕ 723-7578
CHAMBERSBURG ST INTERSECTS
2510 Landro Lorraine E Mrs ⊕ 722-2131
2511⋆Nelson Gregory S ⊕ 722-3290
2515⋆Quadarer John 722-5792
2516 Cartier Gerald 727-4035
2519 Spence Allyn L ⊕ 727-1139
2522 Brecks Raymond J ⊕ 727-4139
2525 Wallin Arth R ⊕ 727-1489
2528 Lindevig Irvin B ⊕ 722-7903
2533 Meier Joseph ⊕ 727-3869
2534 Molinaro Dani W ⊕ 723-4337
2539 Williams Richd G ⊕ 727-4290
2544 Schlichting Alvin L ⊕ 727-2282
2545 Bauers Thos W ⊕ 727-3640
2546 Cibusar Robt C ⊕ 722-2316
2601 Meyers Fred N ⊕ 722-0677
W LILLIAN AV INTERSECTS
2602 Carlson Lloyd G ⊕ 722-4545
2607 Klick Joseph G ⊕ 722-4065
2610 Sata Bertha H Mrs ⊕ 723-6858
2617 Carlson Axel B ⊕ 727-2585
2619 Schalinder Doris M Mrs ⊕ 722-8392
2627 Peterson Ray I ⊕ 727-3876
2633 Orr Robt Rev ⊕ 722-1176
2639 Chesiak W Mrs ⊕ 727-7362
HUTCHINSON RD INTERSECTS
2702 Lucsak Chester T ⊕ 727-2326
2710 Peterson Kenneth V ⊕ 723-8673
2714 Novak Karl J ⊕ 723-1906
2722 Hjulstad Viola S Mrs ⊕ 727-1913
2723 Waisanen Edwin ⊕ 723-8879
2736 Johnson Mary T Mrs ⊕ 727-1968
2738 Reid John M ⊕ 722-4392
2739 Johnson Alner R ⊕ 727-1723
2761 Frink Nancy M Mrs ⊕ 727-3266
2802 Bubacz Chester J ⊕ 727-3767
2810 Youngberg Allan J ⊕ 727-7138
2811 Coombes Bradley R ⊕ 722-9426
2816 Olson Guy B ⊕ 727-3621
2821 Bowman Clyde A ⊕ 727-4978
2822 Ellingson James E ⊕ 722-5103
2827 Zapp Mark W 722-9447
2828 Billings Kenneth G ⊕ 727-5754
2834 Carlson David R ⊕ 722-5097
2840 Miller Robt C ⊕ 722-4353
2841 Kuhtak Edmund A ⊕ 722-7138
2844 Johnson Emery G ⊕ 727-5470
2845 Bohlin Morris W ⊕ 722-5761
2850 Granmo Dale W ⊕ 727-3978
2851 Anderson Alice M Mrs ⊕ 727-1467

66
HAWKINS ST —FROM BLACKMAN AV EAST 2 NORTH OF BAYLIS

ZIP CODE 55811
FERN AV INTERSECTS
302 O'Brien Geo M ⊕ 728-4838
303 Schoelk Herbert C ⊕ 728-2342
312 Holt Paul J ⊕ 724-5904
313 Schramm Carl W Jr ⊕ 724-5422
320 Kirsch Alex C ⊕ 724-3576
324 Ekbom James T ⊕ 728-5849
325 Broman John D ⊕ 724-0143
326 Hendrickson Le Roy E ⊕ 724-5044
328 Dunleavy Kerwin ⊕ 722-6961
333 Kauchick Jody ⊕ 724-4779
341 Tusler Robt G ⊕ 724-5069
515 Chelstrom Richd L ⊕ 728-3673

50
HAWTHORNE RD NORTH —FROM 3100 E SUPERIOR ST NORTH

ZIP CODE 55812
1 Baldin Albert E ⊕ 724-7607
2 Zinsmaster Wm H ⊕ 724-6016
7 Vacant
19 No Return
29 Legaard Jan P
1ST ST INTERSECTS
101 Irving Stanley D ⊕ 728-3282
131 No Return
2D ST INTERSECTS

76
202 Lafave Rodney J ⊕ 728-6571
314 Darland Raymond W ⊕ 724-2051
4TH ST INTERSECTS
404 Freeman Richd E
415 Alworth Royal D Jr ⊕ 724-2987
420 Higgins Raymond J ⊕ 724-3621
424 Maddy Clarence E ⊕ 724-9110

LYNN BEECHLER REALTY
WHERE SERVICE MAKES THE DIFFERENCE
507 Lonsdale Building, Duluth, Minnesota 55802
218-723-8101

N HAWTHORNE RD—Contd
455 Lanigan Wm A ⊕ 728-2032
456 Pollard Wm S ⊕ 722-2695
LAKE VIEW AV INTERSECTS
518 Hartley Guilford ⊕ 724-1776
518½ Conrad Thos J 724-3551
519 Blackman James R
522 Dahlke Vernon H ⊕ 724-4780
VERMILLION RD INTERSECTS
WALLACE AV INTERSECTS
8TH ST ENDS

50
HAWTHORNE RD SOUTH —FROM 3100 E SUPERIOR SOUTH

ZIP CODE 55812
29⋆Mc Donough Patricia ⊕ 73-0628
BRANCH ST ENDS
GREYSOLON PL BEGINS
106 Collins Roger T ⊕ 724-7361
GREYSOLON RD INTERSECTS

8
HAZEL ST —FROM N 57TH AV W WEST 1 NORTH OF ST LOUIS RIVER RD

ZIP CODE 55810

2
HEARD ST EAST —FROM 200 COMMONWEALTH AV EAST

ZIP CODE 55808
16 Smith Gerald G ⊕ 626-1575
99TH AV W INTERSECTS
124 Sibik Victoria M Mrs ⊕ 626-1476
98TH AV W INTERSECTS
315 Vacant
96TH AV W INTERSECTS
402 White Elwood J ⊕ 626-1595
406 La Fave Louella Mrs ⊕ 626-1556
95TH AV W INTERSECTS

2
HEARD ST WEST —FROM 300 COMMONWEALTH AV WEST

ZIP CODE 55808

70
HEATHER AV —FROM JEAN DULUTH RD NORTHEAST BET HEL AIRE AV AND LOCHAIRE AV

ZIP CODE 55803
2201 Cedar John B Rev ⊕ 525-6048
2202 Smith Jeffrey V ⊕ 525-1153
2207 Henderson Charles W ⊕ 525-3740
2215 Winfield Robt A ⊕ 525-2926
2221 Vizanko Christopher ⊕ 525-3587

30
HELEN ST —EAST OF ARLINGTON AV AND SOUTH OF OBSERVATION RD

ZIP CODE 55811

17
HELM ST WEST —FROM 26TH AV W WEST 2 SOUTH OF SUPERIOR

ZIP CODE 55806
27TH AV INTERSECTS
28TH AV INTERSECTS
29TH AV INTERSECTS
2907 Better Brands Inc beer distr 722-9441
2923 Ribbon Distributing Inc beer distr 722-0010
30TH AV INTERSECTS

6
HENDRICK AV —FROM KING NORTH 1 WEST OF N 66TH AV W

ZIP CODE 55810

2
HERMAN AV —FROM PRESCOTT SOUTHEAST

ZIP CODE 55808

34
HERMANTOWN RD —FROM PIEDMONT AV NORTHWEST 1 EAST OF CHAMBERSBURG AV

ZIP CODE 55811
3900 Frank's Quality Foods 722-8584
3901 Pat's Skelly Station 722-9544
3908 Jablonski Harry A ⊕ 722-7025
3910 Seeley Gordon D logger ⊕ 722-7804
3911 No Return
3914 De Loyd Douglas B ⊕ 722-7614
3915 Salem Lutheran Church 727-1357
3916 Wirtz Gary L ⊕ 722-0142
3918 Murray Harry G ⊕ 722-8520
3920 Vacant
3924 Savola Gust ⊕ 722-6083
3926 Johnson Engman C ⊕ 727-3074
3928 Langdahl Bernard A ⊕ 722-3504
3928½⋆Magen Julie C 722-6121
3932 Dyson Gary R ⊕ 723-1849
3937 Engwall Florist & Greenhouse 727-8961
Engwall Clarence T ⊕ 727-8961
3942 Carlson Greenhouses & Florist 722-9868
Carlson Lloyd P ⊕ 722-9868
OKERSTROM RD INTERSECTS
4000 Brooks Frank ⊕
4005 Swanson Einar A ⊕ 727-2817
4008 Hanson Patk G ⊕ 727-3610
4010 Mac Millen Duncan W ⊕ 727-4906
4013 Moen Ole ⊕ 727-7944
4015 Archambeau Josephine Mrs ⊕ 722-0314
4016 Hood James M ⊕ 722-3083
4019 Dunaisky Andrew J ⊕ 727-6587
4023 Mc Manus Michl G ⊕ 722-2937
4024 Duncan Lloyd J Jr ⊕ 722-4072
4026 Heikkinen Wayne J ⊕ 722-5604
4031 Beckman Louis A ⊕ 727-1860
4032 Herman Richd D ⊕ 727-7739
4035 No Return
4037 Lane Richd ⊕ 727-1703
4038 Erikson Clyde O carp ⊕ 727-4303
4039⋆Valley Douglas ⊕ 727-2367
STEBNER RD INTERSECTS
4109 Nelson Roy C ⊕ 729-6255
4111 Pfeiffer Larry S ⊕ 729-8655
4112 Bethany Cemetary 624-4549
KENROY RD INTERSECTS
4113 Griffith Richd M ⊕ 729-7789
4114⋆Peterson Marshel A ⊕ 729-9183
4115 Halverson Herbert W ⊕ 729-9176
4116 Mac Donald Norman E ⊕ 729-9197
4118 Mc Rae John J ⊕ 729-6124
Mc Rae Mary C Mrs 729-9616
4119 Rothe Richd R ⊕
4120 Funk Royal E ⊕ 728-7110
4121 Bergh James E ⊕ 729-6936
4122 Weiss Marvin J ⊕ 729-6206
4123 Velander Willard L ⊕ 729-6542
4127 Oland John L ⊕ 728-6652
4128 Weiss Raymond E ⊕ 729-6186
4130 Carlson C Wm ⊕ 729-6734
GETCHALL RD INTERSECTS
4205 Union Cemetery 729-6760
⋆Sloan Martin 729-6760
4207 Melanson Kenneth
4208 Bonnett Robt E ⊕ 729-6446
4209 Witta Archie H ⊕ 729-6869
4210 Gerada Ervin H ⊕ 729-6827
4211 Witte Leonard ⊕ 729-6316
4214 Beacon Inn 729-6633
4215 Vacant
4218 Zylka Charles F ⊕ 729-9191
4221 Wagner Wilmer A ⊕ 729-6109
4224 Stebner Wm E ⊕ 729-7637
4229 Wagner Raymond L ⊕ 729-9048
4230 Koutsoyan James P ⊕ 729-6242
LA VAQUE RD INTERSECTS

66
HICKORY ST —FROM TRIGGS AV WEST 4 SOUTH OF ST MARIE

ZIP CODE 55811

66
HIGH ST —FROM 1400 FERN AV EAST 1 NORTH OF BLVD

ZIP CODE 25805
209⋆Payment Charles M 724-5356
215 Vacant
233 Cofield Brooks ⊕ 728-6173
313 Patrick Robt W 724-4575
321 Virkhaus Taavo ⊕ 724-6853
601 Fredrickson Viola K Mrs ⊕ 724-1179
7TH AV INTERSECTS
701 Olsson Egill ⊕ 724-7766
705 Maas Wm G
706 Bakke Carol Mrs ⊕ 728-2876
710 Moir John W ⊕ 724-4546

24
HIGH PARK RD —FROM PIEDMONT AV EAST 1 NORTH OF 6 LINCOLN PARK RD

ZIP CODE 55811
2314 Hellman Oren F ⊕ 722-4977
2323 Vacant

11
HIGHLAND ST —FROM 5514 N CENTRAL AV WEST

ZIP CODE 55807
5514 Le Clair Wm ⊕ 628-2660
5516 Erickson Edwin ⊕ 624-2976
5520 Vacant
5524 Youngstrom Rosaline M Mrs ⊕ 624-2019
5525 Nosek Wallace J ⊕ 624-5610
5528⋆Nelson Wm
5529 Novack Robt F ⊕ 624-0151
58TH AV INTERSECTS
5601 Marshalek James J ⊕ 624-7810
5604 Strom Lawrence J ⊕
5606 Meier Eva I Mrs ⊕ 624-4033
5609 Zylka Arth J ⊕ 624-9517
5610 Mason Howard B ⊕ 624-3011
5612 Haglund Howard S ⊕ 624-4110
5613 Hansen Florence M Mrs ⊕ 624-4420
5628 Carlson Mark A ⊕ 628-2508
57TH AV INTERSECTS
5712 Lundquist Danl L
5714 Kucharski Earnest J ⊕ 624-2788
5715 Trudeau Patricia A Mrs ⊕ 624-2151
5716 Ferguson Marguerite I Mrs ⊕ 624-2063
5718 Barstrom Alan P ⊕
5723 Priley Betty J Mrs ⊕ 624-4174
5725 Johnson Harold J ⊕ 624-9177
56TH AV INTERSECTS
5802 No Return
5805 Vacant
59TH AV INTERSECTS
6004 Johnson Shirley
6010 Myre Vernon P ⊕ 624-3586
N 61ST AV W INTERSECTS
D M&I R CROSSES
6102 Bunt Geo R 624-6594

8
62D AV INTERSECTS
6229 Begin Lawrence V ⊕ 624-7357

2023 Duluth-North Shore, MN - Polk City Directory

GREYSOLON RD Cont'd
2301 Grytdahl Byron L ✓w 24 a (1901)
2302 Tibbetts Alice L 4 a (1956)
2310 Martens Peter A 5 a (1953)
2313 Foley Gary P & Dorothy J ✓@w 3 a (2014)
2314 May Horst G ✓ 42 a (1955)
2320 Royal James J 45 a (1949)
Ⓣ Watson Rondi J ✓ a (1939)
2322 Sandell Richard G & Kathryn J ✓@ 24 a (1920) 218-724-9613
2323 Hamilton Earl T Jr & Beth A ✓ 26 a (1988) 218-728-3491
2330 Murray Catherine A ✓ 9 a (1941) 218-464-4502
2401 Gilbert Greg C ✓w 64 a (1979)
Gilbert Ana A
2402 Wang Shenlun ✓@ 13 a (1939)
2408 No Current Listing
2412 Lutzka David R ✓@w 80 a (1940)
Lutzka Cira
2417 Bradley Ryan & Elaine K ✓w 21 a (1942)
Ⓣ Ryan Bradley ✓
2420 Leppi Cherie L ✓@w 30 a (1940)
2424 Wiczak-Bertsch Jennifer C ✓ 23 a (1941)
2426 Austin Jay A & Elizabeth C ✓ 17 a (1928) 218-724-1575
2429 1 Bhopal Jaidev R ✓ 4 a (1914)
1 Bhopal Kaitlyn M
2 No Current Listing
2429 1/2 Graves Mary G 13
2430 No Current Listing
2502 Maki Dennis L 16 a (1951)
2512 Lenox Lesley S ✓ 4 a (1958) 218-724-3868
Lenox Howard A 218-724-3868
2518 Ⓣ Craven Jodi ✓
Timmerman Dustin D & Kalli J ✓ 10 a (1949)
2522 Kappers Jarry M & Deetta S 36 a (1949)
2525 Silvola Andrea J & Dain L ✓w 9 a (1959)
2526 No Current Listing
2531 Taylor Sean L 15 a (1953)
2536 Peluso Rita ✓ 9 a (1938)
2600 Case Delbert W & Jeanne P ✓ 22 a (1938)
2603 Savastiades John ✓ 9 a (1939)
2610 Wallis Mark D & Kathryn D @ 12 a (1940)
2615 Berg Janice E 10 a (1939)
2620 Vanstrom Neal R ✓ 39 a (1954) 218-724-1403
Vanstrom Wahli 218-724-1403
2700 Chandler Eric W & Shelley Z ✓w 5 a (1962) 218-728-4410
2710 Ⓣ Apalqvist Eva ✓@
Ⓣ Uehling Mark D ✓ a (1939)
2724 Savastiades Patra M ✓w 9 a (1939)
Savastiades Demetrius
2725 Lucca Michael J & Jill C ✓@w 64 a (1948) 218-724-7365
2730 Loraas Paul A & Dawn M ✓@w 19 a (1950) 218-728-2656
+ S 28TH AVE E INTERSECTS
2800 Sands Gloria I ✓w 34 a (1978) 218-728-3307
2801 Zarins Joann L ✓ 52 a (1948)
2809 Salmela Chad E w 13 a (1951)
Salmela Ira M
2810 Debrine Frederick R Jr & Kelly M ✓w 2 a (1933)
2815 Cruz Renan E ✓ 4 a (1933)
Ⓣ Foster Lisa ✓
Fuller Boyd C ✓ 4 a (1946)
Fuller Lisa N w
2816 Dauner Daniel G & Kimberly N ✓ 4 a (1927)
2820 Ranelli Paul L & Carla ✓@w 20 a (1942) 218-728-8128
2821 Ⓣ Marcus George D ✓ a (1939)
2824 Schneider Michael J & Jan J ✓@w 29 a (1942)
2825 Alaspa Kimberly A 23 a (1942)
2831 Shilman Nick S & Sarah ✓ 17 a (1943)
2832 Wellnitz Shawn M & Jennifer M ✓w 19 a (1928)
2901 No Current Listing
2902 Maruca Mandi ✓ 20 a (1939)
Tellor Tracey A 24 a (1926)
2906 JULIAN BOATWORKS LLC boat rpr
Julian Melissa G ✓w 7 a (1940)
Julian Randy w
2909 Renier Thomas S & Debra J ✓w 35 a (1932)
2910 Gillett Julia E w 26 a (1952)
2914 Gomke Monte A @ 20 a (1925)
2915 Ostman Paul T & Mary M ✓ 64 a (1924) 218-724-8119
2919 Pilate Scott R & Maria ✓ 12 a (1924) 218-724-2305
2920 Ojakangas Susanna K ✓ 2 a (1926)
2924 Ⓣ Anakka Milburn
2925 Pailliotet Ronald 11 a (1939)
2928 Evans Mary J ✓ 49 a (1925) 218-724-0261
Evans Molly J 218-724-0261
2931 Vandruten William A & Sharon E ✓w 46 a (1928) 218-481-7273
2932 Klassen Heidi L ✓ 10 a (1965) 218-724-1255
Klassen Madison 218-724-1255
2940 Hewell Elizabeth N ✓ 2 a (1942)
3001 Buria John A & Alice L ✓@ 36 a (1911)
3009 Nilsson Lukas 2 a (1939)
Walls Melissa L ✓ 9 a (1959)
3015 Baocheng Zhao 4 a (1939)
Kuettel K ✓ 4 a (1939) 218-525-2513
3103 Johnson David M & Mary P ✓@ 20 a (1942)
3104 Maddy Michael M & Marta T ✓@ 64 a (1941)
3110 Scherer Carrie L ✓w 16 a (1939)
3111 Crowell Richard D & Barbara K ✓@w 17 a (1965) 218-525-7103
3120 Klassen Heidi L ✓@ 19 a (1929) 218-728-6990
Klassen Mason 218-728-6990
3121 Wyatt Dylan C ✓ 2 a (1925)
3122 No Current Listing
3124 Ross James M Jr & Suzanne M ✓@w 27 a (1995) 218-724-4682
3125 Pedersen Theodore D & Ayda C ✓@ 20 a (1950) 218-729-8733
3126 Wolterstorff Susan L ✓ 33 a (1942) 218-728-3789
Wolterstorff SI 218-728-3789
3129 Brown James D & Megan ✓w 26 a (1947) 218-728-9326
3135 Riddle Elizabeth A ✓@ 29 a (1950)
3205 Lusche Jill L 8 a (1939)
+ CONGDON PARK DR INTERSECTS
+ S 32ND AVE E INTERSECTS
• ZIP CODE 55804 CAR-RT C075
3302 Larson Joshua M ✓w 8 a (1953)
Larson Kaitlin
3310 Deloia Linda R ✓ 9 a (2014)
Deloia Matthew A
3319 Weinkauf Michael A ✓ 19 a (1956)
Weinkauf Ben
3400 Scotland Eric B & Lissa B ✓@w 9 a (1949)
+ S 35TH AVE E INTERSECTS
3500 Dougherty Thomas E & Mary B ✓ 64 a (1959)
3502 Bursch Craig W & Paula J ✓w 17 a (1947)
3512 Meland Carter T ✓w 2
3515 Signorelli Joseph J & Ryann M ✓ 8 a (2016)

GREYSOLON RD Cont'd
3518 Whiteside William B & Melissa S 9 a (1952)
3528 Javorina Paul S ✓@w 64 a (1951) 218-728-5652
Javorina Colleen 218-728-5652
3536 Forseth William R ✓ 8 a (1959) 218-525-2746
3540 Krovitz Esther S ✓ 53 a (1954) 218-724-4119
Krovitz Susan B 218-724-4119
Ⓣ Nass Kimberly ✓w
Sundeen Stephan L & Kimberly H ✓@w 5 a (1954)
3543 Boben Mark E & Linda ✓@ 13 a (2010) 218-724-4608
3548 Ⓣ Macdonald Mark L
3601 Braatan Mary ✓ 2 a (1951)
Braatan Katie
3602 Puff John R & Janet M ✓w 29 a (1966) 218-724-1044
3610 Newstrom Karen L & Daniel ✓@ 64 a (1953)
3616 Leighton Richard J & Bridget A ✓w 28 a (1954) 218-724-8597
3622 Cragun Ormonda R & Heidi J ✓ 4 a (1952)
3623 Signorelli Lara A ✓w 14 a (1948)
3627 No Current Listing
3630 Khoury Dwight D & Diane J ✓@ 24 a (1952) 218-728-1330
3704 Sederberg Bryan J ✓w 9 a (1952)
Sederberg Nicole
3707 Johnson Terry M & Julia P ✓ 33 a (1954)
3708 Leis Frank L & Rosemary A ✓ 64 a (1951) 218-724-5884
3714 Andresen Donald G ✓@ 53 a (1949) 218-724-1188
Andresen David 218-724-1188
3715 Guttormsson Stefan P & Rosemary R ✓@w 43 a (1946) 218-728-4037
3721 Agriesti George N ✓@ 33 a (1949) 218-724-6316
Agriesti George J 218-724-6316
3722 Lafferty John P III & Laura T ✓ 28 a (1951) 218-724-2593
3725 Boyd Carla L ✓ 7 a (1952)
Boyd Julia w
3728 No Current Listing
3729 Barker Elizabeth R ✓ 13 a (1959) 218-724-1439
3732 Rogers Patricia ✓ 3 a (1955) 218-724-3470
3733 Sanders Craig A & Debra K @ 30 a (1953)
3737 Ball Stephania A ✓ 29 a (1955)
3741 Boerboom Allison ✓@ 64 a (1957) 218-464-0267
Boerboom Kevin M 218-464-0267
3800 Priley Christopher P & Kalli ✓ 8 a (1954)
Turner Mitchel ✓ 10 a (1959)
3815 Magni Michael A & Linda J ✓ 16 a (1965)
3901 Boyd Kathleen C ✓w 62 a (1931)
BUSINESSES 3 **HOUSEHOLDS 180**

GREYSTONE ST (DULUTH)
• ZIP CODE 55811 CAR-RT C018
4901 Archibald Larry D ✓w 4 a (2017)
4902 Naparala Michael J & Mickie J w 3 a (2016)
4906 Thorstad Michael A & Terese M ✓w 12 a (2009)
4911 Couture George C Jr & Judith A ✓ 8 a (1964) 218-722-2080
Patterson Steven R ✓ 8 a (2010) 218-729-9924
4915 Detray Allen S ✓w 4 a (2016)
Detray Amanda H
4919 Wood Rosemarie F ✓w 15 a (2008) 218-624-0381
4923 Shaw Peter C & Kara ✓w 9 a (2011)
4926 Eidenschink Nicholas L & Jill R @w 11 a (2009)
4927 Rial Matthew H & Nicole ✓ 6 a (2005)
4930 Jones Vincent M & Tara ✓w 8 a (2013) 218-206-7455
4934 Somers Robert M & Jill R ✓@ 7 a (2015) 218-206-7234
4938 Johnson Abby P & Noah W ✓ 3 a (2013)
4939 Drag Sandra T ✓ 4 a (1964)
Kornowski Jason C & Sandra T ✓ 8 a (2013) 218-206-7072
4942 Simonson Barry P & Gina M ✓w 14 a (2008)
4943 Rathbun David A & Lesley ✓@w 2 a (1964)
4946 Bednarek Michael J & Paula ✓w 14 a (2009)
4950 Haber Mitchell J & Debra A ✓ 9 a (2014) 218-206-7142
4954 Latko Steven T & Kelly ✓@w 12 a (2009) 218-206-7120
4958 Ⓣ Devireddy Abhi ✓w a (2014)
Devireddy Megan
4961 Fulda David F & Terri ✓w 16 a (2008) 218-628-2414
4962 Palokangas Glen D & Lori E ✓w 11 a (2012)
4965 Parkinson Daryl A & Tina M @ 4 a (2018)
4966 Tucker Richard J & Bonita J ✓@w 8 a (2015)
4969 Patterson Stephanie L & Justin S w 2 a (2017)
4970 Ⓣ Guite Daniel ✓
Holst John M & Heather M ✓@w 8 a (2015)
4973 Rother Joshua J & Amy ✓@w 9 a (2013)
4974 Carlson Luke D & Kirstin M ✓w 7 a (1964)
HOUSEHOLDS 30

GRIAK DR (DULUTH)
• ZIP CODE 55808 CAR-RT C071
1 Barney Maria E ✓ 28 a (1981)
Freer James R @w 13 a (1981)
+ W STOWE ST CONTINUES
2 Vetrone Carrie J ✓ 34 a (1981)
Vetrone Cj
3 - 4 No Current Listing (2 Hses)
5 Ronning Janelle ✓ 19 a (1981)
Ronning Judy
6 Parker Constance I ✓w 16 a (1981) 218-628-1919
TAXI CABS UP NORTH taxicabs & transportation serv ✓ 218-409-6222
7 No Current Listing
8 Andrews Shirley M @ 5 a (1981)
9 Dixon Duane 20 a (1981)
10 Engstrom Daniel M ✓ 9 a (1981)
Engstrom Holly K
11 Johnson Paula A ✓ 14 a (1981)
Stgeorge Ernest & Paula ✓w 6 a (1981)
12 No Current Listing
13 Hystad Karolina C ✓@ 64 a (1972)
Morrison Kitty ✓ 23 a (1981)
Morrison Katharina J
14 Ⓣ Dennison Sammy
15 Gotalaera Timothy D & Bonnie F ✓@ 7 a (1981) 218-464-4891
16 Heffern Kelly ✓ 3 a (1981)
Heffern John
Klaas Daniel ✓ 18 a (1981)
Klaas Mckenzie R
17 No Current Listing
18 Williams Robin A @ 6 a (1981)
19 Timm Ivan D & Sandi L ✓ 28 a (1981) 218-628-3757
20 No Current Listing
21 Achtabowski James P & Kelly J ✓w 6 a (1981) 218-481-7713
22 Swanson Gregory K ✓ 15 a (1981)
23 Fife Robert A & Brenda B ✓@w 6 a (1981) 218-626-1820
24 No Current Listing
25 Myhre Paul D ✓ 9 a (1981)
+ HOLT DR ENDS
+ COBAN DR INTERSECTS

GRIAK DR Cont'd
+ KORDA DR ENDS
BUSINESSES 1 **HOUSEHOLDS 29**

GRIMMER RD (TWO HARBORS)-FROM 2339 HIGHWAY 2 EAST
• ZIP CODE 55616 CAR-RT R001
1334 Juenemann Cliff W ✓ 16 a (1976)
Juenemann Mandy w
1350 Bright Nicole K 16 a (1980)
1352 No Current Listing
1409 Padgett Krista ✓ 2 a (1980)
SILVER CREEK INSTITUTE associations 218-834-4746
BUSINESSES 1 **HOUSEHOLDS 4**

GRINDEN DR (DULUTH)
• ZIP CODE 55811 CAR-RT C021
4701 ARROWHEAD TAP HOUSE restaurants ✓ 218-481-7335
DULUTH INTERNATIONAL AIRPORT airports ✓@ 218-727-2968
REPUBLIC PARKING SYSTEM parking stations & garages ✓ 218-727-7122
3 ENTERPRISE RENT-A-CAR auto renting ✓@
4 AVIS auto renting ✓@ 218-727-7233
5 BUDGET CAR RENTAL auto renting ✓ 218-727-7685
6 NATIONAL CAR RENTAL auto renting ✓@ 218-727-7426
9 DULUTH AIRPORT AUTH ADMIN OFC airport authority & terminal
BUSINESSES 8

GRONDAHL RD (BRIMSON)
• ZIP CODE 55602 CAR-RT H067
5610 No Current Listing
6505 Ⓣ Dugger Bradley M a (1975)
6610 No Current Listing
HOUSEHOLDS 3

GROUSE RUN (TWO HARBORS)
• ZIP CODE 55616 CAR-RT H083
2676 Hansen Troy R 6 a (2017)
Hansen Adriana
HOUSEHOLDS 1

GROUSE TRL (DULUTH)-FROM 4051 HICKEN RD NORTH
• ZIP CODE 55803 CAR-RT R010
5517 Pryor Kevin J & Michelle C w 9 a (1968)
5545 Hoel Dennis V & Susan J ✓ 64 a (1969)
HOUSEHOLDS 2

GROUSE LAKE RD (ISABELLA)
• ZIP CODE 55607 CAR-RT H001
3225 Wilson Steven G ✓ 36 a (1991) 218-323-7633
3250 - 3327 No Current Listing (3 Hses)
3346 Ⓣ Endicott Denise J
HOUSEHOLDS 5

GROUSE RIDGE DR (HERMANTOWN)-FROM 5165 W ARROWHEAD RD NORTH
• ZIP CODE 55811 CAR-RT C042
4301 Ⓣ Mahoozi Marleana ✓
Melin Karen L ✓ 7 a (1991)
4306 Acker Joseph M ✓w 9 a (1990) 218-206-7055
Acker Ryla M w 218-206-7055
4311 Mayer Annette M ✓w 17 a (1998)
Mayer Rebecca
4314 Kaups Michael & Catharine w 11 a (1993)
4318 Schmies Cary W & Trudi W ✓ 29 a (1990)
4321 Kahlbaugh Brian E & Heather M ✓ 22 a (1997)
4331 Anderson David P & Lisa A ✓w 64 a (1996)
4341 Sparkman Clarissa ✓ 9 a (2002)
4351 McNamara Katharine ✓ 9
4354 Hansen Damian ✓w 7 a (2002)
4361 Thompson Llonda L ✓w 9
Youngren Benjamin K & Megan ✓ 4 a (2005) 218-206-7574
4366 Abernathy Randall S & Amy I ✓@w 64 a (2002) 218-729-7209
4371 Ⓣ Anderson Adam ✓ a (1991)
Anderson Andrea
4372 Felian Edward ✓ 9
Kneisl Gary M & Holly J ✓ 8 a (2001) 218-206-7608
Melin Dustin D ✓ 7 a (1991)
Melin Holly A
4379 Jugovich Jack ✓ 64 a (2003)
Jugovich Matthew D w
4380 Harlander Ronald S Jr & Kelly S ✓@w 16 a (2004) 218-729-9496
4383 Anderson Jarrid A & Danielle S ✓w 16 a (2005)
4388 Peterson Daniel C & Kelly ✓ 6 a (2008) 218-206-7082
4391 Landrigan Brian R ✓ 19 a (2005)
Landrigan Tam N
4392 Melin Karen L & Gary w 10 a (2015)
4395 Wetmore Trent A & Andrea L 8 a (2008)
HOUSEHOLDS 25

GROVE ST (DULUTH)
• ZIP CODE 55803 CAR-RT C036
17 Lyons Kathryn A ✓ 52 a (1896)
Lyons Courtney O
19 Settergren James J & Gerri J ✓ 29 a (1939)
• ZIP CODE 55810 CAR-RT C006
32 Harnell Lowell R & Jennifer A ✓w 19 a (2005) 218-628-9232
33 FORBES UNITED METHODIST CHURCH churches ✓ 218-624-9390
36 Snyder Rachael M w 6 a (2002)
104 Haag Scott A & Mollie M ✓@ 9 a (1950) 218-260-2118
105 Nelson Ronald E ✓ 40 a (1920)
Nelson Deanna E
107 Miller George W & Alvera L ✓@ 29 a (1959) 218-624-3420
110 Palmstein Cory ✓w 7 a (1969)
Palmstein Bethany w
115 McCarthy Mark K & Sharon L ✓@w 29 a (1994) 218-206-7674
118 Ruhnke Lindsey L w 31 a (1965)
123 INTERIM HEALTHCARE home health serv ✓@ 218-624-0552
125 Kylvan Amanda J & Aaron R @w 5 a (1966)
BUSINESSES 2 **HOUSEHOLDS 11**

GULL PT (GRAND MARAIS)-FROM 89 ISLAND RD SOUTHEAST
• ZIP CODE 55604 CAR-RT H064
7 - 12 No Current Listing (2 Hses)
16 Alexander David B ✓ 18 a (1985) 218-388-9422
18 Keller Arthur ✓@ 15 a (1955) 218-388-9481
21 Hartzell Thos ✓ 14 a (1968) 218-388-9988
Hartzell Franklin M 218-388-9988

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GREYSOLON PL Cont'd

3214 Piette Michael J & Kelly A ✓ 23 ▲ (1949)
• ZIP CODE 55804 CAR-RT C075
3331 Lee Timothy O & Joie A ✓ 13 ▲ (1929)
3401 Carlson David S ✓ 43 ▲ (1948)
3402 BUDGET BLINDS-TWIN PORTS venetian blinds- retail
Schwengler Richard A & Jean J ✓ @ 4 ▲ (1951)
3410 (N) Brown Patrick J ✓ ▲ (1958)
Brown Kara
3414 Swanson Robert A & Jennifer L ✓ 24 ▲ (1947) 218-724-4468
3431 Pratt James R & Carol M ✓ 59 ▲ (1953) 218-728-2213
+ S 36TH AVE E INTERSECTS
3623 Jorgensen Steven C & Martha ✓ 3 ▲ (1977)
3624 Golcz Joseph W & Amie K ✓ 11 ▲ (1957) 218-728-4530
3705 Mason Marguerite A ✓ 39 ▲ (1961) 218-724-6848
3706 No Current Listing
3715 Cook Jessica L ✓ 59 ▲ (1959)
3800 Aas Peter J & Jane P ✓ 59 ▲ (1958)
BUSINESSES 1 **HOUSEHOLDS 18**

GREYSOLON RD (DULUTH)-FROM 99 S 17TH AVE E NORTHEAST
• ZIP CODE 55812 CAR-RT C035
1708 No Current Listing
1710 (N) Debettignies Aubrey ✓
1722 Wahlberg Jason ✓ 7
1810 No Current Listing
1812 (N) Landis Killeen ✓
Shannon John ✓ 6
1814 (N) Tegels Ashley ✓
Wicklund Jacqui 2
1818 Stuart Lee ✓ 6 ▲ (1889)
1819 (N) Sellers Jennifer L ✓
1822 Healy Matthew R ✓ 7 ▲ (1900)
1824 (N) Katzaman April ✓
Katzaman Allison
1825 Olson Loren A 19 ▲ (1953)
1827 No Current Listing
+ S 19TH AVE E INTERSECTS
1905 - 1907 No Current Listing (2 Hses)
1907 2 (N) Gartner Kurt
1909 1 Olmanson Jessica ✓ 8
2 No Current Listing
1910 Velzke Kimberly ✓ 10
2 No Current Listing
1912 (N) Jacobs Kate ✓
1914 Elias Janet A ✓ 25 ▲ (1911)
1915 Repinski Robert A ✓ 24 ▲ (1903) 218-724-3603
1917 Foster Gary E ✓ 41 ▲ (1896)
1920 GREYSOLON ARMS guns & gunsmiths ✓ @ 218-348-1825
White Robert J & Barbara J ✓ 51 ▲ (1957)
1921 (N) Connor Molly ✓
1 - 2 No Current Listing (2 Apts)
1922 Nelson Bernadette R ✓ @ 36 ▲ (1953)
1923 Gantz Meghan ✓ 2
1924 Rosberg Joanne N ✓ 36 ▲ (1912) 218-728-5221
1926 Saterbak Chad W ✓ 25 ▲ (1953)
Susan York D ✓ 6 218-728-1067
York Susan M ✓ @ 17 ▲ (1922)
+ S 20TH AVE E INTERSECTS
2010 Keller Ashley ✓ @ 8
(N) Russell Marissa ✓ 218-724-3537
U Hagadorn Nichole ✓ 2
2014 Grangruth Sam ✓ 3
Grangruth Samantha
(N) Wright Ashley ✓ @
2015 Hills Kathleen M ✓ 13 ▲ (1907)
2020 Laplant Katie ✓ @ 2
Welch David A & Ruby A ✓ @ 22 ▲ (1939) 218-724-0958
D No Current Listing
+ JEFFERSON ST CONTINUES
2211 (N) Crandall Linze ✓
Obermeyer Carolyn ✓ @ 5
2301 Marthe Renee M 18 ▲ (1939)
2302 Roman Karen J ✓ 31 ▲ (1956)
(N) Torrence Judith ✓ ▲ (1939)
2310 No Current Listing
2313 (N) Jenks John W ▲ (1939)
2314 May Horst G ✓ 37 ▲ (1955) 218-728-4515
2320 Royal James J ✓ @ 40 ▲ (1949)
2322 Sandell Richard G & Kathryn J ✓ @ 19 ▲ (1920) 218-724-9613
2323 Hamilton Earl T Jr & Beth A ✓ 30 ▲ (1988) 218-728-3491
2330 Murray Catherine A ✓ 4 ▲ (1941) 218-464-4502
• ZIP CODE 55812 CAR-RT C058
2401 Gilbert Greg C ✓ 59 ▲ (1979)
Gilbert Amy A
Thompson-Gilbert Cary A ✓ 59 ▲ (1979)
2402 Durbin William C & Barbara ✓ 6 ▲ (1950)
Wang Shenlun ✓ 8
2408 Halgren William ✓ 5 ▲ (1939)
Halgren Kaylee
2412 Lutzka David R ✓ @ 25 ▲ (1940)
Lutzka Cira
2417 Bradley Robert S & Elaine K ✓ 16 ▲ (1942) 218-724-1984
2420 Brinda William D ✓ 9 ▲ (1940)
Brinda Sarah Mike M
Leppi Cherie L ✓ 25 ▲ (1940) 218-728-5245
2424 Bertsch Benjamin R ✓ 18 ▲ (1941)
2426 Austin Jay A & Elizabeth C ✓ 12 ▲ (1928) 218-724-1575
2429 1 Hall Jeffrey P & Paula J ✓ 26 ▲ (1914) 218-728-0294
2 No Current Listing
2430 Yu Lisa & Gun C ✓ 6 ▲ (1954) 218-726-0465
2502 No Current Listing
2512 Elden Steven W & Arlene F ✓ 59 ▲ (1958) 218-728-2622
2518 (N) Howard Brenda ✓
Timmersman Dustin D & Jodi A ✓ 5 ▲ (1949)
2522 Keppers Jarry M & Deetta S ✓ 30 ▲ (1949)
2525 - 2526 No Current Listing (2 Hses)
2531 Taylor Sean L ✓ 10 ▲ (1953)
2536 No Current Listing
2600 Clore Tammy U & Charles T ✓ 7 ▲ (1938)
2603 Sevastiades Patricia M ✓ 4 ▲ (1939)
Sevastiades John
2610 Wallis Mark D & Kathryn D ✓ 7 ▲ (1940)
2615 Berg Janice E ✓ 5 ▲ (1939)
Greene Douglas L ✓ 5 ▲ (1939)
2620 Vanstrom Neal R & Iola J ✓ 34 ▲ (1954) 218-724-1403
2700 Swanstrom Patricia M ✓ 29 ▲ (1962) 218-606-1098
2710 J K RESEARCH market research & analysis 218-724-1204
Klauber Julia H ✓ 9 ▲ (1978)
Klauber Liz P
2724 Sevastiades Patra M ✓ 4 ▲ (1939)

GREYSOLON RD Cont'd

Sevastiades Demetrius
2725 Lucca Carolyn ✓ 59 ▲ (1948) 218-724-7365
Lucca Michael J 218-724-7365
2730 Loraas Paul A & Dawn M ✓ 8 ▲ (1950) 218-728-2656
+ S 28TH AVE E INTERSECTS
2800 Sands Gloria I ✓ @ 29 ▲ (1978) 218-728-3307
2801 Zarins Joann L ✓ 47 ▲ (1948)
2809 Salmela Chad E ✓ 8 ▲ (1951)
Salmela Ira M
2810 (N) Ellis Patrick J ✓ ▲ (1939)
(N) Williams Timothy K ✓ ▲ (1939)
2815 Backman Glen T & Linda M ✓ 20 ▲ (1946) 218-724-1580
2816 Chandler Eric W & Shelley Z ✓ 16 ▲ (1927) 218-728-4410
2820 Brink Carla J ✓ 24 ▲ (1939) 218-728-8128
Ranelli Paul L ✓ 15 ▲ (1942) 218-728-8128
Ranelli Pl L 218-728-8128
2821 No Current Listing
2824 Schneider Michael J & Amy S ✓ @ 24 ▲ (1942)
2825 No Current Listing
2831 Shilman Nick S & Sarah ✓ @ 12 ▲ (1943)
2832 Wellnitz Shawn M & Jennifer M ✓ 8 ▲ (1928)
2901 Thul-King Mary L 31 ▲ (1952)
2902 Hahn Bobby ✓ 6 ▲ (1939)
Keil Lauren M ✓ 6 ▲ (1926)
Maruca Mandi ✓ 15 ▲ (1939)
2906 Julian Melissa G 2 ▲ (1940)
2909 Renier Thomas S & Debra J ✓ 30 ▲ (1932)
2910 No Current Listing
2914 Gomke Monte A ✓ 15 ▲ (1925)
2915 Ostman Paul T & Mary M ✓ 59 ▲ (1924) 218-724-8119
2919 Pilate Scott R & Alaina ✓ 7 ▲ (1924) 218-724-2305
2920 Black Lorin P ✓ 3 ▲ (1926)
2924 Rose Susan E ✓ 5 ▲ (1927)
2925 Broadmoore Andrew D & Amy A ✓ 8 ▲ (1924)
2928 No Current Listing
2931 Vandruten William A ✓ 40 ▲ (1928)
2932 Klassen Heidi L ✓ 5 ▲ (1965) 218-724-1255
Klassen Madison 218-724-1255
2940 Kroening Tricia J ✓ @ 9 ▲ (1942)
3001 Buria John A & Alice L ✓ 31 ▲ (1911)
(N) Nelson Amanda ✓ ▲ (1939)
3009 Walls Melissa L ✓ 4 ▲ (1959) 218-464-0858
3015 Zhao Baocheng 3 ▲ (1947)
3103 Johnson David M ✓ 15 ▲ (1942)
Johnson Margaret
3104 Maddy Michael M & Marta T ✓ @ 59 ▲ (1941)
3110 Scherer Carrie L ✓ 11 ▲ (1939)
3111 Crowell Richard D & Barbara K ✓ @ 12 ▲ (1965) 218-525-7103
3120 Klassen Jeffrey F & Heidi L ✓ 13 ▲ (1929) 218-728-6990
(N) Mizia Jessica ✓ ▲ (1939)
3121 Larson Randall S & Leona ✓ @ 23 ▲ (1925)
3122 No Current Listing
3124 Ross James M Jr & Suzanne M ✓ 22 ▲ (1995) 218-724-4682
3125 Pedersen Theodore D & Ayda C ✓ 15 ▲ (1950) 218-729-8733
3126 (N) Ringerud Susan ✓ ▲ (1939)
Wolterstorff Susan L ✓ 28 ▲ (1942) 218-728-3789
Wolterstorff St 218-728-3789
3129 Brown James D & Megan ✓ @ 21 ▲ (1947) 218-728-9326
3135 No Current Listing
3205 Lyman Robert F & Jill S ✓ 59 ▲ (1950)
+ CONGDON PARK DR INTERSECTS
+ S 32ND AVE E INTERSECTS
• ZIP CODE 55804 CAR-RT C075
3302 (N) Gaddie Kaitlin M ✓
3310 Deloia Linda R & Gary M ✓ 2 ▲ (1958)
3319 Weinkauf Michael A ✓ 8 ▲ (1956)
Weinkauf Margaret
3400 Stock Lawrence J & Lisa M ✓ 13 ▲ (1949) 218-728-0202
+ S 35TH AVE E INTERSECTS
3500 Dougherty Thomas E & Mary B ✓ 59 ▲ (1959)
3502 Bursch Craig W & Paula J ✓ 12 ▲ (1947)
3512 Laroque Jon & Andrea ✓ 3
Laskowski Marjorie R ✓ 48 ▲ (1954) 218-724-0434
3515 (N) Signorelli Joseph ✓ ▲ (1958)
Signorelli Ryann
3518 Whiteside William B ✓ 4 ▲ (1952)
3528 Javorina Colleen ✓ 59 ▲ (1951) 218-728-5652
Javorina Paul S 218-728-5652
3536 Forseth William R ✓ 9 ▲ (1958) 218-525-2746
Fox Lorrie J ✓ 3 ▲ (1952)
Fox Brittany
3540 (N) Sundeen Stephen L ✓ ▲ (1958)
3543 Boben Mark E & Linda ✓ 8 ▲ (2010) 218-724-4608
(N) Griffin Lorrie ✓
3548 Schneider Steven W & Jodie B ✓ @ 33 ▲ (1954) 218-724-7841
3601 (N) Braaten Mary ✓ ▲ (1958)
Braaten Daisy
3602 Puff John R & Janet M ✓ 24 ▲ (1966) 218-724-1044
3610 Newstrom Karen L ✓ @ 59 ▲ (1953)
Newstrom Patricia
3616 Leighton Richard J & Bridget A ✓ 23 ▲ (1954) 218-724-8597
3622 Wold Stanley R & Mona E ✓ 25 ▲ (1952) 218-728-5925
3623 Signorelli Lara A ✓ 9 ▲ (1948)
Signorelli Joseph
TRY ON MEDIA multimedia ✓ 218-464-4595
3627 Pearson Rodger I & Susan R ✓ 44 ▲ (1953)
3630 Khoury Dwight D & Diane J ✓ 19 ▲ (1952) 218-728-1330
3704 Sederberg Bryan J ✓ 4 ▲ (1952)
Sederberg Nicole
3707 Johnson Terry M & Julie P ✓ 28 ▲ (1954)
3708 Leis Frank L & Rosemary A ✓ 59 ▲ (1951) 218-724-5884
3714 Andresen David ✓ 48 ▲ (1949) 218-724-1188
Andresen Donald G 218-724-1188
3715 Guttormsson Stefan P & Rosemary R ✓ 38 ▲ (1946) 218-728-4037
3721 Agriesti George N ✓ @ 28 ▲ (1949) 218-724-6316
Agriesti George J 218-724-6316
3722 Lafferty John P III & Laura T ✓ @ 23 ▲ (1951) 218-724-2593
Trombino Laura J ✓ 25 ▲ (1958)
3725 Boyd Carla L ✓ 2 ▲ (1958)
DULUTH GARDEN FLOWER SOCIETY florists-retail 218-724-1093
3728 No Current Listing
3729 Barker Elizabeth R ✓ 8 ▲ (1958) 218-724-1439
Villeneuve Daniel L & Elizabeth ✓ @ 8 ▲ (1953)
3732 Canfield Merlin E & Suzanne K ✓ 42 ▲ (1955)
3733 Sanders Craig A & Debra K ✓ 25 ▲ (1953)
3737 Ball Stephanie A ✓ 24 ▲ (1955)
Ball John F
3741 Boerboom Kevin M & Stephanie M ✓ 59 ▲ (1957) 218-464-0267
3800 Priley Christopher P & Kelli ✓ 5 ▲ (1954)
Turner Mitchel ✓ 6
3815 Magni Michael A & Linda J ✓ 11 ▲ (1965)

GREYSOLON RD Cont'd

3901 Boyd Charlotte J ✓ 47 ▲ (1931)
Boyd Kathleen C
BUSINESSES 4 **HOUSEHOLDS 185**

GREYSTONE ST (DULUTH)
• ZIP CODE 55811 CAR-RT C104
4906 Thorstad Michael A & Terese M ✓ 7 ▲ (2009)
4911 Hoff Linda M 7 ▲ (2010)
4915 (N) Barrett Scott ✓ @ ▲ (1977)
Barrett Delaney
4919 Wood Rosemarie F ✓ 10 ▲ (2008) 218-624-0381
4923 Shaw Peter C & Kara ✓ 4 ▲ (1977)
4926 Eidenschink Nicholas L & Jill R ✓ 8 ▲ (2009)
4927 No Current Listing
4930 (N) Jones Vincent M ✓ ▲ (1977)
Jones Tara
4934 Somers Robert M & Jill R ✓ @ 2 ▲ (2015)
4938 Swanson John D ✓ 2
Swanson Sherri
4939 Komowski Jason C ✓ 4 ▲ (2013) 218-206-7072
Komowski Sandra 218-206-7072
4942 Simonson Barry P & Gina M ✓ 9 ▲ (2008)
4943 (N) Klapmeier Patricia L & Dale E ✓ ▲ (1977)
4946 Bednarek Michael J & Paula ✓ @ 9 ▲ (2009)
4950 Haber Mitchell J & Debra A ✓ 4 ▲ (2014) 218-206-7142
4954 Letko Steven T & Kelly ✓ 8 ▲ (2009) 218-206-7120
4958 West Karl E 3 ▲ (2014)
West Jessica
4961 Fulda David F ✓ 11 ▲ (2008) 218-628-2414
Fulda Terry L 218-628-2414
4962 Palckangus Glen D & Lorie ✓ 6 ▲ (1977) 218-729-0262
4966 (N) Tucker Richard J & Bonita J ✓ @ ▲ (1977)
4970 Holst John ✓ 3 ▲ (1977) 218-206-7358
Holst Heather M 218-206-7358
4973 Rother Joshua J & Amy ✓ 4 ▲ (2013)
4974 No Current Listing
HOUSEHOLDS 23

GRIAK DR (DULUTH)
• ZIP CODE 55808 CAR-RT C071
1 Barney Maria E ✓ 20 ▲ (1974)
Freer James R ✓ 8 ▲ (1974) 218-626-1465
+ W STOWE ST CONTINUES
2 Vetrone Carrie J ✓ @ 29 ▲ (1974)
Vetrone Cj
3 Adams Margaret S ✓ @ 26 ▲ (1974) 218-626-3733
4 Davidson Mary D ✓ 59 ▲ (1974) 218-626-4952
5 Colt Jenelle L & Branden ✓ @ 8 ▲ (1974)
Degeberg James A ✓ 8 ▲ (1974)
Nelson Tanya ✓ 18 ▲ (1974)
6 Parker Constance I & George E ✓ 11 ▲ (1974) 218-628-1919
TAXI CABS UP NORTH taxicabs & transportation serv ✓ 218-409-6222
7 - 8 No Current Listing (2 Hses)
9 Dixion Duane ✓ 15 ▲ (1974)
Larson Conrad ✓ 3 ▲ (1974)
10 Engstrom Daniel M ✓ @ 3 ▲ (1974)
Engstrom Holly K
11 Johnson Paula A ✓ 9 ▲ (1974)
(N) St George Ernest ✓ ▲ (1974)
12 Brower James W & Constance A ✓ @ 10 ▲ (1974)
13 (N) Kohs Deborah ✓ @ ▲ (1974)
Morrison Kitty ✓ @ 18 ▲ (1974)
Morrison Katharine J
14 Radle Mary C ✓ @ 15 ▲ (1974)
15 Gotelaere Timothy D & Bonnie F ✓ 2 ▲ (1974) 218-464-4891
16 Bodin Diana ✓ 13 ▲ (1974)
Klaas Kelly J ✓ 10 ▲ (1974)
Klaas Mckenzie R
17 Fjeran Brian A ✓ 25 ▲ (1974)
Fjeran Susan L
18 (N) Williams Robin A ✓ @ ▲ (1974) 218-626-1859
19 Timm Ivan D & Sandi L ✓ 23 ▲ (1974) 218-626-3757
20 No Current Listing
21 (N) Achtabowski James P & Kelly J ✓ ▲ (1974) 218-481-7713
22 No Current Listing
23 (N) Fife Robert A & Brenda B ✓ @ ▲ (1974) 218-626-1820
Swenson Janell L ✓ 7 ▲ (1974)
24 Gruben Lon E ✓ 59 ▲ (1974)
(N) Olson Lowell T ✓ ▲ (1974)
25 Myhre Catherine M & Paul D ✓ 4 ▲ (1974) 218-626-1407
+ HOLT DR ENDS
+ COBAN DR INTERSECTS
+ KORDA DR ENDS
BUSINESSES 1 **HOUSEHOLDS 34**

GRIMMER RD (TWO HARBORS)-FROM 2339 HIGHWAY 2 EAST
• ZIP CODE 55616 CAR-RT R001
1307 No Current Listing
1334 Juenemann Cliff W ✓ 10 ▲ (1976)
Juenemann Mandy
1350 Murray Kenneth J ✓ @ 2 ▲ (1976)
Murray Frances
1409 Larson Katy ✓ 7 ▲ (1976)
Sousa Emily E ✓ 3 ▲ (1976)
Stanze Rachael ✓ 3 ▲ (1976) 218-834-3727
HOUSEHOLDS 6

GRINDEN DR (DULUTH)
• ZIP CODE 55811 CAR-RT C021
4701 ARROWHEAD TAP HOUSE restaurants ✓ 218-481-7335
DULUTH INTERNATIONAL ARPRT-DLH airports ✓ @ 218-727-2968
ENTERPRISE RENT-A-CAR auto renting ✓ 218-727-7426
JEFFERSON LINES bus lines ✓ 218-727-4498
REPUBLIC PARKING SYSTEM parking stations & garages ✓ 218-727-7122
TSR INC business mgmt consultants ✓ 218-727-8076
US CUSTOMS SVC federal government ✓ 218-720-5220
3 HERTZ auto renting ✓ 218-623-1051
4 AVIS RENT A CAR auto renting ✓ @ 218-727-7233
5 BUDGET RENT A CAR auto renting ✓ 218-727-7685
9 DULUTH AIRPORT AUTHORITY airport authority & terminal ✓
BUSINESSES 11

GRONDAHL RD (BRIMSON)
• ZIP CODE 55602 CAR-RT H067
5610 - 6610 No Current Listing (3 Hses)
HOUSEHOLDS 3

GROUSE RUN (TWO HARBORS)
• ZIP CODE 55616 CAR-RT H083

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GREYSOLON RD Cont'd

3707 Johnson Terry M & Julie P ✓@ 23 ☗(1954)
3708 Leis Frank L & Rosemary A ✓@ 54 ☗(1951) 218-724-5884
3714 Andresen John C ✓@ 43 ☗(1949) 218-724-1188
Andresen Donald G 218-724-1188
3715 Guttormsson Stefan P & Rosemary R ✓@ 33 ☗(1946)
.....218-728-4037
3721 Agriesti George J & Roseann C ✓@ 23 ☗(1949) ..218-724-6316
3722 Lafferty John P III & Laura T ✓ 18 ☗(1951) 218-724-2593
3725 Kasper Thomas P & Sherry K ✓ 19 ☗(1952)
3728 Eaton Ruth A ✓@ 27 ☗(1953) 218-724-4589
3729 Barker Elizabeth R ✓ 3 ☗(1955) 218-724-1439
Villeneuve Daniel L ✓ 3 ☗(1953)
Villeneuve Elizabeth
3732 Canfield Merlin E & Suzanne K ✓ 37 ☗(1955)
3733 Sanders Craig A & Debra K ✓ 20 ☗(1953) 218-724-9065
3737 Ball Stephanie A ✓ 19 ☗(1955)
Ⓓ Olsen Suzanne ✓@
3741 Boerboom Kevin M & Stephanie M ✓ 54 ☗(1957)
.....218-464-0267
3800 No Current Listing
3815 Magni Michael A & Linda J ✓ 6 ☗(1965)
3901 Boyd Charlotte J ✓ 42 ☗(1931)
Boyd Kathleen C

BUSINESSES 7 HOUSEHOLDS 171

GREYSTONE ST (DULUTH)
• ZIP CODE 55811 CAR-RT C104
4906 Thorstad Michael A & Terese M ✓ 2 ☗(1957)
4911 Hoff Linda M ✓ 2 ☗(1957)
4919 Wood Rosemarie F ✓ 5 ☗(1957) 218-624-0381
4923 No Current Listing
4926 Ⓓ Eidenschink Nicholas L ✓ ☗(1957)
Eidenschink Jill
4927 Johnson Keven Z & Stephanie D ✓ 4 ☗(1957) 218-727-2144
4942 Simonson Barry P & Gina M ✓@ 3 ☗(1957)
4946 Bednarek Michael J ✓ 4
Bednarek Paula
4954 Ⓓ Letko Steven T & Kelly ✓ ☗(1957)
4961 Fulda David F ✓@ 6 ☗(1957) 218-628-2414
Fulda Terry L 218-628-2414

HOUSEHOLDS 10

GRIAK DR (DULUTH)
• ZIP CODE 55808 CAR-RT C071
1 Barney Maria E ✓ 15 ☗(1972)
+ W STOWE ST CONTINUES
2 Vetrone Carrie J ✓ 24 ☗(1972)
Wark Greggory P & Carrie J ✓@ 7 ☗(1972)
3 Adams Margaret S ✓ 21 ☗(1972) 218-626-3733
4 Davidson Mary D ✓ 54 ☗(1972) 218-626-4952
5 Colt Branden ✓@ 3
Degeberg James A ✓ 3
Nelson Tanya M ✓ 13 ☗(1972)
6 Parker Constance I ✓ 6 ☗(1972) 218-628-1919
7 - 8 No Current Listing (2 Hses)
9 Dixion Duane ✓ 10 ☗(1972)
10 Ohme Alicia ✓@ 6 ☗(1972)
11 Johnson Paula A ✓ 4 ☗(1972)
12 Brower James W & Constance A ✓ 5 ☗(1972) 218-464-1574
13 Morrison Katharine J 13 ☗(1972)
14 Radle Mary C ✓ 10 ☗(1972) 218-626-1941
Radle Celine C 218-626-1941
15 Lieble Kathy J ✓ 4 ☗(1972)
16 Klaas Daniel & Kelly J @ 5 ☗(1972)
17 Harbert David L & Susan L ✓ 14 ☗(1972)
18 Keyport Denise K ✓ 4 ☗(1972)
Peterson Kim A ✓@ 2 ☗(1972)
19 Lemmerman Donald L ✓ 20 ☗(1972)
Timm Ivan D & Sandi L ✓ 18 ☗(1972) 218-626-3757
20 Davis Diane M & Jason R ✓ 3 ☗(1972) 218-626-1197
21 Cooper Kathleen M ✓ 20 ☗(1972)
22 Wilds James A ✓ 2 ☗(1972) 218-464-4475
Wilds Jolen U 218-464-4475
23 Mussman Gregory A ✓@ 2 ☗(1972)
Mussman Vanessa
24 Gruben Lon E ✓ 54 ☗(1972)
25 Schmitz Carol ✓ 2 ☗(1972) 218-464-1750
+ HOLT DR ENDS
+ COBAN DR INTERSECTS
+ KORDA DR ENDS

HOUSEHOLDS 30

GRIMMER RD (TWO HARBORS)-FROM 2339 HIGHWAY 2 EAST
• ZIP CODE 55616 CAR-RT R001
1307 Shepard Andrew C & Kori S ✓ 4 ☗(1971)
1334 Juenemann Mandy ✓ 5 ☗(1976)
1350 Bright Jeffery A ✓ 2 ☗(1971)
Bright Nicole K
1352 Lazzaro Jennifer 3
1409 SILVER CREEK INSTITUTE social serv & welfare org ✓@
.....218-834-4746

BUSINESSES 1 HOUSEHOLDS 4

GRINDEN DR (DULUTH)
• ZIP CODE 55811 CAR-RT C021
4701 ALAMO RENT-A-CAR auto renting ✓@ 218-727-7426
DULUTH INTL AIRPORT-DLH airports ✓@ 218-727-2968
NATIONAL CAR RENTAL auto renting ✓@ 218-727-7426
QUICK BAGS delivery serv ✓@ 218-722-0664
TSR INC call centers ✓@ 218-722-4338
US CUSTOMS SVC federal government @ 218-720-5220
US DEFENSE REUTILIZATION OFC federal government @
.....218-722-2526
US FAA federal government @ 218-722-7326
2 DELTA AIR LINES AIR CARGO air cargo serv ✓@
.....218-727-8747
3 HERTZ RENT A CAR auto renting ✓@ 218-623-1051
8 AFTERBURNER LOUNGE DINING bars ✓@ 218-727-1152

GRINDEN DR Cont'd

11 STANDARD PARKING parking stations & garages ✓@
.....218-727-7122

BUSINESSES 12

GRONDAHL RD (BRIMSON)
• ZIP CODE 55802 CAR-RT H067
5610 Ⓓ Wells Karen ✓@ ☗(1972)
6505 No Current Listing

HOUSEHOLDS 2

GROUSE TRL (DULUTH)-FROM 4051 HICKEN RD NORTH
• ZIP CODE 55803 CAR-RT R010
5503 Sabrowski Annie J 10 ☗(1968)
5517 Constantini Thomas J ✓@ 16 ☗(1968)
Ⓓ Miller Kristina ✓@
5545 Hoel Dennis V & Susan J ✓@ 54 ☗(1969)

HOUSEHOLDS 4

GROUSE LAKE RD (ISABELLA)
• ZIP CODE 55607 CAR-RT H001
3225 - 3327 No Current Listing (4 Hses)
3337 Foster Joseph V ✓ 22 ☗(1973) 218-323-7671
3346 Hedin Thomas L & Barbara J ✓ 7 ☗(1970) 218-323-5557

HOUSEHOLDS 6

GROUSE RIDGE DR (HERMANTOWN)-FROM 5165 W ARROWHEAD RD NORTH
• ZIP CODE 55811 CAR-RT C042
4301 Menzel Raymond C ✓ 3 ☗(1978)
Menzel Anna M
4306 Steede Robert M & Andrea L ✓@ 4 ☗(1978) 218-206-0137
4311 Mayer Brannon D & Rebecca ✓ 7 ☗(1978) 218-729-4921
4314 No Current Listing
4318 Schmies Cary W & Trudi W ✓ 19 ☗(1978)
Weis T ✓ 13 218-729-0487
4321 Kahlbaugh Brian E & Heather M ✓ 12 ☗(1978) 218-729-4544
4331 Anderson Kent L & Jacqueline K ✓ 54 ☗(1978) 218-729-5259
4341 Hnatko Akl ✓@ 54 ☗(1978) 218-729-9493
Hnatko Janelle P 218-729-9493
4351 Karis Thomas J ✓ 6 ☗(1978)
4354 Dillon Herb T & Suzi E ✓ 10 ☗(1978) 218-729-9459
4361 Ⓓ Herter Laura ✓ ☗(1978) 218-729-9045
Herter Jason D 218-729-9045
4366 Abernethy Randall S & Amy I ✓@ 54 ☗(1978) 218-729-7209
4372 Brickson Kyle G & Kellie K ✓@ 3 ☗(1978)
4379 Jugovich Matthew D II & Stephanie H ✓ 54 ☗(1978)
4380 Harlander Ronald S Jr & Kelly S ✓ 6 ☗(1978) 218-729-9496
4383 Anderson Jerrid A & Danielle S ✓ 6 ☗(1978)
4388 Peterson Daniel C & Kelly ✓@ 6 ☗(1978) 218-206-0296
4391 Landrigan Brian R ✓ 9 ☗(1978)
Landrigan Tam N
4395 Melin Gary J & Karen L ✓ 7 ☗(1978)

HOUSEHOLDS 20

GROVE ST (DULUTH)
• ZIP CODE 55803 CAR-RT C036
17 Lyons Courtney O & Kathryn A ✓@ 42 ☗(1896) 218-724-6878
19 Settergren James J & Geraldine J ✓@ 19 ☗(1939)
• ZIP CODE 55810 CAR-RT C025
32 Crain Marcie A ✓ 3 ☗(1939)
Harnell Lowell R & Jennifer A ✓ 9 ☗(1939) 218-628-9232
33 FORBES UNITED METHODIST CHURCH churches ✓@
.....218-624-9390
36 Harnell Sherry V ✓ 54 ☗(1939) 218-628-7001
104 Haggy Sandra K ✓ 28 ☗(1939) 218-624-3100
105 Nelson Ronald E & Deanna E ✓@ 30 ☗(1939) 218-624-4371
107 Miller George W & Alvera L ✓@ 19 ☗(1939) 218-624-3420
110 Fontaine Leonard E & Mildred I ✓ 15 ☗(1939) 218-628-7179
115 McCarthy Mark K & Sharon L ✓@ 18 ☗(1939) 218-624-3341
118 Jaja Bright & Lindsey ✓ 3 ☗(1939) 218-624-1953
123 Johnson Mary E 22 ☗(1939)
125 Foucault Troy D ✓ 6 ☗(1939)
Foucault Katie

BUSINESSES 1 HOUSEHOLDS 13

GULL PT (GRAND MARAIS)-FROM 89 ISLAND RD SOUTHEAST
• ZIP CODE 55604 CAR-RT H064
12 Dilley William ✓ 5 218-388-2269
16 Alexander David ✓ 8 218-388-9422
18 Keller Arthur ✓ 5 218-388-9481
21 Hartzell Franklin M ✓ 4 218-388-9988
25 Langston Robert C ✓ 3 ☗(1978) 218-388-9954
Langston Sue 218-388-9954

HOUSEHOLDS 5

GULL LAKE LN (GRAND MARAIS)-FROM 2 WATTERS PT NORTH
+ SAG LAKE TRL CONTINUES
• ZIP CODE 55604 CAR-RT H064
27 Lyon Carol ✓ 3 218-388-4438
+ WATTERS PT BEGINS
64 Sierakowski Joseph R & Rita C ✓ 22 ☗(1964) 218-388-9453
72 Gerkensmeyer David C & Janis E ✓ 12 ☗(1963) 218-388-2010
73 Brown Kenneth & Diane ✓ 7 218-388-0636

HOUSEHOLDS 4

GUN CLUB RD (TWO HARBORS)
+ HIGHWAY 2 CONTINUES
+ LINDGREN RD INTERSECTS
• ZIP CODE 55616 CAR-RT R001
1353 Minkkinen Philip R ✓ 7 ☗(2006) 218-834-7112
1357 Maki Coralee R ✓@ 13 ☗(1965)
Udenberg Larry R & Corie ✓ 32 ☗(1945) 218-834-4944
1362 Findley Dan J & Alice D ✓ 2 ☗(1971) 218-834-5190
1377 Kosmo Steven J & Lisa L ✓ 54 ☗(1965) 218-834-3482
1382 Labonne Gary J & Donna L ✓@ 19 ☗(1965) 218-834-2822
+ ALDER RD BEGINS
1394 Haveri John W Jr ✓ 15 ☗(1965) 218-834-3704
Haveri John P Jr 218-834-3704
1395 Carr Eleanor M ✓ 54 ☗(1965) 218-834-2734

GUN CLUB RD Cont'd

1497 Carr Daniel R & Mary L ✓@ 8 ☗(1992) 218-834-2624
1554 Johnson Travis R ✓ 9 ☗(1994) 218-834-6295
1567 Palola Donna M ✓ 20 ☗(1993)
1568 Anderson Curtis W & Christine L ✓ 15 ☗(1979)
1574 Beck Sandra M ✓@ 54 ☗(1990) 218-834-3480
1606 Wirt Craig T ✓ 18 ☗(1945)
1628 Ⓓ Cox Carla J ✓ ☗(1971)
Ⓓ Palmer Kim ✓ ☗(1971)
1652 Hedin James A & Bobbi J ✓ 25 ☗(1965) 218-834-2090
1707 Svir Allan R & Maureen K ✓ 20 ☗(1997) 218-834-4832
1714 Ⓓ Bentler Wayne J & Lois A ✓ ☗(1971)
• ZIP CODE 55616 CAR-RT R005
1751 Nelson Susan J & Bradley J ✓ 13 ☗(1965) 218-834-4866
1761 Anderson Richard B ✓ 15 ☗(1965) 218-834-4390
Anderson Holly L 218-834-4390
Mc Mahon Roberta ✓ 3 ☗(1971)
1780 Ⓓ Hanson David E & Lisa B ✓@ ☗(2008)
1788 Newman Natalie ✓ 8 ☗(1971) 218-834-6581
1809 Carr Michael V & Becky J ✓ 30 ☗(1965) 218-834-2995
1820 Cavallin Jeffrey D & Amy L ✓ 25 ☗(1965) 218-834-5168
1823 Vigen Anthony J ✓@ 10 ☗(2003)
1833 Goedel John R 4 ☗(1971)
1836 Rasmussen Justin J ✓ 9 ☗(2004) 218-834-3287
Rasmussen Toni 218-834-3287
1837 Ⓓ Dewey Shawn N ✓ ☗(1977) 218-834-6131
Larson Louise E ✓@ 29 ☗(1977)
+ FORS RD INTERSECTS

HOUSEHOLDS 31

N GUNFLINT LK (GRAND MARAIS)
• ZIP CODE 55604 CAR-RT H064
54 Lang Marcia ✓ 14 218-388-0610
90 Ferguson David M & Melody ✓ 54 ☗(1979) 218-388-0300
102 - 106 No Current Listing (3 Hses)
118 Spangler Ken ✓ 3 ☗(1979) 218-388-4426
120 No Current Listing
126 Schloot John ✓ 10 ☗(1979) 218-388-9467
170 Peddycoart Brenwyn ✓ 9 ☗(1979) 218-388-0577
196 MOOSEHORN BED & BREAKFAST resorts ✓@ 218-388-2233
Ⓓ Schloot Rose ✓
199 No Current Listing
201 Beyer Erwin F ✓ 11 ☗(1985) 218-388-0930
Beyer Bud 218-388-0930
203 Larson-Hyzer Terri ✓ 18 ☗(1979) 218-388-9901
209 Larson Kathleen ✓ 4 218-388-0209
215 Schroeder Ernie & Audrey ✓ 13 218-388-0119
216 Reid Wendy ✓ 11 218-388-0123
Reid Lou 218-388-0123

BUSINESSES 1 HOUSEHOLDS 16

S GUNFLINT LK (GRAND MARAIS)-FROM 2 VOYAGEUR BAY EAST
+ GUNFLINT TRL CONTINUES
• ZIP CODE 55604 CAR-RT H064
133 Hindermann Sheryl ✓ 8 218-388-0609
139 Mace Natalie ✓ 3 218-388-0342
143 Ⓓ Bannister Kent ✓
Groth Matthew A ✓ 13
GUNFLINT LODGE resorts ✓@ 218-388-2294
GUNFLINT NORTHWOODS OUTFITTERS fishing parties ✓@
.....218-388-2296
Hindermann Sheryl A ✓ 21
Johnson Barbara ✓ 17 218-388-0156
Kerfoot Bruce T ✓ 29 ☗(1962) 218-388-0968
Kerfoot Miranda 218-388-0968
Ⓓ Kraker Eliza ✓
Kroager Amanda L ✓ 9 218-388-9440
Kufahl Don ✓ 2
Kufahl Marilyn
Martinson Curtis L ✓ 18 218-388-0334
Martinson Denise J 218-388-0334
Schreiber Kacy ✓ 3 218-388-0326
Ⓓ Senterfeit Kelly J ✓
Simons Jacob V III ✓ 5
Smith Deborah ✓ 3 218-388-0570
Storud Rollin ✓@ 5
Todd Dennis R ✓ 12 218-388-0146
Viarengo John ✓ 9 218-388-9920
Walsh Jennifer P 17
Walsh Tim
YMCA CAMP MENOGYN social serv & welfare org ✓@
.....218-388-0340
+ VOYAGEUR BAY BEGINS
201 Kerfoot Bruce T & Susan G ✓ 24 ☗(1979) 218-388-0876
Matsis Eleanor L ✓ 21 ☗(1963)
206 Ⓓ Baker Robert M ✓ ☗(1979)
Smith Richard D ✓@ 54 ☗(1979) 218-388-0660
Smith Ronene L 218-388-0660
217 Baker Shari A & Robert M ✓ 10 ☗(1979) 218-388-4479
GUNFLINT PINES RESORT-CMPGRND resorts ✓@
.....218-388-4454
230 Baker Robert L & Sharon A ✓ 54 ☗(1979) 218-388-0544
245 Baker Bob & Sherry ✓@ 8 ☗(1979) 218-388-0955
253 - 365 No Current Listing (4 Hses)
386 Ⓓ Gecas Robert H ✓ ☗(1979)
387 Knecht Richard A & Dorothy E ✓ 54 ☗(1979)
401 Knudsen Craig ✓ 10 218-388-0526
412 Troelsen Amanda ✓ 5 218-388-0626
413 Leuty Peter A ✓ 10 ☗(1979)
419 Semmer Steve ✓ 6 ☗(1979) 218-388-9952
427 Nelson Viola E ✓ 10 ☗(1979) 218-388-4452
443 Wick Evelyn M & John C ✓ 54 ☗(1964) 218-388-9486
451 No Current Listing
465 Fillips Bruce H & Dianne ✓ 6 ☗(1979) 218-388-0668
473 No Current Listing
483 Edinger Lester D & Elizabeth A ✓ 19 ☗(1964) 218-388-4490
499 Henricksson John ✓ 4 218-388-2246
517 Lush Clifford C ✓ 16 ☗(1963) 218-388-4451

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GREYSOLON RD Cont'd
2401 Thompson-Gilbert Cary A 50 ♠
2402 Ⓦ Smith Kristin L ♠ 218-464-0649
2408 Craig Robert H & Gail M 16 ♠ 218-728-9285
2412 Lutzka David R & Lori A 16 ♠ 218-724-3057
2417 Bradley Robert S & Elaine K 7 ♠ 218-724-1984
2420 Leppi Cherie L 16 ♠ 218-728-5245
2424 Ⓦ Nelson Scott G ♠
Wiczek-Bertsch Jennifer C 9 ♠ 218-724-5675
2426 Austin Jay A & Elizabeth C 3 ♠ 218-724-1575
2429 1 Hall Jeffrey P & Paula J 17 ♠ 218-728-0294
302 Paulisich Marie L 4
2429 1/2 Ⓦ Richards Lisa
2430 Mickelsen Peggy B 43 ♠ 218-724-3857
2502 Maki Lois J & Dennis 2 ♠ 218-724-4948
2512 Elden Steven W & Arlene F 50 ♠ 218-728-2622
2518 Ⓦ Albuquerque Pedro H ♠
2522 Keppers Jarry M & Diedta S 21 ♠ 218-724-7434
2525 Ⓦ Radin Linda S ♠
2526 No Current Listing
2531 Ⓦ Taylor Kevin C ♠ 218-720-5844
Taylor Sean L 218-720-5844
2536 Laven Scott R 50 ♠ 218-724-3234
2600 Case Delbert W & Jennifer P 9 ♠ 218-728-4016
2603 Bennett Thomas J & Lois A 12 ♠ 218-724-6297
2610 Ziegler Lee J & Mary B 4 ♠ 218-728-0463
2615 Ireland Donald W 35 ♠ 218-724-5613
2620 Vanstrom Neal R & Iola J 25 ♠ 218-724-1403
2700 Swanstrom Patricia M 20 ♠ 218-724-3215
Swanstrom Jennifer J 218-724-3215
2710 Weidner Robert R 6 ♠
2724 McMillan David J & Carleen A 50 ♠ 218-724-4684
2725 Lucca Michael J & Jill C 50 ♠ 218-724-7365
2730 No Current Listing
+ S 28TH AVE E INTERSECTS
2800 Sands Gloria I 20 ♠ 218-728-3307
2801 Zar Joann L 38 ♠ 218-728-1688
2809 Viljaste Gunnar & Adrienne M 35 ♠ 218-724-6091
2810 Loraas Paul A & Dawn M 13 ♠ 218-728-2656
Ⓦ Sams Mark A ♠
2815 Backman Glen T & Linda M 11 ♠ 218-724-1580
2816 Chandler Eric W & Shelley Z 7 ♠ 218-728-4410
2820 Ranelli Paul L 6 ♠ 218-728-8128
Ranelli Pl L 218-728-8128
2821 Hahm Allen E & Cynthia A 2 ♠
2824 Schneider Michael J & Amy S 15 ♠ 218-728-6510
2825 Alaspa Kimberly A 9 ♠
2831 Shilman Nicholas S 3 ♠
Shilman Sarah
2832 Leigh Mary M 25 ♠ 218-724-3883
2901 King Mary L 22 ♠ 218-724-7500
2902 Ⓦ Johnson Richard L ♠
Tellor Tracey A 10 ♠ 218-728-0422
2906 Petersen Ernest S 34 ♠ 218-724-4266
2909 Renier Thomas S & Debra J 21 ♠ 218-724-9203
2910 Gillett Julia E 12 ♠ 218-724-8609
2914 Gomke Monte A 8 ♠ 218-728-0921
2915 Ostman Paul T & Mary M 50 ♠ 218-724-8119
2919 Anderson Harvey J & Susan M 23 ♠ 218-724-4574
2920 Colman Steven M & Marion S 6 ♠ 218-728-4432
2924 Grombacher Jacquelynn S & Charles A 31 ♠ 218-728-5229
2925 Wirth Kevin E 2 ♠ 218-728-1458
Wirth Erin 218-728-1458
2928 Evans Mary J 29 ♠ 218-724-0261
Evans David L 218-724-0261
2931 Vandruten William A & Sharon E 31 ♠ 218-724-4176
2932 Hassinger Nancy L 13 ♠
2940 Marshall David E 14 ♠ 218-724-1129
3001 Buria John A & Alice L 22 ♠ 218-724-1114
3009 Hill Jonathan T 6 ♠
3015 Nielsen Joanne M & Skott J 13 ♠ 218-724-2901
3103 Johnson David M 8 ♠
Johnson Mary P
3104 Maddy Michael M & Marla T 50 ♠
3110 Morrison John M & Carrie 4 ♠ 218-730-0346
3111 Crowell Richard D & Barbara K 2 ♠ 218-525-7103
3120 Klassen Jeffrey F & Heidi L 4 ♠ 218-728-6990
3121 Larson Randall S & Maureen E 14 ♠ 218-724-6125
Rappley Maureen E 13 ♠
3122 Ⓦ Sleen Julia P
3124 Ross James M Jr & Suzanne M 13 ♠ 218-724-4682
3125 Pedersen Theodore D & Ayda C 6 ♠ 218-729-8733
3126 Wolterstorff Jay R & Susan L 19 ♠ 218-728-3789
3129 Brown James D & Shelbie J 12 ♠ 218-728-9326
3135 Riddle Elizabeth A 15 ♠
Riddle David D
3205 Lyman Robert F & Jill S 50 ♠ 218-728-3133
+ CONGDON PARK DR INTERSECTS
+ S 32ND AVE E INTERSECTS
• ZIP CODE 55804 CAR-RT C071
3302 Keane Michele T 5 ♠ 218-728-4550
3319 Hovland George I III & Cindy M 11 ♠ 218-724-5422
3400 Lundstrom Joann K 20 ♠ 218-730-0166
Lundstrom Michael G 218-730-0166
+ S 35TH AVE E INTERSECTS
3500 No Current Listing
3502 Bursch Craig W & Paula J 3 ♠
3512 Laskowski Frank S Jr & Marjorie R 39 ♠ 218-724-0434
3518 REM ARROWHEAD INC social serv & welfare org
....218-724-9373
3528 Javorina Paul S 50 ♠ 218-728-5652
3536 Ingelin Paul W & Fay A 50 ♠ 218-724-6284
3540 Krovitz Esther S 39 ♠ 218-724-4119
3548 Schneider Steven W & Jodie B 24 ♠ 218-724-7841
3601 Knuesel Thomas W & Claudia J 14 ♠ 218-724-7550
3602 Puff John R & Janet M 15 ♠ 218-724-1044
3610 Newstrom Dale C & Laverne O 50 ♠ 218-724-2251
3616 Leighton Richard J & Bridget A 14 ♠

GREYSOLON RD Cont'd
3622 Wold Stanley R & Mona E 16 ♠ 218-728-5925
3623 Coventry Katharine B & William D 41 ♠ 218-728-2074
3627 Pearson Rodger I & Susan R 35 ♠ 218-728-2134
3630 Khoury Dwight D 10 ♠ 218-728-1330
Khoury Samuel D 218-728-1330
3704 Arch Robert L & Kristina L 50 ♠
3707 Johnson Terry M & Julie P 19 ♠ 218-728-2344
3708 Leis Frank L & Rosemary A 50 ♠ 218-724-5884
3714 Andresen John C 39 ♠ 218-724-1188
Andresen Harrold 218-724-1188
3715 Guttormsson Stefan P 29 ♠ 218-728-4037
Guttormsson Stefan J 218-728-4037
3721 Agriesti George J & Roseann C 19 ♠ 218-724-6316
3722 Lafferty John P III & Laura T 14 ♠ 218-724-2593
3725 Kasper Thomas P & Sherry K 15 ♠ 218-724-4921
LE FLAIR beauty salons 218-724-4921
3728 Eaton Robert F Jr & Ruth A 23 ♠ 218-724-4589
3729 Hecimovich James A & Maxine K 8 ♠ 218-728-2448
3732 Canfield Merlin E & Kathleen S 35 ♠ 218-724-0226
3733 Sanders Craig A 16 ♠ 218-724-9065
3737 Ball Stephanie A 15 ♠ 218-730-0249
3741 Boerboom Kevin M & Stephanie M 50 ♠
3800 Johnson Robert W 26 ♠ 218-724-1620
Johnson Peter V 218-724-1620
3815 Magni Michael A & Linda J 2 ♠
3901 Boyd Robert W 38 ♠ 218-724-8630
BUSINESSES 8 HOUSEHOLDS 154

GRIAK DR (DULUTH)
• ZIP CODE 55808 CAR-RT C060
1 Marzolf Brian L 13 ♠
+ W STOWE ST CONTINUES
2 Wark Greggory P 3 ♠
3 No Current Listing
4 Davidson Mary D 50 ♠ 218-626-4952
5 Ronning Jenelle 2 ♠
6 Parker Constance I 2 ♠ 218-628-1919
7 Galovich Robert 4 ♠ 218-626-4016
8 Johnson Daniel S 7 ♠ 218-626-1267
9 Dixion Duane 7 ♠ 218-626-1703
10 Ohme Carrie L 2 ♠
Ohme Alicia
11 - 12 No Current Listing (2 Hses)
13 Hystad Pamela G 50 ♠ 218-626-2187
Hystad Karoline C 218-626-2187
14 Radle M C 6 ♠ 218-626-1941
15 Peterson James R 2 ♠
16 Ⓦ Klaas Kelly J
17 Harbert David L 10 ♠
18 Moberg Diane M 3 ♠
19 Timm Ivan D & Sandi L 14 ♠ 218-626-3757
20 Murray Pennie & John W 20 ♠ 218-626-4077
21 Cooper Kathleen M 16 ♠ 218-626-3795
22 No Current Listing
23 Ridgley Gwendylynne 4 ♠
24 Gruben Lon E 50 ♠
25 No Current Listing
+ HOLT DR ENDS
+ COBAN DR INTERSECTS
+ KORDA DR ENDS
HOUSEHOLDS 25

W GRIGGS PL (DULUTH)
• ZIP CODE 55803 CAR-RT C039
20 No Current Listing
24 Bach Dana T & Marlene B 30 ♠ 218-728-5315
HOUSEHOLDS 2

GRIMMER RD (TWO HARBORS)
• ZIP CODE 55616 CAR-RT R001
1307 Johnson Emmert L 41 ♠ 218-834-2762
1334 Ⓦ Juenemann Cliff W ♠
Juenemann Mandy
1352 No Current Listing
1409 SILVER CREEK INSTITUTE social serv & welfare org
....218-834-4746
BUSINESSES 1 HOUSEHOLDS 3

GRINDEN DR (DULUTH)
• ZIP CODE 55811 CAR-RT C021
4701 BUDGET RENT A CAR auto renting 218-727-7685
DATM LLC automated teller mach 218-727-9425
DULUTH INTL AIRPORT-DLH city government 218-727-2968
QUICK BAGS delivery serv 218-722-0664
US CUSTOMS SVC federal government 218-720-5220
US DEFENSE REUTILIZATION OFC federal government
....218-722-2526
US FAA federal government 218-722-7326
2 NORTHWEST AIRLINES AIR CARGO air cargo serv
....218-727-8747
4 AVIS RENT A CAR auto renting 218-727-7233
6 ALAMO RENT-A-CAR auto renting 218-727-7426
6 NATIONAL CAR RENTAL auto renting 218-727-7426
8 AFTERBURNER LOUNGE DINING bars 218-727-1152
11 STANDARD PARKING parking stations & garages
....218-727-7122
BUSINESSES 13

GRONDAHL RD (BRIMSON)
• ZIP CODE 55602 CAR-RT H067
6505 Ⓦ Ziegler Gregory A ♠
HOUSEHOLDS 1

GROUSE TRL (DULUTH)-FROM 4051 HICKEN RD NORTH
• ZIP CODE 55803 CAR-RT R010
5503 Sabrowski Annie J 9 ♠
Shovein Joanne L 20 ♠

GROUSE TRL Cont'd
5545 Hoel Dennis V & Susan J 50 ♠ 218-721-3337
HOUSEHOLDS 3

GROUSE LAKE RD (ISABELLA)
• ZIP CODE 55607 CAR-RT H001
3225 - 3327 No Current Listing (3 Hses)
3337 Foster Joseph V 19 ♠ 218-323-7671
3346 Hedin Thomas L & Barbara J 2 ♠
HOUSEHOLDS 5

GROUSE RIDGE DR (HERMANTOWN)-FROM 5165 W ARROWHEAD RD NORTH
• ZIP CODE 55811 CAR-RT C042
4301 Ⓦ Cruz Maureen S ♠
4306 Ⓦ Steede Robert M & Bobbie M ♠ 218-206-0137
4311 Mayer Brannon D & Rebecca S 4 ♠ 218-729-4921
4314 Sylvester Fredrick D & Tami L 11 ♠
4318 Schmies Cary W 15 ♠
Schmies Trudi W
4321 Kahlbaugh Brian E & Heather M 9 ♠ 218-729-4544
4331 Anderson Kent L 50 ♠ 218-729-5259
4341 Hnatko Todd H & Janelle P 50 ♠ 218-729-9493
4351 Karis Thomas 2 ♠
4354 Dillon Herb T & Suzi 8 ♠ 218-729-9459
4361 Larson Brant N & Tina L 3 ♠ 218-729-0077
4366 Abernathy Randall S & Amy I 50 ♠ 218-729-7209
4372 Melin Dustin D & Holly A 15 ♠ 218-729-8294
4379 Jugovich Stephanie 50 ♠ 218-729-0030
Jugovich Matthew D II 218-729-0030
4380 Harlander Ronald S Jr & Kelly S 3 ♠ 218-729-9496
4383 Anderson Jerrid A & Danielle S 2 ♠
4388 Ⓦ Peterson Daniel C & Kelly 218-206-0296
4391 No Current Listing
4395 Ⓦ Melin Karen
HOUSEHOLDS 19

GROVE ST (DULUTH)
• ZIP CODE 55803 CAR-RT C036
17 Lyons Courtney O & Kathryn A 38 ♠ 218-724-6878
19 Settergren James J & Geraldine J 15 ♠ 218-728-5869
• ZIP CODE 55810 CAR-RT C025
32 Harnell Lowell R & Jennifer A 9 ♠ 218-628-9232
33 FORBES UNITED METHODIST CHURCH churches
....218-624-9390
36 Vail Sherry A 5 ♠
104 Haggy Edwin H & Sandra K 24 ♠ 218-624-3100
105 Nelson Ronald E 26 ♠ 218-624-4371
Nelson Eileen E 218-624-4371
107 Miller George W 15 ♠ 218-624-3420
Miller Susan A 218-624-3420
110 Fontaine Leonard E & Mildred I 11 ♠ 218-628-7179
115 McCarthy Mark K & Sharon L 14 ♠ 218-624-3341
118 Ruhnke Lindsey L 17 ♠ 218-624-1953
123 Wittman Bryan R & Kelly A 2 ♠ 218-624-0220
125 Foucault Troy D 2 ♠
Foucault Katie
BUSINESSES 1 HOUSEHOLDS 12

GULL PT (GRAND MARAIS)-FROM 89 ISLAND RD SOUTHEAST
• ZIP CODE 55604 CAR-RT H064
7 No Current Listing
12 Ⓦ Diffey William 218-388-2269
16 Alexander David 5 ♠ 218-388-9422
18 Ⓦ Keller Arthur 218-388-9481
HOUSEHOLDS 4

GULL LAKE LN (GRAND MARAIS)-FROM 2 WATTERS PT NORTH
+ SAG LAKE TRL CONTINUES
+ WATTERS PT BEGINS
• ZIP CODE 55604 CAR-RT H064
64 Sierakowski Joseph R & Rita C 18 ♠ 218-388-9453
72 No Current Listing
73 Brown Diane 3 218-388-0636
HOUSEHOLDS 3

GUN CLUB RD (TWO HARBORS)
+ HIGHWAY 2 CONTINUES
+ LINDGREN RD INTERSECTS
• ZIP CODE 55616 CAR-RT R001
1353 Ⓦ Minkkinan Philip R ♠
1357 Maki Coralee R 9 ♠
1377 Kosmo Steve-Lisa 50 ♠ 218-834-3482
Kosmo Steven J 218-834-3482
1382 Laborne Gary J & Donna L 15 ♠ 218-834-2822
1394 No Current Listing
1395 Carr John W Sr 50 ♠ 218-834-2734
1395 Carr Eleanor M 218-834-2734
1467 - 1554 No Current Listing (2 Hses)
1567 Palola Donna M 16 ♠
1568 Anderson Curtis W & Christine L 11 ♠
1574 Beck Sandra M 50 ♠ 218-834-3480
1606 Wirt Craig T 14 ♠ 218-834-5917
1652 Hedin James A & Bobbi J 21 ♠ 218-834-2090
1707 Svir Allan R & Maureen K 16 ♠ 218-834-4832
• ZIP CODE 55616 CAR-RT R005
1751 No Current Listing
1761 Anderson Richard B 11 ♠ 218-834-4390
1788 Newman Nellie 2 ♠ 218-834-6581
1809 Carr Becky J 26 ♠ 218-834-2995
1820 Cavallin Jeffrey D 21 ♠ 218-834-5168
1823 Vigen Anthony J 6 ♠ 218-834-7162
Vigen Andrea L 218-834-7162
1836 Ⓦ Olson Toni L ♠
1837 Larson Richard A 25 ♠ 218-834-5946
Larson Louise E 218-834-5946
1849 Udenberg Vince H & Sherry R 9 ♠ 218-834-3919

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GREYSOLON RD Cont'd
2330 Keegan Terri L [4]▲ 218-724-7277
2401 Thompson-Gilbert Cary A [49]▲
2402 No Current Listing
2408 Craig Robert H & Gail M [14]▲ 218-728-9285
2412 Lutzka David R & Lori A [14]▲ 218-724-3057
2417 Bradley Robert S [5]▲
Bradley Steve
2420 Leppi Cherie L [14]▲ 218-728-5245
2424 Bertsch Benjamin R [7]▲ 218-724-5575
2426 @ Austin Jay A & Elizabeth C▲ 218-724-1575
2429 Paulisich Marie L [2]
1 Hall Jeffrey P & Paula J [15]▲ 218-726-0294
2429 1/2 @ Grisham Heather K
2430 Mickelsen Peggy B & William K [41]▲ 218-724-3857
2502 @ Maki Dennis & Lois 218-724-4948
2512 Elden Steven W & Arlene F [48]▲ 218-728-2622
2518 Howard Russ E & Brenda S [12]▲ 218-728-9251
2522 Keppers Jarry M & Deetta S [19]▲ 218-724-7434
2525 Myzel Philip [47]▲ 218-724-1393
2526 - 2531 No Current Listing (2 Hses)
2536 Laven Scott R [48]▲ 218-724-3234
@ Peterson Julia K
2600 Case Delbert W & Jennifer P [7]▲ 218-728-4016
2603 Bennett Thomas J & Lois A [10]▲ 218-724-6297
2610 No Current Listing
2615 Ireland Donald W [33]▲ 218-724-5613
2620 Vanstrom Neal R & Iola J [23]▲ 218-724-1403
2700 Swanstrom Patricia M [18]▲ 218-724-3215
2710 Weidner Robert R [4]▲ 218-525-5468
2724 McMillan David J & Carleen A [48]▲ 218-724-4684
2725 Lucca Michael J & Jill C [48]▲ 218-724-7365
2730 Kirschling Ronnie J [3]▲
Vorderbrug Harry H & Candy L [5]▲
+ S 28TH AVE E INTERSECTS
2800 Sands Gloria I [18]▲ 218-728-3307
2801 Zarins John J & Joann L [36]▲ 218-728-1688
2809 Viljaste Gunnar & Adrienne M [33]▲ 218-724-6091
2810 INTERIORS 3 int decrtrs design/consultants 218-724-4665
Loraas Paul A & Dawn M [11]▲ 218-728-2656
2815 Backman Glen T & Linda M [9]▲ 218-724-1580
2816 Chandler Eric W & Shelley Z [5]▲ 218-728-4410
2820 Ranelli Paul L [4]▲ 218-728-8128
Ranelli Pl L 218-728-8128
2821 @ Nixon Bryce A▲ 218-728-1403
2824 Schneider Michael J & Amy S [13]▲ 218-728-6510
2825 Alaspa Kimberly A [7]▲ 218-724-4439
2831 @ Shilman Sarah▲
Shilman Nicholas S
2832 Leigh Mary M [23]▲ 218-724-3883
2901 King Mary L [20]▲ 218-724-7500
2902 Tellor Tracey A [8]▲ 218-728-0422
2906 Petersen Ernest S & Dorothea E [32]▲ 218-724-4266
2909 Renier Thomas S & Debra J [19]▲ 218-724-9203
2910 Gillett Julia E [10]▲ 218-724-8609
2914 Gomke Monte A [4]▲ 218-728-0921
2915 Ostman Paul T & Mary M [48]▲ 218-724-8119
2919 Anderson Harvey J & Susan M [21]▲ 218-724-4574
2920 Colman Steven M & Marion S [4]▲ 218-728-4432
2924 Grombacher Jacquelynn S & Charles A [20]▲
2925 @ Wirth Erin▲ 218-728-1458
2928 Evans Mary J [27]▲ 218-724-0261
Evans David L 218-724-0261
2931 Vandruten William A & Sharon E [29]▲ 218-724-4176
2932 Hassinger Nancy L [11]▲
2940 Marshall David E [12]▲
3001 Buria John A & Alice L [20]▲ 218-724-1114
3009 Harnstrom Jack M [5]▲ 218-728-2459
JACK HARNSTROM REALTY real estate 218-624-2804
3015 Nielsen Joanne M & Skott J [11]▲ 218-724-2901
3103 Johnson David M & Mary P [4]▲ 218-728-3998
3104 No Current Listing
3110 Kroening Tricia J [4]▲
3111 Klassen Jeffrey F & Heidi L [48]▲ 218-728-6990
3120 Schmelka Daneil [4]▲
Schmelka Kathleen
3121 Larson Randall S & Maureen E [12]▲ 218-724-6125
3122 No Current Listing
3124 Ross James M Jr & Suzanne M [11]▲ 218-724-4682
3125 Pedersen Theodore D & Ayda C [4]▲ 218-729-8733
3126 Wolterstorff Jay R & Susan L [17]▲ 218-728-3789
3129 Brown James D [10]▲ 218-728-9326
3135 Riddle Elizabeth A [13]▲
Riddle Michael W
3205 Lyman Robert F & Jill S [48]▲ 218-728-3133
+ CONGDON PARK DR INTERSECTS
+ S 32ND AVE E INTERSECTS
• ZIP CODE 55804 CAR-RT C071
3302 @ Keane Michele T▲ 218-728-4550
3319 Hovland George I III & Cindy M [9]▲ 218-724-5422
3400 @ Englund Joann K▲
Lundstrom Michael G [48]▲ 218-730-0166
+ S 35TH AVE E INTERSECTS
3500 Dougherty Mary B & Thomas E [48]▲ 218-728-3302
3502 @ Bursch Craig W▲
Bursch Paula J
3512 Laskowski Frank S Jr & Marjorie R [37]▲ 218-724-0434
3518 REM ARROWHEAD INC social serv & welfare org 218-724-9373
3528 Javorina Paul S [46]▲ 218-728-5652
3536 Ingelin Paul W [49]▲ 218-724-6284
3540 Krovitz Esther S [27]▲ 218-724-4119
3548 Schneider Steven W & Jodie B [22]▲ 218-724-7841
3601 Knuesel Thomas W & Claudia J [12]▲ 218-724-7550
3602 Puff John R & Janet M [13]▲ 218-724-1044
3610 Newstrom Dale C [48]▲ 218-724-2251
Newstrom Dale R 218-724-2251
3616 Leighton Richard J & Bridget A [12]▲
3622 Wold Stanley R & Mona E [14]▲ 218-728-5925

GREYSOLON RD Cont'd
3623 Coventry Katharine B & William D [39]▲ 218-728-2074
3627 Pearson Rodger I & Susan R [33]▲ 218-728-2134
3630 Khoury Dwight D & Diane J [9]▲ 218-728-1330
3704 Arch Robert L & Kristina L [48]▲
3707 Johnson Terry M & Julie P [17]▲ 218-728-2344
3708 Leis Frank L & Rosemary A [48]▲ 218-724-5884
3714 Andresen John C & Ruth [37]▲ 218-724-1188
3715 Guttormsson Stefan P & Rosemary R [27]▲ 218-728-4037
3721 Agriesti George J & Roseann C [17]▲ 218-724-6316
3722 Lafferty John P III & Laura T [12]▲ 218-724-2593
3725 Kasper Thomas P & Sherry K [13]▲
LE FLAIR beauty salons 218-724-4921
3726 Eaton Robert F Jr & Ruth A [21]▲ 218-724-4589
3729 Hecimovich James A & Maxine K [6]▲ 218-728-2448
3732 Canfield Merlin E [31]▲ 218-724-0226
Canfield Suzanne K 218-724-0226
3733 Sanders Craig A [14]▲ 218-724-9065
3737 No Current Listing
3741 Boerboom Kevin M & Stephanie M [48]▲
3800 Johnson Robert W III & Doris L [24]▲ 218-724-1620
3815 No Current Listing
3901 Boyd Robert W [36]▲ 218-724-8630
Boyd Kathleen C 218-724-8630
3901 1/2 @ Anderson E▲
BUSINESSES 9 HOUSEHOLDS 155

GRIAK DR (DULUTH)
• ZIP CODE 55808 CAR-RT C060
1 Marzolf Brian L [11]▲ 218-626-1981
+ W STOWE ST CONTINUES
2 @ Wark Greggory P▲
3 No Current Listing
4 Davidson Mary D [49]▲ 218-626-4952
5 @ McClarey Dawn 218-626-4717
6 @ Parker Constance I▲ 218-628-1919
Parker George E Jr 218-628-1919
7 Galovich Robert [2]▲ 218-626-4016
8 No Current Listing
9 Dixion Duane [5]▲ 218-626-1703
10 No Current Listing
11 Benassi Curtis F [14]▲ 218-626-1098
12 No Current Listing
13 Hystad Pamela G [48]▲ 218-626-2187
14 Radle M C [4]▲ 218-626-1941
15 Keogan Patricia R [2]▲ 218-626-1566
16 Johnson Aaron L & Diana M [3]▲
17 Harbert David L & Susan L [8]▲ 218-626-1178
18 @ Moberg Diane M
19 Timm Ivan D & Sandi L [12] 218-626-3757
20 Murray John W & Pennie [18]▲ 218-626-4077
21 Cooper Kathleen M [14]▲ 218-626-3795
22 Kallos Donald E [13]▲ 218-626-4779
Kallos Mary E 218-626-4779
23 Ridgley Gwendylynne [2]▲ 218-626-4980
24 Gruben Lon E [48]▲
25 Herrington George S Sr [16]▲ 218-626-1280
Herrington Marjorie K 218-626-1280
+ HOLT DR ENDS
+ COBAN DR INTERSECTS
+ KORDA DR ENDS
HOUSEHOLDS 25

W GRIGGS PL (DULUTH)
• ZIP CODE 55803 CAR-RT C039
20 Carr Leah K [17]▲
24 Bach Dana T & Marlene B [28]▲ 218-728-5315
HOUSEHOLDS 2

GRIMMER RD (TWO HARBORS)
• ZIP CODE 55616 CAR-RT R001
1307 Johnson Dorothy E & Emmert L [39]▲ 218-834-2762
1334 Ryan Jeanne F & Richard C [49]▲ 218-834-3052
1409 SILVER CREEK INSTITUTE envrmntl conservation/ecologcl 218-834-4746
BUSINESSES 1 HOUSEHOLDS 2

GRINDEN DR (DULUTH)
• ZIP CODE 55811 CAR-RT C042
4701 AFTER BURNER BANQUET & CNFRNC banquet rooms 218-628-0276
AFTERBURNER LOUNGE DINING restaurants 218-727-1152
ALAMO RENT-A-CAR auto renting 218-727-7426
DATM LLC automated teller mach 218-727-9425
DULUTH AIRPORT AUTHORITY city government 218-727-2968
HERTZ RENT A CAR auto renting 218-722-7418
NATIONAL CAR RENTAL auto renting 218-727-7426
NORTHWEST AIRLINES AIR CARGO air cargo serv 218-727-8747
QUICK BAGS delivery serv 218-722-0664
STANDARD PARKING parking stations & garages 218-727-7122
BUSINESSES 10

GRONDAHL RD (BRIMSON)
• ZIP CODE 55602 CAR-RT H067
6505 Hepola Gary M [46]▲
HOUSEHOLDS 1

GROUSE TRL (DULUTH)-FROM 4051 HICKEN RD NORTH
• ZIP CODE 55803 CAR-RT R010
5503 Shovein Joanne L [18]▲ 218-721-3905
5545 Hoel Dennis V & Susan J [48]▲ 218-721-3337
@ Smith Bemeta E▲
HOUSEHOLDS 3

GROUSE LAKE RD (ISABELLA)
• ZIP CODE 55607 CAR-RT H001
3337 Foster Joseph V [16]▲ 218-323-7671

GROUSE LAKE RD Cont'd
3346 @ Hedin Thomas L & Barbara J▲
HOUSEHOLDS 2

GROUSE RIDGE DR (HERMANTOWN)-FROM 5165 W ARROWHEAD RD NORTH
• ZIP CODE 55811 CAR-RT C042
4301 Melin Gary J & Karen L [48]▲ 218-729-8927
4306 Meierhoff Joseph W & Laurena D [12]▲ 218-720-5391
4311 @ Mayer Brannon D▲ 218-729-4921
4314 Sylvester Fredrick D & Tami L [6]▲
4318 Schmies Trudi W [13]▲
Schmies Cary W
4321 Kahlbaugh Brian E & Heather M [6]▲ 218-729-4544
4331 Anderson Kent L [48]▲ 218-729-5259
4341 Hnatko Todd H & Janelle P [48]▲ 218-729-9493
4351 Scanlon Larry M & Sheryl K [6]▲
4354 Dillon Herb T & Suzi [4] 218-729-9459
4361 @ Larson Brant N & Tina L▲ 218-729-0077
4366 Abernethy Randall S & Amy I [48]▲ 218-729-7209
4372 Melin Dustin D & Holly A [19]▲ 218-729-8294
4379 Jugovich Stephanie [48]▲ 218-729-0030
Jugovich Matthew D II 218-729-0030
4380 @ Harlander Ron S
Harlander Kelly
4391 Landrigan Brian R [5]
HOUSEHOLDS 16

GROVE ST (DULUTH)
• ZIP CODE 55803 CAR-RT C036
17 Lyons Courtney O & Kathryn A [36]▲ 218-724-6878
19 Settergren James J & Geraldine J [13]▲ 218-728-5869
• ZIP CODE 55810 CAR-RT C025
32 @ Harnell Lowell R & Jennifer A▲
33 FORBES UNITED METHODIST CHURCH churches 218-624-9390
36 Harnell S [48]▲ 218-628-7001
Harnell Lee E 218-628-7001
104 Haggy Edwin H & Sandra K [22]▲ 218-624-3100
105 Nelson Ronald E [24]▲ 218-624-4371
Nelson Eileen E 218-624-4371
107 Miller George W [13]▲ 218-624-3420
Miller Susan A 218-624-3420
110 Fontaine Leonard E [9]▲ 218-628-7179
115 McCarthy Mark K & Sharon L [12]▲ 218-624-3341
118 Ruhnke Kenneth B [15]▲ 218-624-1953
Ruhnke Lindsey L 218-624-1953
123 Klang Lawrence C [48]▲ 218-624-0500
125 No Current Listing
BUSINESSES 1 HOUSEHOLDS 12

GULL PT (GRAND MARAIS)-FROM 63 ISLAND RD SOUTHEAST
• ZIP CODE 55604 CAR-RT H064
16 Alexander David [3]▲ 218-388-9422
HOUSEHOLDS 1

GULL LAKE LN (GRAND MARAIS)
• ZIP CODE 55604 CAR-RT H064
64 Sierakowski Joseph R & Rita C [16]▲ 218-388-9453
72 Gerkensmeyer David C & Janis E [6]▲ 218-388-2010
73 @ Brown Kenneth & Diane▲ 218-388-0636
HOUSEHOLDS 3

GUN CLUB RD (TWO HARBORS)
• ZIP CODE 55616 CAR-RT R001
1357 Maki Coralee R [7]▲
1377 Kosmo Steve-Lisa [48]▲ 218-834-3482
Kosmo Steven J 218-834-3482
1382 Labonne Donna L & Gary J [8]▲ 218-834-2822
1394 No Current Listing
1395 Carr John W Sr [48]▲ 218-834-2734
Carr Eleanor M 218-834-2734
1554 @ Heinonen Lisa
1567 - 1568 No Current Listing (2 Hses)
1574 Beck Sandra M & Scott C [48]▲ 218-834-3480
1606 Wirt Craig T [48]▲ 218-834-5917
1652 HEDIN CONSTRUCTION SVC gent contractors 218-834-2019
Hedin James A & Bobbi J [19]▲ 218-834-2090
1707 Svir Allan R & Maureen K [14]▲ 218-834-4832
• ZIP CODE 55616 CAR-RT R005
1751 No Current Listing
1761 Anderson Richard B [9]▲ 218-834-4390
1788 - 1809 No Current Listing (2 Hses)
1820 Cavallin Amy L & Jeffrey D [19]▲ 218-834-5168
1823 Vigen Andrea L [4]▲ 218-834-7162
1836 Rasmussen Justin J [3]▲ 218-834-3287
1837 Larson Richard A & Esther L [9]▲ 218-834-3319
1849 Udenberg Sherry R & Vince H [6]▲ 218-834-3919
BUSINESSES 1 HOUSEHOLDS 21

N GUNFLINT LK (GRAND MARAIS)
• ZIP CODE 55604 CAR-RT H064
72 Kloek James [25]▲ 218-388-2281
83 S Nicolaison Chris [6] 218-388-2225
Nicolaison Lilean 218-388-2225
90 Ferguson Melody & David M [48]▲ 218-388-0300
102 Germain Donald L & Carole L [48]▲ 218-388-9946
104 Gill Thomas B & Mary E [48]▲ 218-388-9412
106 Murphy Robert P Jr [48]▲
126 Schloot John [4]▲ 218-388-9467
170 Peddycoart Brenwyn [3]▲ 218-388-0577
Peddycoart R 218-388-0577
182 George David [7]▲ 218-388-0806
194 Beattie David C [9]▲ 218-388-2233
MOOSEHORN BED & BREAKFAST resorts 218-388-2233
196 Beattie David C [49]▲
199 Baile John T & Nona J [48]▲
201 Beyer Bud & Patti [5]▲ 218-388-0930
215 Schroeder Ernie & Audrey [7]▲ 218-388-0119
216 Reid Wendy [5]▲ 218-388-0123

STREET GUIDE

2001 - Duluth, MN - Polk

GREENBRIAR DR (D)
5 Caya Elizabeth A [D]+ ♠ 624-6377
7 Lane Bonita K [4]
Myron Jean A [2] 624-3955
9 Rysman Dale W [N] 624-4233
11 [N] Kleinsasser Herbert J 628-3731
Kleinsasser Bonny J 628-3731
13 Joki Jeffrey A [3] ♠ 628-2472
Joki Michelle A 628-2472
15 [N] Campaigne John C 624-1525
17 [N] Ellingson Timothy 624-7403
19 Hendrickson Kent M & Brenda [D]+ ♠ 624-3561
21 [N] Johnson Lyle T 624-3795
23 [N] Peterson L A 628-3604
25 Marrow Rita S [5] ♠ 628-0445
27 Olin Elwood P [7] ♠ 624-5764
Olin Joanne E 624-5764
+OLEA AVE ENDS
HOUSEHOLDS 15

GREENWOOD LN (DULUTH)-FROM 2079 VERMILION RD EAST
- ZIP CODE 55803 CAR-RT C031
107 Norlander Mark A [2] ♠ 728-6943
Norlander Dawn R 728-6943
108 Saari Darren L & Lori [3] ♠
111 [N] Davy Malcom B 728-3416
Spillers C S 728-5094
112 Bents Lisa 724-7631
[N] Bjerklie J 724-0410
114 [N] Finnigan Robert ♠ 724-7774
115 Schwartau William K [D]+ ♠ 724-4042
120 Marshall Robert H [D]+ ♠ 724-0408
122 Haney Kevin R [D]+ ♠ 724-1401
Haney Julie A 724-1401
123 [N] Betzler Steven 724-2471
132 [N] Verchota Robert J 728-3045
133 Larson Kristopher W & Christine [2] 728-0048
137 [N] Burklund Jack 724-3225
139 [N] Conant Jonathan 724-8210
140 [N] Hojnacki David M 728-4678
145 [N] Larsen David W 728-3389
+LAKEVIEW DR INTERSECTS
HOUSEHOLDS 17

GREENWOOD RD (DULUTH)-
+LAKESIDE CT ENDS
- ZIP CODE 55804 CAR-RT C066
5177 Hansen Constance P [D]+ ♠
5198 Sorensen Sarah G [4] ♠
5201 [N] Olson Maureen 525-5166
+SPRUCE CT ENDS
5202 McNaughton Corinne E [D]+ ♠ 525-1516
McNaughton Kelly S 525-1516
5208 Cameron Lois M [D]+ ♠ 525-4403
5209 Simmons Muriel E [D]+ ♠ 525-4652
Simmons Jerry L 525-4652
5212 Komanti Vickie L [D]+ ♠ 525-6563
5213 Fellbaum John L [D]+ ♠ 525-5197
5216 [N] Lindgren John 525-3754
5217 Tonkin James D [D]+ ♠ 525-4084
Tonkin Bonnie G 525-4084
5218 [N] Hagberg Irene 525-6116
5220 Sundberg Charles E & Laura [D]+ ♠ 525-2312
5224 [N] Ultican Thomas E 525-6344
5227 Surine Eric A [6] ♠ 525-4254
5228 Not Verified
5229 Claveau Virginia I [D]+ ♠ 525-5171
5231 Marple Everett M [D]+ ♠ 525-4845
5232 Williamson Dany J [7] ♠ 525-5267
Williamson Tracy H 525-5267
5235 [N] Andrews T 525-5903
5241 [N] Sorvik Arvid 525-5994
5243 [N] Aebli Cynthia 525-2602
5247 Schlarman Paul E [7] ♠ 525-7796
5249 Risku Emil M [D]+ ♠ 525-1007
Risku Ernestina M 525-1007
5253 Kimball Dwight L [D]+ ♠
5257 [N] Falk Angie 525-3081
5261 Beyer Carrie A [6]
Beyer Jennifer L
Sunde Jeffrey D [D]+ ♠ 525-7677
Sunde Virginia L 525-7677
5264 Spees Claudia P [D]+ ♠ 525-6921
Spees Jesse L 525-6921
5266 Cook Jeffrey R [D]+ ♠ 525-4010
Cook Rita J 525-4010
5269 Sundstrom Martin T [D]+ ♠ 525-4629
Sundstrom Anna A 525-4629
5279 Beck Peter A [D]+ ♠ 525-1063
Beck Catherine J 525-1063
5280 Not Verified
5282 [N] Kohlsatt Peter 525-6227
5285 Cannon Chelsea 525-7198
+PINE TREE RD ENDS
5307 [N] Stermer S L 525-7626
5311 Hiukka Mayme C [D]+ ♠ 525-5702
Hiukka John L 525-5702
5315 Jackson David B & Laurie [D]+ ♠ 525-5135
5316 Lamb Patrick W [8] ♠ 525-0658
5320 Sundstrom Lillian C [D]+ ♠ 525-5779

GREENWOOD RD (D)
5325 Imes Thomas L & Barbara [D]+ ♠ 525-3249
5329 Not Verified
5330 [N] Fuentes Daniel 525-4357
5334 [N] Hedberg Richard 525-2008
5341 Jackson Gerald S [D]+ ♠ 525-4291
Jackson Jeanette H 525-4291
5342 [N] Zink Jay N 525-5589
5356 Livingston Marlis J [6] ♠ 525-0647
Livingston Thomas B 525-0647
5358 Davies Thomas E [D]+ ♠ 525-5125
5361 Baumgartner Duane G [D]+ ♠ 525-4649
Baumgartner Jacqueline R 525-4649
5372 Brandenburg Eric C [N] ♠ 525-0319
5377 Stromgren George C [D]+ ♠ 525-3953
5384 [N] Carlson Henning F 525-5790
5393 Blomquist Corinne E [D]+ ♠ 525-4321
5406 Johnson Dagmar J [5]+ ♠ 525-4641
5409 [N] Bowen John D 525-6285
+RYAN RD INTERSECTS
HOUSEHOLDS 54

GREENWOOD RD (GRAND MARAIS)-FROM 620 GUNFLINT TRL NORTHEAST

GREYSOLON PL (DULUTH)-
- ZIP CODE 55812 CAR-RT C058
3106 Agnew Katherine L [D]+ ♠ 724-4013
3132 Ranthum Evelyn C [D]+ ♠ 724-2478
3144 Olson Taylor A [4] ♠ 724-5351
3202 Ondich-Batson Daniel S [7]
Unruh Daniel M [D]+ ♠ 728-4734
Unruh Judy A 728-4734
3208 Kmiech Joseph J III [D]+
Kmiech Tanya C
Ranthum Garry 724-9155
3214 [N] Pielke Michael 728-6392
- ZIP CODE 55804 CAR-RT C075
3331 Saracino Steven [3] ♠ 724-4104
3401 Not Verified
3401 MENDENHALL GRAHAM COMPANY 728-7964
3402 Johnson Jean [D]+ ♠ 724-8689
3410 Nelson Rev Loren O [D]+ ♠ 724-8481
Nelson Candace L 724-8481
3414 [N] Patterson Michael S 724-9575
3431 Tubesing Donald A [D]+ ♠ 724-7014
3623 [N] Krautbauer John 728-9417
3624 [N] Edson C L 724-3143
Edson Mary N 724-7516
3705 Mason Jidney R [D]+ ♠ 724-6848
3706 Sandelin Rodney E & Loretta [D]+ ♠ 728-5674
3715 Cook Roberta J [6] ♠ 724-8725
3800 [N] Hartley Alfred 724-2725
BUSINESSES 1 HOUSEHOLDS 21

GREYSOLON RD (DULUTH)-FROM 101 S 17TH AVE E NORTHEAST
- ZIP CODE 55812 CAR-RT C050
1708 Not Verified
1710 Cerio Anita C [D]+ ♠ 724-9471
1722 [N] Schatz M 728-6434
1724 [N] Canonico Heather 724-4419
1731 ST PAUL'S CARRIAGE HOUSE 724-8369
+S 18TH AVE E INTERSECTS
1818 Ralston Dennis P [D]+ ♠ 724-3977
Ralston Maria 724-3977
1819 Shaw Heidi 728-0325
1 Not Verified
1822 [N] Hunnewell Rick 728-2050
NEKTON 728-2956
Wachtin Roberta 724-5062
1824 [N] Puhl Vivian M 728-4054
1825 1 Wattleimer Tammy L [5] ♠ 728-0672
1827 [N] Newman Cheryl 730-0134
+S 19TH AVE E INTERSECTS
- ZIP CODE 55812 CAR-RT C053
1905 Duffy Patrick 724-2843
2 Not Verified
1907 Haller Carrie F [D]+ ♠ 724-0599
2 Johnson Carrie F [D] ♠
1909 Mayberry Scott B [2]
1 Not Verified
1910 Mattila Derek 728-1751
Svoboda Lisa J [D]+ 728-3743
1912 Marquardt David E. 728-1657
1914 [N] Highlan Ann 724-2817
1915 [N] Repinski Robert 724-3603
1917 Foster Sharon A [D]+ ♠ 724-2942
Foster Thomas 724-2942
1920 GREYSOLON ARMS antiques 724-8387
[N] White Robert J 724-8740
1921 Heydt-Nelson Jessie [N] 724-6567
Reed Jana J 724-6567
2 Bowers Ken J [6] ♠ 724-7907
1922 Nelson Eric J [D]+ ♠ 728-2353

GREYSOLON RD (D)
1923 Johnson Dan 728-0515
2 Not Verified
1924 Rosberg Joanne N [D]+ ♠ 728-5221
Rosberg Tricia B 728-5221
1926 Saterbak Chad W & Kimberly [D] ♠ 724-2984
+S 20TH AVE E INTERSECTS
2010 Crowser Shawn P [5] 728-5284
Crowser Valerie D 728-5284
Kress Megan 724-5877
[N] Spoors Nicole A
Spoors Walter A
2015 Not Verified
2020 [N] Lepage Steven V & Laura 724-9778
2020 Not Verified
+N 21ST AVE E INTERSECTS
+JEFFERSON ST CONTINUES
- ZIP CODE 55812 CAR-RT C058
2211 FRANCISCAN SISTERS LIFE CENTER NETWORK religious orgn 724-2052
FRANCISCAN SISTERS OF THE EUCHARIST convent 724-6912
Rock B [2] ♠
+N 23RD AVE E INTERSECTS
- ZIP CODE 55812 CAR-RT C053
2301 Grytdahl Byron L [D]+ ♠ 724-9150
2302 Roman Karen J [D]+ ♠ 724-4463
Roman Daniel C 724-4463
2310 [N] Ulrich A R 724-0772
2314 [N] May Horst 728-4515
2320 Royal Christen E [D]+ ♠ 724-4957
2322 Sandell Richard G & Kathryn [5] ♠ 724-9613
2323 [N] Hamilton Earl 728-3491
2330 [N] Johnson Candyce L 728-1933
+N 24TH AVE E BEGINS
2401 Gilbert Gary T [D]+ ♠
2402 Kalman Mary M [D]+ ♠ 728-6404
KALMAN MARY CUSTOM DESIGN custom tailor 728-6404
2408 [N] Craig Robert 728-9265
2412 Lutzka David R & Lori [7] ♠ 724-3057
2417 [N] Harrison Scott 729-1360
2420 Leppi Charle L [8] ♠ 728-5245
2424 [N] Bertsch Benjamin 724-5675
Wiczek-Bertsch Jennifer 724-5675
2426 Yung Sharon Y [8] ♠ 728-6883
2429 Hall P J 728-0294
2429½ Andrews Jerry [3] 728-2029
Andrews Brett A 728-2029
2430 [N] Mickelsen Bill 724-3857
+N 25TH AVE E INTERSECTS
2502 Sax Leverne R [D]+ ♠
2512 Elden Steven W & Arlene [D]+ ♠ 728-2622
2518 Howard Russell E & Brenda [3] ♠ 728-9251
2522 Keppers De S [D]+ ♠ 724-7434
Keppers Jarry 724-7434
2525 Myzel Philip & Pearl [D]+ ♠ 724-1393
2526 Not Verified
2531 Armold David C [D]+ ♠ 724-4346
Armold Linda M 724-4346
2536 Laven Scott R [2] ♠ 724-3234
+S 26TH AVE E INTERSECTS
2600 [N] Heckart Dave 730-0060
2803 [N] Bennett Thomas 724-6297
2610 Sarvela Leonard A Jr [D]+ ♠ 728-5385
SARVELA LEONARD A JUNIOR 728-5385
- ZIP CODE 55812 CAR-RT C058
2615 Ireland Donald W [D]+ ♠ 724-5613
- ZIP CODE 55812 CAR-RT C053
2620 Vanstrom Laura J [D]+ ♠ 724-1403
Vanstrom Janice A 724-1403
2700 Swanstrom Sally A [D]+ ♠ 724-3215
Swanstrom Jack 724-3215
2710 Chez Fred B [D]+ ♠
2724 Not Verified
2725 [N] Lucca Michael 724-7365
2730 Shefchik Dorothy L [D]+ ♠ 724-0159
+S 28TH AVE E INTERSECTS
2800 Sands Gloria I [D]+ ♠ 728-3307
2801 [N] Zarins John J 728-1688
2809 [N] Viuaste Gunnar 724-6091
2810 Loraas Paul A [5] ♠ 728-2656
2815 [N] Backman Glen 724-1580
2816 Sailstad Richard B & Nancy [D]+ ♠ 724-5896
2820 [N] Maclean Robert A 724-0840
2821 Osborne Kathryn J [D]+ ♠ 724-5341
2824 Schneider Amy S [5]+ ♠ 728-6510
2825 [N] Parker John E 728-9204
2831 [N] Rowell M A 724-9496
2832 [N] Leigh M M 724-3883
2901 King Marylynn L [D]+ ♠ 724-7500
2902 Tellor Tracey A [4] ♠ 728-0422
TELLOR TRACEY OFFICE 728-0422
2906 Petersen Dorothea E [D]+ ♠ 724-4266
2909 Renier Thomas S & Debra [D]+ ♠ 724-9203

GREYSOLON RD
2910 [N] Gillett J E 724-8609
2914 Pooley John W [D]+ ♠ 728-1895
2915 Oslman Paul T & Mary [D]+ ♠ 724-8119
2919 Anderson Susan M [D]+ ♠ 724-4574
2920 [N] Becker Daniel 724-6410
2924 [N] Brown John A & Jeanne
2925 Hynum Steven L [2] ♠ Pechan Marlene K 728-1607
2928 [N] Evans David L 724-0261
2931 [N] Van Druten William A 724-4176
2932 Not Verified
2940 Klassen Michelle M [8] ♠ 728-4476
+S 30TH AVE E ENDS
3001 Buria Alice L & John [D]+ ♠ 724-1114
JOHN'S TURN wood carvings 724-1114
3009 Jensen James H & Deborah [D]+ ♠ 728-5603
3015 [N] Kuettel Robert 724-5823
+N HAWTHORNE RD ENDS
+BRANCH ST ENDS
3103 [N] Ferreira E C 728-2693
3104 Maddy Michael M & Marta [D]+ ♠
3110 Staver John F [D]+ ♠ 728-3820
3111 Klassen Heidi L [4] ♠ 728-6990
3120 McGeachie Dan [D]+ ♠ 728-1500
3121 Larson Randy S 724-8125
Rappley Larsen R [D]+ ♠
3122 Franz David 728-6839
3124 Ross James M Jr [6] ♠ 724-4682
Ross Suzanne M 724-4682
3126 [N] Shelhon Ellen 728-4570
3126 Wolterstorff Jay R & Susan [D]+ ♠ 728-3789
3129 Brown Kelly S [D]+ ♠ 728-9326
3135 Riddle Elizabeth A [7] ♠ Riddle David D
3205 Lyman Jill S [D]+ ♠ 728-3133
+CONGDON PARK DR INTERSECTS
+S 32ND AVE E BEGINS
- ZIP CODE 55804 CAR-RT C071
3302 Not Verified
3319 Hovland George III [5] ♠ 724-5422
Hovland Cynthia A 724-5422
3400 Lundstrom Michael G & Lana [3] ♠ 730-0166
3500 [N] Dougherty Thomas E 728-3302
3502 [N] Devaney Fred D 724-4598
3512 [N] Laskowski Frank S Jr 724-0434
3516 [N] Kostelic Rachel A NEKTON INCORPORATED handicapped care 724-9373
3528 Javorina S [5] ♠ 728-5652
3536 Ingelin Fay A [D]+ ♠ 724-6284
3540 Krovitz Maurice & Esther [D]+ ♠ 724-4119
3548 Schneider Steven W & Jodie [D]+ ♠ 724-7641
+S 36TH AVE E INTERSECTS
3601 CAMP TIGER youth camps 724-7550
Knuesel Thomas W & Claudia [3] ♠ 724-7550
3602 [N] Puff J 724-1044
3610 Newstrom Bale [D]+ ♠ 724-2251
Newstrom Karen L 724-2251
3616 Not Verified
3622 [N] Wold Stanley 728-5925
3623 COVENTRY WILLIAM D phys 728-2074
3627 Pearson Rodger I & Susan [D]+ ♠ 724-0658
3630 Khoury Dwight D & Diane [4] ♠ 728-1330
3704 Arch Kristina L [9]
3707 Johnson Terry M & Julie [D]+ ♠ 728-2344
3708 Lee Edward [D]+ ♠ 724-5884
3714 Andresen John C [D]+ ♠ 724-1188
3715 Gutz Stefan P 728-4037
3721 Agriesti Joe [D]+ ♠ 724-6316
3722 Lafferty Jack T [6] ♠ 724-2593
Lafferty Laura J 724-2593
Trombino Laura J [7] ♠
3725 Kasper Thomas P [3] ♠ 724-4921
Kasper Sherry K 724-4921
3728 [N] Eaton Robert F 724-4589
3729 [N] Lundberg Mark D 728-1434
3732 Canfield Kathleen S [D]+ ♠ 724-0226
Canfield Heidi M 724-0226
3733 [N] Sanders Craig 724-9065
3737 Ball Stephanie A [7] ♠ 724-2639
Ball Suzanne A 724-2639
3741 Not Verified
3800 [N] Johnson Robert W 724-1620
3815 [N] Truscott Ronald W ♠ 724-0942
Truscott Mary K 724-0942
3901 Boyd Robert W 724-8630
3903½ Not Verified
BUSINESSES 12 HOUSEHOLDS 160

GRIAK DR (DULUTH)-FROM 311 E STOWE ST SOUTH
- ZIP CODE 55808 CAR-RT C060
1 Marzoll Brian L [3] ♠
2 Not Verified
3 Adams Margaret S [D]+ ♠ 626-3733

GRIAK DR (D)
4 [N] Davidson M O 626-4952
5 [N] Nelson Tanya 626-2731
7 [N] Cogswell-Garrett J 626-3220
8 Haynes Stein L [2] 626-3818
Haynes Darla 626-3818
9 Gillis Sherry L [2] 626-2414
10 [N] Long Karen S 626-0282
Long Jody L 626-0282
A-B Not Verified (2 Apts)
11 Not Verified
12 Marshall Brian L [3] ♠ 626-4007
Marshall Michelle 626-4007
13 Hystad Pamela G [D]+ ♠ 626-2187
Hystad Karoline C 626-2187
14 Russell Phillip D & Kathryn [D]+ ♠ 626-2287
15 [N] Adams Eric
16 Not Verified
17 Harbert Susan L [3] 626-1178
Harbert David L 626-1178
18 Mathison Neill J III [D]+ ♠ 626-1975
Mathison Tammy J 626-1975
19 Shelley James F [D]+ ♠
Shelley Linda M
Timm Sandi L [7] ♠ 626-2757
Timm Ivan D 626-2757
20 Delancey Bruce A [D]+ ♠ 626-3402
Delancey Tina M 626-3402
21 [N] Cooper K 626-3795
22 Booth Chris [D]+ ♠ 626-1354
Booth Rebecca L 626-1354
Kallos Donald E II [4] ♠ 626-4928
Kallos Mary E 626-4928
23 Stauty Bert E & Elsie [D]+ ♠ 626-3601
24 Long Jade L [2] 626-3480
25 [N] Herrington George S 626-1280
+COBAN DR INTERSECTS
HOUSEHOLDS 28

E GRIGGS PL (DULUTH)-FROM 1201 WOODLAND AVE WEST

W GRIGGS PL (DULUTH)-FROM 1201 BRAINERD AVE EAST
- ZIP CODE 55803 CAR-RT C039
20 Carr Leah K [D]+ ♠
24 [N] Bach Dana T 728-5315
+E UNIVERSITY CIR BEGINS
+JUNCTION AVE INTERSECTS
HOUSEHOLDS 2

GRIMMER RD (TWO HARBORS)-
- ZIP CODE 55616 CAR-RT R001
1307 Johnson Emmert L [4] ♠ 834-2762
Johnson Dorothy E 834-2762
1334 Ryan Richard C [D]+ ♠ 834-3052
Ryan Dena E 834-3052
1352 Johnson Bruce W [D]+ ♠ 834-2756
Johnson Edgar W 834-2756
1409 Rondeau Eugene T [D]+ ♠ 834-2563
Rondeau Jeanne A 834-2563
HOUSEHOLDS 4

GRINDEN DR (DULUTH)-
- ZIP CODE 55811 CAR-RT C081
4701 A C S G industry splist consit 727-2270
4701 Not Verified
EXECUTIVE DELIVERY SERVICE 722-0664
H K ENTERPRISES auto leasing 722-7418
SONJU ENTERPRISES tourist agcy 727-7233
BUSINESSES 4 HOUSEHOLDS 1

GROUSE TRL (DULUTH)-FROM 4051 HICKEN RD NORTH
- ZIP CODE 55803 CAR-RT R012
5503 Shovein Joanne L [9]+ ♠ 721-3905
5517 Kelner Elsie E [6] ♠ 721-4233
Kelner Jamie P 721-4233
5545 [N] Hoel Dennis 721-3337
HOUSEHOLDS 3

GROUSE LAKE RD (ISABELLA)-
- ZIP CODE 55607 CAR-RT H001
3225 [N] Wilson Steve G 323-7633
3254 Not Verified
3337 Foster Joseph V [D]+ 323-7671
HOUSEHOLDS 3

GROUSE RIDGE DR (HERMANTOWN)-FROM 5165 W ARROWHEAD RD NORTH
- ZIP CODE 55811 CAR-RT C042
4301 Malin Dustin D [5] ♠ 729-8927
Malin Travis D 729-8927
4306 Merryman Ronald C [4] ♠ 729-1880
Merryman Sandra G 729-1880
4311 [N] Buxbaum D 729-0137
Thompson L 729-0137
4314 Hausch Raymond C & Carolyn [N] ♠ 729-1837
4318 [N] Weis T 729-0487
4321 Malin Holly A [4] ♠ 729-8294

Appendix H

Photographs

Photo 1. View of maintained greenspace north of Taxiway A.

Photo 2. Typical view of Taxiway A.

Photo 3. View of Taxiway A at western end.

Photo 4. View of lighting/signage along Taxiway A

Photo 5. Typical view of Taxiway A.

Photo 6. View of maintained greenspace west of Taxiway A.

Photo 1. View of stormwater ditch west of the pond area.

Photo 2. View of outlet structure on western end of the pond area.

Photo 3. Typical view of the pond area.

Photo 4. View of outlet structure on western end of the pond area.

Photo 5. View of the eastern pond area at the stormwater ditch inlet.

Photo 6. View of area south of the pond area.

Photo 1. Typical view of the stormwater pond.

Photo 2. View of the eastern inlet and riprap.

Photo 3. View of the western inlet and riprap.

Photo 4. View of the expansion area west of the stormwater pond.

Photo 5. View of the area east of the stormwater pond.

Photo 6. View of an at-grade monitoring well located along the northern portion of the pond.

Appendix I

Qualifications of the Environmental Personnel

KERI AUFDENCAMP

SENIOR PROJECT SCIENTIST

Ms. Aufdencamp is a senior project scientist who has managed Phase I and II ESAs and construction monitoring projects for MnDOT's Office of Environmental Stewardship, Metropolitan Council, Municipalities, and private clients. She has assisted clients with due diligence from early design planning stages through construction to secure regulatory approvals.

24 years

OF EXPERIENCE

EXPERIENCE

SP 6982-353 Fiber Optic Installation (Minnesota Department of Transportation) – Duluth, MN

Project manager for the Phase I ESA and Phase II ESA. The project extends from the Lief Erickson tunnel to the end of I-35 at 26th Avenue East in Duluth, Minnesota. MnDOT plans to complete fiber optic installation along the Project alignment. The Phase I ESA identified twelve high, forty medium, and fifteen low rank sites along the Project corridor.

River to River Greenway Trail Connections & Robert Street Underpass (Dakota County) – West Saint Paul, MN

Senior level review of the Phase I ESA and assisted with the Phase II ESA. The project is located between CSAH 6 (Thompson Avenue) and CSAH 8 (East Wentworth Avenue) in the City of West. St. Paul. SEH assisted Dakota County with final design of 0.65 mile greenway through a busy commercial district in West St. Paul that includes a 16 ft. wide by 10 ft. high concrete box culvert under Robert Street. Project involves significant agency coordination with MnDOT, County, City and private property owners and local businesses.

I-29/85th Street Environmental Assessment (85th Street Owner's Joint Venture) – Sioux Falls, SD

Senior level review of the Phase I ESA. The project will consist of a new interchange at 85th Street in Lincoln County with a braided exit ramp for WB I-229 to SB I-29 exiting traffic. This project includes two new bridge structures, drainage design, wetland mitigation, signals, lighting, and permitting. This project will be let through the SDDOT. The project also includes work with the City of Sioux Falls, City of Tea and Lincoln County.

Green Line Extension also known as the Southwest LRT Construction Monitoring (Metropolitan Council Metro Transit) – Eden Prairie, Minnetonka, Hopkins, Saint Louis Park, and Minneapolis, MN

Project Manager for contaminated materials construction monitoring oversight (Response Action Plan Implementation). Responsible for coordination, field oversight for proper management of contaminated materials and Response Action Plan Implementation Reports, Tank Excavation Worksheets, etc. for contaminated materials encountered on the 14.5-mile transit corridor.

TH 36 St. Croix River Crossing (Minnesota Department of Transportation) – Stillwater, MN

MnDOT project manager responsible for managing Phase I and II ESA, RAP development, contract special provisions, construction monitoring and liability assurance work; contracting environmental consultants; and overseeing cleanup during construction of a 5,070-foot bridge. Project work included work in Wisconsin.

EDUCATION

Bachelor of Science
Geology and Earth Science
University of Northern Iowa-Cedar Falls (2000)

REGISTRATIONS/CERTIFICATIONS

Certified Professional in Erosion and Sediment Control (8693),

Certified Erosion, Sediment, & Stormwater Inspector (11996)

SWPPP Designer, Construction Site Manager, and Construction Installer, University of Minnesota

Asbestos Inspector, Asbestos Supervisor, Minnesota Department of Health

Hazwoper and current 8 hour refresher

eRailSafe and BNSF Contractor

PROFESSIONAL ASSOCIATIONS

Minnesota Erosion Control Association, Member

International Erosion Control Association, Member

Minnesota Groundwater Association, Member

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JOIN OUR SOCIAL COMMUNITIES

Appendix H

Phase II ESA Twy A

Phase II Environmental Investigation

Taxiway A Reconstruction - Phase 7

Duluth, St. Louis County, Minnesota

DULAI 186683 | May 18, 2026

SEH

Building a Better World for All of Us®

Engineers | Architects | Planners | Scientists

Building a Better World for All of Us®

May 18, 2026

RE: Taxiway A Reconstruction - Phase 7
Phase II Environmental Investigation
Duluth, St. Louis County, Minnesota
SEH No. DULAI 186683

Mr. Ryan Welch
Duluth Airport Authority
4701 Grinden Drive
Duluth, Minnesota 55811

Dear Mr. Welch:

Please find enclosed the Phase II Environmental Investigation for the Taxiway A Reconstruction - Phase 7 project located at the Duluth International Airport in Duluth, St. Louis County, Minnesota. Please feel free to contact me directly at 651.318.0354 or kaufdencamp@sehinc.com if you have any questions or comments.

Sincerely,

Keri B. Aufdencamp

Keri Aufdencamp
Project Manager

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Certification

Phase II Environmental Investigation
Taxiway A Reconstruction - Phase 7
Duluth, St. Louis County, Minnesota

SEH No. DULAI 186683

May 18, 2026

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Executive Summary

Phase II Environmental Investigation

Short Elliott Hendrickson Inc. (SEH®) was retained by the Duluth Airport Authority (DAA) to conduct a Phase II Environmental Investigation for the Taxiway A Reconstruction - Phase 7 project located at the Duluth International Airport (DLH) in Duluth, St. Louis County, Minnesota (herein referred to as "Site"). The Site location is depicted on **Figure 1**.

Taxiway A is the parallel taxiway for the main runway (Runway 9/27) serving the DLH. The existing Taxiway A is approximately 10,700 feet in length and the reconstruction is proposed to be completed in nine phases, based on the result of the 2021 DLH Airport Master Plan and discussions with the DAA and Federal Aviation Administration (FAA). The overall reconstruction project includes realignment of the taxiway in the same general area as the existing Taxiway A. The Phase 7 project will also include the reconstruction and realignment of Taxiway A1 and Taxiway A2, which join Runway 9/27 with Taxiway A to meet current Federal Aviation Administration (FAA) design standards, which include having a right-angle intersection with the runway. The project also includes the expansion of the existing stormwater pond southeast of the DLH Terminal, and the dredging of the existing Northern Stormwater Pond to restore capacity.

The project work will include removal of existing airfield pavements, concrete taxiway pavement installation, asphalt shoulder pavement construction, and storm sewer infrastructure and drainage improvements. Taxiway edge lighting, airfield signage, and related airfield electrical circuits will be reconstructed with this project. Project work will also include turf establishment and installation of airfield pavement markings. The extent of the Phase 7 project areas are depicted on Figure 2.

The DLH includes the base of the Minnesota Air National Guards (ANG's) 148th Fighter Wing (FW). The 148th FW facilities are located on leased properties at several locations in the vicinity of the main east-west runway at the DLH and the main base is located on the eastern side of the DLH. The 148th FW base houses aircraft, vehicles, and equipment. Current and past operations at the base have involved the use of products such as fuels, oils, lubricants, paints, paint thinners, solvents, and aqueous film forming foam (AFFF).

A base-wide per- and polyfluoroalkyl substances (PFAS) Remedial Investigation (RI) is currently on-going at the DLH as the Minnesota ANG is evaluating PFAS impacts through a similar process used under the Installation Restoration Program (IRP) and consistent with the provisions of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended. Based on a review of the interim results provided by the Minnesota ANG, several detections of perfluorooctanoic acid (PFOA) and perfluorodecanoic acid (PFDA) exceeding their respective Minnesota Pollution Control Agency (MPCA) Commercial/Industrial Soil Reference Values (ISRVs) and/or Residential/Recreational SRVs (RSRVs) were located either within or adjacent to the Taxiway A Reconstruction and Northern Stormwater Pond Dredge portions of the Subject Property.

This investigation was performed to investigate the Site for the presence of contaminated soil that may be encountered during project construction-related activities and to provide necessary data for the development of a Response Action Plan (RAP)/Construction Contingency Plan (CCP), as needed. Drilling and sampling was completed on April 20 and 21, 2026.

The Phase II Environmental Investigation included thirteen hand auger soil borings (HA-01 through HA-13) completed to depths ranging between 3 to 5 feet below ground surface (bgs). Three sediment

samples were collected of the dredge material in the Northern Stormwater Pond as well as a surface water sample. The borings were completed along the existing Taxiway A, which will be reconstructed, in areas where the taxiway will be extended or where taxiway connector pavements will be constructed within the Phase 7 construction area, as well as around the footprint of the proposed stormwater pond expansion southeast of the DLH Terminal. Fill material was encountered throughout the borings extending to 5 feet bgs. No debris was observed. PID headspace readings were recorded between 0.0 to 2.1 parts per million (ppm), within background levels. No visual or olfactory indications of contamination were noted during the investigation.

Groundwater was not encountered while drilling. However, surface water located in the Northern Stormwater Pond contains PFAS contaminants above regulatory levels that will require proper management during dredging activities.

On the western extent of the Taxiway A area, PFDA (up to 9.24 nanogram per gram [ng/g]) and PFOA (4.34 ng/g) exceeded the MPCA ISRVs in boring HA-01 at depths ranging from 1 to 3 feet bgs. PFOS (up to 180 ng/g) and PFOA (0.366 ng/g) exceeded the MPCA RSRVs in borings HA-01 (at 1 and 3 feet bgs) and HA-02 (at 1 foot bgs). However no exceedances were identified at 3 feet bgs in HA-02. All other PFAS analytes in HA-01, HA-02, and HA-03 were below their respective RLs. On the eastern extent of the Taxiway A area, PFOS (up to 27.4 ng/g) and PFOA (up to 1.24 ng/g) exceeded the MPCA RSRVs in borings HA-09 (at 1 and 3 feet bgs) and HA-07 (at 1 and 3 feet bgs). All other PFAS analytes in HA-06, HA-07, HA-08, and HA-09 were below their respective RLs.

Soil encountered elsewhere during this Phase II Environmental Investigation met MPCA UFC, SRVs, and SLVs.

We recommend a RAP/CCP be prepared that describes the handling of PFAS contaminated soils along Taxiway A, the dredging procedures in the Northern Stormwater Pond, and procedures that would be employed in the event unknown contamination is encountered during excavation activities during the Taxiway A Reconstruction – Phase 7 project.

List of Abbreviations

Abbreviation	Meaning
ACM	Asbestos containing material
AFFF	Aqueous Film Forming Foam
ANG	Air National Guard
amsl	Above Mean Sea Level
AOC	Area of Concern
bgs	Below Ground Surface
Braun	Braun Intertec Corporation
C	Celsius
CCP	Construction Contingency Plan
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DAA	Duluth Airport Authority
DLH	Duluth International Airport
DRO	Diesel Range Organics
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
eV	Electron Volt
FAA	Federal Aviation Administration
FUDS	Formerly Used Defense Sites
FW	Fighter Wing
GPL	General Permit Limit
GRO	Gasoline Range Organics
HBG	Health Based Guidance
IRP	Installation Restoration Program
ISRV	Commercial/Industrial Soil Reference Value
MCL	Maximum Contamination Level
MDH	Minnesota Department of Health
MDL	Method Detection Limit
MGS	Minnesota Geological Survey
ML	Minimum Level
MN ANG	Minnesota Air National Guard
mg/kg	Milligrams per Kilogram
MPCA	Minnesota Pollution Control Agency
MWI	Minnesota Well Index
ng/g	Nanogram per Gram
ng/l	Nanogram per Liter
NPDES	National Pollutant Discharge Elimination System
NPDWR	National Primary Drinking Water Regulation
OUs	Operable Units
PAH	Polycyclic Aromatic Hydrocarbons
PFAS	Per- and polyfluoroalkyl substance
PFBA	Perfluorobutanoic Acid
PFBS	Perfluorobutanesulfonic Acid
PFDA	Perfluorodecanoic Acid
PFHxA	Perfluorohexanoic Acid
PFHxS	Perfluorohexanesulfonic Acid
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctanesulfonic Acid
PID	Photoionization Detector

List of Abbreviations (continued)

Abbreviation	Meaning
PIN	Parcel Identification Number
ppm	Parts per Million
QA/QC	Quality Assurance/Quality Control
RAA	Risk Assessment Advice
RAP	Response Action Plan
RCRA	Resource Conservation Recovery Act
RI	Remedial Investigation
RL	Report Limit
RSRV	Residential/Recreational Soil Reference Value
SEH	Short Elliott Hendrickson Inc.
SLV	Soil Leaching Value
SRV	Soil Reference Value
SVOC	Semi-Volatile Organic Compound
TPH	Total Petroleum Hydrocarbons
UFC	Unregulated Fill Criteria
ug/l	Microgram per Liter
USACE	United States Army Corps of Engineers
USAF	United State Air Force
UST	Underground Storage Tank
VOC	Volatile Organic Compound

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Phase II Environmental Investigation

Taxiway A Reconstruction - Phase 7

Prepared for the Duluth Airport Authority

1 Introduction

Short Elliott Hendrickson Inc. (SEH®) was retained by the Duluth Airport Authority (DAA) to conduct a Phase II Environmental Investigation for the proposed improvements for the Taxiway A Reconstruction - Phase 7 project located at the Duluth International Airport (DLH) in Duluth, St. Louis County, Minnesota (herein referred to as the "Site"). The Site location is depicted on **Figure 1**. The Site is described in further detail in **Section 1.1**.

1.1 Site Description

Taxiway A is the parallel taxiway for the main runway (Runway 9/27) serving the DLH. The existing Taxiway A is approximately 10,700 feet in length and the reconstruction is proposed to be completed in nine phases, based on the result of the 2021 DLH Airport Master Plan and discussions with the DAA and Federal Aviation Administration (FAA). The overall reconstruction project includes realignment of the taxiway in the same general area as the existing Taxiway A. The Phase 7 project will also include the reconstruction and realignment of Taxiway A1 and Taxiway A2, which join Runway 9/27 with Taxiway A to meet current FAA design standards, which include having a right-angle intersection with the runway. The project also includes the expansion of the existing stormwater pond southeast of the DLH Terminal, and the dredging of the existing Northern Stormwater Pond to restore capacity.

The project work will include removal of existing airfield pavements, concrete taxiway pavement installation, asphalt shoulder pavement construction, and storm sewer infrastructure and drainage improvements. Taxiway edge lighting, airfield signage, and related airfield electrical circuits will be reconstructed with this project. Project work will also include turf establishment and installation of airfield pavement markings. The extent of the Phase 7 project areas are depicted on **Figure 2**.

1.2 Purpose of Investigation

This investigation was performed for the following purposes.

- To investigate the project area for the presence of contaminated soil that may be encountered during project construction-related activities.
- To provide necessary data for the development of a Response Action Plan (RAP)/Construction Contingency Plan (CCP).

1.3 Scope of Work and Limitations

The Phase II Work Plans were developed using information gathered in the previously completed Modified Phase I Environmental Site Assessment (ESA) (SEH, May 2026), the work plans are

included in **Appendix A**. The proposed work was based on the design information available at the time. Therefore, the Phase II Environmental Investigation addressed general assumptions regarding anticipated construction considerations available at the time of the work plan development. Borings were completed adjacent to proposed construction areas identified from design files.

Modifications to the work plans were made based on field observations, accessibility, and other considerations. Photoionization detector (PID) soil headspace readings are summarized on **Table 1**. Detected soil and water sample analytical results are summarized on **Table 2** and **Table 3**, respectively.

SEH advanced a total of thirteen borings (HA-01 through HA-13) for the project on April 20 and April 21, 2026. One surface water sample (WS-01) and three sediment samples (SS-01 through SS-03) were also collected from the Northern Stormwater Pond on April 21, 2026. The investigation included field screening, geological logging, PID soil headspace screening, and soil and water collection and analysis. Results of the Phase II Environmental Investigation are summarized on attached tables and figures and discussed in **Section 4** of this report.

1.4 User Reliance

This Phase II Environmental Investigation and all reports, verbal and written, are solely for the use of DAA. Any third party may have different interests, purposes, and motives than DAA with regard to this assessment and report. Any reliance on the Phase II Environmental Investigation Report by any other party shall be at such party's sole risk, unless that party has written authorization from SEH and DAA, and is a party to the Agreement between SEH and DAA.

2 Site and Surrounding Area Background

2.1 Site Location

Figure 1 illustrates the location of the Site. The Site is located at the DLH in Duluth, St. Louis County, Minnesota. The Site occupies portions of the following parcel identification numbers (PINs):

- 010-2747-00160
- 010-2747-00210
- 010-2747-00220
- 280-0031-00455
- 280-0031-00456
- 395-0010-00330
- 395-0010-00348
- 395-0010-00349
- 395-0010-00350
- 395-0010-00550

2.2 Findings of the Taxiway A Reconstruction - Phase 7 - Phase I Environmental Site Assessment

SEH was retained by the DAA to conduct a Phase I Environmental Site Assessment (ESA) of the project areas associated with the proposed Taxiway A Reconstruction – Phase 7 project (SEH, 2026). The Phase I included a review of the land use history and previous investigations completed in the area around the Phase 7 areas.

The Subject Property includes three project areas that are identified as the Taxiway A Reconstruction area, the Terminal Stormwater Pond Expansion area, and the Northern Stormwater Pond Dredge area. These project areas are all separated and are generally located in the western, southeastern, and northern parts of the DLH, respectively. The areas are depicted on **Figure 2**.

The Subject Property was identified in numerous regulatory databases related to historic and current uses including Leak sites, spills, Resource Conservation Recovery Act (RCRA) hazardous waste generators, construction stormwater permits, and air emissions permits. Although the database report identified these listings for the Subject Property, a majority were located greater than 1,000 feet from the Subject Property areas with a select few located as close as 500 feet to the Subject Property areas.

Twelve regulated spills associated with the DLH were also identified as either unlocatable or as within the DLH property in the database reports. Although the exact location of these spills are unknown, it is not likely that all of these releases have affected the Subject Property. Given the use of the Taxiway A Reconstruction portion of the Subject Property and surrounding area, it is likely that some spills related to fueling activities have occurred on or adjacent to the Taxiway A Reconstruction portion of the Subject Property.

The remaining facilities included in the database report are unlikely to have current or former releases of hazardous substances or petroleum products with the potential to migrate to the Subject Property based on a variety of factors including, but not limited to: the overall setting in which the Subject Property is located, potential depth to groundwater and assumed groundwater flow direction, existing or past uses of the surrounding properties, the potential migration distance of hazardous substances and/or petroleum products in the area, and distance from the Subject Property.

The DLH includes the base of the Minnesota Air National Guards (ANG's) 148th Fighter Wing (FW). The 148th FW facilities are located on leased properties at several locations in the vicinity of the main east-west runway at the DLH and the main base is located on the eastern side of the DLH. The 148th FW base houses aircraft, vehicles, and equipment. Current and past operations at the base have involved the use of products such as fuels, oils, lubricants, paints, paint thinners, solvents, and aqueous film forming foam (AFFF). Based on a review of the 2019 and 2025 Five-Year Review Reports, the operable units (OUs) associated with the 148th FW base are not considered a REC for the Subject Property.

A base-wide per- and polyfluoroalkyl substances (PFAS) Remedial Investigation (RI) is currently on-going at the DLH as the Minnesota ANG is evaluating PFAS impacts through a similar process used under the Installation Restoration Program (IRP) and consistent with the provisions of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended. Based on a review of the interim results provided by the Minnesota ANG, several

detections of perfluorooctanoic acid (PFOA) and perfluorodecanoic acid (PFDA) exceeding their respective Minnesota Pollution Control Agency (MPCA) Commercial/Industrial Soil Reference Values (ISRVs) and/or Residential/Recreational SRVs (RSRVs) were located either within or adjacent to the Taxiway A Reconstruction and Northern Stormwater Pond Dredge portions of the Subject Property.

2.3 Regional Physical Setting

The Taxiway A alignment is the high spot at the project Site, at an approximate elevation of 1420 feet above mean sea level (amsl). The taxiway gently slopes to the southeast and a low area is located east of the taxiway at an approximate elevation of 1410 feet amsl.

2.3.1 Regional Geology

Based on previously completed investigations in the area of the project Site (**Section 2.2**), fill soils consisting generally of sand and silt with sand was encountered below paved areas extending to depths of 4 to 10 feet bgs (Braun, 2021). Published geology indicates native deposits in this area are glacial lake deposits of the Cromwell Formation of the Wrenshall Member of the Michigan Sub-episode and consist of brown silt and clay with minor sand (Minnesota Geological Survey [MGS], 2009).

The uppermost bedrock unit is the Gabbroic zone of the Duluth Complex at approximately 1320 to 1370 feet above amsl or around 50 to 100 feet bgs. The Gabbroic zone of the Duluth Complex is described as medium-grained, intergranular, foliated and locally layered olivine oxide gabbro. The Gabbroic zone of the Duluth Complex ranges from 2,300 to 5,000 feet thick (MGS, 2008).

2.3.2 Regional Hydrogeology

Based on previously completed investigations in the area of the project Sites (see **Section 2.2**), the DLH is situated on a groundwater mound. Groundwater flow in the northern half of the DLH is to the north, while groundwater flow in the southern half of the DLH is to the south (EMR, 2004).

Depth to groundwater is variable across the DLH. Well records obtained through the Minnesota Department of Health's (MDH's) Minnesota Well Index (MWI) online mapping tool indicate groundwater in the southwestern portion of the DLH (near the Taxiway A Reconstruction portion of the Subject Property) is at approximately 8 feet bgs (approximate elevation of 1403 amsl), and groundwater in the southeastern portion of the DLH (near the Terminal Pond Expansion portion of the Subject Property) is at approximately 10 feet bgs (approximate elevation of 1377 feet amsl). Standing water was observed in both the Terminal Stormwater Pond (approximate elevation of 1370 feet amsl) and North Stormwater Pond Dredge (approximate elevation of 1395 feet amsl) portions of the Subject Property during the site reconnaissance.

3 Overview of the Phase II Investigation

The following sections describe the scope and goals of the Phase II Environmental Investigation. Also included is methodology, quality assurance/quality control (QA/QC) information and regulatory/guidance levels. The Phase II Environmental Investigation areas are depicted on **Figure 2** and **Figure 3**. Results of the Phase II Environmental Investigation are discussed in **Section 4**. Completed borings, field screening results, and soil sample locations and results are captured on attached figures and tables.

3.1 Field Investigation and Sampling Methods

Soil borings (boreholes) were completed by SEH using a powered hand auger and a non-powered hand auger. Lubricants or solvents with petroleum products or hazardous substances were not used for downhole drilling or on sampling equipment. Each borehole was properly abandoned in accordance with local regulations. The location of each borehole is depicted on **Figure 3**.

3.1.1 Soil Field Screening

Soil samples were collected for field screening from each boring by placing soil into a new, clean, quart-size, labeled, resealable bag. The bags used for field screening were used for one sample only. Soil clumps were manually agitated and the bags were shaken vigorously at the beginning and end of the headspace development period. The bags were placed in a sunny location. Weather conditions at the time of the investigation were calm.

PID headspace readings were collected in general accordance with MPCA guidelines. A MiniRae PID with a 10.6 electron volt (eV) bulb calibrated to isobutylene was inserted through a small opening in the bag and the highest reading was recorded. Empty bag readings were recorded periodically throughout the investigation and are considered “background.” Empty bags had readings ranging from 0.0 to 0.3 ppm. The results of the headspace readings are summarized on **Table 1**.

3.1.2 Soil Sampling

Soil samples were collected using the hand auger for field screening and placed into the appropriate jars for laboratory analysis.

The SEH scientist wore a new clean pair of disposable Nitrile® gloves while collecting each sample. All remaining soil from each sample and borehole cuttings were thin spread on-site. Sample containers were placed in coolers with ice and were protected from sunlight. Samples were transported to Eurofins within 48 hours of their collection with proper chain-of-custody documentation. Specific information on samples collected (e.g. total number of samples collected, sample depths, etc.) is included within **Section 4**.

Analytical samples collected were labeled corresponding to the boring number from which they were collected (for example HA-06). Additionally, soil samples were labeled for the depth from which they were collected. For example, a sample collected from a three foot depth in HA-06 is labeled HA-06-3. Samples were collected from the interval ± 0.5 foot on either side of the noted sample depth. For example: a sample with a noted depth of 3 feet bgs contains material from 2.5 to 3.5 feet bgs.

3.1.3 Water Sampling

Water samples were collected using a disposable bailer. The SEH scientist wore a new clean pair of disposable Nitrile® gloves while collecting each water sample. The water samples were placed in the appropriate laboratory containers in accordance with the laboratory’s specifications. The sample containers were placed in a cooler with ice and protected from sunlight. The samples were then transported to Eurofins within 48 hours of their collection with proper chain-of-custody documentation.

Specific information on samples collected at each site (e.g., total number of samples collected, samples depths, etc.) is included within **Section 4**.

Water sampling was completed in the area of proposed dredging of the Northern Stormwater Pond. The purpose of water sampling was to investigate water most likely to be dewatered during construction and dredging activities.

3.1.4 Chemical Analytical Methodologies

Soil sample analytes included:

- Diesel Range Organics (DRO) (Wisconsin Method DRO)
- DRO with Silica Gel Cleanup (DRO) (Wisconsin Method DRO – Silica Gel Cleanup)
- Gasoline Range Organics (GRO) (Wisconsin Method GRO)
- Volatile Organic Compounds (VOCs) (Environmental Protection Agency [EPA] Method 8260D)
- Polycyclic Aromatic Hydrocarbons (PAHs) (EPA Method 8270E by selective ion monitoring (SIM))
- Resource Conservation and Recovery Act (RCRA) 8 Metals (EPA Method 7471B/6020B)
- Moisture (SW3550C)
- Per- and polyfluoroalkyl substances (PFAS) (EPA 1633, Revision A, by liquid chromatography/mass spectrometry [LC-MS/MS])

Water sample analytes included:

- DRO (Wisconsin Method DRO)
- GRO (Wisconsin Method GRO)
- VOCs (EPA Method 8260D)
- PAHs (EPA Method 8270E by SIM)
- RCRA 8 Metals (EPA Method 7471B/6020B)
- PFAS (EPA Draft-4 1633, Revision A, by LC-MS/MS)

3.2 Notes on Analytical Methods

The following descriptions provide background information and terminology for DRO, Silica Gel Clean-Up, GRO, and PFAS.

3.2.1 DRO

The Wisconsin DRO Method is designed to measure mid-range petroleum products such as diesel or fuel oil. This method provides gas chromatographic conditions for the detection of semi-volatile petroleum fractions such as diesel, fuel oil #2, or kerosene. DRO analysis includes hydrocarbons within the range of C10 - C28 and a boiling point range between approximately 170 degrees Celsius (º C) and 430°C. Quantitation is based on a direct comparison of the total area within this range to the total area of the Diesel Component Standard. As defined in the method, other organic compounds, including chlorinated hydrocarbons, phenols, phthalate esters, PAHs, kerosene, fuel oils and heavier oils are measurable within the range of C10 - C28. DRO results include these compounds/products. Components greater than C28 present in products such as

motor oils or lubricating oils are detectable under the conditions of the method (Wisconsin DNRa, 1995).

3.2.2 Silica Gel Clean-up

DRO samples may be complicated by biogenic interference which includes materials such as naturally occurring organics. The resulting concentrations may occur at levels well above the regulatory limit.

Silica gel cleanup is used to separate analytes of different polarity. The majority of “fresh” or non-biodegraded petroleum hydrocarbons are considered non-polar compounds. Depending upon the soil makeup, the majority of the biogenic compounds may be polar or semi-polar in nature. The silica gel cleanup procedure will preferentially remove polar and semi-polar compounds, thus leaving the non-polar or petroleum hydrocarbons behind.

The cleanup procedure typically takes place after the initial DRO extract has been analyzed and the client evaluates the results. It is important that the original extract be used to minimize the variable of non-homogeneous samples. The original extract is taken back to the laboratory for cleanup and re-injected along with the batch QC samples.

3.2.3 GRO

The Wisconsin GRO Method is designed to measure the concentration of GRO in water and soil. GRO analysis includes hydrocarbon within the range of C6 - C10 and a boiling point range between approximately 60°C and 220°C. All the chromatographic response falling between the onset of the methyl-tertiary-butyl ether peak and the conclusion of the naphthalene peak. Quantitation is based on a direct comparison of the total area within this range to the total area of the Gasoline Component Standard.

As defined in the method, other organic compounds including chlorinated solvents, ketones, ethers, mineral spirits, stoddard solvents, and napthas are measurable within the range of C6 - C10. High levels of heavier petroleum products such as diesel fuel may contain some volatile components producing a response within the retention time range for GRO. As defined in the method, results for GRO include petroleum fractions such as gasoline, stoddard solvent, or mineral spirits as well as other measurable organic compounds such as chlorinated solvents, ketones, and ethers (Wisconsin DNRb, 1995).

3.2.4 PFAS EPA Method 1633

The EPA has developed the 1633 method to test for 40 PFAS compounds in wastewater, surface water, groundwater, soil, biosolids, sediment, landfill leachate, and fish tissue. Method 1633 can be used in several applications including National Pollution Discharge Elimination System (NPDES) discharge permits and is approved method within MPCA Guidance Document p-eao2-28 (MPCA, 2022). This method is a performance-based approach to accommodate the unique challenges PFAS compounds possess. Samples are extracted using a methanol solution, cleaned with carbon and other filters, and then analyzed with a liquid chromatography–tandem mass spectrometry instrument. This filtering and cleaning removes materials that may interfere with accurate results. Care needs to be taken with sample collection, preparation, and analysis to prevent cross contamination. The method specifies that strict quality control and detailed record-keeping measures be taken in order to ensure reliable and repeatable results. (EPA, December 2024; MPCA, January 2022).

3.3 Quality Assurance/Quality Control

Eurofins is a Minnesota-certified laboratory and has a current QA/QC manual on file with the MDH and the MPCA. A QA/QC report "Project Narrative" is attached near the beginning of each Eurofins laboratory report (**Appendix B**). The QA/QC report includes:

- General information
- Hold time
- Sample preparation
- Initial calibrations
- Continuing calibrations
- Surrogates
- Method blanks
- Laboratory control spikes
- Matrix spikes
- Duplicate samples
- Additional comments

Based on review of the laboratory results and QA/QC data, the quality of the data is acceptable for the purposes of this report.

3.4 Regulatory and Guidance Levels

To evaluate the magnitude of impacts, MPCA regulatory levels and guidelines, where established, are compared to analytical results for detected chemicals.

3.4.1 Soil

Soil results are compared to MPCA RSRVs, ISRVs, Soil Leaching Values (SLVs), and UFC.

3.4.1.1 Soil Reference Values

Revised SRVs were published by the MPCA in May 2026 (MPCA, 2026), and are incorporated into this report. The MPCA intends to complete annual updates to the SRVs. The MPCA SRVs are intended to be risk-based screening values and were derived using methodology from the EPA's Superfund Program, exposure parameters based on land use categories, contaminants toxicity values, and a contaminant's chemical-specific parameters.

3.4.1.2 Screening Soil Leaching Values

The MPCA has established SLVs that provide a conservative estimate of whether groundwater contaminant concentrations could result from leaching to groundwater from contaminated soils in direct contact with groundwater. The current Screening SLVs were established in 2013 (as discussed in MPCA Guidance Document c-r1-04 [MPCA, May 2013]) and are referenced in the MPCA Guidance Document c-rem1-01, *Best Management Practices for the Off-Site Reuse of Unregulated Fill* (MPCA, 2024).

3.4.1.3 MPCA Unregulated Fill Criteria

The MPCA has defined unregulated fill in guidance document c-rem1-01, *Best Management Practices for the Off-Site Reuse of Unregulated Fill* (MPCA, 2024). The guidance document

states that soil that meets all SLV and SRV limits, is free from solid waste, debris, asbestos containing materials (ACM), visual staining and odors, and has organic vapors less than 10 parts per million (ppm) (measured using a PID) is considered to meet the definition of unregulated fill. This document also defines limits for DRO and gasoline range organics (GRO) of 100 milligrams per kilogram (mg/kg) in soil are as meeting the definition of unregulated fill. ACM is material containing greater than 1% asbestos, as defined in Minnesota Statutes, Section 326.71, Subdivision 3.

3.4.2 Water

Water results are compared to Minnesota Department of Health (MDH) Health Based Guidance (HBG) that have been established to evaluate drinking water, NPDES General Permit Limits (GPLs) for contaminated groundwater discharges, and EPA maximum contaminant levels (MCLs) for drinking water contaminants.

The MDH HBGs, NPDES GPLs, and EPA MCLs are used as a proxy for evaluating the chemicals detected in water; however, for construction purposes the treatment limits for dewatering discharge would be established in the issued discharge permit for the project. Results for this project are compared to MDH HBGs, NPDES GPLs, and EPA MCLs on **Table 3**.

3.4.2.1 Minnesota Department of Health – Health Based Guidance

Water results are compared to MDH HBGs that have been established to evaluate drinking water. These values include Health Risk Limits (HRLs), Health Based Values (HBVs), and Risk Assessment Advice (RAA) levels. The MDH developed guidance (published in November 2018) for petroleum contaminated drinking water wells which supersedes guidance of Total Petroleum Hydrocarbons (TPH) criteria developed in 2000. Petroleum products contain many chemicals and drinking water criteria are available for only a small fraction of them. This guidance provides a margin of safety in situations where drinking water is contaminated with petroleum residuals that do not exceed individual chemical criteria. The MDH recommends a RAA of 50 ug/L TPH which is based on a pyrene surrogate. The MDH guidance indicates that the DRO and GRO values should be added, and other volatile petroleum concentrations should be subtracted from the cumulative total. For the purpose of this Phase II Environmental Investigation, these values (except for RAAs) are used as a proxy for evaluating the chemicals detected in groundwater. A simplified approach of using 50 ug/L as the MDH HBG for DRO and GRO without the calculation and subtraction is being utilized. It should also be noted that RLs for this project are greater than 50 ug/L for DRO and GRO (MDH, 2018).

3.4.2.2 NPDES - General Permit Limits

The NPDES general permit (MNG790000) identifies discharge limits for contaminated water discharges. The general permit (MNG790000) was reissued on May 1, 2022, and expires April 30, 2027 (MPCA, May 2022). The general permit regulates the discharge of groundwater extracted at cleanup and redevelopment sites. This includes discharges which have been contaminated by past or present activities, from both known and unknown sources of contamination. GPLs are used in this report as a comparison for groundwater contaminant concentrations. The permit limits used in this report are compared to three different types of groundwater discharge; 1) land application, 2) surface waters not designated as drinking water, and 3) trout streams/surface waters designated as drinking water.

3.4.2.3 Environmental Protection Agency – Maximum Contaminant Levels

The EPA has established National Primary Drinking Water Regulations (NPDWRs) that set mandatory water quality standards for drinking water contaminants that apply to public water systems. Standards called MCLs are established to protect the public against consumption of drinking water contaminants that present a risk to human health. MCLs are not enforceable standards that apply to construction related handling of groundwater (EPA, January 2022).

3.4.3 Regulatory Levels vs. Laboratory Reporting Limits

The following sections describe situations when the achievable laboratory reporting limits (RLs) are above the established regulatory guidance. Tables of analytical results attached to this report include only detected parameters. In some cases, laboratory RLs are greater than the regulatory limits. If a parameter is not detected in any sample, the parameter is not included on the attached tables. All analytical results are included in **Appendix B**.

3.4.3.1 Soil Leaching Values

Several concentrations of VOCs in soil have laboratory RLs that exceed MPCA SLVs (SLVs are as low 0.000015 mg/kg). In these cases, the SLV is not achievable by the laboratory analytical method. RLs that exceed regulatory limits also commonly occur when the sample diluted (required by high level of target, non-target analytes or matrix interferences).

3.4.3.2 PAH Detection Limits

The effluent limitations contained in the General Permit for total carcinogenic PAHs, total non-carcinogenic PAHs, and anthracene are below the method detection limit (MDL) of currently available and approved analytical test methods. The limit at which compliance or noncompliance is determined will be based on the Minimum Level (ML) of EPA method 625 or any updates to that method as published in 40 CFR Part 136, Appendix A. ML is synonymous with RL. If during the life of the General Permit a more sensitive test method is approved by EPA for wastewater analyses, then the General Permit effluent limitation will become the enforceable limitation rather than the analytical detection limit (EPA, 2016).

4 Phase II Environmental Investigation Results

SEH advanced thirteen soil borings (HA-01 through HA-13) and collected 26 soil samples for laboratory analysis. SEH also collected three sediment samples (SS-01 through SS-03) of material to be dredged from the Northern Stormwater Pond for laboratory analysis, as well as a surface water sample (WS-01) from the Northern Stormwater Pond for laboratory analysis. Borings were advanced to maximum depths of 5.0 feet bgs. **Figure 3** depicts boring and sample locations. The Investigation results are summarized on **Figure 3**. PID soil headspace readings are summarized on **Table 1**. Detected soil sample analytical results are summarized on **Table 2**. Detected water sample analytical results are summarized on **Table 3**. Work plan documents, laboratory reports and boring logs are included as **Appendix A**, **Appendix B**, and **Appendix C**, respectively.

4.1 Geologic, Hydrogeologic, and Field Screening Results

Fill material, consisting of clayey sand with gravel, silty sand with gravel, and sandy clay with cobbles, was observed extending to the termination depth of the hand auger borings (5 feet bgs). Refusal was encountered at HA-07 at 3.0 feet bgs due to frost in the ground from the remnants of

an adjacent snow storage pile. No debris was observed in the borings and native deposits were not encountered.

PID headspace readings were recorded between 0.0 to 2.1 ppm, within background levels. No visual or olfactory indications of contamination were noted in observed soils. PID headspace results are summarized on **Table 1**.

Groundwater was not encountered during the advancement of the hand auger borings.

4.2 Results of Subsurface Investigation – Taxiway A Reconstruction Area

Nine borings (HA-01 through HA-09) were completed along the existing Taxiway A, which will be reconstructed, and in areas where the taxiway will be extended or where taxiway connector pavements will be constructed within the Phase 7 project area. Select soil samples were collected and analyzed for DRO, GRO, VOCs, PAHs, RCRA Metals, and PFAS. Soil samples were collected for chemical analyses with sampling intervals targeted to zones where indications of contamination were observed, if applicable, and to evaluate potential impacts in soil that will likely be excavated during redevelopment to establish limited subgrade frost penetrations zones.

All soil sample analytical results for DRO, GRO, VOCs, PAHs, and RCRA Metals were reported below their respective MPCA SLVs, SRVs, and UFC.

On the western extent of the Taxiway A area, perfluorodecanoic acid (PFDA) (9.24 nanogram per gram [ng/g]) exceeded the ISRV (0.36 ng/g) in boring HA-01 at 1 foot bgs and exceeded the ISRV at 3 feet bgs (4.98 ng/g). Perfluorooctanoic acid (PFOA) (4.34 ng/g) also exceeded the ISRV (2 ng/g) in boring HA-01 at 3 feet bgs. Perfluorooctanesulfonic acid (PFOS) (176 ng/g) above the RSRV (13 ng/g) and PFOA (0.669 ng/g) above the RSRV (0.36 ng/g) were identified in boring HA-01 at 1 foot bgs. PFOA (0.366 ng/g) above the RSRV (0.36 ng/g) was also identified in boring HA-02 at 1 foot bgs, however no exceedances were identified at 3 feet bgs in HA-02. All other PFAS analytes in HA-01, HA-02, and HA-03 were below their respective RLs.

On the eastern extent of the Taxiway A area, PFOS (16.0 ng/g) above the RSRV (13 ng/g) was identified in boring HA-09 at 1 feet bgs, and PFOA (0.892 ng/g) above the RSRV (0.36 ng/g) was identified at 3 feet bgs. PFOS (27.4 ng/g) above the RSRV (13 ng/g) was identified in boring HA-07 at 1 feet bgs, and PFOA (up to 1.24 ng/g) above the RSRV (0.36 ng/g) was identified at 1 and 3 feet bgs. All other PFAS analytes in HA-06, HA-07, HA-08, and HA-09 were below their respective RLs.

PFAS was not analyzed in HA-04 and HA-05 as borings were located adjacent to ANG borings BGSL-09 and BGSL-10 that were collected on April 29, 2024, with no laboratory analytical exceedances of the MPCA RSRVs.

4.3 Results of Subsurface Investigation – Terminal Stormwater Pond Expansion Area

Four borings (HA-10 through HA-13) were completed around the proposed expansion area of the Terminal Stormwater Pond, which will be expanded on the west side of the existing pond, and in areas where the existing pond discharges. Select soil samples were collected and analyzed for DRO, GRO, VOCs, PAHs, RCRA Metals, and PFAS. Soil samples were collected for chemical

analyses with sampling intervals targeted to zones where indications of contamination were observed, if applicable, and to evaluate potential impacts in soil that will likely be excavated during expansion.

All soil sample analytical results were reported below their respective MPCA SLVs, SRVs, and UFC.

4.4 Results of Subsurface Investigation – Northern Stormwater Pond Dredging

Three sediment samples (SS-01 through SS-03) were completed in the area of the proposed dredging of the existing Northern Stormwater Pond, which will be dredged to restore capacity on the south side of the existing pond. Select soil samples were collected and analyzed for DRO, DRO Silica gel, GRO, VOCs, PAHs, RCRA Metals, and PFAS. Sediment samples were collected for chemical analyses with sampling intervals targeted to zones where indications of contamination were observed, if applicable, and to evaluate potential impacts in sediment that will likely be excavated during restoration of pond capacity.

All sediment sample analytical results were reported below their respective MPCA SLVs, SRVs, and UFC.

One surface water sample (WS-01) was taken of the stormwater pond. The reporting limit for GRO (<100 ug/l) in the sample was above the EPA MCL (50 ug/l) but was below the MPCA NPDES GPLs (200 ug/l). Various PFAS substances were above the MDH HBG in the water sample including; perfluorobutanesulfonic acid (PFBS) (48.0 ng/l) above the MDH HBG (0.1 ng/l), perfluorobutanoic acid (PFBA) (15.9 ng/l) above the MDH HBG (7 ng/l), and perfluorohexanoic acid (PFHxA) (54.3 ng/l) above the MDH HBG (0.2 ng/l). Additionally, the following PFAS substances were identified above the EPA MCL; perfluorohexanesulfonic acid (PFHxS) (246 ng/l) above the EPA MCL (10 ng/l), PFOS (165 ng/l) above the EPA MCL (4 ng/l), and PFOA (41.0 ng/l) above the EPA MCL (4 ng/l).

5 Conclusions and Recommendations

The Phase II Environmental Investigation included thirteen hand auger soil borings (HA-01 through HA-13) completed to depths ranging between 3 to 5 feet bgs. Three sediment samples (SS-01 through SS-03) were collected of the dredge material in the Northern Stormwater Pond as well as a surface water sample. The borings were completed along the existing Taxiway A, which will be reconstructed, in areas where the taxiway will be extended or where taxiway connector pavements will be constructed within the Phase 7 construction area, as well as around the footprint of the proposed stormwater pond expansion southeast of the DLH Terminal. Fill material was encountered throughout the borings extending to 5 feet bgs. No debris was observed. PID headspace readings were recorded between 0.0 to 2.1 ppm, within background levels. No visual or olfactory indications of contamination were noted during the investigation.

Groundwater was not encountered while drilling. However, surface water located in the Northern Stormwater Pond contains PFAS contaminants above regulatory levels that will require proper management during dredging activities.

On the western extent of the Taxiway A area, PFDA (up to 9.24 ng/g) and PFOA (4.34 ng/g) exceeded the MPCA ISRVs in boring HA-01 at depths ranging from 1 to 3 feet bgs. PFOS (up to

180 ng/g) and PFOA (0.366 ng/g) exceeded the MPCA RSRVs in borings HA-01 (at 1 and 3 feet bgs) and HA-02 (at 1 foot bgs). However, no exceedances were identified at 3 feet bgs in HA-02. All other PFAS analytes in HA-01, HA-02, and HA-03 were below their respective RLs.

On the eastern extent of the Taxiway A area, PFOS (up to 27.4 ng/g) and PFOA (up to 1.24 ng/g) exceeded the MPCA RSRVs in borings HA-09 (at 1 and 3 feet bgs) and HA-07 (at 1 and 3 feet bgs). All other PFAS analytes in HA-06, HA-07, HA-08, and HA-09 were below their respective RLs.

Soil encountered elsewhere during this Phase II Environmental Investigation met MPCA UFC, SRVs, and SLVs.

We recommend a RAP/CCP be prepared that describes the handling of PFAS contaminated soils along Taxiway A, the dredging procedures in the Northern Stormwater Pond, and procedures that would be employed in the event unknown contamination is encountered during excavation activities during the Taxiway A Reconstruction – Phase 7 project.

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Tables

Table 1 – Photoionization Detector Results
Table 2 – Soil Analytical Results
Table 3 – Surface Water Analytical Results

Abbreviations and Descriptions

Abbreviations:

BaP - Benzo(a)pyrene equivalent
BRL - No detections above laboratory reporting limits
DRO - Diesel Range Organics
EOB - End of Boring
EPA - Environmental Protection Agency
ft bgs - feet below ground surface
GW - groundwater
GPL - General Permit Limits
GRO - Gasoline Range Organics
HA - hand auger
HBG - Health Based Guidance
LC-MS/MS - liquid chromatography/mass spectrometry
MDH - Minnesota Department of Health
MPCA - Minnesota Pollution Control Agency
MW - Monitoring Well
mg/kg - milligrams per kilogram
ng/g - nanograms per gram
ng/L - nanograms per liter
NM - analysis not performed
NPDES - National Pollutant Discharge Elimination System
PAH - Polycyclic Aromatic Hydrocarbon
PFAS - Per- and polyfluoroalkyl substances
PID - Photoionization Detector
ppm - parts per million
RCRA - Resource Conservation and Recovery Act
SIM - Selected Ion Monitoring
SLV - MPCA Screening Soil Leaching Values
SRV - MPCA Soil Reference Values
SVOC - Semi Volatile Organic Compound
UFC - MPCA Unregulated Fill Criteria
ug/L - micrograms per liter
<x - indicates analyte concentration not detected above the laboratory reporting limit

Lab Report Qualifiers:

Exceeds DRO/GRO MPCA UFC	DRO/GRO Exceeds MPCA UFC
Exceeds 2013 Screening SLV	Screening SLV - MPCA Screening Soil Leaching Values
Exceeds Residential/Recreational SRV	Minnesota Pollution Control Agency (MPCA) Soil Reference Values for Residential/Recreational properties
Exceeds Commercial/Industrial SRV	MPCA Soil Reference Values for Commerical/Industrial properties
NPDES Discharge General Permit Limits	NPDES Discharge General Permit Limits MNG790000 (surface waters designated as drinking water)
Exceeds 2026 MDH HBG	MDH HBG - Minnesota Department of Health (MDH) Health Based Guidance (HBGs) for drinking water
Exceeds EPA MCLs	EPA MCLs - Environmental Protection Agency (EPA) Maximum Concentration Levels (MCLs) for drinking water

Notes:

Sample ID is listed as: investigation type - identification number - depth
All depths are reported in feet below ground surface (bgs) and listed after the boring identification number

Soil analytical methods include:

Diesel Range Organics by Wisconsin Method DRO
DRO Silica Gel Cleanup by WIDRO GCS Silica Gel
Gasoline Range Organics by Wisconsin Method GRO
Volatile Organic Compounds (VOCs) by EPA Method 8260C
Mercury by EPA Method 7471B
Polycyclic Aromatic Hydrocarbons (PAHs) by EPA Method 8270E by SIM
Resource Conservation and Recovery Act (RCRA) 8 Metals by EPA Method 7471B/6020B
Per- and polyfluoroalkyl substances (PFAS) (EPA 1633, Revision A, by liquid chromatography/mass spectrometry [LC-MS/MS])

Groundwater analytical methods include:

DRO by Wisconsin Method DRO
GRO by Wisconsin Method GRO
VOC by EPA Method 8260C
RCRA 8 Metals by EPA Method 7471/6010B (field filtered)
Mercury by EPA Method 7470A
PAHs by EPA Method 8270E by selective ion monitoring (SIM)
PFAS (EPA 1633, Revision A, by liquid chromatography/mass spectrometry [LC-MS/MS])

Table 1
Photoionization Detector Results
Phase II Environmental Investigation
Taxiway A Reconstruction - Phase 7
Duluth, Minnesota

Depth (feet)	HA-01	HA-02	HA-03	HA-04	HA-05	HA-06	HA-07	HA-08	HA-09	HA-10	HA-11	HA-12	HA-13
0 to 1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.5	0.0	0.0	0.2	0.8	0.3
1 to 3	0.1	0.0	0.1	0.0	0.0	0.2	0.0	0.3	0.1	2.1	0.3	0.2	0.1
3 to 5	0.1	0.0	0.1	0.1	0.2	0.1		0.1	0.1	0.0	0.1	0.6	0.1

Notes:

For a full list of acronyms, see the table glossary

Table 2
Soil Analytical Results
Phase II Environmental Investigation
Taxiway A Reconstruction - Phase 7
Duluth, Minnesota

Boring ID	Units	*Screening SLV (2014)*	Residential and Recreational Chronic SRV	**Commercial and Industrial Chronic SRV**	HA-01	HA-01	HA-02	HA-02	HA-03	HA-03	HA-04	HA-04	HA-05	HA-05	HA-06	HA-06	HA-07	HA-07
Field Sample ID					HA-01-1	HA-01-3	HA-02-1	HA-02-3	HA-03-1	HA-03-3	HA-04-1	HA-04-3	HA-05-1	HA-05-3	HA-06-1	HA-06-3	HA-07-1	HA-07-2.5
Laboratory ID					310-330206-11	310-330206-12	310-330206-13	310-330206-14	310-330206-9	310-330206-10	310-330206-7	310-330206-8	310-330206-5	310-330206-6	310-330206-3	310-330206-4	310-330206-15	310-330206-16
Sample Date					04/20/2026	04/20/2026	04/20/2026	04/20/2026	04/20/2026	04/20/2026	04/20/2026	04/20/2026	04/20/2026	04/20/2026	04/20/2026	04/20/2026	04/20/2026	04/20/2026
Diesel Range Organics (DRO) and Gasoline Range Organics (GRO)																		
Diesel Range Organics	mg/kg	The MPCA UFC for DRO is <100 mg/kg			<5.79	11.0	11.6	10.7	16.7	12.5	8.13	<5.32	10.5	<5.96	6.84	<5.70	57.5	8.87
Diesel Range Organics Silica Gel Cleanup	mg/kg				NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Gasoline Range Organics	mg/kg				<11.0	<11.1	<11.8	<11.4	<12.4	<11.7	<11.7	<9.89	<11.5	<10.9	<12.3	<12.0	<10.3	<10.1
Metals																		
Arsenic	mg/kg	5.8	9	9	1.62	1.92	2.12	2.01	2.35	1.75	2.41	1.50	2.08	1.92	1.96	1.74	1.97	2.18
Barium	mg/kg	1700	3100	41000	37.8	44.7	52.6	40.4	47.9	38.8	61.7	37.8	49.2	46.0	53.4	37.4	49.3	47.5
Chromium (Total)*	mg/kg	36 / 1000000000	2.3 / 23000	62 / 100000	19.3	28.3	22.9	17.1	22.5	30.1	29.3	21.0	26.5	27.0	24.4	18.5	24.6	26.0
Lead	mg/kg	2700	200	460	4.78	5.91	12.3	5.47	5.18	4.04	6.60	3.95	5.18	4.58	10.1	4.92	11.3	7.52
Semi-VOCs																		
Acenaphthene	mg/kg	81	460	6800	<0.00520	<0.00580	<0.00547	<0.00562	<0.00656	<0.00580	<0.00571	<0.00526	<0.00618	<0.00535	0.00992	<0.00531	<0.0257	<0.00533
Acenaphthylene	mg/kg	-	-	-	<0.00520	<0.00580	<0.00547	<0.00562	<0.00656	<0.00580	<0.00571	<0.00526	<0.00618	<0.00535	<0.00582	<0.00531	<0.0257	0.00751
Anthracene	mg/kg	1300	2800	42000	<0.00520	<0.00580	<0.00547	<0.00562	<0.00656	<0.00580	<0.00571	<0.00526	<0.00618	<0.00535	0.0152	<0.00531	0.0423	0.00920
Benzo(a)pyrene	mg/kg	1.4	-	-	<0.00520	<0.00580	0.00671	0.0108	<0.00656	<0.00580	0.0192	<0.00526	0.00827	<0.00535	0.0466	0.0102	0.108	0.0481
Benzo(a)anthracene	mg/kg	-	-	-	<0.00520	<0.00580	<0.00547	0.00828	<0.00656	<0.00580	0.0213	<0.00526	0.00915	<0.00535	0.0402	0.0103	0.0925	0.0403
Benzo(b)fluoranthene	mg/kg	-	-	-	<0.00520	<0.00580	0.0122	0.0163	<0.00656	<0.00580	0.0275	<0.00526	0.0118	<0.00535	0.0657	0.0146	0.139	0.0620
Benzo(k)fluoranthene	mg/kg	-	-	-	<0.00520	<0.00580	<0.00547	<0.00562	<0.00656	<0.00580	0.00884	<0.00526	<0.00618	<0.00535	0.0239	0.00568	0.0518	0.0246
Chrysene	mg/kg	-	-	-	<0.00520	<0.00580	0.00712	0.0133	<0.00656	<0.00580	0.0214	<0.00526	0.00927	<0.00535	0.0548	0.0121	0.113	0.0438
Dibenz(a,h)anthracene	mg/kg	-	-	-	<0.00520	<0.00580	<0.00547	<0.00562	<0.00656	<0.00580	<0.00571	<0.00526	<0.00618	<0.00535	0.00816	<0.00531	<0.0257	0.00921
Indeno(1,2,3-cd)pyrene	mg/kg	-	-	-	<0.00520	<0.00580	0.00570	0.00707	<0.00656	<0.00580	0.0104	<0.00526	<0.00618	<0.00535	0.0280	0.00660	0.0648	0.0294
Benzo(g,h,i)perylene	mg/kg	-	-	-	<0.00520	<0.00580	0.00703	0.00996	<0.00656	<0.00580	0.0118	<0.00526	0.00664	<0.00535	0.0338	0.00721	0.0823	0.0361
Fluoranthene	mg/kg	670	210	2700	<0.00520	<0.00580	0.0114	0.0165	<0.00656	<0.00580	0.0427	<0.00526	0.0217	<0.00535	0.132	0.0228	0.221	0.0877
Fluorene	mg/kg	110	390	5800	<0.00520	<0.00580	<0.00547	<0.00562	<0.00656	<0.00580	<0.00571	<0.00526	<0.00618	<0.00535	0.00799	<0.00531	<0.0257	<0.00533
2-Methylnaphthalene	mg/kg	-	39	580	<0.00520	<0.00580	<0.00547	<0.00562	<0.00656	<0.00580	<0.00571	<0.00526	<0.00618	<0.00535	0.0704	0.00659	0.0348	<0.00533
Naphthalene	mg/kg	4.5	81	280	<0.00520	<0.00580	<0.00547	<0.00562	<0.00656	<0.00580	<0.00571	<0.00526	0.00759	<0.00535	0.0436	0.0144	<0.0257	<0.00533
Phenanthrene	mg/kg	-	-	-	<0.00520	<0.00580	<0.00547	<0.00562	<0.00656	<0.00580	0.0163	<0.00526	0.00918	<0.00535	0.0920	0.0137	0.125	0.0312
Pyrene	mg/kg	440	220	3200	<0.00520	<0.00580	0.0103	0.0152	<0.00656	<0.00580	0.0331	<0.00526	0.0168	<0.00535	0.105	0.0171	0.206	0.0733
BaP Equiv result																		
Benzo(a)pyrene Equivalents	mg/kg	1.4	0.91	23	0	0	0	0.0085	0.0140	0	0	0.0252	0	0.0104	0	0.0134	0.1383	0.0708
Per- and Polyfluoroalkyl Substances (PFAS)																		
Perfluorodecanesulfonic acid (PFDS)	ng/g	-	-	-	0.391	0.301	<0.223	<0.218	<0.524	NM	NM	NM	NM	NM	<0.238	NM	<0.215	<0.219
Perfluorodecanoic acid (PFDA)	ng/g	-	0.027	0.36	**9.24**	**4.98**	<0.223	<0.218	<0.524	NM	NM	NM	NM	NM	<0.238	NM	<0.215	<0.219
Perfluorododecanesulfonic acid (PFDoS)	ng/g	-	-	-	0.248	<0.232	<0.223	<0.218	<0.524	NM	NM	NM	NM	NM	<0.238	NM	<0.215	<0.219
Perfluorododecanoic acid (PFDoA)	ng/g	-	-	-	3.90	2.07	<0.223	<0.218	<0.524	NM	NM	NM	NM	NM	<0.238	NM	<0.215	<0.219
Perfluoroheptanesulfonic acid (PFHpS)	ng/g	-	-	-	1.53	3.14	<0.223	<0.218	<0.524	NM	NM	NM	NM	NM	<0.238	NM	<0.215	<0.219
Perfluoroheptanoic acid (PFHpA)	ng/g	-	-	-	0.285	0.317	<0.223	<0.218	<0.524	NM	NM	NM	NM	NM	<0.238	NM	<0.215	<0.219
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ng/g	-	-	-	2.21	<1.16	<1.12	<1.09	<1.39	NM	NM	NM	NM	NM	<1.19	NM	<1.08	<1.09
Perfluorohexanesulfonic acid (PFHxS)	ng/g	-	130	1600	4.05	10.9	0.872	0.292	<0.524	NM	NM	NM	NM	NM	<0.238	NM	2.73	5.42
Perfluorohexanoic acid (PFHxA)	ng/g	-	1900	24000	0.554	0.430	<0.223	<0.218	<0.278	NM	NM	NM	NM	NM	<0.238	NM	0.372	0.492
Perfluorononanesulfonic acid (PFNS)	ng/g	-	-	-	0.440	0.312	<0.223	<0.218	<0.524	NM	NM	NM	NM	NM	<0.238	NM	<0.215	<0.219
Perfluorononanoic acid (PFNA)	ng/g	-	40	540	1.78	1.46	<0.223	<0.218	<0.524	NM	NM	NM	NM	NM	<0.238	NM	<0.215	<0.219
Perfluorooctanesulfonic acid (PFOS)	ng/g	-	13	180	176	180	5.35	1.81	0.678	NM	NM	NM	NM	NM	0.496	NM	27.4	11.3
Perfluorooctanoic acid (PFOA)	ng/g	-	0.36	2	0.669	**4.34**	0.366	<0.218	<0.524	NM	NM	NM	NM	NM	<0.238	NM	0.372	1.24
Perfluoropentanoic acid (PFPeA)	ng/g	-	-	-	0.451	0.260	<0.223	<0.218	<0.278	NM	NM	NM	NM	NM	<0.238	NM	<0.215	<0.219
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ng/g	-	-	-	1.84	<1.16	<1.12	<1.09	<1.39	NM	NM	NM	NM	NM	<1.19	NM	<1.08	<1.09
Perfluorotetradecanoic acid (PFTeDA)	ng/g	-	-	-	0.946	0.437	<0.223	<0.218	<0.524	NM	NM	NM	NM	NM	<0.238	NM	<0.215	<0.219
Perfluorotridecanoic acid (PFTrDA)	ng/g	-	-	-	0.329	<0.232	<0.223	<0.218	<0.524	NM	NM	NM	NM	NM	<0.238	NM	<0.215	<0.219
Perfluoroundecanoic acid (PFUnA)	ng/g	-	-	-	1.15	0.637	<0.223	<0.218	<0.524	NM	NM	NM	NM	NM	<0.238	NM	<0.215	<0.219
VOCs																		
All VOCs	mg/kg	Varies			BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL

Notes:
* = Total Chromium does not have established MPCA regulatory limits. Chromium III and VI regulatory limits are depicted.
F1 - Matrix spike and/or matrix spike duplicate recovery exceeds control limits.
For a full list of acronyms, see the table glossary

Table 2
Soil Analytical Results
Phase II Environmental Investigation
Taxiway A Reconstruction - Phase 7
Duluth, Minnesota

Boring ID	Units	*Screening SLV (2014)*	Residential and Recreational Chronic SRV	**Commercial and Industrial Chronic SRV**	HA-08	HA-08	HA-09	HA-09	HA-10	HA-10	HA-11	HA-11	HA-12	HA-12	HA-13	SS-01	SS-02	SS-03
Field Sample ID					HA-08-1	HA-08-3	HA-09-1	HA-09-3	HA-10-1	HA-10-3	HA-11-1	HA-11-3	HA-12-1	HA-12-3	HA-13-1	SS-01	SS-02	SS-03
Laboratory ID					310-330206-1	310-330206-2	310-330206-17	310-330206-18	310-330206-23	310-330206-24	310-330206-25	310-330206-26	310-330206-27	310-330206-28	310-330206-29	310-330206-20	310-330206-21	310-330206-22
Sample Date					04/20/2026	04/20/2026	04/20/2026	04/20/2026	04/21/2026	04/21/2026	04/21/2026	04/21/2026	04/21/2026	04/21/2026	04/21/2026	04/21/2026	04/21/2026	04/21/2026
Diesel Range Organics (DRO) and Gasoline Range Organics (GRO)																		
Diesel Range Organics	mg/kg	The MPCA UFC for DRO is <100 mg/kg			<7.62	8.68	31.5	13.5	<7.88	<6.95	<7.29	<6.63	<7.50	<7.37	<6.18	NM	NM	NM
Diesel Range Organics Silica Gel Cleanup	mg/kg				NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	<7.45	<9.33	<8.15
Gasoline Range Organics	mg/kg				<13.1	<11.7	<14.5	<11.4	<14.0	<11.6	<13.9	<12.1	<12.6	<12.9	<11.9	<12.3	<13.9	<13.6
Metals																		
Arsenic	mg/kg	5.8	9	9	2.06	1.83	2.07	1.85	2.58	3.03	2.48	<1.13	2.51	3.08	2.67	1.62	4.18	1.84
Barium	mg/kg	1700	3100	41000	46.5	39.8	47.9	44.5	65.6	64.7	59.2	39.4	82.4	85.1	65.9	61.3	43.5	54.9
Chromium (Total)*	mg/kg	36 / 1000000000	2.3 / 23000	62 / 100000	23.5	22.2	21.9	19.2	35.8	37.7	30.6	21.9	38.3	50.1	40.7	22.7	17.7	25.9
Lead	mg/kg	2700	200	460	4.95	4.14	9.02	6.51	6.84	7.12	6.99	2.49	8.85	6.44	5.98	5.59	4.89	5.97
Semi-VOCs																		
Acenaphthene	mg/kg	81	460	6800	<0.00622	<0.00563	0.00675	<0.00562	<0.00656	<0.00582	<0.00638	<0.00590	<0.00616	<0.00593	<0.00609	<0.00566	0.00663	<0.00626
Acenaphthylene	mg/kg	-	-	-	<0.00622	<0.00563	0.0200	0.0130	<0.00656	<0.00582	<0.00638	<0.00590	<0.00616	<0.00593	<0.00609	<0.00566	<0.00641	<0.00626
Anthracene	mg/kg	1300	2800	42000	<0.00622	0.00718 F1	0.0314	0.0253	<0.00656	<0.00582	<0.00638	<0.00590	<0.00616	<0.00593	<0.00609	<0.00566	0.00661	<0.00626
Benzo(a)pyrene	mg/kg	1.4	-	-	0.0104	0.0416 F1	0.139	0.0930	0.0178	<0.00582	0.0620	<0.00590	0.00777	<0.00593	<0.00609	<0.00566	0.00868	0.00751
Benzo(a)anthracene	mg/kg	-	-	-	0.00832	0.0329 F1	0.137	0.102	0.0184	<0.00582	0.0159	<0.00590	0.00714	<0.00593	<0.00609	<0.00566	0.0118	0.00687
Benzo(b)fluoranthene	mg/kg	-	-	-	0.0148	0.0647 F1	0.201	0.130	0.0254	0.00941	0.0725	<0.00590	0.0143	<0.00593	<0.00609	<0.00566	0.0184	0.0139
Benzo(k)fluoranthene	mg/kg	-	-	-	<0.00622	0.0232 F1	0.0742	0.0502	0.0109	<0.00582	0.0268	<0.00590	<0.00616	<0.00593	<0.00609	<0.00566	0.00676	<0.00626
Chrysene	mg/kg	-	-	-	0.0110	0.0460	0.149	0.100	0.0218	0.00777	0.0254	<0.00590	0.0117	<0.00593	<0.00609	<0.00566	0.0175	0.0112
Dibenz(a,h)anthracene	mg/kg	-	-	-	<0.00622	0.00842	0.0237	0.0152	<0.00656	<0.00582	0.0116	<0.00590	<0.00616	<0.00593	<0.00609	<0.00566	<0.00641	<0.00626
Indeno(1,2,3-cd)pyrene	mg/kg	-	-	-	0.00648	0.0277 F1	0.0774	0.0513	0.0122	<0.00582	0.0439	<0.00590	0.00620	<0.00593	<0.00609	<0.00566	<0.00641	<0.00626
Benzo(g,h,i)perylene	mg/kg	-	-	-	0.00773	0.0296	0.0802	0.0523	0.0126	<0.00582	0.0511	<0.00590	0.00727	<0.00593	<0.00609	<0.00566	0.00741	<0.00626
Fluoranthene	mg/kg	670	210	2700	0.0173	0.0865 F1	0.355	0.271	0.0493	0.0121	0.0180	<0.00590	0.0238	<0.00593	0.00679	0.00717	0.0713	0.0295
Fluorene	mg/kg	110	390	5800	<0.00622	<0.00563	0.0105	0.00908	<0.00656	<0.00582	<0.00638	<0.00590	<0.00616	<0.00593	<0.00609	<0.00566	<0.00641	<0.00626
2-Methylnaphthalene	mg/kg	-	39	580	<0.00622	<0.00563	<0.00595	<0.00562	<0.00656	<0.00582	0.0251	<0.00590	0.00806	<0.00593	<0.00609	<0.00566	<0.00641	<0.00626
Naphthalene	mg/kg	4.5	81	280	<0.00622	<0.00563	<0.00595	<0.00562	<0.00656	<0.00582	0.0109	<0.00590	<0.00616	<0.00593	<0.00609	<0.00566	<0.00641	<0.00626
Phenanthrene	mg/kg	-	-	-	<0.00622	0.0287 F1	0.138	0.118	0.0312	<0.00582	0.00657	<0.00590	0.0115	<0.00593	<0.00609	<0.00566	0.0641	0.0178
Pyrene	mg/kg	440	220	3200	0.0142	0.0627 F1	0.261	0.195	0.0379	0.00973	0.0183	<0.00590	0.0175	<0.00593	<0.00609	<0.00566	0.0587	0.0240
BaP Equiv result																		
Benzo(a)pyrene Equivalents	mg/kg	1.4	0.91	23	0.0134	0.0628	0.2051	0.1371	0.0235	0.0009	0.0871	0	0.0105	0	0	0	0.0118	0.0096
Per- and Polyfluoroalkyl Substances (PFAS)																		
Perfluorodecanesulfonic acid (PFDS)	ng/g	-	-	-	<0.262	<0.227	<0.244	<0.240	<0.272	<0.242	<0.269	<0.241	<0.257	<0.251	<0.248	<0.248	<0.273	<0.259
Perfluorodecanoic acid (PFDA)	ng/g	-	0.027	0.36	<0.262	<0.227	<0.244	<0.240	<0.272	<0.242	<0.269	<0.241	<0.257	<0.251	<0.248	<0.248	<0.273	<0.259
Perfluorododecanesulfonic acid (PFDoS)	ng/g	-	-	-	<0.262	<0.227	<0.244	<0.240	<0.272	<0.242	<0.269	<0.241	<0.257	<0.251	<0.248	<0.248	<0.273	<0.259
Perfluorododecanoic acid (PFDoA)	ng/g	-	-	-	<0.262	<0.227	<0.244	<0.240	<0.272	<0.242	<0.269	<0.241	<0.257	<0.251	<0.248	<0.248	<0.273	<0.259
Perfluoroheptanesulfonic acid (PFHpS)	ng/g	-	-	-	<0.262	<0.227	<0.244	0.358	<0.272	<0.242	<0.269	<0.241	<0.257	<0.251	<0.248	<0.248	<0.273	<0.259
Perfluoroheptanoic acid (PFHpA)	ng/g	-	-	-	<0.262	<0.227	<0.244	<0.240	<0.272	<0.242	<0.269	<0.241	<0.257	<0.251	<0.248	<0.248	<0.273	<0.259
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ng/g	-	-	-	<1.31	<1.14	<1.22	<1.20	<1.36	<1.21	<1.35	<1.20	<1.29	<1.26	<1.24	<1.24	<1.36	<1.30
Perfluorohexanesulfonic acid (PFHxS)	ng/g	-	130	1600	<0.262	0.581	10.1	14.6	<0.272	<0.242	<0.269	<0.241	0.263	<0.251	<0.248	0.294	0.787	0.441
Perfluorohexanoic acid (PFHxA)	ng/g	-	1900	24000	<0.262	<0.227	0.901	0.611	<0.272	<0.242	<0.269	<0.241	<0.257	<0.251	<0.248	<0.248	<0.273	<0.259
Perfluorononanesulfonic acid (PFNS)	ng/g	-	-	-	<0.262	<0.227	<0.244	<0.240	<0.272	<0.242	<0.269	<0.241	<0.257	<0.251	<0.248	<0.248	<0.273	<0.259
Perfluorononanoic acid (PFNA)	ng/g	-	40	540	<0.262	<0.227	<0.244	<0.240	<0.272	<0.242	<0.269	<0.241	<0.257	<0.251	<0.248	<0.248	<0.273	<0.259
Perfluorooctanesulfonic acid (PFOS)	ng/g	-	13	180	1.46	1.18	16.0	11.4	0.398	0.335	0.527	<0.241	0.399	<0.251	<0.248	1.35	2.22	1.98
Perfluorooctanoic acid (PFOA)	ng/g	-	0.36	2	<0.262	<0.227	0.760	0.892	<0.272	<0.242	0.291	<0.241	0.275	<0.251	<0.248	<0.248	0.330	<0.259
Perfluoropentanoic acid (PFPeA)	ng/g	-	-	-	<0.262	<0.227	0.245	<0.240	<0.272	<0.242	<0.269	<0.241	<0.257	<0.251	<0.248	<0.248	<0.273	<0.259
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ng/g	-	-	-	<1.31	<1.14	<1.22	<1.20	<1.36	<1.21	<1.35	<1.20	<1.29	<1.26	<1.24	<1.24	<1.36	<1.30
Perfluorotetradecanoic acid (PFTeDA)	ng/g	-	-	-	<0.262	<0.227	<0.244	<0.240	<0.272	<0.242	<0.269	<0.241	<0.257	<0.251	<0.248	<0.248	<0.273	<0.259
Perfluorotridecanoic acid (PFTrDA)	ng/g	-	-	-	<0.262	<0.227	<0.244	<0.240	<0.272	<0.242	<0.269	<0.241	<0.257	<0.251	<0.248	<0.248	<0.273	<0.259
Perfluoroundecanoic acid (PFUnA)	ng/g	-	-	-	<0.262	<0.227	<0.244	<0.240	<0.272	<0.242	<0.269	<0.241	<0.257	<0.251	<0.248	<0.248	<0.273	<0.259
VOCs																		
All VOCs	mg/kg	Varies			BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL

Notes:
* = Total Chromium does not have established MPCA regulatory limits. Chromium III and VI regulatory limits are depicted.
F1 - Matrix spike and/or matrix spike duplicate recovery exceeds control limits.
For a full list of acronyms, see the table glossary

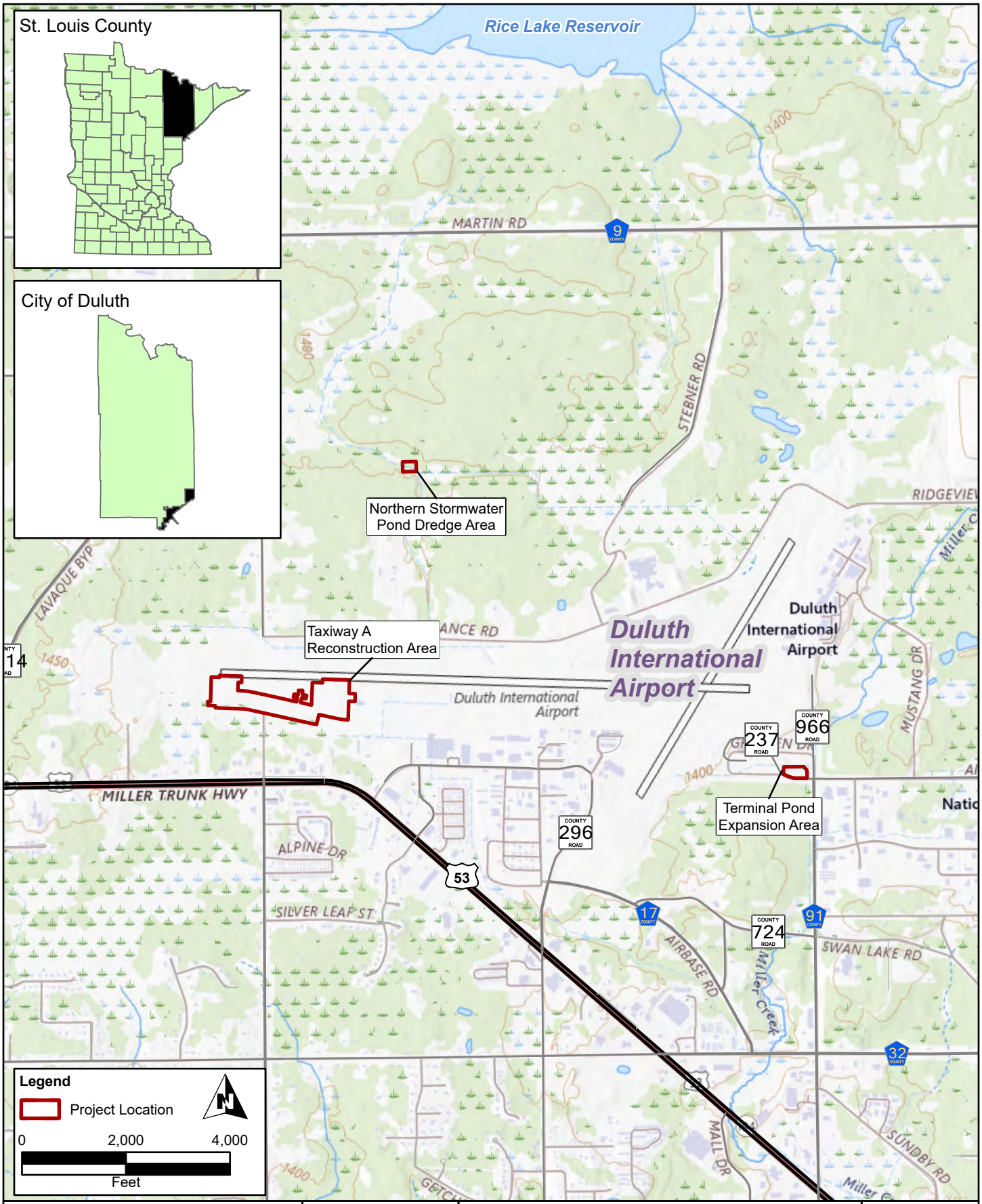
Table 3
Surface Water Analytical Results
Phase II Environmental Investigation
Taxiway A Reconstruction - Phase 7
Duluth, Minnesota

Boring ID	Units	EPA MCL 2025	2026 MDH Health Based Guidance			MPCA NPDES General Permit Limits [MNG790000; issued 2022]			WS-01
Field Sample ID			Health Based Values	Health Risk Limits	Risk Assesment Advice	Land Application (non surface water discharge)	Trout/ surface waters designated as drinking water	surface waters not designated as drinking water	WS-01
Laboratory ID									310-330206-19
Sample Date									4/21/2026
DRO and GRO									
Diesel Range Organics	ug/l	-	-	-	50	200	200	200	0.257
Gasoline Range Organics	ug/l	-	-	-	50	200	200	200	<100
Metals									
Barium	ug/l	2000	-	2000	-	-	-	-	15.3
Per- and Polyfluoroalkyl Substances (PFAS)									
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ng/L	-	-	-	-	Discharge of pollutants associated with emerging contaminants such as PFAS, pharmaceuticals, endocrine active substances, etc., are prohibited. (Minn. R. 7050.0210, subp. 13)			3.74
Perfluorobutanesulfonic acid (PFBS)	ng/L	-	-	100	-				48.0
Perfluorobutanoic acid (PFBA)	ng/L	-	-	7000	-				15.9
Perfluoroheptanesulfonic acid (PFHpS)	ng/L	-	-	-	-				4.68
Perfluoroheptanoic acid (PFHpA)	ng/L	-	-	-	-				17.9
Perfluorohexanesulfonic acid (PFHxS)	ng/L	10	-	47	-				246
Perfluorohexanoic acid (PFHxA)	ng/L	-	-	200	-				54.3
Perfluorononanoic acid (PFNA)	ng/L	10	-	-	-				2.04
Perfluorooctanesulfonic acid (PFOS)	ng/L	4	-	2.3	-				165
Perfluorooctanoic acid (PFOA)	ng/L	4	-	0.24	-				41.0
Perfluoropentanesulfonic acid (PFPeS)	ng/L	-	-	-	-				40.9
Perfluoropentanoic acid (PFPeA)	ng/L	-	-	-	-				40.0
PAHs									
All PAHs	ug/l	Varies	Varies			Varies			BRL
VOCs									
All VOCs	ug/l	Varies	Varies			Varies			BRL

Notes:
For a full list of acronyms, see the table glossary

Figures

Figure 1 – Project Site Location
Figure 2 – Phase 7 Extent and Project Areas
Figure 3 – Select Soil and Groundwater Sample Analytical Results



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SEH

3535 VADNAIS CENTER DR.
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Project: DULAI 186683
Print Date: 5/15/2026

User Name: rhawkins
Projection: UTM NAD 83 Zone 15N
Source: ESRI, MnDOT, SEH Digi, St. Louis County

Project Site Location

Phase II Environmental Investigation
Taxiway A Reconstruction - Phase 7
Duluth, St. Louis County, Minnesota

Figure 1

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources listed on this map and is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.

Northern Stormwater Pond Dredge Area

Taxiway A Reconstruction Area

Terminal Stormwater Pond Expansion Area

Taxiway A1

Taxiway A

Taxiway A2

Stebner Rd

Ridgeview Rd

Warhawk Drive

Lavaque Rd

M-1

Airport Rd

Malstrom St

Lackland St

Airport Approach Rd

Ralston Dr

Cirrus Dr

Sugar Maple Dr

Venture Ave

Airpark Blvd

Venture Rd

COUNTY 694 ROAD

COUNTY 297 ROAD

COUNTY 296 ROAD

COUNTY 237 ROAD

COUNTY 966 ROAD

48 COUNTY

53

91 COUNTY

Legend

- Project Area
- County Parcel Boundaries

0 475 950 1,900 Feet

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Project: DULAI 186683
Print Date: 5/17/2026

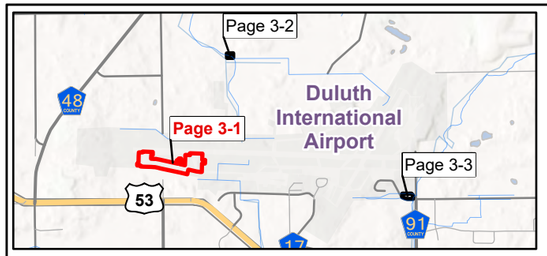
User Name: rhawkins
Projection: NAD 1983 HARN Adj MN St. Louis (US Feet)
Source: ESRI, SEH Digi, St. Louis County

Phase 7 Extent and Project Areas

Phase II Environmental Investigation
Taxiway A Reconstruction - Phase 7
Duluth, St. Louis County, Minnesota

Figure 2

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources listed on this map and is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.



Legend

- County Parcel Boundaries
- Project Area
- 2026 Sample Location

MN ANG PFAS Sampling Locations (ANG, 2024)

- Detections below MPCA 2026 RSRVs and ISRVs
- Detections exceeding 2026 MPCA ISRVs
- Detections exceeding MPCA 2026 RSRVs

Hand Auger Boring (HA), Sediment Sample (SS), Water Sample (WS)

HA-01
EOB = 10 (1, 15) — Termination Depth (ft); Sample Depths
Soil Analytical Results
(3) Diesel Range Organics - 108 — Analytical Results (ng/g); Sample Depth (ft)
Groundwater Observation Summary
PFOS - 0.01 — Analytical Results (ng/L)
Soil Observation Summary
0.5 ppm — Maximum PID Measurement
Fill to EOB — Soil Description

- Soil parameter concentrations shown exceed Minnesota Pollution Control Agency (MPCA) Screening Soil Reference Values (SLVs), Residential/Recreational Soil Reference Values (RSRVs), and Commercial Industrial SRVs (ISRVs).
- **Bold** soil detections indicate and exceedance of the ISRV.
- Water parameter concentrations shown exceed Minnesota Department of Health (MDH) Health Based Guidance (HBGs), Environmental Protection Agency (EPA) Maximum Contaminant Levels (MCLs), and National Pollutant Discharge Elimination System (NPDES) General Permit Limits (GPLs).
- Depth = Sample depth in feet below ground surface (bgs).
- EOB = End of Boring (Termination Depth of Hand Auger Boring).
- ppm = parts per million
- Soil detections shown are in nanograms per gram (ng/g).
- Water detections shown are in nanograms per liter (ng/L).
- Air National Guard (ANG)
- 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)
- Per- and polyfluoroalkyl Substances (PFAS)
- Perfluorobutanesulfonic acid (PFBS)
- Perfluorobutanoic acid (PFBA)
- Perfluoroheptanesulfonic acid (PFHpS)
- Perfluoroheptanoic acid (PFHpA)
- Perfluorohexanesulfonic acid (PFHxS)
- Perfluorohexanoic acid (PFHxA)
- Perfluorononanoic acid (PFNA)
- Perfluorooctanesulfonic acid (PFOS)
- Perfluorooctanoic acid (PFOA)
- Perfluoropentanesulfonic acid (PFPeS)
- Perfluoropentanoic acid (PFPeA)
- Photoionization Detector (PID)

0 150 300
Feet

HA-02
EOB=5 (1s and 3s)
Soil Analytical Results
(1) PFOA - 0.366
Groundwater Analytical Results
Groundwater not encountered.
Soil Observation Summary
0.1 ppm
Clayey sand fill to EOB.

HA-03
EOB=5 (1s and 3s)
Soil Analytical Results
All below MPCA SLVs, SRVs, and UFC.
Groundwater Analytical Results
Groundwater not encountered.
Soil Observation Summary
0.2 ppm
Clayey sand fill to EOB. Trace wood chips at 3.5 feet bgs.

HA-04
EOB=5 (1s and 3s)
Soil Analytical Results
All below MPCA SLVs, SRVs, and UFC.
Groundwater Analytical Results
Groundwater not encountered.
Soil Observation Summary
0.1 ppm
Clayey sand fill to EOB.

HA-05
EOB=5 (1s and 3s)
Soil Analytical Results
All below MPCA SLVs, SRVs, and UFC.
Groundwater Analytical Results
Groundwater not encountered.
Soil Observation Summary
0.2 ppm
Clayey sand fill to EOB.

HA-07
EOB=3 (1s and 2.5s)
Soil Analytical Results
(1) PFOS - 27.4
(1) PFOA - 0.372
(3) PFOA - 1.24
Groundwater Analytical Results
Groundwater not encountered.
Soil Observation Summary
0.1 ppm
Clayey sand fill to EOB.

HA-09
EOB=5 (1s and 3s)
Soil Analytical Results
(1) PFOS - 16.0
(3) PFOA - 0.892
Groundwater Analytical Results
Groundwater not encountered.
Soil Observation Summary
0.1 ppm
Silty sand fill to EOB.

HA-01
EOB=5 (1s and 3s)
Soil Analytical Results
(1) PFDA - 9.24
(1) PFOS - 176
(1) PFOA - 0.669
(3) PFDA - 4.98
(3) PFOS - 180
(3) PFOA - 4.34
Groundwater Analytical Results
Groundwater not encountered.
Soil Observation Summary
0.1 ppm
Clayey sand fill to EOB. Buried topsoil at 4.5 to 5 feet bgs.

HA-06
EOB=5 (1s and 3s)
Soil Analytical Results
All below MPCA SLVs, SRVs, and UFC.
Groundwater Analytical Results
Groundwater not encountered.
Soil Observation Summary
0.2 ppm
Clayey sand fill to EOB.

HA-08
EOB=5 (1s and 3s)
Soil Analytical Results
All below MPCA SLVs, SRVs, and UFC.
Groundwater Analytical Results
Groundwater not encountered.
Soil Observation Summary
0.5 ppm
Clayey sand and silty sand fill to EOB.

Taxiway A1
Taxiway A
Taxiway A2
BGSL-09
BGSL-10
BGSL-11
BGSL-12
Lavaque Rd

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www.sehinc.com

Project: DULAI 186683
Print Date: 5/17/2026

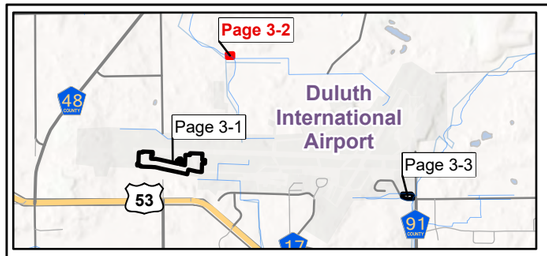
User Name: rhawkins
Projection: NAD 1983 HARN Adj MN St. Louis (US Feet)
Source: ESRI, SEH Digi, St. Louis County

Select Analytical Results - Taxiway A Reconstruction Area

Phase II Environmental Investigation
Taxiway A Reconstruction - Phase 7
Duluth, St. Louis County, Minnesota

Figure 3-1

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources listed on this map and is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.



Legend

County Parcel Boundaries

Project Area

2026 Sample Location

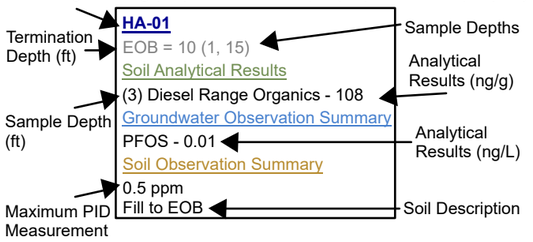
MN ANG PFAS Sampling Locations (ANG, 2024)

Detections below MPCA 2026 RSRVs and ISRVs

Detections exceeding 2026 MPCA ISRVs

Detections exceeding MPCA 2026 RSRVs

Hand Auger Boring (HA), Sediment Sample (SS), Water Sample (WS)



- Soil parameter concentrations shown exceed Minnesota Pollution Control Agency (MPCA) Screening Soil Reference Values (SLVs), Residential/Recreational Soil Reference Values (RSRVs), and Commercial Industrial SRVs (ISRVs).
- **Bold** soil detections indicate and exceedance of the ISRV.
- Water parameter concentrations shown exceed Minnesota Department of Health (MDH) Health Based Guidance (HBGs), Environmental Protection Agency (EPA) Maximum Contaminant Levels (MCLs), and National Pollutant Discharge Elimination System (NPDES) General Permit Limits (GPLs).
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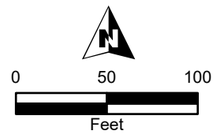
- Water detections shown are in nanograms per liter (ng/L).
- Air National Guard (ANG)
- 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)
- Per- and polyfluoroalkyl Substances (PFAS)
- Perfluorobutanesulfonic acid (PFBS)
- Perfluorobutanoic acid (PFBA)
- Perfluoroheptanesulfonic acid (PFHpS)
- Perfluoroheptanoic acid (PFHpA)
- Perfluorohexanesulfonic acid (PFHxS)
- Perfluorohexanoic acid (PFHxA)
- Perfluorononanoic acid (PFNA)
- Perfluorooctanesulfonic acid (PFOS)
- Perfluorooctanoic acid (PFOA)
- Perfluoropentanesulfonic acid (PFPeS)
- Perfluoropentanoic acid (PFPeA)
- Photoionization Detector (PID)



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Print Date: 5/17/2026

User Name: rhawkins
Projection: NAD 1983 HARN Adj MN St. Louis (US Feet)
Source: ESRI, SEH Digi, St. Louis County

Select Analytical Results - Northern Stormwater Pond Dredge Area

Phase II Environmental Investigation
Taxiway A Reconstruction - Phase 7
Duluth, St. Louis County, Minnesota

Figure 3-2

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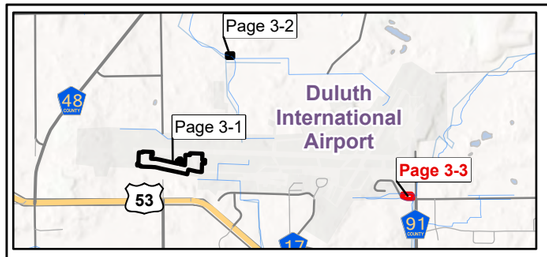

Legend

- County Parcel Boundaries
- Project Area
- 2026 Sample Location

MN ANG PFAS Sampling Locations (ANG, 2024)

- Detections below MPCA 2026 RSRVs and ISRVs
- Detections exceeding 2026 MPCA ISRVs
- Detections exceeding MPCA 2026 RSRVs

Hand Auger Boring (HA), Sediment Sample (SS), Water Sample (WS)

HA-01
EOB = 10 (1, 15) — Termination Depth (ft); Sample Depths
Soil Analytical Results
(3) Diesel Range Organics - 108 — Analytical Results (ng/g)
Groundwater Observation Summary
PFOS - 0.01 — Sample Depth (ft); Analytical Results (ng/L)
Soil Observation Summary
0.5 ppm — Maximum PID Measurement
Fill to EOB — Soil Description

- Soil parameter concentrations shown exceed Minnesota Pollution Control Agency (MPCA) Screening Soil Reference Values (SLVs), Residential/Recreational Soil Reference Values (RSRVs), and Commercial Industrial SRVs (ISRVs).
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- 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)
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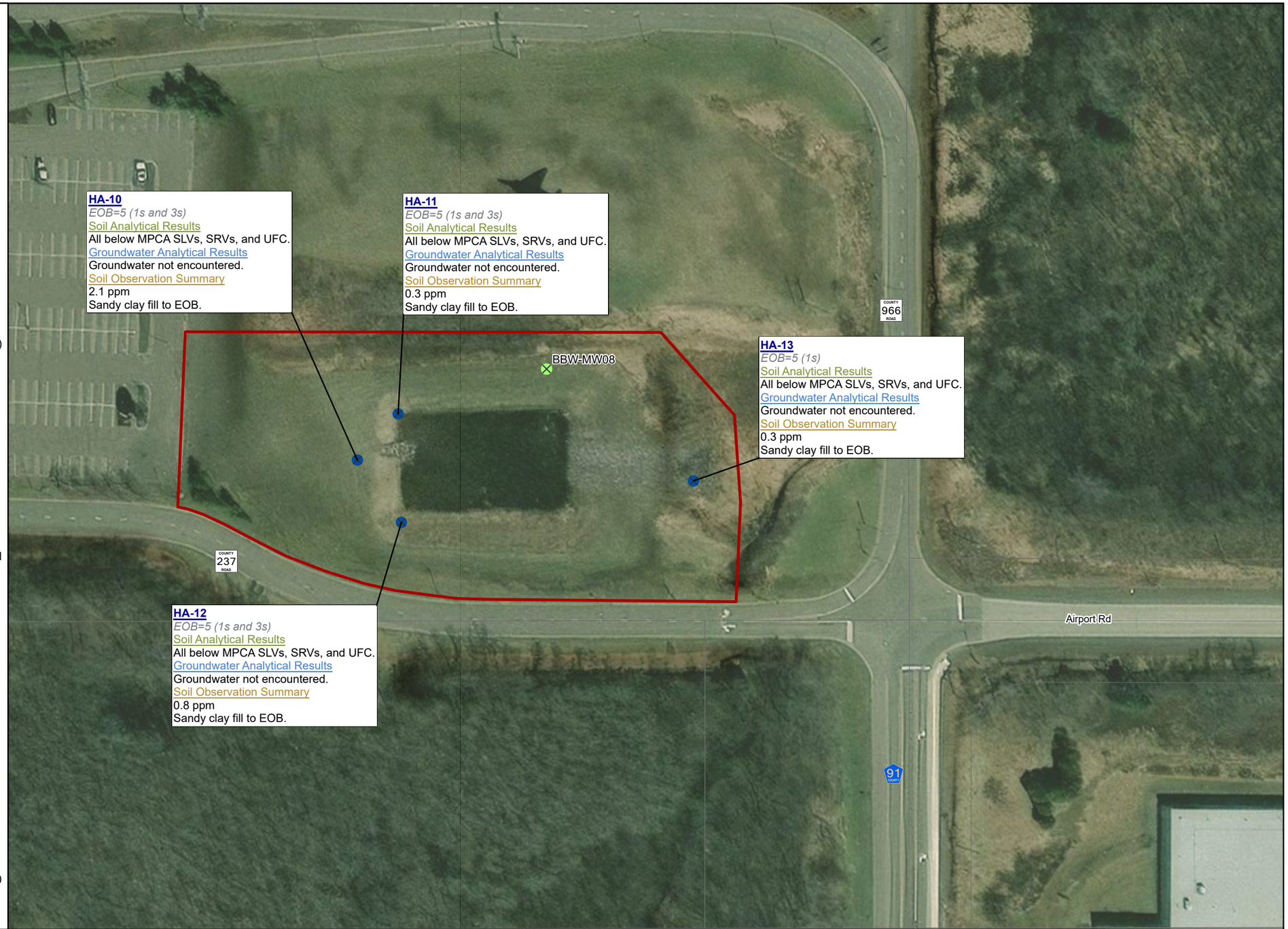
- Perfluorononanoic acid (PFNA)
- Perfluorooctanesulfonic acid (PFOS)
- Perfluorooctanoic acid (PFOA)
- Perfluoropentanesulfonic acid (PFPeS)
- Perfluoropentanoic acid (PFPeA)
- Photoionization Detector (PID)

0 50 100
Feet



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Project: DULAI 186683
Print Date: 5/17/2026

User Name: rhawkins
Projection: NAD 1983 HARN Adj MN St. Louis (US Feet)
Source: ESRI, SEH Digi, St. Louis County

Select Analytical Results - Terminal Stormwater Pond Expansion Area

Phase II Environmental Investigation
Taxiway A Reconstruction - Phase 7
Duluth, St. Louis County, Minnesota

Figure 3-3

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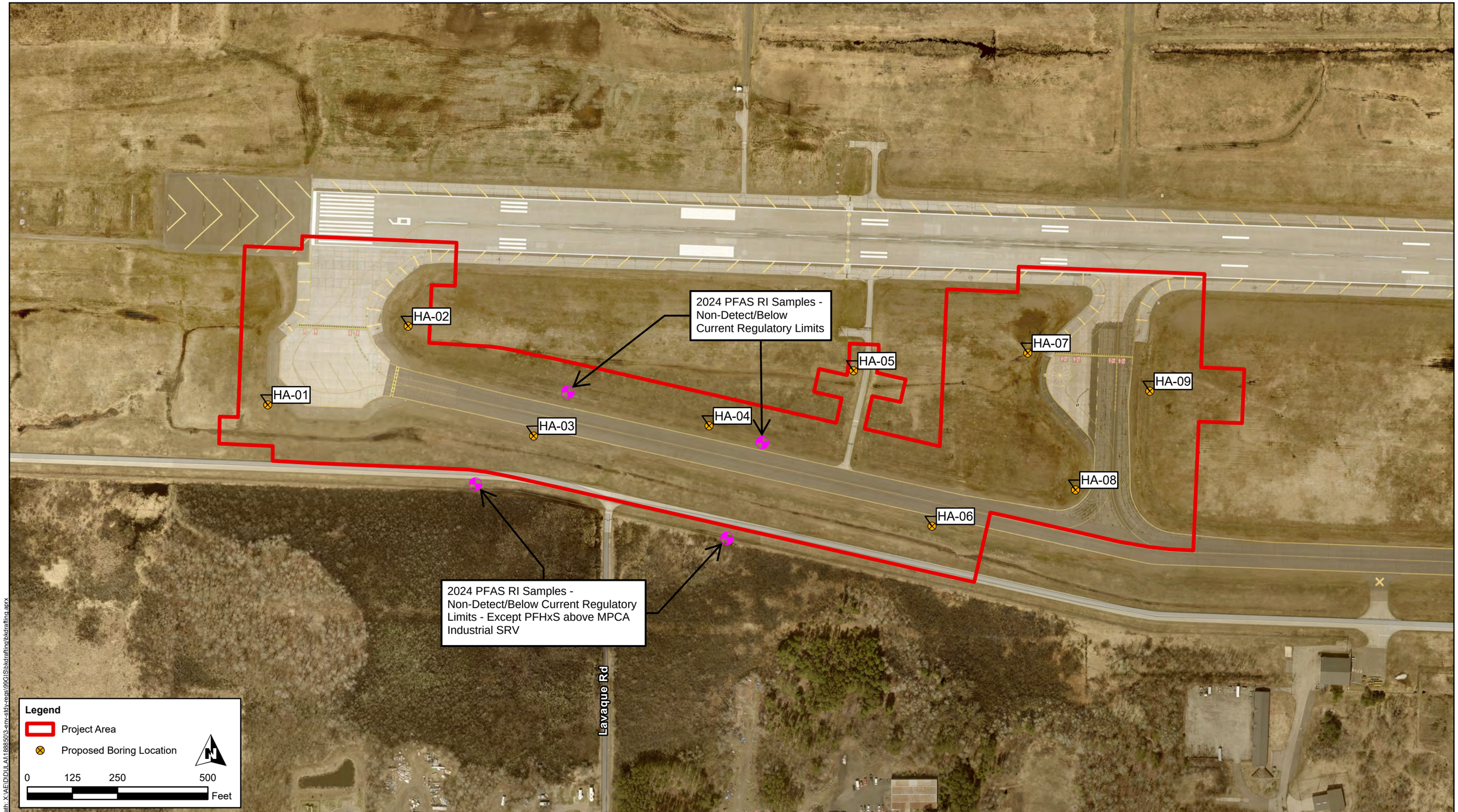
Appendix A

Work Plan



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Project: DULAI 188850
Print Date: 4/7/2026

User Name: bkolter
Projection: NAD 1983 HARN Adj MN St. Louis (US Feet)
Source: ESRI, SEH Digi, St. Louis County

Proposed Sampling Locations

Taxiway A Reconstruction - Phase 7
Taxiway A1/A2 Reconstruction
Duluth International Airport
Duluth, St. Louis County, Minnesota

Figure 1-1

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources listed on this map and is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.

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Project: DULAI 188850
Print Date: 4/7/2026

User Name: bkolter
Projection: NAD 1983 HARN Adj MN
St. Louis (US Feet)
Source: ESRI, SEH Digi,
St. Louis County

Proposed Sampling Locations

Taxiway A Reconstruction - Phase 7
Terminal Stormwater Pond Expansion
Duluth International Airport
Duluth, St. Louis County, Minnesota

Figure
1-2

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Project: DULAI 188850
Print Date: 4/7/2026

User Name: bkolter
Projection: NAD 1983 HARN Adj MN
St. Louis (US Feet)
Source: ESRI, SEH Digi,
St. Louis County

Proposed Sampling Locations

Taxiway A Reconstruction - Phase 7
Northern Stormwater Pond Dredging
Duluth International Airport
Duluth, St. Louis County, Minnesota

Figure
1-3

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Work Plan

Taxiway A Reconstruction - Phase 7
Duluth International Airport
Duluth, St. Louis County, Minnesota

Proposed Boring ID	Boring Location Notes	Anticipated Total Depth (feet bgs)	Anticipated Soil Sample Depths (feet bgs)	Soil Sampling Parameters						Anticipated Depth to Groundwater (feet bgs)~	Water Sampling Parameters					
				DRO	GRO	VOCs	PAHs	RCRA 8 Metals	PFAS		DRO	GRO	VOCs	PAHs	RCRA 8 Metals	PFAS
HA-01	Preliminary information for Project	4	1 and 3	2	2	2	2	2	2[1]	6-10 ft bgs	-	-	-	-	-	-
HA-02	Preliminary information for Project	4	1 and 3	2	2	2	2	2	2[1]	6-10 ft bgs	-	-	-	-	-	-
HA-03	Preliminary information for Project	4	1 and 3	2	2	2	2	2	2[1]	6-10 ft bgs	-	-	-	-	-	-
HA-04	Preliminary information for Project	4	1 and 3	2	2	2	2	2	2[1]	6-10 ft bgs	-	-	-	-	-	-
HA-05	Preliminary information for Project	4	1 and 3	2	2	2	2	2	2[1]	6-10 ft bgs	-	-	-	-	-	-
HA-06	Preliminary information for Project	4	1 and 3	2	2	2	2	2	2[1]	6-10 ft bgs	-	-	-	-	-	-
HA-07	Preliminary information for Project	4	1 and 3	2	2	2	2	2	2[1]	6-10 ft bgs	-	-	-	-	-	-
HA-08	Preliminary information for Project	4	1 and 3	2	2	2	2	2	2[1]	6-10 ft bgs	-	-	-	-	-	-
HA-09	Preliminary information for Project	4	1 and 3	2	2	2	2	2	2[1]	6-10 ft bgs	-	-	-	-	-	-
HA-10	Preliminary information for Project	4	1 and 3	2	2	2	2	2	2	6-10 ft bgs	-	-	-	-	-	-
HA-11	Preliminary information for Project	4	1 and 3	2	2	2	2	2	2	6-10 ft bgs	-	-	-	-	-	-
HA-12	Preliminary information for Project	4	1 and 3	2	2	2	2	2	2	6-10 ft bgs	-	-	-	-	-	-
HA-13	Preliminary information for Project	4	1 and 3	2[2]	2[2]	2[2]	2[2]	2[2]	2[2]	6-10 ft bgs	-	-	-	-	-	-

Work Plan

Taxiway A Reconstruction - Phase 7
Duluth International Airport
Duluth, St. Louis County, Minnesota

Proposed Boring ID	Boring Location Notes	Anticipated Total Depth (feet bgs)	Anticipated Soil Sample Depths (feet bgs)	Soil Sampling Parameters						Anticipated Depth to Groundwater (feet bgs)~	Water Sampling Parameters					
				DRO	GRO	VOCs	PAHs	RCRA 8 Metals	PFAS		DRO	GRO	VOCs	PAHs	RCRA 8 Metals	PFAS
SS-01	Preliminary information for Project	4	1 and 3	2^2	2^2	2^2	2^2	2^2	2^2	6-10 ft bgs	-	-	-	-	-	-
SS-02	Preliminary information for Project	4	1 and 3	2^2	2^2	2^2	2^2	2^2	2^2	6-10 ft bgs	-	-	-	-	-	-
SS-03	Preliminary information for Project	4	1 and 3	2^2	2^2	2^2	2^2	2^2	2^2	6-10 ft bgs	-	-	-	-	-	-
WS-01	Preliminary information for Project	-	-	-	-	-	-	-	-	0 - Surface Water	1	1	1	1	1	1
Totals				**32**	**32**	**32**	**32**	**32**	**32**		**1**	**1**	**1**	**1**	**1**	**1**

1 - PFAS samples collected to be run as needed depending on initial samples results. Initial PFAS samples run will be HA-01, HA-03, HA-06, and HA-09 based on 2024 PFAS sampling in the Taxiway A area.
2 - Deep samples collected at 3 feet bgs will be held at the lab and run if needed, depending on results of shallower samples.

Appendix B

Laboratory Analytical Reports

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Keri Aufdencamp
Short Elliott Hendrickson, Inc. dba SEH
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St. Paul, Minnesota 55110

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JOB DESCRIPTION

Duluth Airport Taxiway A

JOB NUMBER

310-330206-1

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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Authorization

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Zach Bindert, Senior Project Manager
Zach.Bindert@et.eurofinsus.com
(319)595-2016

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Receipt Checklists 260
Isotope Dilution Summary 261

Job ID: 310-330206-1 — Eurofins Cedar Falls

Job Narrative
310-330206-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The samples were received on 4/22/2026 1:20 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.9°C, 4.0°C, 4.3°C and 5.1°C.

GC/MS VOA
Method 8260D: The method requirement for no headspace was not met. The following volatile sample was analyzed with headspace in the sample container(s): Trip Blank - Water (310-330206-33).

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-487059 recovered above the upper control limit for Chloroethane(23%D), Trichlorofluoromethane(24%D), Dichlorofluoromethane(25%D), and Bromomethane(26%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is:(CCV 310-487059/4).

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-487062 recovered above the upper control limit for Acetone(24%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is:(CCV 310-487062/3).

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-487062 recovered above the upper control limit for Chloroethane(44%D), Vinyl chloride(22%D), Dichlorofluoromethane(27%D), and Bromomethane(60%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is:(CCV 310-487062/4).

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-487186 recovered outside of the control limits for 2,2-Dichloropropane(-23%D). A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The associated sample is impacted: (CCV 310-487186/3).

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-487186 recovered above the upper control limit for Chloroethane(53%D) and Bromomethane(52%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is:(CCV 310-487186/4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC/MS Semi VOA
Method 8270E: The continuing calibration verification (CCV) associated with batch 310-487274 recovered above the upper control limit for 4,4-DDD (31 %D), Endosulfan Sulfate (21 %D), Endrin (29 %D) and Methoxychlor (29 %D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is:(CCV 310-487274/3).

Method 8270E: The continuing calibration verification (CCV) analyzed in 310-487299 was outside the method criteria for the following analyte(s): nitrobenzene-d5 (39%D). As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

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Method 8270E: The continuing calibration verification (CCV) associated with batch 310-487299 recovered above the upper control limit for acenaphthylene (22%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is:(CCV 310-487299/15).

Method 8270E: The surrogate recovery for the blank associated with preparation batch 310-487020 and analytical batch 310-487054 was outside the upper control limits.

Method 8270E: Surrogate recovery was outside acceptance limits for the following matrix spike/matrix spike duplicate (MS/MSD) sample: (310-330206-B-2-C MSD). The parent sample's surrogate recovery was within limits. The MS/MSD sample has been qualified and reported.

Method 8270E: Surrogate recovery for the following sample was outside control limits: HA-06-1 (310-330206-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8270E: The following sample was diluted due to the nature of the sample matrix: HA-07-1 (310-330206-15). Elevated reporting limits (RLs) are provided.

Method 8270E: The continuing calibration verification (CCV) associated with batch 310-487149 recovered above the upper control limit for 2-methylnaphthalene (23%D) and acenaphthene (22%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is:(CCV 310-487149/4).

Method 8270E: The continuing calibration verification (CCV) analyzed in 310-487291 was outside the method criteria for the following analyte(s): nitrobenzene-d5 (26%D). As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270E: Surrogate recovery was outside acceptance limits for the following matrix spike/matrix spike duplicate (MS/MSD) sample: (310-330206-B-23-A MS). The parent sample's surrogate recovery was within limits. The MS/MSD sample has been qualified and reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Gasoline Range Organics
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Diesel Range Organics
Method WI-DRO: Significant peaks, readily distinguished from background, were detected in the following samples within five minutes after the end of the analytical window defined by the last component eluting in the Diesel Range Organics (DRO) mix (i.e., n-Octacosane): HA-08-1 (310-330206-1), HA-08-3 (310-330206-2), HA-06-1 (310-330206-3), HA-05-1 (310-330206-5), HA-03-1 (310-330206-9), HA-03-3 (310-330206-10), HA-01-3 (310-330206-12), HA-02-1 (310-330206-13), HA-02-3 (310-330206-14), HA-07-1 (310-330206-15), HA-07-2.5 (310-330206-16), HA-09-1 (310-330206-17) and HA-09-3 (310-330206-18).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

PFAS
Method 1633A: The continuing calibration verification (CCV) recovered outside of control limits for IDA compound(s) (flagged). Section 14.3.3 of the finalized EPA 1633 states that the recovery of target analytes for the CCV must be within 70 - 130%, unless the analyte is not of concern for a given project. Since target analyte(s) associated with this IDA are within spec, data is reported. The following samples are impacted: HA-09-1 (310-330206-17), SS-01 (310-330206-20), SS-02 (310-330206-21), SS-03 (310-330206-22), HA-10-1 (310-330206-23), HA-10-3 (310-330206-24), HA-11-1 (310-330206-25), HA-11-3 (310-330206-26), HA-12-1 (310-330206-27), HA-12-3 (310-330206-28) and HA-13-1 (310-330206-29).

Method 1633A: The continuing calibration verification (CCV) associated with batch 240-699825 recovered above the upper control limit for Nonafluoro-3,6-dioxaheptanoic acid (NFDHA). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are:HA-06-1 (310-330206-3), HA-03-1 (310-330206-9) and HA-01-1 (310-330206-11).

Method 1633A: The continuing calibration verification (CCV) recovered outside of control limits for IDA compound(s) (flagged). Section 14.3.3 of the finalized EPA 1633 states that the recovery of target analytes for the CCV must be within 70 - 130%, unless the analyte is not of concern for a given project. Since target analyte(s) associated with this IDA are within spec, data is reported. The following samples are impacted: HA-06-1 (310-330206-3) and HA-01-1 (310-330206-11).

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Method 1633A: Samples re-extracted at 1.00g due to low/no IDA recoveries. Since low IDA was likely due to matrix effects. Sample was analyzed at a dilution and may have elevated RLs. Laboratory proceeded with re-analysis. HA-03-1 (310-330206-9)

Method 1633A: The continuing calibration verification (CCV) associated with batch 240-700142 recovered above the upper control limit for Perfluorododecanesulfonic acid (PFDoS). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Sample Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
310-330206-1	HA-08-1	Solid	04/20/26 10:20	04/22/26 13:20	Minnesota
310-330206-2	HA-08-3	Solid	04/20/26 10:25	04/22/26 13:20	Minnesota
310-330206-3	HA-06-1	Solid	04/20/26 10:56	04/22/26 13:20	Minnesota
310-330206-4	HA-06-3	Solid	04/20/26 10:55	04/22/26 13:20	Minnesota
310-330206-5	HA-05-1	Solid	04/20/26 11:15	04/22/26 13:20	Minnesota
310-330206-6	HA-05-3	Solid	04/20/26 11:20	04/22/26 13:20	Minnesota
310-330206-7	HA-04-1	Solid	04/20/26 11:35	04/22/26 13:20	Minnesota
310-330206-8	HA-04-3	Solid	04/20/26 11:40	04/22/26 13:20	Minnesota
310-330206-9	HA-03-1	Solid	04/20/26 11:55	04/22/26 13:20	Minnesota
310-330206-10	HA-03-3	Solid	04/20/26 12:00	04/22/26 13:20	Minnesota
310-330206-11	HA-01-1	Solid	04/20/26 12:15	04/22/26 13:20	Minnesota
310-330206-12	HA-01-3	Solid	04/20/26 12:20	04/22/26 13:20	Minnesota
310-330206-13	HA-02-1	Solid	04/20/26 12:35	04/22/26 13:20	Minnesota
310-330206-14	HA-02-3	Solid	04/20/26 12:40	04/22/26 13:20	Minnesota
310-330206-15	HA-07-1	Solid	04/20/26 12:55	04/22/26 13:20	Minnesota
310-330206-16	HA-07-2.5	Solid	04/20/26 13:00	04/22/26 13:20	Minnesota
310-330206-17	HA-09-1	Solid	04/20/26 13:15	04/22/26 13:20	Minnesota
310-330206-18	HA-09-3	Solid	04/20/26 13:20	04/22/26 13:20	Minnesota
310-330206-19	WS-01	Water	04/21/26 09:00	04/22/26 13:20	Minnesota
310-330206-20	SS-01	Solid	04/21/26 10:00	04/22/26 13:20	Minnesota
310-330206-21	SS-02	Solid	04/21/26 10:10	04/22/26 13:20	Minnesota
310-330206-22	SS-03	Solid	04/21/26 10:20	04/22/26 13:20	Minnesota
310-330206-23	HA-10-1	Solid	04/21/26 11:25	04/22/26 13:20	Minnesota
310-330206-24	HA-10-3	Solid	04/21/26 11:30	04/22/26 13:20	Minnesota
310-330206-25	HA-11-1	Solid	04/21/26 11:45	04/22/26 13:20	Minnesota
310-330206-26	HA-11-3	Solid	04/21/26 11:50	04/22/26 13:20	Minnesota
310-330206-27	HA-12-1	Solid	04/21/26 12:05	04/22/26 13:20	Minnesota
310-330206-28	HA-12-3	Solid	04/21/26 12:10	04/22/26 13:20	Minnesota
310-330206-29	HA-13-1	Solid	04/21/26 12:25	04/22/26 13:20	Minnesota
310-330206-31	Rinsate Blank	Water	04/21/26 13:00	04/22/26 13:20	Minnesota
310-330206-32	Trip Blank - Soil 1	Solid	04/21/26 14:00	04/22/26 13:20	Minnesota
310-330206-33	Trip Blank - Water	Water	04/21/26 15:00	04/22/26 13:20	Minnesota

Client Sample ID: HA-08-1 — Lab Sample ID: 310-330206-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo(a)anthracene	0.00832		0.00622		mg/Kg	1	☼	8270E	Total/NA
Benzo(a)pyrene	0.0104		0.00622		mg/Kg	1	☼	8270E	Total/NA
Benzo(b)fluoranthene	0.0148		0.00622		mg/Kg	1	☼	8270E	Total/NA
Benzo(g,h,i)perylene	0.00773		0.00622		mg/Kg	1	☼	8270E	Total/NA
Chrysene	0.0110		0.00622		mg/Kg	1	☼	8270E	Total/NA
Fluoranthene	0.0173		0.00622		mg/Kg	1	☼	8270E	Total/NA
Indeno(1,2,3-cd)pyrene	0.00648		0.00622		mg/Kg	1	☼	8270E	Total/NA
Pyrene	0.0142		0.00622		mg/Kg	1	☼	8270E	Total/NA
Arsenic	2.06		1.30		mg/Kg	2	☼	6020B	Total/NA
Barium	46.5		1.30		mg/Kg	2	☼	6020B	Total/NA
Chromium	23.5		0.522		mg/Kg	2	☼	6020B	Total/NA
Lead	4.95		0.261		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-08-3 — Lab Sample ID: 310-330206-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Anthracene	0.00718	F1	0.00563		mg/Kg	1	☼	8270E	Total/NA
Benzo(a)anthracene	0.0329	F1	0.00563		mg/Kg	1	☼	8270E	Total/NA
Benzo(a)pyrene	0.0416	F1	0.00563		mg/Kg	1	☼	8270E	Total/NA
Benzo(b)fluoranthene	0.0647	F1	0.00563		mg/Kg	1	☼	8270E	Total/NA
Benzo(g,h,i)perylene	0.0296	F1	0.00563		mg/Kg	1	☼	8270E	Total/NA
Benzo(k)fluoranthene	0.0232	F1	0.00563		mg/Kg	1	☼	8270E	Total/NA
Chrysene	0.0460		0.00563		mg/Kg	1	☼	8270E	Total/NA
Dibenz(a,h)anthracene	0.00842		0.00563		mg/Kg	1	☼	8270E	Total/NA
Fluoranthene	0.0865	F1	0.00563		mg/Kg	1	☼	8270E	Total/NA
Indeno(1,2,3-cd)pyrene	0.0277	F1	0.00563		mg/Kg	1	☼	8270E	Total/NA
Phenanthrene	0.0287	F1	0.00563		mg/Kg	1	☼	8270E	Total/NA
Pyrene	0.0627	F1	0.00563		mg/Kg	1	☼	8270E	Total/NA
Diesel Range Organics (DRO)	8.68		6.42		mg/Kg	1	☼	WI-DRO	Total/NA
Arsenic	1.83		1.11		mg/Kg	2	☼	6020B	Total/NA
Barium	39.8		1.11		mg/Kg	2	☼	6020B	Total/NA
Chromium	22.2		0.444		mg/Kg	2	☼	6020B	Total/NA
Lead	4.14		0.222		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-06-1 — Lab Sample ID: 310-330206-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.00992		0.00582		mg/Kg	1	☼	8270E	Total/NA
Anthracene	0.0152		0.00582		mg/Kg	1	☼	8270E	Total/NA
Benzo(a)anthracene	0.0402		0.00582		mg/Kg	1	☼	8270E	Total/NA
Benzo(a)pyrene	0.0466		0.00582		mg/Kg	1	☼	8270E	Total/NA
Benzo(b)fluoranthene	0.0657		0.00582		mg/Kg	1	☼	8270E	Total/NA
Benzo(g,h,i)perylene	0.0338		0.00582		mg/Kg	1	☼	8270E	Total/NA
Benzo(k)fluoranthene	0.0239		0.00582		mg/Kg	1	☼	8270E	Total/NA
Chrysene	0.0548		0.00582		mg/Kg	1	☼	8270E	Total/NA
Dibenz(a,h)anthracene	0.00816		0.00582		mg/Kg	1	☼	8270E	Total/NA
Fluoranthene	0.132		0.00582		mg/Kg	1	☼	8270E	Total/NA
Fluorene	0.00799		0.00582		mg/Kg	1	☼	8270E	Total/NA
Indeno(1,2,3-cd)pyrene	0.0280		0.00582		mg/Kg	1	☼	8270E	Total/NA
2-Methylnaphthalene	0.0704		0.00582		mg/Kg	1	☼	8270E	Total/NA
Naphthalene	0.0436		0.00582		mg/Kg	1	☼	8270E	Total/NA
Phenanthrene	0.0920		0.00582		mg/Kg	1	☼	8270E	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: HA-06-1 (Continued)
Lab Sample ID: 310-330206-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Pyrene	0.105		0.00582		mg/Kg	1	☼	8270E	Total/NA
Diesel Range Organics (DRO)	6.84		6.58		mg/Kg	1	☼	WI-DRO	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.496		0.238		ng/g	1	☼	1633A	Total/NA
Arsenic	1.96		1.19		mg/Kg	2	☼	6020B	Total/NA
Barium	53.4		1.19		mg/Kg	2	☼	6020B	Total/NA
Chromium	24.4		0.475		mg/Kg	2	☼	6020B	Total/NA
Lead	10.1		0.238		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-06-3
Lab Sample ID: 310-330206-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo(a)anthracene	0.0103		0.00531		mg/Kg	1	☼	8270E	Total/NA
Benzo(a)pyrene	0.0102		0.00531		mg/Kg	1	☼	8270E	Total/NA
Benzo(b)fluoranthene	0.0146		0.00531		mg/Kg	1	☼	8270E	Total/NA
Benzo(g,h,i)perylene	0.00721		0.00531		mg/Kg	1	☼	8270E	Total/NA
Benzo(k)fluoranthene	0.00568		0.00531		mg/Kg	1	☼	8270E	Total/NA
Chrysene	0.0121		0.00531		mg/Kg	1	☼	8270E	Total/NA
Fluoranthene	0.0228		0.00531		mg/Kg	1	☼	8270E	Total/NA
Indeno(1,2,3-cd)pyrene	0.00660		0.00531		mg/Kg	1	☼	8270E	Total/NA
2-Methylnaphthalene	0.00659		0.00531		mg/Kg	1	☼	8270E	Total/NA
Naphthalene	0.0144		0.00531		mg/Kg	1	☼	8270E	Total/NA
Phenanthrene	0.0137		0.00531		mg/Kg	1	☼	8270E	Total/NA
Pyrene	0.0171		0.00531		mg/Kg	1	☼	8270E	Total/NA
Arsenic	1.74		1.04		mg/Kg	2	☼	6020B	Total/NA
Barium	37.4		1.04		mg/Kg	2	☼	6020B	Total/NA
Chromium	18.5		0.417		mg/Kg	2	☼	6020B	Total/NA
Lead	4.92		0.209		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-05-1
Lab Sample ID: 310-330206-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo(a)anthracene	0.00915		0.00618		mg/Kg	1	☼	8270E	Total/NA
Benzo(a)pyrene	0.00827		0.00618		mg/Kg	1	☼	8270E	Total/NA
Benzo(b)fluoranthene	0.0118		0.00618		mg/Kg	1	☼	8270E	Total/NA
Benzo(g,h,i)perylene	0.00664		0.00618		mg/Kg	1	☼	8270E	Total/NA
Chrysene	0.00927		0.00618		mg/Kg	1	☼	8270E	Total/NA
Fluoranthene	0.0217		0.00618		mg/Kg	1	☼	8270E	Total/NA
Naphthalene	0.00759		0.00618		mg/Kg	1	☼	8270E	Total/NA
Phenanthrene	0.00918		0.00618		mg/Kg	1	☼	8270E	Total/NA
Pyrene	0.0168		0.00618		mg/Kg	1	☼	8270E	Total/NA
Diesel Range Organics (DRO)	10.5		7.30		mg/Kg	1	☼	WI-DRO	Total/NA
Arsenic	2.08		1.24		mg/Kg	2	☼	6020B	Total/NA
Barium	49.2		1.24		mg/Kg	2	☼	6020B	Total/NA
Chromium	26.5		0.497		mg/Kg	2	☼	6020B	Total/NA
Lead	5.18		0.248		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-05-3
Lab Sample ID: 310-330206-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.92		1.13		mg/Kg	2	☼	6020B	Total/NA
Barium	46.0		1.13		mg/Kg	2	☼	6020B	Total/NA
Chromium	27.0		0.451		mg/Kg	2	☼	6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: HA-05-3 (Continued)
Lab Sample ID: 310-330206-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	4.58		0.226		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-04-1
Lab Sample ID: 310-330206-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo(a)anthracene	0.0213		0.00571		mg/Kg	1	☼	8270E	Total/NA
Benzo(a)pyrene	0.0192		0.00571		mg/Kg	1	☼	8270E	Total/NA
Benzo(b)fluoranthene	0.0275		0.00571		mg/Kg	1	☼	8270E	Total/NA
Benzo(g,h,i)perylene	0.0118		0.00571		mg/Kg	1	☼	8270E	Total/NA
Benzo(k)fluoranthene	0.00884		0.00571		mg/Kg	1	☼	8270E	Total/NA
Chrysene	0.0214		0.00571		mg/Kg	1	☼	8270E	Total/NA
Fluoranthene	0.0427		0.00571		mg/Kg	1	☼	8270E	Total/NA
Indeno(1,2,3-cd)pyrene	0.0104		0.00571		mg/Kg	1	☼	8270E	Total/NA
Phenanthrene	0.0163		0.00571		mg/Kg	1	☼	8270E	Total/NA
Pyrene	0.0331		0.00571		mg/Kg	1	☼	8270E	Total/NA
Diesel Range Organics (DRO)	8.13		7.00		mg/Kg	1	☼	WI-DRO	Total/NA
Arsenic	2.41		0.989		mg/Kg	2	☼	6020B	Total/NA
Barium	61.7		0.989		mg/Kg	2	☼	6020B	Total/NA
Chromium	29.3		0.395		mg/Kg	2	☼	6020B	Total/NA
Lead	6.60		0.198		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-04-3
Lab Sample ID: 310-330206-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.50		0.948		mg/Kg	2	☼	6020B	Total/NA
Barium	37.8		0.948		mg/Kg	2	☼	6020B	Total/NA
Chromium	21.0		0.379		mg/Kg	2	☼	6020B	Total/NA
Lead	3.95		0.190		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-03-1
Lab Sample ID: 310-330206-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics (DRO)	16.7		8.53		mg/Kg	1	☼	WI-DRO	Total/NA
Perfluorooctanesulfonic acid (PFOS) - RE	0.678		0.524		ng/g	1	☼	1633A	Total/NA
Arsenic	2.35		1.28		mg/Kg	2	☼	6020B	Total/NA
Barium	47.9		1.28		mg/Kg	2	☼	6020B	Total/NA
Chromium	22.5		0.510		mg/Kg	2	☼	6020B	Total/NA
Lead	5.18		0.255		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-03-3
Lab Sample ID: 310-330206-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics (DRO)	12.5		7.34		mg/Kg	1	☼	WI-DRO	Total/NA
Arsenic	1.75		1.11		mg/Kg	2	☼	6020B	Total/NA
Barium	38.8		1.11		mg/Kg	2	☼	6020B	Total/NA
Chromium	30.1		0.443		mg/Kg	2	☼	6020B	Total/NA
Lead	4.04		0.221		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-01-1
Lab Sample ID: 310-330206-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorodecanesulfonic acid (PFDS)	0.391		0.207		ng/g	1	☼	1633A	Total/NA
Perfluorodecanoic acid (PFDA)	9.24		0.207		ng/g	1	☼	1633A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: HA-01-1 (Continued)
Lab Sample ID: 310-330206-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorododecanesulfonic acid (PFDoS)	0.248		0.207		ng/g	1	☼	1633A	Total/NA
Perfluorododecanoic acid (PFDoA)	3.90		0.207		ng/g	1	☼	1633A	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	1.53		0.207		ng/g	1	☼	1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.285		0.207		ng/g	1	☼	1633A	Total/NA
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	2.21		1.03		ng/g	1	☼	1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	4.05		0.207		ng/g	1	☼	1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	0.554		0.207		ng/g	1	☼	1633A	Total/NA
Perfluorononanesulfonic acid (PFNS)	0.440		0.207		ng/g	1	☼	1633A	Total/NA
Perfluorononanoic acid (PFNA)	1.78		0.207		ng/g	1	☼	1633A	Total/NA
Perfluorooctanoic acid (PFOA)	0.669		0.207		ng/g	1	☼	1633A	Total/NA
Perfluoropentanoic acid (PFPeA)	0.451		0.207		ng/g	1	☼	1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.84		1.03		ng/g	1	☼	1633A	Total/NA
Perfluorotetradecanoic acid (PFTeDA)	0.946		0.207		ng/g	1	☼	1633A	Total/NA
Perfluorotridecanoic acid (PFTrDA)	0.329		0.207		ng/g	1	☼	1633A	Total/NA
Perfluoroundecanoic acid (PFUnA)	1.15		0.207		ng/g	1	☼	1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	176		1.03		ng/g	5	☼	1633A	Total/NA
Arsenic	1.62		1.01		mg/Kg	2	☼	6020B	Total/NA
Barium	37.8		1.01		mg/Kg	2	☼	6020B	Total/NA
Chromium	19.3		0.402		mg/Kg	2	☼	6020B	Total/NA
Lead	4.78		0.201		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-01-3
Lab Sample ID: 310-330206-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics (DRO)	11.0		7.13		mg/Kg	1	☼	WI-DRO	Total/NA
Arsenic	1.92		1.09		mg/Kg	2	☼	6020B	Total/NA
Barium	44.7		1.09		mg/Kg	2	☼	6020B	Total/NA
Chromium	28.3		0.438		mg/Kg	2	☼	6020B	Total/NA
Lead	5.91		0.219		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-02-1
Lab Sample ID: 310-330206-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo(a)pyrene	0.00671		0.00547		mg/Kg	1	☼	8270E	Total/NA
Benzo(b)fluoranthene	0.0122		0.00547		mg/Kg	1	☼	8270E	Total/NA
Benzo(g,h,i)perylene	0.00703		0.00547		mg/Kg	1	☼	8270E	Total/NA
Chrysene	0.00712		0.00547		mg/Kg	1	☼	8270E	Total/NA
Fluoranthene	0.0114		0.00547		mg/Kg	1	☼	8270E	Total/NA
Indeno(1,2,3-cd)pyrene	0.00570		0.00547		mg/Kg	1	☼	8270E	Total/NA
Pyrene	0.0103		0.00547		mg/Kg	1	☼	8270E	Total/NA
Diesel Range Organics (DRO)	11.6		6.46		mg/Kg	1	☼	WI-DRO	Total/NA
Arsenic	2.12		1.11		mg/Kg	2	☼	6020B	Total/NA
Barium	52.6		1.11		mg/Kg	2	☼	6020B	Total/NA
Chromium	22.9		0.444		mg/Kg	2	☼	6020B	Total/NA
Lead	12.3		0.222		mg/Kg	2	☼	6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-1
Project/Site: Duluth Airport Taxiway A

Client Sample ID: HA-02-3
Lab Sample ID: 310-330206-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo(a)anthracene	0.00828		0.00562		mg/Kg	1	☼	8270E	Total/NA
Benzo(a)pyrene	0.0108		0.00562		mg/Kg	1	☼	8270E	Total/NA
Benzo(b)fluoranthene	0.0163		0.00562		mg/Kg	1	☼	8270E	Total/NA
Benzo(g,h,i)perylene	0.00996		0.00562		mg/Kg	1	☼	8270E	Total/NA
Chrysene	0.0133		0.00562		mg/Kg	1	☼	8270E	Total/NA
Fluoranthene	0.0165		0.00562		mg/Kg	1	☼	8270E	Total/NA
Indeno(1,2,3-cd)pyrene	0.00707		0.00562		mg/Kg	1	☼	8270E	Total/NA
Pyrene	0.0152		0.00562		mg/Kg	1	☼	8270E	Total/NA
Diesel Range Organics (DRO)	10.7		6.66		mg/Kg	1	☼	WI-DRO	Total/NA
Arsenic	2.01		1.04		mg/Kg	2	☼	6020B	Total/NA
Barium	40.4		1.04		mg/Kg	2	☼	6020B	Total/NA
Chromium	17.1		0.417		mg/Kg	2	☼	6020B	Total/NA
Lead	5.47		0.208		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-07-1
Lab Sample ID: 310-330206-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Anthracene	0.0423		0.0257		mg/Kg	5	☼	8270E	Total/NA
Benzo(a)anthracene	0.0925		0.0257		mg/Kg	5	☼	8270E	Total/NA
Benzo(a)pyrene	0.108		0.0257		mg/Kg	5	☼	8270E	Total/NA
Benzo(b)fluoranthene	0.139		0.0257		mg/Kg	5	☼	8270E	Total/NA
Benzo(g,h,i)perylene	0.0823		0.0257		mg/Kg	5	☼	8270E	Total/NA
Benzo(k)fluoranthene	0.0518		0.0257		mg/Kg	5	☼	8270E	Total/NA
Chrysene	0.113		0.0257		mg/Kg	5	☼	8270E	Total/NA
Fluoranthene	0.221		0.0257		mg/Kg	5	☼	8270E	Total/NA
Indeno(1,2,3-cd)pyrene	0.0648		0.0257		mg/Kg	5	☼	8270E	Total/NA
2-Methylnaphthalene	0.0348		0.0257		mg/Kg	5	☼	8270E	Total/NA
Phenanthrene	0.125		0.0257		mg/Kg	5	☼	8270E	Total/NA
Pyrene	0.206		0.0257		mg/Kg	5	☼	8270E	Total/NA
Diesel Range Organics (DRO)	57.5		6.04		mg/Kg	1	☼	WI-DRO	Total/NA
Arsenic	1.97		0.853		mg/Kg	2	☼	6020B	Total/NA
Barium	49.3		0.853		mg/Kg	2	☼	6020B	Total/NA
Chromium	24.6		0.341		mg/Kg	2	☼	6020B	Total/NA
Lead	11.3		0.171		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-07-2.5
Lab Sample ID: 310-330206-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.00751		0.00533		mg/Kg	1	☼	8270E	Total/NA
Anthracene	0.00920		0.00533		mg/Kg	1	☼	8270E	Total/NA
Benzo(a)anthracene	0.0403		0.00533		mg/Kg	1	☼	8270E	Total/NA
Benzo(a)pyrene	0.0481		0.00533		mg/Kg	1	☼	8270E	Total/NA
Benzo(b)fluoranthene	0.0620		0.00533		mg/Kg	1	☼	8270E	Total/NA
Benzo(g,h,i)perylene	0.0361		0.00533		mg/Kg	1	☼	8270E	Total/NA
Benzo(k)fluoranthene	0.0246		0.00533		mg/Kg	1	☼	8270E	Total/NA
Chrysene	0.0438		0.00533		mg/Kg	1	☼	8270E	Total/NA
Dibenz(a,h)anthracene	0.00921		0.00533		mg/Kg	1	☼	8270E	Total/NA
Fluoranthene	0.0877		0.00533		mg/Kg	1	☼	8270E	Total/NA
Indeno(1,2,3-cd)pyrene	0.0294		0.00533		mg/Kg	1	☼	8270E	Total/NA
Phenanthrene	0.0312		0.00533		mg/Kg	1	☼	8270E	Total/NA
Pyrene	0.0733		0.00533		mg/Kg	1	☼	8270E	Total/NA
Diesel Range Organics (DRO)	8.87		7.34		mg/Kg	1	☼	WI-DRO	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: HA-07-2.5 (Continued)
Lab Sample ID: 310-330206-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.18		1.06		mg/Kg	2	☼	6020B	Total/NA
Barium	47.5		1.06		mg/Kg	2	☼	6020B	Total/NA
Chromium	26.0		0.423		mg/Kg	2	☼	6020B	Total/NA
Lead	7.52		0.212		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-09-1
Lab Sample ID: 310-330206-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.00675		0.00595		mg/Kg	1	☼	8270E	Total/NA
Acenaphthylene	0.0200		0.00595		mg/Kg	1	☼	8270E	Total/NA
Anthracene	0.0314		0.00595		mg/Kg	1	☼	8270E	Total/NA
Benzo(a)anthracene	0.137		0.00595		mg/Kg	1	☼	8270E	Total/NA
Benzo(a)pyrene	0.139		0.00595		mg/Kg	1	☼	8270E	Total/NA
Benzo(b)fluoranthene	0.201		0.00595		mg/Kg	1	☼	8270E	Total/NA
Benzo(g,h,i)perylene	0.0802		0.00595		mg/Kg	1	☼	8270E	Total/NA
Benzo(k)fluoranthene	0.0742		0.00595		mg/Kg	1	☼	8270E	Total/NA
Chrysene	0.149		0.00595		mg/Kg	1	☼	8270E	Total/NA
Dibenz(a,h)anthracene	0.0237		0.00595		mg/Kg	1	☼	8270E	Total/NA
Fluoranthene	0.355		0.00595		mg/Kg	1	☼	8270E	Total/NA
Fluorene	0.0105		0.00595		mg/Kg	1	☼	8270E	Total/NA
Indeno(1,2,3-cd)pyrene	0.0774		0.00595		mg/Kg	1	☼	8270E	Total/NA
Phenanthrene	0.138		0.00595		mg/Kg	1	☼	8270E	Total/NA
Pyrene	0.261		0.00595		mg/Kg	1	☼	8270E	Total/NA
Diesel Range Organics (DRO)	31.5		6.94		mg/Kg	1	☼	WI-DRO	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	10.1		0.244		ng/g	1	☼	1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	0.901		0.244		ng/g	1	☼	1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	16.0		0.244		ng/g	1	☼	1633A	Total/NA
Perfluorooctanoic acid (PFOA)	0.760		0.244		ng/g	1	☼	1633A	Total/NA
Perfluoropentanoic acid (PFPeA)	0.245		0.244		ng/g	1	☼	1633A	Total/NA
Arsenic	2.07		1.17		mg/Kg	2	☼	6020B	Total/NA
Barium	47.9		1.17		mg/Kg	2	☼	6020B	Total/NA
Chromium	21.9		0.469		mg/Kg	2	☼	6020B	Total/NA
Lead	9.02		0.235		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-09-3
Lab Sample ID: 310-330206-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.0130		0.00562		mg/Kg	1	☼	8270E	Total/NA
Anthracene	0.0253		0.00562		mg/Kg	1	☼	8270E	Total/NA
Benzo(a)anthracene	0.102		0.00562		mg/Kg	1	☼	8270E	Total/NA
Benzo(a)pyrene	0.0930		0.00562		mg/Kg	1	☼	8270E	Total/NA
Benzo(b)fluoranthene	0.130		0.00562		mg/Kg	1	☼	8270E	Total/NA
Benzo(g,h,i)perylene	0.0523		0.00562		mg/Kg	1	☼	8270E	Total/NA
Benzo(k)fluoranthene	0.0502		0.00562		mg/Kg	1	☼	8270E	Total/NA
Chrysene	0.100		0.00562		mg/Kg	1	☼	8270E	Total/NA
Dibenz(a,h)anthracene	0.0152		0.00562		mg/Kg	1	☼	8270E	Total/NA
Fluoranthene	0.271		0.00562		mg/Kg	1	☼	8270E	Total/NA
Fluorene	0.00908		0.00562		mg/Kg	1	☼	8270E	Total/NA
Indeno(1,2,3-cd)pyrene	0.0513		0.00562		mg/Kg	1	☼	8270E	Total/NA
Phenanthrene	0.118		0.00562		mg/Kg	1	☼	8270E	Total/NA
Pyrene	0.195		0.00562		mg/Kg	1	☼	8270E	Total/NA
Diesel Range Organics (DRO)	13.5		6.36		mg/Kg	1	☼	WI-DRO	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: HA-09-3 (Continued) — Lab Sample ID: 310-330206-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.85		1.02		mg/Kg	2	☼	6020B	Total/NA
Barium	44.5		1.02		mg/Kg	2	☼	6020B	Total/NA
Chromium	19.2		0.407		mg/Kg	2	☼	6020B	Total/NA
Lead	6.51		0.203		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: WS-01 — Lab Sample ID: 310-330206-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics (DRO)	0.257		0.0989		mg/L	1		WI-DRO	Total/NA
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	3.74		3.26		ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	48.0		1.63		ng/L	1		1633A	Total/NA
Perfluorobutanoic acid (PFBA)	15.9		3.26		ng/L	1		1633A	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	4.68		1.63		ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	17.9		1.63		ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	246		1.63		ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	54.3		1.63		ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	2.04		1.63		ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	165		1.63		ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	41.0		1.63		ng/L	1		1633A	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	40.9		1.63		ng/L	1		1633A	Total/NA
Perfluoropentanoic acid (PFPeA)	40.0		1.63		ng/L	1		1633A	Total/NA
Barium	15.3		5.00		ug/L	1		6020B	Total Recoverable

Client Sample ID: SS-01 — Lab Sample ID: 310-330206-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	0.00717		0.00566		mg/Kg	1	☼	8270E	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.294		0.248		ng/g	1	☼	1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.35		0.248		ng/g	1	☼	1633A	Total/NA
Arsenic	1.62		1.23		mg/Kg	2	☼	6020B	Total/NA
Barium	61.3		1.23		mg/Kg	2	☼	6020B	Total/NA
Chromium	22.7		0.490		mg/Kg	2	☼	6020B	Total/NA
Lead	5.59		0.245		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: SS-02 — Lab Sample ID: 310-330206-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.00663		0.00641		mg/Kg	1	☼	8270E	Total/NA
Anthracene	0.00661		0.00641		mg/Kg	1	☼	8270E	Total/NA
Benzo(a)anthracene	0.0118		0.00641		mg/Kg	1	☼	8270E	Total/NA
Benzo(a)pyrene	0.00868		0.00641		mg/Kg	1	☼	8270E	Total/NA
Benzo(b)fluoranthene	0.0184		0.00641		mg/Kg	1	☼	8270E	Total/NA
Benzo(g,h,i)perylene	0.00741		0.00641		mg/Kg	1	☼	8270E	Total/NA
Benzo(k)fluoranthene	0.00676		0.00641		mg/Kg	1	☼	8270E	Total/NA
Chrysene	0.0175		0.00641		mg/Kg	1	☼	8270E	Total/NA
Fluoranthene	0.0713		0.00641		mg/Kg	1	☼	8270E	Total/NA
Phenanthrene	0.0641		0.00641		mg/Kg	1	☼	8270E	Total/NA
Pyrene	0.0587		0.00641		mg/Kg	1	☼	8270E	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.787		0.273		ng/g	1	☼	1633A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SS-02 (Continued)
Lab Sample ID: 310-330206-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	2.22		0.273		ng/g	1	☼	1633A	Total/NA
Perfluorooctanoic acid (PFOA)	0.330		0.273		ng/g	1	☼	1633A	Total/NA
Arsenic	4.18		1.33		mg/Kg	2	☼	6020B	Total/NA
Barium	43.5		1.33		mg/Kg	2	☼	6020B	Total/NA
Chromium	17.7		0.530		mg/Kg	2	☼	6020B	Total/NA
Lead	4.89		0.265		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: SS-03
Lab Sample ID: 310-330206-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo(a)anthracene	0.00687		0.00626		mg/Kg	1	☼	8270E	Total/NA
Benzo(a)pyrene	0.00751		0.00626		mg/Kg	1	☼	8270E	Total/NA
Benzo(b)fluoranthene	0.0139		0.00626		mg/Kg	1	☼	8270E	Total/NA
Chrysene	0.0112		0.00626		mg/Kg	1	☼	8270E	Total/NA
Fluoranthene	0.0295		0.00626		mg/Kg	1	☼	8270E	Total/NA
Phenanthrene	0.0178		0.00626		mg/Kg	1	☼	8270E	Total/NA
Pyrene	0.0240		0.00626		mg/Kg	1	☼	8270E	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.441		0.259		ng/g	1	☼	1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.98		0.259		ng/g	1	☼	1633A	Total/NA
Arsenic	1.84		1.00		mg/Kg	2	☼	6020B	Total/NA
Barium	54.9		1.00		mg/Kg	2	☼	6020B	Total/NA
Chromium	25.9		0.401		mg/Kg	2	☼	6020B	Total/NA
Lead	5.97		0.201		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-10-1
Lab Sample ID: 310-330206-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo(a)anthracene	0.0184		0.00656		mg/Kg	1	☼	8270E	Total/NA
Benzo(a)pyrene	0.0178		0.00656		mg/Kg	1	☼	8270E	Total/NA
Benzo(b)fluoranthene	0.0254		0.00656		mg/Kg	1	☼	8270E	Total/NA
Benzo(g,h,i)perylene	0.0126		0.00656		mg/Kg	1	☼	8270E	Total/NA
Benzo(k)fluoranthene	0.0109		0.00656		mg/Kg	1	☼	8270E	Total/NA
Chrysene	0.0218		0.00656		mg/Kg	1	☼	8270E	Total/NA
Fluoranthene	0.0493		0.00656		mg/Kg	1	☼	8270E	Total/NA
Indeno(1,2,3-cd)pyrene	0.0122		0.00656		mg/Kg	1	☼	8270E	Total/NA
Phenanthrene	0.0312		0.00656		mg/Kg	1	☼	8270E	Total/NA
Pyrene	0.0379		0.00656		mg/Kg	1	☼	8270E	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.398		0.272		ng/g	1	☼	1633A	Total/NA
Arsenic	2.58		1.24		mg/Kg	2	☼	6020B	Total/NA
Barium	65.6		1.24		mg/Kg	2	☼	6020B	Total/NA
Chromium	35.8		0.495		mg/Kg	2	☼	6020B	Total/NA
Lead	6.84		0.248		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-10-3
Lab Sample ID: 310-330206-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo(b)fluoranthene	0.00941		0.00582		mg/Kg	1	☼	8270E	Total/NA
Chrysene	0.00777		0.00582		mg/Kg	1	☼	8270E	Total/NA
Fluoranthene	0.0121		0.00582		mg/Kg	1	☼	8270E	Total/NA
Pyrene	0.00973		0.00582		mg/Kg	1	☼	8270E	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.335		0.242		ng/g	1	☼	1633A	Total/NA
Arsenic	3.03		0.986		mg/Kg	2	☼	6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: HA-10-3 (Continued)
Lab Sample ID: 310-330206-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	64.7		0.986		mg/Kg	2	☼	6020B	Total/NA
Chromium	37.7		0.394		mg/Kg	2	☼	6020B	Total/NA
Lead	7.12		0.197		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-11-1
Lab Sample ID: 310-330206-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo(a)anthracene	0.0159		0.00638		mg/Kg	1	☼	8270E	Total/NA
Benzo(a)pyrene	0.0620		0.00638		mg/Kg	1	☼	8270E	Total/NA
Benzo(b)fluoranthene	0.0725		0.00638		mg/Kg	1	☼	8270E	Total/NA
Benzo(g,h,i)perylene	0.0511		0.00638		mg/Kg	1	☼	8270E	Total/NA
Benzo(k)fluoranthene	0.0268		0.00638		mg/Kg	1	☼	8270E	Total/NA
Chrysene	0.0254		0.00638		mg/Kg	1	☼	8270E	Total/NA
Dibenz(a,h)anthracene	0.0116		0.00638		mg/Kg	1	☼	8270E	Total/NA
Fluoranthene	0.0180		0.00638		mg/Kg	1	☼	8270E	Total/NA
Indeno(1,2,3-cd)pyrene	0.0439		0.00638		mg/Kg	1	☼	8270E	Total/NA
2-Methylnaphthalene	0.0251		0.00638		mg/Kg	1	☼	8270E	Total/NA
Naphthalene	0.0109		0.00638		mg/Kg	1	☼	8270E	Total/NA
Phenanthrene	0.00657		0.00638		mg/Kg	1	☼	8270E	Total/NA
Pyrene	0.0183		0.00638		mg/Kg	1	☼	8270E	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.527		0.269		ng/g	1	☼	1633A	Total/NA
Perfluorooctanoic acid (PFOA)	0.291		0.269		ng/g	1	☼	1633A	Total/NA
Arsenic	2.48		1.30		mg/Kg	2	☼	6020B	Total/NA
Barium	59.2		1.30		mg/Kg	2	☼	6020B	Total/NA
Chromium	30.6		0.520		mg/Kg	2	☼	6020B	Total/NA
Lead	6.99		0.260		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-11-3
Lab Sample ID: 310-330206-26

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	39.4		1.13		mg/Kg	2	☼	6020B	Total/NA
Chromium	21.9		0.451		mg/Kg	2	☼	6020B	Total/NA
Lead	2.49		0.226		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-12-1
Lab Sample ID: 310-330206-27

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo(a)anthracene	0.00714		0.00616		mg/Kg	1	☼	8270E	Total/NA
Benzo(a)pyrene	0.00777		0.00616		mg/Kg	1	☼	8270E	Total/NA
Benzo(b)fluoranthene	0.0143		0.00616		mg/Kg	1	☼	8270E	Total/NA
Benzo(g,h,i)perylene	0.00727		0.00616		mg/Kg	1	☼	8270E	Total/NA
Chrysene	0.0117		0.00616		mg/Kg	1	☼	8270E	Total/NA
Fluoranthene	0.0238		0.00616		mg/Kg	1	☼	8270E	Total/NA
Indeno(1,2,3-cd)pyrene	0.00620		0.00616		mg/Kg	1	☼	8270E	Total/NA
2-Methylnaphthalene	0.00806		0.00616		mg/Kg	1	☼	8270E	Total/NA
Phenanthrene	0.0115		0.00616		mg/Kg	1	☼	8270E	Total/NA
Pyrene	0.0175		0.00616		mg/Kg	1	☼	8270E	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.263	I	0.257		ng/g	1	☼	1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.399		0.257		ng/g	1	☼	1633A	Total/NA
Perfluorooctanoic acid (PFOA)	0.275		0.257		ng/g	1	☼	1633A	Total/NA
Arsenic	2.51		0.945		mg/Kg	2	☼	6020B	Total/NA
Barium	82.4		0.945		mg/Kg	2	☼	6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: HA-12-1 (Continued) — Lab Sample ID: 310-330206-27

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	38.3		0.378		mg/Kg	2	☼	6020B	Total/NA
Lead	8.85		0.189		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-12-3 — Lab Sample ID: 310-330206-28

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	3.08		1.01		mg/Kg	2	☼	6020B	Total/NA
Barium	85.1		1.01		mg/Kg	2	☼	6020B	Total/NA
Chromium	50.1		0.404		mg/Kg	2	☼	6020B	Total/NA
Lead	6.44		0.202		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-13-1 — Lab Sample ID: 310-330206-29

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	0.00679		0.00609		mg/Kg	1	☼	8270E	Total/NA
Arsenic	2.67		1.11		mg/Kg	2	☼	6020B	Total/NA
Barium	65.9		1.11		mg/Kg	2	☼	6020B	Total/NA
Chromium	40.7		0.445		mg/Kg	2	☼	6020B	Total/NA
Lead	5.98		0.222		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: Rinsate Blank — Lab Sample ID: 310-330206-31

No Detections.

Client Sample ID: Trip Blank - Soil 1 — Lab Sample ID: 310-330206-32

No Detections.

Client Sample ID: Trip Blank - Water — Lab Sample ID: 310-330206-33

No Detections.

This Detection Summary does not include radiochemical test results.

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-08-1
Date Collected: 04/20/26 10:20
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-1
Matrix: Solid
Percent Solids: 75.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.821		0.821		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Allyl chloride	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Benzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Bromobenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Bromochloromethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Bromodichloromethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Bromoform	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Bromomethane	<0.821		0.821		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
2-Butanone (MEK)	<1.23		1.23		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Carbon tetrachloride	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Chlorobenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Chlorodibromomethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Chloroethane	<0.411		0.411		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Chloroform	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Chloromethane	<0.411		0.411		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
2-Chlorotoluene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
4-Chlorotoluene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
cis-1,2-Dichloroethene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
cis-1,3-Dichloropropene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
1,2-Dibromo-3-chloropropane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
1,2-Dibromoethane (EDB)	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Dibromomethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
1,2-Dichlorobenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
1,3-Dichlorobenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
1,4-Dichlorobenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Dichlorodifluoromethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
1,1-Dichloroethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
1,2-Dichloroethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
1,1-Dichloroethene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Dichlorofluoromethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
1,2-Dichloropropane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
1,3-Dichloropropane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
2,2-Dichloropropane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
1,1-Dichloropropene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Diethyl ether	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Ethylbenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Hexachlorobutadiene	<0.411		0.411		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Isopropylbenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Methylene chloride	<0.411		0.411		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
4-Methyl-2-pentanone (MIBK)	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Methyl tert-butyl ether	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Naphthalene	<0.411		0.411		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
n-Butylbenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
n-Propylbenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
p-Isopropyltoluene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
sec-Butylbenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Styrene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
tert-Butylbenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
1,1,1,2-Tetrachloroethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1

Client Sample ID: HA-08-1
Date Collected: 04/20/26 10:20
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-1
Matrix: Solid
Percent Solids: 75.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Tetrachloroethene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Tetrahydrofuran	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Toluene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
trans-1,2-Dichloroethene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
trans-1,3-Dichloropropene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
1,2,3-Trichlorobenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
1,2,4-Trichlorobenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
1,1,1-Trichloroethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
1,1,2-Trichloroethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Trichloroethene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Trichlorofluoromethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
1,2,3-Trichloropropane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
1,1,2-Trichlorotrifluoroethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
1,2,4-Trimethylbenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
1,3,5-Trimethylbenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Vinyl chloride	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1
Xylenes, Total	<0.246		0.246		mg/Kg	☼	04/27/26 08:51	04/27/26 16:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*	*04/27/26 08:51*	*04/27/26 16:09*	*1*
Dibromofluoromethane (Surr)	*89*		*80 - 120*	*04/27/26 08:51*	*04/27/26 16:09*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*	*04/27/26 08:51*	*04/27/26 16:09*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00622		0.00622		mg/Kg	☼	04/24/26 16:44	04/27/26 20:25	1
Acenaphthylene	<0.00622		0.00622		mg/Kg	☼	04/24/26 16:44	04/27/26 20:25	1
Anthracene	<0.00622		0.00622		mg/Kg	☼	04/24/26 16:44	04/27/26 20:25	1
Benzo(a)anthracene	**0.00832**		0.00622		mg/Kg	☼	04/24/26 16:44	04/27/26 20:25	1
Benzo(a)pyrene	**0.0104**		0.00622		mg/Kg	☼	04/24/26 16:44	04/27/26 20:25	1
Benzo(b)fluoranthene	**0.0148**		0.00622		mg/Kg	☼	04/24/26 16:44	04/27/26 20:25	1
Benzo(g,h,i)perylene	**0.00773**		0.00622		mg/Kg	☼	04/24/26 16:44	04/27/26 20:25	1
Benzo(k)fluoranthene	<0.00622		0.00622		mg/Kg	☼	04/24/26 16:44	04/27/26 20:25	1
Chrysene	**0.0110**		0.00622		mg/Kg	☼	04/24/26 16:44	04/27/26 20:25	1
Dibenz(a,h)anthracene	<0.00622		0.00622		mg/Kg	☼	04/24/26 16:44	04/27/26 20:25	1
Fluoranthene	**0.0173**		0.00622		mg/Kg	☼	04/24/26 16:44	04/27/26 20:25	1
Fluorene	<0.00622		0.00622		mg/Kg	☼	04/24/26 16:44	04/27/26 20:25	1
Indeno(1,2,3-cd)pyrene	**0.00648**		0.00622		mg/Kg	☼	04/24/26 16:44	04/27/26 20:25	1
2-Methylnaphthalene	<0.00622		0.00622		mg/Kg	☼	04/24/26 16:44	04/27/26 20:25	1
Naphthalene	<0.00622		0.00622		mg/Kg	☼	04/24/26 16:44	04/27/26 20:25	1
Phenanthrene	<0.00622		0.00622		mg/Kg	☼	04/24/26 16:44	04/27/26 20:25	1
Pyrene	**0.0142**		0.00622		mg/Kg	☼	04/24/26 16:44	04/27/26 20:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*112*		*20 - 122*	*04/24/26 16:44*	*04/27/26 20:25*	*1*
Nitrobenzene-d5 (Surr)	*124*		*10 - 132*	*04/24/26 16:44*	*04/27/26 20:25*	*1*
Terphenyl-d14 (Surr)	*117*		*10 - 119*	*04/24/26 16:44*	*04/27/26 20:25*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-08-1

Date Collected: 04/20/26 10:20
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-1

Matrix: Solid
Percent Solids: 75.2

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<13.1		13.1		mg/Kg	☼	04/24/26 11:30	04/25/26 13:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*80 - 120*	*04/24/26 11:30*	*04/25/26 13:16*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<7.62		7.62		mg/Kg	☼	04/23/26 07:56	04/23/26 16:27	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**2.06**		1.30		mg/Kg	☼	04/24/26 10:00	04/27/26 18:55	2
Barium	**46.5**		1.30		mg/Kg	☼	04/24/26 10:00	04/27/26 18:55	2
Cadmium	<0.261		0.261		mg/Kg	☼	04/24/26 10:00	04/27/26 18:55	2
Chromium	**23.5**		0.522		mg/Kg	☼	04/24/26 10:00	04/27/26 18:55	2
Lead	**4.95**		0.261		mg/Kg	☼	04/24/26 10:00	04/27/26 18:55	2
Selenium	<1.30		1.30		mg/Kg	☼	04/24/26 10:00	04/27/26 18:55	2
Silver	<0.261		0.261		mg/Kg	☼	04/24/26 10:00	04/27/26 18:55	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.129		0.129		mg/Kg	☼	04/24/26 10:00	04/27/26 12:46	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**24.8**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**75.2**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-08-3
Date Collected: 04/20/26 10:25
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-2
Matrix: Solid
Percent Solids: 85.8

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.685		0.685		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Allyl chloride	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Benzene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Bromobenzene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Bromochloromethane	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Bromodichloromethane	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Bromoform	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Bromomethane	<0.685		0.685		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
2-Butanone (MEK)	<1.03		1.03		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Carbon tetrachloride	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Chlorobenzene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Chlorodibromomethane	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Chloroethane	<0.342		0.342		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Chloroform	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Chloromethane	<0.342		0.342		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
2-Chlorotoluene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
4-Chlorotoluene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
cis-1,2-Dichloroethene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
cis-1,3-Dichloropropene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
1,2-Dibromo-3-chloropropane	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
1,2-Dibromoethane (EDB)	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Dibromomethane	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
1,2-Dichlorobenzene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
1,3-Dichlorobenzene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
1,4-Dichlorobenzene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Dichlorodifluoromethane	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
1,1-Dichloroethane	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
1,2-Dichloroethane	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
1,1-Dichloroethene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Dichlorofluoromethane	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
1,2-Dichloropropane	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
1,3-Dichloropropane	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
2,2-Dichloropropane	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
1,1-Dichloropropene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Diethyl ether	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Ethylbenzene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Hexachlorobutadiene	<0.342		0.342		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Isopropylbenzene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Methylene chloride	<0.342		0.342		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
4-Methyl-2-pentanone (MIBK)	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Methyl tert-butyl ether	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Naphthalene	<0.342		0.342		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
n-Butylbenzene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
n-Propylbenzene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
p-Isopropyltoluene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
sec-Butylbenzene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Styrene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
tert-Butylbenzene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
1,1,1,2-Tetrachloroethane	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1

Client Sample ID: HA-08-3
Date Collected: 04/20/26 10:25
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-2
Matrix: Solid
Percent Solids: 85.8

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Tetrachloroethene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Tetrahydrofuran	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Toluene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
trans-1,2-Dichloroethene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
trans-1,3-Dichloropropene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
1,2,3-Trichlorobenzene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
1,2,4-Trichlorobenzene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
1,1,1-Trichloroethane	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
1,1,2-Trichloroethane	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Trichloroethene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Trichlorofluoromethane	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
1,2,3-Trichloropropane	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
1,1,2-Trichlorotrifluoroethane	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
1,2,4-Trimethylbenzene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
1,3,5-Trimethylbenzene	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Vinyl chloride	<0.137		0.137		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1
Xylenes, Total	<0.205		0.205		mg/Kg	☼	04/27/26 08:51	04/27/26 16:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*	*04/27/26 08:51*	*04/27/26 16:32*	*1*
Dibromofluoromethane (Surr)	*87*		*80 - 120*	*04/27/26 08:51*	*04/27/26 16:32*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*	*04/27/26 08:51*	*04/27/26 16:32*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00563		0.00563		mg/Kg	☼	04/24/26 16:44	04/27/26 12:39	1
Acenaphthylene	<0.00563		0.00563		mg/Kg	☼	04/24/26 16:44	04/27/26 12:39	1
Anthracene	**0.00718**	**F1**	0.00563		mg/Kg	☼	04/24/26 16:44	04/27/26 12:39	1
Benzo(a)anthracene	**0.0329**	**F1**	0.00563		mg/Kg	☼	04/24/26 16:44	04/27/26 12:39	1
Benzo(a)pyrene	**0.0416**	**F1**	0.00563		mg/Kg	☼	04/24/26 16:44	04/27/26 12:39	1
Benzo(b)fluoranthene	**0.0647**	**F1**	0.00563		mg/Kg	☼	04/24/26 16:44	04/27/26 12:39	1
Benzo(g,h,i)perylene	**0.0296**	**F1**	0.00563		mg/Kg	☼	04/24/26 16:44	04/27/26 12:39	1
Benzo(k)fluoranthene	**0.0232**	**F1**	0.00563		mg/Kg	☼	04/24/26 16:44	04/27/26 12:39	1
Chrysene	**0.0460**		0.00563		mg/Kg	☼	04/24/26 16:44	04/27/26 12:39	1
Dibenz(a,h)anthracene	**0.00842**		0.00563		mg/Kg	☼	04/24/26 16:44	04/27/26 12:39	1
Fluoranthene	**0.0865**	**F1**	0.00563		mg/Kg	☼	04/24/26 16:44	04/27/26 12:39	1
Fluorene	<0.00563		0.00563		mg/Kg	☼	04/24/26 16:44	04/27/26 12:39	1
Indeno(1,2,3-cd)pyrene	**0.0277**	**F1**	0.00563		mg/Kg	☼	04/24/26 16:44	04/27/26 12:39	1
2-Methylnaphthalene	<0.00563		0.00563		mg/Kg	☼	04/24/26 16:44	04/27/26 12:39	1
Naphthalene	<0.00563		0.00563		mg/Kg	☼	04/24/26 16:44	04/27/26 12:39	1
Phenanthrene	**0.0287**	**F1**	0.00563		mg/Kg	☼	04/24/26 16:44	04/27/26 12:39	1
Pyrene	**0.0627**	**F1**	0.00563		mg/Kg	☼	04/24/26 16:44	04/27/26 12:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*98*		*20 - 122*	*04/24/26 16:44*	*04/27/26 12:39*	*1*
Nitrobenzene-d5 (Surr)	*83*		*10 - 132*	*04/24/26 16:44*	*04/27/26 12:39*	*1*
Terphenyl-d14 (Surr)	*89*		*10 - 119*	*04/24/26 16:44*	*04/27/26 12:39*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-08-3

Date Collected: 04/20/26 10:25
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-2

Matrix: Solid
Percent Solids: 85.8

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<11.7		11.7		mg/Kg	☼	04/24/26 11:30	04/25/26 13:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*80 - 120*	*04/24/26 11:30*	*04/25/26 13:42*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	**8.68**		6.42		mg/Kg	☼	04/23/26 07:56	04/23/26 12:29	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.83**		1.11		mg/Kg	☼	04/24/26 10:00	04/27/26 19:09	2
Barium	**39.8**		1.11		mg/Kg	☼	04/24/26 10:00	04/27/26 19:09	2
Cadmium	<0.222		0.222		mg/Kg	☼	04/24/26 10:00	04/27/26 19:09	2
Chromium	**22.2**		0.444		mg/Kg	☼	04/24/26 10:00	04/27/26 19:09	2
Lead	**4.14**		0.222		mg/Kg	☼	04/24/26 10:00	04/27/26 19:09	2
Selenium	<1.11		1.11		mg/Kg	☼	04/24/26 10:00	04/27/26 19:09	2
Silver	<0.222		0.222		mg/Kg	☼	04/24/26 10:00	04/27/26 19:09	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.127		0.127		mg/Kg	☼	04/24/26 10:00	04/27/26 12:54	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**14.2**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**85.8**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-06-1
Date Collected: 04/20/26 10:56
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-3
Matrix: Solid
Percent Solids: 82.6

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.723		0.723		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Allyl chloride	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Benzene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Bromobenzene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Bromochloromethane	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Bromodichloromethane	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Bromoform	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Bromomethane	<0.723		0.723		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
2-Butanone (MEK)	<1.08		1.08		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Carbon tetrachloride	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Chlorobenzene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Chlorodibromomethane	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Chloroethane	<0.361		0.361		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Chloroform	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Chloromethane	<0.361		0.361		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
2-Chlorotoluene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
4-Chlorotoluene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
cis-1,2-Dichloroethene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
cis-1,3-Dichloropropene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
1,2-Dibromo-3-chloropropane	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
1,2-Dibromoethane (EDB)	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Dibromomethane	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
1,2-Dichlorobenzene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
1,3-Dichlorobenzene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
1,4-Dichlorobenzene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Dichlorodifluoromethane	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
1,1-Dichloroethane	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
1,2-Dichloroethane	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
1,1-Dichloroethene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Dichlorofluoromethane	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
1,2-Dichloropropane	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
1,3-Dichloropropane	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
2,2-Dichloropropane	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
1,1-Dichloropropene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Diethyl ether	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Ethylbenzene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Hexachlorobutadiene	<0.361		0.361		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Isopropylbenzene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Methylene chloride	<0.361		0.361		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
4-Methyl-2-pentanone (MIBK)	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Methyl tert-butyl ether	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Naphthalene	<0.361		0.361		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
n-Butylbenzene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
n-Propylbenzene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
p-Isopropyltoluene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
sec-Butylbenzene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Styrene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
tert-Butylbenzene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
1,1,1,2-Tetrachloroethane	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1

Client Sample ID: HA-06-1
Date Collected: 04/20/26 10:56
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-3
Matrix: Solid
Percent Solids: 82.6

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Tetrachloroethene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Tetrahydrofuran	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Toluene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
trans-1,2-Dichloroethene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
trans-1,3-Dichloropropene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
1,2,3-Trichlorobenzene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
1,2,4-Trichlorobenzene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
1,1,1-Trichloroethane	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
1,1,2-Trichloroethane	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Trichloroethene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Trichlorofluoromethane	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
1,2,3-Trichloropropane	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
1,1,2-Trichlorotrifluoroethane	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
1,2,4-Trimethylbenzene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
1,3,5-Trimethylbenzene	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Vinyl chloride	<0.145		0.145		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1
Xylenes, Total	<0.217		0.217		mg/Kg	☼	04/27/26 08:51	04/27/26 16:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*	*04/27/26 08:51*	*04/27/26 16:55*	*1*
Dibromofluoromethane (Surr)	*87*		*80 - 120*	*04/27/26 08:51*	*04/27/26 16:55*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*	*04/27/26 08:51*	*04/27/26 16:55*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**0.00992**		0.00582		mg/Kg	☼	04/24/26 16:44	04/27/26 13:03	1
Acenaphthylene	<0.00582		0.00582		mg/Kg	☼	04/24/26 16:44	04/27/26 13:03	1
Anthracene	**0.0152**		0.00582		mg/Kg	☼	04/24/26 16:44	04/27/26 13:03	1
Benzo(a)anthracene	**0.0402**		0.00582		mg/Kg	☼	04/24/26 16:44	04/27/26 13:03	1
Benzo(a)pyrene	**0.0466**		0.00582		mg/Kg	☼	04/24/26 16:44	04/27/26 13:03	1
Benzo(b)fluoranthene	**0.0657**		0.00582		mg/Kg	☼	04/24/26 16:44	04/27/26 13:03	1
Benzo(g,h,i)perylene	**0.0338**		0.00582		mg/Kg	☼	04/24/26 16:44	04/27/26 13:03	1
Benzo(k)fluoranthene	**0.0239**		0.00582		mg/Kg	☼	04/24/26 16:44	04/27/26 13:03	1
Chrysene	**0.0548**		0.00582		mg/Kg	☼	04/24/26 16:44	04/27/26 13:03	1
Dibenz(a,h)anthracene	**0.00816**		0.00582		mg/Kg	☼	04/24/26 16:44	04/27/26 13:03	1
Fluoranthene	**0.132**		0.00582		mg/Kg	☼	04/24/26 16:44	04/27/26 13:03	1
Fluorene	**0.00799**		0.00582		mg/Kg	☼	04/24/26 16:44	04/27/26 13:03	1
Indeno(1,2,3-cd)pyrene	**0.0280**		0.00582		mg/Kg	☼	04/24/26 16:44	04/27/26 13:03	1
2-Methylnaphthalene	**0.0704**		0.00582		mg/Kg	☼	04/24/26 16:44	04/27/26 13:03	1
Naphthalene	**0.0436**		0.00582		mg/Kg	☼	04/24/26 16:44	04/27/26 13:03	1
Phenanthrene	**0.0920**		0.00582		mg/Kg	☼	04/24/26 16:44	04/27/26 13:03	1
Pyrene	**0.105**		0.00582		mg/Kg	☼	04/24/26 16:44	04/27/26 13:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*126*	*S1+*	*20 - 122*	*04/24/26 16:44*	*04/27/26 13:03*	*1*
Nitrobenzene-d5 (Surr)	*133*	*S1+*	*10 - 132*	*04/24/26 16:44*	*04/27/26 13:03*	*1*
Terphenyl-d14 (Surr)	*122*	*S1+*	*10 - 119*	*04/24/26 16:44*	*04/27/26 13:03*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-06-1

Date Collected: 04/20/26 10:56
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-3

Matrix: Solid
Percent Solids: 82.6

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<12.3		12.3		mg/Kg	☼	04/24/26 11:30	04/25/26 14:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*80 - 120*	*04/24/26 11:30*	*04/25/26 14:08*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	**6.84**		6.58		mg/Kg	☼	04/23/26 07:56	04/23/26 16:14	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.475		0.475		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.475		0.475		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.475		0.475		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.19		1.19		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.19		1.19		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
Perfluorobutanesulfonic acid (PFBS)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
Perfluorobutanoic acid (PFBA)	<0.475		0.475		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
Perfluorodecanesulfonic acid (PFDS)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
Perfluorodecanoic acid (PFDA)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
Perfluorododecanesulfonic acid (PFDoS)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
Perfluorododecanoic acid (PFDoA)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
Perfluoroheptanoic acid (PFHpA)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.19		1.19		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
Perfluorohexanesulfonic acid (PFHxS)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
Perfluorohexanoic acid (PFHxA)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-06-1
Date Collected: 04/20/26 10:56
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-3
Matrix: Solid
Percent Solids: 82.6

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
Perfluorononanesulfonic acid (PFNS)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
Perfluorononanoic acid (PFNA)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
Perfluorooctanesulfonamide (PFOSA)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
Perfluorooctanesulfonic acid (PFOS)	**0.496**		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
Perfluorooctanoic acid (PFOA)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
Perfluoropentanesulfonic acid (PFPeS)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
Perfluoropentanoic acid (PFPeA)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.19		1.19		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.475		0.475		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
Perfluorotetradecanoic acid (PFTeDA)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
Perfluorotridecanoic acid (PFTrDA)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1
Perfluoroundecanoic acid (PFUnA)	<0.238		0.238		ng/g	☼	04/29/26 08:25	04/29/26 18:35	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*73.2*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:35*	*1*
13C2 10:2 FTS	*50.0*		*40 - 275*	*04/29/26 08:25*	*04/29/26 18:35*	*1*
13C2 4:2 FTS	*54.9*		*40 - 165*	*04/29/26 08:25*	*04/29/26 18:35*	*1*
13C2 6:2 FTS	*55.2*		*40 - 215*	*04/29/26 08:25*	*04/29/26 18:35*	*1*
13C2 8:2 FTS	*50.6*		*40 - 275*	*04/29/26 08:25*	*04/29/26 18:35*	*1*
13C3 HFPO-DA	*68.1*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:35*	*1*
13C4 PFBA	*72.2*		*8 - 130*	*04/29/26 08:25*	*04/29/26 18:35*	*1*
13C3 PFBS	*67.1*		*40 - 135*	*04/29/26 08:25*	*04/29/26 18:35*	*1*
13C6 PFDA	*73.8*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:35*	*1*
13C2-PFDoA	*68.9*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:35*	*1*
13C4 PFHpA	*66.2*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:35*	*1*
13C5 PFHxA	*66.5*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:35*	*1*
13C3 PFHxS	*67.1*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:35*	*1*
13C9 PFNA	*72.7*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:35*	*1*
13C8 PFOA	*65.6*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:35*	*1*
13C8 PFOS	*59.8*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:35*	*1*
13C5 PFPeA	*77.5*		*35 - 130*	*04/29/26 08:25*	*04/29/26 18:35*	*1*
13C3-PFPrS	*61.6*		*20 - 150*	*04/29/26 08:25*	*04/29/26 18:35*	*1*
13C2 PFTeDA	*88.5*		*20 - 130*	*04/29/26 08:25*	*04/29/26 18:35*	*1*
13C7 PFUnA	*69.8*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:35*	*1*
d5-NEtFOSAA	*52.2*		*40 - 150*	*04/29/26 08:25*	*04/29/26 18:35*	*1*
d9-N-EtFOSE-M	*56.0*		*15 - 130*	*04/29/26 08:25*	*04/29/26 18:35*	*1*
d5-NEtPFOSA	*72.4*		*10 - 130*	*04/29/26 08:25*	*04/29/26 18:35*	*1*
d3-NMeFOSAA	*54.7*		*40 - 135*	*04/29/26 08:25*	*04/29/26 18:35*	*1*
d7-N-MeFOSE-M	*54.1*		*20 - 130*	*04/29/26 08:25*	*04/29/26 18:35*	*1*
d3-NMePFOSA	*70.9*		*10 - 130*	*04/29/26 08:25*	*04/29/26 18:35*	*1*

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.96**		1.19		mg/Kg	☼	04/24/26 10:00	04/27/26 19:11	2

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-06-1
Date Collected: 04/20/26 10:56
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-3
Matrix: Solid
Percent Solids: 82.6

Method: SW846 6020B - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**53.4**		1.19		mg/Kg	☼	04/24/26 10:00	04/27/26 19:11	2
Cadmium	<0.238		0.238		mg/Kg	☼	04/24/26 10:00	04/27/26 19:11	2
Chromium	**24.4**		0.475		mg/Kg	☼	04/24/26 10:00	04/27/26 19:11	2
Lead	**10.1**		0.238		mg/Kg	☼	04/24/26 10:00	04/27/26 19:11	2
Selenium	<1.19		1.19		mg/Kg	☼	04/24/26 10:00	04/27/26 19:11	2
Silver	<0.238		0.238		mg/Kg	☼	04/24/26 10:00	04/27/26 19:11	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.114		0.114		mg/Kg	☼	04/24/26 10:00	04/27/26 12:56	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**17.4**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**82.6**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-06-3
Date Collected: 04/20/26 10:55
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-4
Matrix: Solid
Percent Solids: 87.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.656		0.656		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Allyl chloride	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Benzene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Bromobenzene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Bromochloromethane	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Bromodichloromethane	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Bromoform	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Bromomethane	<0.656		0.656		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
2-Butanone (MEK)	<0.984		0.984		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Carbon tetrachloride	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Chlorobenzene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Chlorodibromomethane	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Chloroethane	<0.328		0.328		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Chloroform	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Chloromethane	<0.328		0.328		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
2-Chlorotoluene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
4-Chlorotoluene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
cis-1,2-Dichloroethene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
cis-1,3-Dichloropropene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
1,2-Dibromo-3-chloropropane	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
1,2-Dibromoethane (EDB)	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Dibromomethane	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
1,2-Dichlorobenzene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
1,3-Dichlorobenzene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
1,4-Dichlorobenzene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Dichlorodifluoromethane	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
1,1-Dichloroethane	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
1,2-Dichloroethane	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
1,1-Dichloroethene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Dichlorofluoromethane	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
1,2-Dichloropropane	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
1,3-Dichloropropane	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
2,2-Dichloropropane	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
1,1-Dichloropropene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Diethyl ether	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Ethylbenzene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Hexachlorobutadiene	<0.328		0.328		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Isopropylbenzene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Methylene chloride	<0.328		0.328		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
4-Methyl-2-pentanone (MIBK)	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Methyl tert-butyl ether	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Naphthalene	<0.328		0.328		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
n-Butylbenzene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
n-Propylbenzene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
p-Isopropyltoluene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
sec-Butylbenzene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Styrene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
tert-Butylbenzene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
1,1,1,2-Tetrachloroethane	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1

Client Sample ID: HA-06-3
Date Collected: 04/20/26 10:55
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-4
Matrix: Solid
Percent Solids: 87.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Tetrachloroethene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Tetrahydrofuran	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Toluene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
trans-1,2-Dichloroethene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
trans-1,3-Dichloropropene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
1,2,3-Trichlorobenzene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
1,2,4-Trichlorobenzene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
1,1,1-Trichloroethane	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
1,1,2-Trichloroethane	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Trichloroethene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Trichlorofluoromethane	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
1,2,3-Trichloropropane	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
1,1,2-Trichlorotrifluoroethane	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
1,2,4-Trimethylbenzene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
1,3,5-Trimethylbenzene	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Vinyl chloride	<0.131		0.131		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1
Xylenes, Total	<0.197		0.197		mg/Kg	☼	04/27/26 08:51	04/27/26 17:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*	*04/27/26 08:51*	*04/27/26 17:17*	*1*
Dibromofluoromethane (Surr)	*86*		*80 - 120*	*04/27/26 08:51*	*04/27/26 17:17*	*1*
Toluene-d8 (Surr)	*107*		*80 - 120*	*04/27/26 08:51*	*04/27/26 17:17*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00531		0.00531		mg/Kg	☼	04/24/26 16:44	04/27/26 13:28	1
Acenaphthylene	<0.00531		0.00531		mg/Kg	☼	04/24/26 16:44	04/27/26 13:28	1
Anthracene	<0.00531		0.00531		mg/Kg	☼	04/24/26 16:44	04/27/26 13:28	1
Benzo(a)anthracene	**0.0103**		0.00531		mg/Kg	☼	04/24/26 16:44	04/27/26 13:28	1
Benzo(a)pyrene	**0.0102**		0.00531		mg/Kg	☼	04/24/26 16:44	04/27/26 13:28	1
Benzo(b)fluoranthene	**0.0146**		0.00531		mg/Kg	☼	04/24/26 16:44	04/27/26 13:28	1
Benzo(g,h,i)perylene	**0.00721**		0.00531		mg/Kg	☼	04/24/26 16:44	04/27/26 13:28	1
Benzo(k)fluoranthene	**0.00568**		0.00531		mg/Kg	☼	04/24/26 16:44	04/27/26 13:28	1
Chrysene	**0.0121**		0.00531		mg/Kg	☼	04/24/26 16:44	04/27/26 13:28	1
Dibenz(a,h)anthracene	<0.00531		0.00531		mg/Kg	☼	04/24/26 16:44	04/27/26 13:28	1
Fluoranthene	**0.0228**		0.00531		mg/Kg	☼	04/24/26 16:44	04/27/26 13:28	1
Fluorene	<0.00531		0.00531		mg/Kg	☼	04/24/26 16:44	04/27/26 13:28	1
Indeno(1,2,3-cd)pyrene	**0.00660**		0.00531		mg/Kg	☼	04/24/26 16:44	04/27/26 13:28	1
2-Methylnaphthalene	**0.00659**		0.00531		mg/Kg	☼	04/24/26 16:44	04/27/26 13:28	1
Naphthalene	**0.0144**		0.00531		mg/Kg	☼	04/24/26 16:44	04/27/26 13:28	1
Phenanthrene	**0.0137**		0.00531		mg/Kg	☼	04/24/26 16:44	04/27/26 13:28	1
Pyrene	**0.0171**		0.00531		mg/Kg	☼	04/24/26 16:44	04/27/26 13:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*107*		*20 - 122*	*04/24/26 16:44*	*04/27/26 13:28*	*1*
Nitrobenzene-d5 (Surr)	*100*		*10 - 132*	*04/24/26 16:44*	*04/27/26 13:28*	*1*
Terphenyl-d14 (Surr)	*94*		*10 - 119*	*04/24/26 16:44*	*04/27/26 13:28*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-06-3

Date Collected: 04/20/26 10:55
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-4

Matrix: Solid
Percent Solids: 87.2

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<12.0		12.0		mg/Kg	☼	04/24/26 11:30	04/25/26 14:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*80 - 120*	*04/24/26 11:30*	*04/25/26 14:34*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<5.70		5.70		mg/Kg	☼	04/23/26 07:56	04/23/26 12:41	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.74**		1.04		mg/Kg	☼	04/24/26 10:00	04/27/26 19:14	2
Barium	**37.4**		1.04		mg/Kg	☼	04/24/26 10:00	04/27/26 19:14	2
Cadmium	<0.209		0.209		mg/Kg	☼	04/24/26 10:00	04/27/26 19:14	2
Chromium	**18.5**		0.417		mg/Kg	☼	04/24/26 10:00	04/27/26 19:14	2
Lead	**4.92**		0.209		mg/Kg	☼	04/24/26 10:00	04/27/26 19:14	2
Selenium	<1.04		1.04		mg/Kg	☼	04/24/26 10:00	04/27/26 19:14	2
Silver	<0.209		0.209		mg/Kg	☼	04/24/26 10:00	04/27/26 19:14	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.119		0.119		mg/Kg	☼	04/24/26 10:00	04/27/26 12:58	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**12.8**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**87.2**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-05-1
Date Collected: 04/20/26 11:15
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-5
Matrix: Solid
Percent Solids: 76.0

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.818		0.818		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Allyl chloride	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Benzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Bromobenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Bromochloromethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Bromodichloromethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Bromoform	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Bromomethane	<0.818		0.818		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
2-Butanone (MEK)	<1.23		1.23		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Carbon tetrachloride	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Chlorobenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Chlorodibromomethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Chloroethane	<0.409		0.409		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Chloroform	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Chloromethane	<0.409		0.409		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
2-Chlorotoluene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
4-Chlorotoluene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
cis-1,2-Dichloroethene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
cis-1,3-Dichloropropene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
1,2-Dibromo-3-chloropropane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
1,2-Dibromoethane (EDB)	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Dibromomethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
1,2-Dichlorobenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
1,3-Dichlorobenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
1,4-Dichlorobenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Dichlorodifluoromethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
1,1-Dichloroethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
1,2-Dichloroethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
1,1-Dichloroethene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Dichlorofluoromethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
1,2-Dichloropropane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
1,3-Dichloropropane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
2,2-Dichloropropane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
1,1-Dichloropropene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Diethyl ether	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Ethylbenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Hexachlorobutadiene	<0.409		0.409		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Isopropylbenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Methylene chloride	<0.409		0.409		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
4-Methyl-2-pentanone (MIBK)	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Methyl tert-butyl ether	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Naphthalene	<0.409		0.409		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
n-Butylbenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
n-Propylbenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
p-Isopropyltoluene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
sec-Butylbenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Styrene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
tert-Butylbenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
1,1,1,2-Tetrachloroethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1

Client Sample ID: HA-05-1
Date Collected: 04/20/26 11:15
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-5
Matrix: Solid
Percent Solids: 76.0

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Tetrachloroethene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Tetrahydrofuran	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Toluene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
trans-1,2-Dichloroethene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
trans-1,3-Dichloropropene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
1,2,3-Trichlorobenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
1,2,4-Trichlorobenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
1,1,1-Trichloroethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
1,1,2-Trichloroethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Trichloroethene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Trichlorofluoromethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
1,2,3-Trichloropropane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
1,1,2-Trichlorotrifluoroethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
1,2,4-Trimethylbenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
1,3,5-Trimethylbenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Vinyl chloride	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1
Xylenes, Total	<0.246		0.246		mg/Kg	☼	04/27/26 08:51	04/27/26 17:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*	*04/27/26 08:51*	*04/27/26 17:40*	*1*
Dibromofluoromethane (Surr)	*89*		*80 - 120*	*04/27/26 08:51*	*04/27/26 17:40*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*	*04/27/26 08:51*	*04/27/26 17:40*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00618		0.00618		mg/Kg	☼	04/24/26 16:44	04/27/26 13:53	1
Acenaphthylene	<0.00618		0.00618		mg/Kg	☼	04/24/26 16:44	04/27/26 13:53	1
Anthracene	<0.00618		0.00618		mg/Kg	☼	04/24/26 16:44	04/27/26 13:53	1
Benzo(a)anthracene	**0.00915**		0.00618		mg/Kg	☼	04/24/26 16:44	04/27/26 13:53	1
Benzo(a)pyrene	**0.00827**		0.00618		mg/Kg	☼	04/24/26 16:44	04/27/26 13:53	1
Benzo(b)fluoranthene	**0.0118**		0.00618		mg/Kg	☼	04/24/26 16:44	04/27/26 13:53	1
Benzo(g,h,i)perylene	**0.00664**		0.00618		mg/Kg	☼	04/24/26 16:44	04/27/26 13:53	1
Benzo(k)fluoranthene	<0.00618		0.00618		mg/Kg	☼	04/24/26 16:44	04/27/26 13:53	1
Chrysene	**0.00927**		0.00618		mg/Kg	☼	04/24/26 16:44	04/27/26 13:53	1
Dibenz(a,h)anthracene	<0.00618		0.00618		mg/Kg	☼	04/24/26 16:44	04/27/26 13:53	1
Fluoranthene	**0.0217**		0.00618		mg/Kg	☼	04/24/26 16:44	04/27/26 13:53	1
Fluorene	<0.00618		0.00618		mg/Kg	☼	04/24/26 16:44	04/27/26 13:53	1
Indeno(1,2,3-cd)pyrene	<0.00618		0.00618		mg/Kg	☼	04/24/26 16:44	04/27/26 13:53	1
2-Methylnaphthalene	<0.00618		0.00618		mg/Kg	☼	04/24/26 16:44	04/27/26 13:53	1
Naphthalene	**0.00759**		0.00618		mg/Kg	☼	04/24/26 16:44	04/27/26 13:53	1
Phenanthrene	**0.00918**		0.00618		mg/Kg	☼	04/24/26 16:44	04/27/26 13:53	1
Pyrene	**0.0168**		0.00618		mg/Kg	☼	04/24/26 16:44	04/27/26 13:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*111*		*20 - 122*	*04/24/26 16:44*	*04/27/26 13:53*	*1*
Nitrobenzene-d5 (Surr)	*100*		*10 - 132*	*04/24/26 16:44*	*04/27/26 13:53*	*1*
Terphenyl-d14 (Surr)	*98*		*10 - 119*	*04/24/26 16:44*	*04/27/26 13:53*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-05-1

Date Collected: 04/20/26 11:15
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-5

Matrix: Solid
Percent Solids: 76.0

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<11.5		11.5		mg/Kg	☼	04/24/26 11:30	04/25/26 15:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*80 - 120*	*04/24/26 11:30*	*04/25/26 15:00*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	**10.5**		7.30		mg/Kg	☼	04/23/26 07:56	04/23/26 16:02	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**2.08**		1.24		mg/Kg	☼	04/24/26 10:00	04/27/26 19:22	2
Barium	**49.2**		1.24		mg/Kg	☼	04/24/26 10:00	04/27/26 19:22	2
Cadmium	<0.248		0.248		mg/Kg	☼	04/24/26 10:00	04/27/26 19:22	2
Chromium	**26.5**		0.497		mg/Kg	☼	04/24/26 10:00	04/27/26 19:22	2
Lead	**5.18**		0.248		mg/Kg	☼	04/24/26 10:00	04/27/26 19:22	2
Selenium	<1.24		1.24		mg/Kg	☼	04/24/26 10:00	04/27/26 19:22	2
Silver	<0.248		0.248		mg/Kg	☼	04/24/26 10:00	04/27/26 19:22	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.125		0.125		mg/Kg	☼	04/24/26 10:00	04/27/26 12:59	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**24.0**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**76.0**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-05-3
Date Collected: 04/20/26 11:20
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-6
Matrix: Solid
Percent Solids: 88.6

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.649		0.649		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Allyl chloride	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Benzene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Bromobenzene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Bromochloromethane	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Bromodichloromethane	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Bromoform	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Bromomethane	<0.649		0.649		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
2-Butanone (MEK)	<0.973		0.973		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Carbon tetrachloride	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Chlorobenzene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Chlorodibromomethane	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Chloroethane	<0.324		0.324		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Chloroform	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Chloromethane	<0.324		0.324		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
2-Chlorotoluene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
4-Chlorotoluene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
cis-1,2-Dichloroethene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
cis-1,3-Dichloropropene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
1,2-Dibromo-3-chloropropane	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
1,2-Dibromoethane (EDB)	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Dibromomethane	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
1,2-Dichlorobenzene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
1,3-Dichlorobenzene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
1,4-Dichlorobenzene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Dichlorodifluoromethane	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
1,1-Dichloroethane	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
1,2-Dichloroethane	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
1,1-Dichloroethene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Dichlorofluoromethane	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
1,2-Dichloropropane	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
1,3-Dichloropropane	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
2,2-Dichloropropane	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
1,1-Dichloropropene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Diethyl ether	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Ethylbenzene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Hexachlorobutadiene	<0.324		0.324		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Isopropylbenzene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Methylene chloride	<0.324		0.324		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
4-Methyl-2-pentanone (MIBK)	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Methyl tert-butyl ether	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Naphthalene	<0.324		0.324		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
n-Butylbenzene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
n-Propylbenzene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
p-Isopropyltoluene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
sec-Butylbenzene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Styrene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
tert-Butylbenzene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
1,1,1,2-Tetrachloroethane	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1

Client Sample ID: HA-05-3
Date Collected: 04/20/26 11:20
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-6
Matrix: Solid
Percent Solids: 88.6

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Tetrachloroethene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Tetrahydrofuran	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Toluene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
trans-1,2-Dichloroethene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
trans-1,3-Dichloropropene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
1,2,3-Trichlorobenzene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
1,2,4-Trichlorobenzene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
1,1,1-Trichloroethane	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
1,1,2-Trichloroethane	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Trichloroethene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Trichlorofluoromethane	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
1,2,3-Trichloropropane	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
1,1,2-Trichlorotrifluoroethane	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
1,2,4-Trimethylbenzene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
1,3,5-Trimethylbenzene	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Vinyl chloride	<0.130		0.130		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1
Xylenes, Total	<0.195		0.195		mg/Kg	☼	04/27/26 08:51	04/27/26 18:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*	*04/27/26 08:51*	*04/27/26 18:02*	*1*
Dibromofluoromethane (Surr)	*88*		*80 - 120*	*04/27/26 08:51*	*04/27/26 18:02*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*	*04/27/26 08:51*	*04/27/26 18:02*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00535		0.00535		mg/Kg	☼	04/24/26 16:44	04/27/26 14:17	1
Acenaphthylene	<0.00535		0.00535		mg/Kg	☼	04/24/26 16:44	04/27/26 14:17	1
Anthracene	<0.00535		0.00535		mg/Kg	☼	04/24/26 16:44	04/27/26 14:17	1
Benzo(a)anthracene	<0.00535		0.00535		mg/Kg	☼	04/24/26 16:44	04/27/26 14:17	1
Benzo(a)pyrene	<0.00535		0.00535		mg/Kg	☼	04/24/26 16:44	04/27/26 14:17	1
Benzo(b)fluoranthene	<0.00535		0.00535		mg/Kg	☼	04/24/26 16:44	04/27/26 14:17	1
Benzo(g,h,i)perylene	<0.00535		0.00535		mg/Kg	☼	04/24/26 16:44	04/27/26 14:17	1
Benzo(k)fluoranthene	<0.00535		0.00535		mg/Kg	☼	04/24/26 16:44	04/27/26 14:17	1
Chrysene	<0.00535		0.00535		mg/Kg	☼	04/24/26 16:44	04/27/26 14:17	1
Dibenz(a,h)anthracene	<0.00535		0.00535		mg/Kg	☼	04/24/26 16:44	04/27/26 14:17	1
Fluoranthene	<0.00535		0.00535		mg/Kg	☼	04/24/26 16:44	04/27/26 14:17	1
Fluorene	<0.00535		0.00535		mg/Kg	☼	04/24/26 16:44	04/27/26 14:17	1
Indeno(1,2,3-cd)pyrene	<0.00535		0.00535		mg/Kg	☼	04/24/26 16:44	04/27/26 14:17	1
2-Methylnaphthalene	<0.00535		0.00535		mg/Kg	☼	04/24/26 16:44	04/27/26 14:17	1
Naphthalene	<0.00535		0.00535		mg/Kg	☼	04/24/26 16:44	04/27/26 14:17	1
Phenanthrene	<0.00535		0.00535		mg/Kg	☼	04/24/26 16:44	04/27/26 14:17	1
Pyrene	<0.00535		0.00535		mg/Kg	☼	04/24/26 16:44	04/27/26 14:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*105*		*20 - 122*	*04/24/26 16:44*	*04/27/26 14:17*	*1*
Nitrobenzene-d5 (Surr)	*102*		*10 - 132*	*04/24/26 16:44*	*04/27/26 14:17*	*1*
Terphenyl-d14 (Surr)	*104*		*10 - 119*	*04/24/26 16:44*	*04/27/26 14:17*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-05-3

Date Collected: 04/20/26 11:20
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-6

Matrix: Solid
Percent Solids: 88.6

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<10.9		10.9		mg/Kg	☼	04/24/26 11:30	04/25/26 15:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*80 - 120*	*04/24/26 11:30*	*04/25/26 15:26*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<5.96		5.96		mg/Kg	☼	04/23/26 07:56	04/23/26 12:54	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.92**		1.13		mg/Kg	☼	04/24/26 10:00	04/27/26 19:25	2
Barium	**46.0**		1.13		mg/Kg	☼	04/24/26 10:00	04/27/26 19:25	2
Cadmium	<0.226		0.226		mg/Kg	☼	04/24/26 10:00	04/27/26 19:25	2
Chromium	**27.0**		0.451		mg/Kg	☼	04/24/26 10:00	04/27/26 19:25	2
Lead	**4.58**		0.226		mg/Kg	☼	04/24/26 10:00	04/27/26 19:25	2
Selenium	<1.13		1.13		mg/Kg	☼	04/24/26 10:00	04/27/26 19:25	2
Silver	<0.226		0.226		mg/Kg	☼	04/24/26 10:00	04/27/26 19:25	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.101		0.101		mg/Kg	☼	04/24/26 10:00	04/27/26 13:01	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**11.4**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**88.6**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-04-1
Date Collected: 04/20/26 11:35
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-7
Matrix: Solid
Percent Solids: 82.9

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.688		0.688		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Allyl chloride	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Benzene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Bromobenzene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Bromochloromethane	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Bromodichloromethane	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Bromoform	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Bromomethane	<0.688		0.688		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
2-Butanone (MEK)	<1.03		1.03		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Carbon tetrachloride	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Chlorobenzene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Chlorodibromomethane	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Chloroethane	<0.344		0.344		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Chloroform	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Chloromethane	<0.344		0.344		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
2-Chlorotoluene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
4-Chlorotoluene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
cis-1,2-Dichloroethene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
cis-1,3-Dichloropropene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
1,2-Dibromo-3-chloropropane	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
1,2-Dibromoethane (EDB)	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Dibromomethane	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
1,2-Dichlorobenzene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
1,3-Dichlorobenzene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
1,4-Dichlorobenzene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Dichlorodifluoromethane	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
1,1-Dichloroethane	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
1,2-Dichloroethane	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
1,1-Dichloroethene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Dichlorofluoromethane	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
1,2-Dichloropropane	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
1,3-Dichloropropane	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
2,2-Dichloropropane	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
1,1-Dichloropropene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Diethyl ether	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Ethylbenzene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Hexachlorobutadiene	<0.344		0.344		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Isopropylbenzene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Methylene chloride	<0.344		0.344		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
4-Methyl-2-pentanone (MIBK)	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Methyl tert-butyl ether	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Naphthalene	<0.344		0.344		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
n-Butylbenzene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
n-Propylbenzene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
p-Isopropyltoluene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
sec-Butylbenzene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Styrene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
tert-Butylbenzene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
1,1,1,2-Tetrachloroethane	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1

Client Sample ID: HA-04-1
Date Collected: 04/20/26 11:35
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-7
Matrix: Solid
Percent Solids: 82.9

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Tetrachloroethene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Tetrahydrofuran	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Toluene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
trans-1,2-Dichloroethene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
trans-1,3-Dichloropropene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
1,2,3-Trichlorobenzene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
1,2,4-Trichlorobenzene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
1,1,1-Trichloroethane	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
1,1,2-Trichloroethane	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Trichloroethene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Trichlorofluoromethane	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
1,2,3-Trichloropropane	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
1,1,2-Trichlorotrifluoroethane	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
1,2,4-Trimethylbenzene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
1,3,5-Trimethylbenzene	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Vinyl chloride	<0.138		0.138		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1
Xylenes, Total	<0.207		0.207		mg/Kg	☼	04/27/26 08:51	04/27/26 18:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*	*04/27/26 08:51*	*04/27/26 18:25*	*1*
Dibromofluoromethane (Surr)	*84*		*80 - 120*	*04/27/26 08:51*	*04/27/26 18:25*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*	*04/27/26 08:51*	*04/27/26 18:25*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00571		0.00571		mg/Kg	☼	04/24/26 16:44	04/27/26 14:42	1
Acenaphthylene	<0.00571		0.00571		mg/Kg	☼	04/24/26 16:44	04/27/26 14:42	1
Anthracene	<0.00571		0.00571		mg/Kg	☼	04/24/26 16:44	04/27/26 14:42	1
Benzo(a)anthracene	**0.0213**		0.00571		mg/Kg	☼	04/24/26 16:44	04/27/26 14:42	1
Benzo(a)pyrene	**0.0192**		0.00571		mg/Kg	☼	04/24/26 16:44	04/27/26 14:42	1
Benzo(b)fluoranthene	**0.0275**		0.00571		mg/Kg	☼	04/24/26 16:44	04/27/26 14:42	1
Benzo(g,h,i)perylene	**0.0118**		0.00571		mg/Kg	☼	04/24/26 16:44	04/27/26 14:42	1
Benzo(k)fluoranthene	**0.00884**		0.00571		mg/Kg	☼	04/24/26 16:44	04/27/26 14:42	1
Chrysene	**0.0214**		0.00571		mg/Kg	☼	04/24/26 16:44	04/27/26 14:42	1
Dibenz(a,h)anthracene	<0.00571		0.00571		mg/Kg	☼	04/24/26 16:44	04/27/26 14:42	1
Fluoranthene	**0.0427**		0.00571		mg/Kg	☼	04/24/26 16:44	04/27/26 14:42	1
Fluorene	<0.00571		0.00571		mg/Kg	☼	04/24/26 16:44	04/27/26 14:42	1
Indeno(1,2,3-cd)pyrene	**0.0104**		0.00571		mg/Kg	☼	04/24/26 16:44	04/27/26 14:42	1
2-Methylnaphthalene	<0.00571		0.00571		mg/Kg	☼	04/24/26 16:44	04/27/26 14:42	1
Naphthalene	<0.00571		0.00571		mg/Kg	☼	04/24/26 16:44	04/27/26 14:42	1
Phenanthrene	**0.0163**		0.00571		mg/Kg	☼	04/24/26 16:44	04/27/26 14:42	1
Pyrene	**0.0331**		0.00571		mg/Kg	☼	04/24/26 16:44	04/27/26 14:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*114*		*20 - 122*	*04/24/26 16:44*	*04/27/26 14:42*	*1*
Nitrobenzene-d5 (Surr)	*102*		*10 - 132*	*04/24/26 16:44*	*04/27/26 14:42*	*1*
Terphenyl-d14 (Surr)	*107*		*10 - 119*	*04/24/26 16:44*	*04/27/26 14:42*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-04-1

Date Collected: 04/20/26 11:35
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-7

Matrix: Solid
Percent Solids: 82.9

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<11.7		11.7		mg/Kg	☼	04/28/26 11:40	04/28/26 21:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*	*04/28/26 11:40*	*04/28/26 21:42*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	**8.13**		7.00		mg/Kg	☼	04/23/26 07:56	04/23/26 14:34	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**2.41**		0.989		mg/Kg	☼	04/24/26 10:00	04/27/26 19:28	2
Barium	**61.7**		0.989		mg/Kg	☼	04/24/26 10:00	04/27/26 19:28	2
Cadmium	<0.198		0.198		mg/Kg	☼	04/24/26 10:00	04/27/26 19:28	2
Chromium	**29.3**		0.395		mg/Kg	☼	04/24/26 10:00	04/27/26 19:28	2
Lead	**6.60**		0.198		mg/Kg	☼	04/24/26 10:00	04/27/26 19:28	2
Selenium	<0.989		0.989		mg/Kg	☼	04/24/26 10:00	04/27/26 19:28	2
Silver	<0.198		0.198		mg/Kg	☼	04/24/26 10:00	04/27/26 19:28	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.139		0.139		mg/Kg	☼	04/24/26 10:00	04/27/26 13:03	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**17.1**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**82.9**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-04-3
Date Collected: 04/20/26 11:40
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-8
Matrix: Solid
Percent Solids: 92.5

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.535		0.535		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Allyl chloride	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Benzene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Bromobenzene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Bromochloromethane	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Bromodichloromethane	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Bromoform	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Bromomethane	<0.535		0.535		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
2-Butanone (MEK)	<0.803		0.803		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Carbon tetrachloride	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Chlorobenzene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Chlorodibromomethane	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Chloroethane	<0.268		0.268		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Chloroform	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Chloromethane	<0.268		0.268		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
2-Chlorotoluene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
4-Chlorotoluene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
cis-1,2-Dichloroethene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
cis-1,3-Dichloropropene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
1,2-Dibromo-3-chloropropane	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
1,2-Dibromoethane (EDB)	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Dibromomethane	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
1,2-Dichlorobenzene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
1,3-Dichlorobenzene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
1,4-Dichlorobenzene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Dichlorodifluoromethane	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
1,1-Dichloroethane	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
1,2-Dichloroethane	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
1,1-Dichloroethene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Dichlorofluoromethane	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
1,2-Dichloropropane	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
1,3-Dichloropropane	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
2,2-Dichloropropane	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
1,1-Dichloropropene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Diethyl ether	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Ethylbenzene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Hexachlorobutadiene	<0.268		0.268		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Isopropylbenzene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Methylene chloride	<0.268		0.268		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
4-Methyl-2-pentanone (MIBK)	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Methyl tert-butyl ether	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Naphthalene	<0.268		0.268		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
n-Butylbenzene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
n-Propylbenzene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
p-Isopropyltoluene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
sec-Butylbenzene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Styrene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
tert-Butylbenzene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
1,1,1,2-Tetrachloroethane	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1

Client Sample ID: HA-04-3
Date Collected: 04/20/26 11:40
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-8
Matrix: Solid
Percent Solids: 92.5

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Tetrachloroethene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Tetrahydrofuran	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Toluene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
trans-1,2-Dichloroethene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
trans-1,3-Dichloropropene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
1,2,3-Trichlorobenzene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
1,2,4-Trichlorobenzene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
1,1,1-Trichloroethane	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
1,1,2-Trichloroethane	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Trichloroethene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Trichlorofluoromethane	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
1,2,3-Trichloropropane	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
1,1,2-Trichlorotrifluoroethane	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
1,2,4-Trimethylbenzene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
1,3,5-Trimethylbenzene	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Vinyl chloride	<0.107		0.107		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1
Xylenes, Total	<0.161		0.161		mg/Kg	☼	04/27/26 08:51	04/27/26 18:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*	*04/27/26 08:51*	*04/27/26 18:48*	*1*
Dibromofluoromethane (Surr)	*89*		*80 - 120*	*04/27/26 08:51*	*04/27/26 18:48*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*	*04/27/26 08:51*	*04/27/26 18:48*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00526		0.00526		mg/Kg	☼	04/27/26 08:10	04/28/26 00:56	1
Acenaphthylene	<0.00526		0.00526		mg/Kg	☼	04/27/26 08:10	04/28/26 00:56	1
Anthracene	<0.00526		0.00526		mg/Kg	☼	04/27/26 08:10	04/28/26 00:56	1
Benzo(a)anthracene	<0.00526		0.00526		mg/Kg	☼	04/27/26 08:10	04/28/26 00:56	1
Benzo(a)pyrene	<0.00526		0.00526		mg/Kg	☼	04/27/26 08:10	04/28/26 00:56	1
Benzo(b)fluoranthene	<0.00526		0.00526		mg/Kg	☼	04/27/26 08:10	04/28/26 00:56	1
Benzo(g,h,i)perylene	<0.00526		0.00526		mg/Kg	☼	04/27/26 08:10	04/28/26 00:56	1
Benzo(k)fluoranthene	<0.00526		0.00526		mg/Kg	☼	04/27/26 08:10	04/28/26 00:56	1
Chrysene	<0.00526		0.00526		mg/Kg	☼	04/27/26 08:10	04/28/26 00:56	1
Dibenz(a,h)anthracene	<0.00526		0.00526		mg/Kg	☼	04/27/26 08:10	04/28/26 00:56	1
Fluoranthene	<0.00526		0.00526		mg/Kg	☼	04/27/26 08:10	04/28/26 00:56	1
Fluorene	<0.00526		0.00526		mg/Kg	☼	04/27/26 08:10	04/28/26 00:56	1
Indeno(1,2,3-cd)pyrene	<0.00526		0.00526		mg/Kg	☼	04/27/26 08:10	04/28/26 00:56	1
2-Methylnaphthalene	<0.00526		0.00526		mg/Kg	☼	04/27/26 08:10	04/28/26 00:56	1
Naphthalene	<0.00526		0.00526		mg/Kg	☼	04/27/26 08:10	04/28/26 00:56	1
Phenanthrene	<0.00526		0.00526		mg/Kg	☼	04/27/26 08:10	04/28/26 00:56	1
Pyrene	<0.00526		0.00526		mg/Kg	☼	04/27/26 08:10	04/28/26 00:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*86*		*20 - 122*	*04/27/26 08:10*	*04/28/26 00:56*	*1*
Nitrobenzene-d5 (Surr)	*103*		*10 - 132*	*04/27/26 08:10*	*04/28/26 00:56*	*1*
Terphenyl-d14 (Surr)	*96*		*10 - 119*	*04/27/26 08:10*	*04/28/26 00:56*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-04-3

Date Collected: 04/20/26 11:40
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-8

Matrix: Solid
Percent Solids: 92.5

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<9.89		9.89		mg/Kg	☼	04/28/26 11:40	04/28/26 22:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*	*04/28/26 11:40*	*04/28/26 22:08*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<5.32		5.32		mg/Kg	☼	04/23/26 07:56	04/23/26 13:06	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.50**		0.948		mg/Kg	☼	04/24/26 10:00	04/27/26 19:31	2
Barium	**37.8**		0.948		mg/Kg	☼	04/24/26 10:00	04/27/26 19:31	2
Cadmium	<0.190		0.190		mg/Kg	☼	04/24/26 10:00	04/27/26 19:31	2
Chromium	**21.0**		0.379		mg/Kg	☼	04/24/26 10:00	04/27/26 19:31	2
Lead	**3.95**		0.190		mg/Kg	☼	04/24/26 10:00	04/27/26 19:31	2
Selenium	<0.948		0.948		mg/Kg	☼	04/24/26 10:00	04/27/26 19:31	2
Silver	<0.190		0.190		mg/Kg	☼	04/24/26 10:00	04/27/26 19:31	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.103		0.103		mg/Kg	☼	04/24/26 10:00	04/27/26 13:04	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**7.5**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**92.5**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-03-1
Date Collected: 04/20/26 11:55
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-9
Matrix: Solid
Percent Solids: 71.3

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.819		0.819		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Allyl chloride	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Benzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Bromobenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Bromochloromethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Bromodichloromethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Bromoform	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Bromomethane	<0.819		0.819		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
2-Butanone (MEK)	<1.23		1.23		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Carbon tetrachloride	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Chlorobenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Chlorodibromomethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Chloroethane	<0.410		0.410		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Chloroform	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Chloromethane	<0.410		0.410		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
2-Chlorotoluene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
4-Chlorotoluene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
cis-1,2-Dichloroethene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
cis-1,3-Dichloropropene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
1,2-Dibromo-3-chloropropane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
1,2-Dibromoethane (EDB)	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Dibromomethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
1,2-Dichlorobenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
1,3-Dichlorobenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
1,4-Dichlorobenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Dichlorodifluoromethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
1,1-Dichloroethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
1,2-Dichloroethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
1,1-Dichloroethene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Dichlorofluoromethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
1,2-Dichloropropane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
1,3-Dichloropropane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
2,2-Dichloropropane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
1,1-Dichloropropene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Diethyl ether	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Ethylbenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Hexachlorobutadiene	<0.410		0.410		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Isopropylbenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Methylene chloride	<0.410		0.410		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
4-Methyl-2-pentanone (MIBK)	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Methyl tert-butyl ether	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Naphthalene	<0.410		0.410		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
n-Butylbenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
n-Propylbenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
p-Isopropyltoluene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
sec-Butylbenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Styrene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
tert-Butylbenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
1,1,1,2-Tetrachloroethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1

Client Sample ID: HA-03-1
Date Collected: 04/20/26 11:55
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-9
Matrix: Solid
Percent Solids: 71.3

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Tetrachloroethene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Tetrahydrofuran	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Toluene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
trans-1,2-Dichloroethene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
trans-1,3-Dichloropropene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
1,2,3-Trichlorobenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
1,2,4-Trichlorobenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
1,1,1-Trichloroethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
1,1,2-Trichloroethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Trichloroethene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Trichlorofluoromethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
1,2,3-Trichloropropane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
1,1,2-Trichlorotrifluoroethane	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
1,2,4-Trimethylbenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
1,3,5-Trimethylbenzene	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Vinyl chloride	<0.164		0.164		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1
Xylenes, Total	<0.246		0.246		mg/Kg	☼	04/27/26 08:51	04/27/26 19:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*	*04/27/26 08:51*	*04/27/26 19:10*	*1*
Dibromofluoromethane (Surr)	*91*		*80 - 120*	*04/27/26 08:51*	*04/27/26 19:10*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*	*04/27/26 08:51*	*04/27/26 19:10*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00656		0.00656		mg/Kg	☼	04/27/26 08:10	04/28/26 01:21	1
Acenaphthylene	<0.00656		0.00656		mg/Kg	☼	04/27/26 08:10	04/28/26 01:21	1
Anthracene	<0.00656		0.00656		mg/Kg	☼	04/27/26 08:10	04/28/26 01:21	1
Benzo(a)anthracene	<0.00656		0.00656		mg/Kg	☼	04/27/26 08:10	04/28/26 01:21	1
Benzo(a)pyrene	<0.00656		0.00656		mg/Kg	☼	04/27/26 08:10	04/28/26 01:21	1
Benzo(b)fluoranthene	<0.00656		0.00656		mg/Kg	☼	04/27/26 08:10	04/28/26 01:21	1
Benzo(g,h,i)perylene	<0.00656		0.00656		mg/Kg	☼	04/27/26 08:10	04/28/26 01:21	1
Benzo(k)fluoranthene	<0.00656		0.00656		mg/Kg	☼	04/27/26 08:10	04/28/26 01:21	1
Chrysene	<0.00656		0.00656		mg/Kg	☼	04/27/26 08:10	04/28/26 01:21	1
Dibenz(a,h)anthracene	<0.00656		0.00656		mg/Kg	☼	04/27/26 08:10	04/28/26 01:21	1
Fluoranthene	<0.00656		0.00656		mg/Kg	☼	04/27/26 08:10	04/28/26 01:21	1
Fluorene	<0.00656		0.00656		mg/Kg	☼	04/27/26 08:10	04/28/26 01:21	1
Indeno(1,2,3-cd)pyrene	<0.00656		0.00656		mg/Kg	☼	04/27/26 08:10	04/28/26 01:21	1
2-Methylnaphthalene	<0.00656		0.00656		mg/Kg	☼	04/27/26 08:10	04/28/26 01:21	1
Naphthalene	<0.00656		0.00656		mg/Kg	☼	04/27/26 08:10	04/28/26 01:21	1
Phenanthrene	<0.00656		0.00656		mg/Kg	☼	04/27/26 08:10	04/28/26 01:21	1
Pyrene	<0.00656		0.00656		mg/Kg	☼	04/27/26 08:10	04/28/26 01:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*78*		*20 - 122*	*04/27/26 08:10*	*04/28/26 01:21*	*1*
Nitrobenzene-d5 (Surr)	*94*		*10 - 132*	*04/27/26 08:10*	*04/28/26 01:21*	*1*
Terphenyl-d14 (Surr)	*71*		*10 - 119*	*04/27/26 08:10*	*04/28/26 01:21*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-03-1

Date Collected: 04/20/26 11:55
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-9

Matrix: Solid
Percent Solids: 71.3

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<12.4		12.4		mg/Kg	☼	04/28/26 11:40	04/28/26 22:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*	*04/28/26 11:40*	*04/28/26 22:35*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	**16.7**		8.53		mg/Kg	☼	04/23/26 07:56	04/23/26 13:19	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.278		0.278		ng/g	☼	04/29/26 08:25	04/29/26 20:48	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.278		0.278		ng/g	☼	04/29/26 08:25	04/29/26 20:48	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.555		0.555		ng/g	☼	04/29/26 08:25	04/29/26 20:48	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.278		0.278		ng/g	☼	04/29/26 08:25	04/29/26 20:48	1
Perfluorobutanesulfonic acid (PFBS)	<0.278		0.278		ng/g	☼	04/29/26 08:25	04/29/26 20:48	1
Perfluorobutanoic acid (PFBA)	<0.555		0.555		ng/g	☼	04/29/26 08:25	04/29/26 20:48	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.278		0.278		ng/g	☼	04/29/26 08:25	04/29/26 20:48	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.39		1.39		ng/g	☼	04/29/26 08:25	04/29/26 20:48	1
Perfluorohexanoic acid (PFHxA)	<0.278		0.278		ng/g	☼	04/29/26 08:25	04/29/26 20:48	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.278		0.278		ng/g	☼	04/29/26 08:25	04/29/26 20:48	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.278		0.278		ng/g	☼	04/29/26 08:25	04/29/26 20:48	1
Perfluoropentanoic acid (PFPeA)	<0.278		0.278		ng/g	☼	04/29/26 08:25	04/29/26 20:48	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.39		1.39		ng/g	☼	04/29/26 08:25	04/29/26 20:48	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.555		0.555		ng/g	☼	04/29/26 08:25	04/29/26 20:48	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 4:2 FTS	*52.2*		*40 - 165*	*04/29/26 08:25*	*04/29/26 20:48*	*1*
13C3 HFPO-DA	*73.0*		*40 - 130*	*04/29/26 08:25*	*04/29/26 20:48*	*1*
13C4 PFBA	*79.5*		*8 - 130*	*04/29/26 08:25*	*04/29/26 20:48*	*1*
13C3 PFBS	*68.7*		*40 - 135*	*04/29/26 08:25*	*04/29/26 20:48*	*1*
13C5 PFHxA	*68.2*		*40 - 130*	*04/29/26 08:25*	*04/29/26 20:48*	*1*
13C5 PFPeA	*90.4*		*35 - 130*	*04/29/26 08:25*	*04/29/26 20:48*	*1*
13C3-PFPrS	*74.1*		*20 - 150*	*04/29/26 08:25*	*04/29/26 20:48*	*1*

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.524		0.524		ng/g	☼	05/01/26 08:54	05/01/26 18:35	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.524		0.524		ng/g	☼	05/01/26 08:54	05/01/26 18:35	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.05		1.05		ng/g	☼	05/01/26 08:54	05/01/26 18:35	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<1.05		1.05		ng/g	☼	05/01/26 08:54	05/01/26 18:35	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-03-1
Date Collected: 04/20/26 11:55
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-9
Matrix: Solid
Percent Solids: 71.3

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.524		0.524		ng/g	☼	05/01/26 08:54	05/01/26 18:35	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.524		0.524		ng/g	☼	05/01/26 08:54	05/01/26 18:35	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<2.62		2.62		ng/g	☼	05/01/26 08:54	05/01/26 18:35	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.524		0.524		ng/g	☼	05/01/26 08:54	05/01/26 18:35	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.524		0.524		ng/g	☼	05/01/26 08:54	05/01/26 18:35	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<2.62		2.62		ng/g	☼	05/01/26 08:54	05/01/26 18:35	1
Perfluorodecanesulfonic acid (PFDS)	<0.524		0.524		ng/g	☼	05/01/26 08:54	05/01/26 18:35	1
Perfluorodecanoic acid (PFDA)	<0.524		0.524		ng/g	☼	05/01/26 08:54	05/01/26 18:35	1
Perfluorododecanesulfonic acid (PFDoS)	<0.524		0.524		ng/g	☼	05/01/26 08:54	05/01/26 18:35	1
Perfluorododecanoic acid (PFDoA)	<0.524		0.524		ng/g	☼	05/01/26 08:54	05/01/26 18:35	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.524		0.524		ng/g	☼	05/01/26 08:54	05/01/26 18:35	1
Perfluoroheptanoic acid (PFHpA)	<0.524		0.524		ng/g	☼	05/01/26 08:54	05/01/26 18:35	1
Perfluorohexanesulfonic acid (PFHxS)	<0.524		0.524		ng/g	☼	05/01/26 08:54	05/01/26 18:35	1
Perfluorononanesulfonic acid (PFNS)	<0.524		0.524		ng/g	☼	05/01/26 08:54	05/01/26 18:35	1
Perfluorononanoic acid (PFNA)	<0.524		0.524		ng/g	☼	05/01/26 08:54	05/01/26 18:35	1
Perfluorooctanesulfonamide (PFOSA)	<0.524		0.524		ng/g	☼	05/01/26 08:54	05/01/26 18:35	1
Perfluorooctanesulfonic acid (PFOS)	**0.678**		0.524		ng/g	☼	05/01/26 08:54	05/01/26 18:35	1
Perfluorooctanoic acid (PFOA)	<0.524		0.524		ng/g	☼	05/01/26 08:54	05/01/26 18:35	1
Perfluoropentanesulfonic acid (PFPeS)	<0.524		0.524		ng/g	☼	05/01/26 08:54	05/01/26 18:35	1
Perfluorotetradecanoic acid (PFTeDA)	<0.524		0.524		ng/g	☼	05/01/26 08:54	05/01/26 18:35	1
Perfluorotridecanoic acid (PFTrDA)	<0.524		0.524		ng/g	☼	05/01/26 08:54	05/01/26 18:35	1
Perfluoroundecanoic acid (PFUnA)	<0.524		0.524		ng/g	☼	05/01/26 08:54	05/01/26 18:35	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*73.6*		*40 - 130*	*05/01/26 08:54*	*05/01/26 18:35*	*1*
13C2 10:2 FTS	*72.1*		*40 - 275*	*05/01/26 08:54*	*05/01/26 18:35*	*1*
13C2 4:2 FTS	*60.5*		*40 - 165*	*05/01/26 08:54*	*05/01/26 18:35*	*1*
13C2 6:2 FTS	*66.6*		*40 - 215*	*05/01/26 08:54*	*05/01/26 18:35*	*1*
13C2 8:2 FTS	*71.1*		*40 - 275*	*05/01/26 08:54*	*05/01/26 18:35*	*1*
13C3 HFPO-DA	*59.0*		*40 - 130*	*05/01/26 08:54*	*05/01/26 18:35*	*1*
13C4 PFBA	*62.1*		*8 - 130*	*05/01/26 08:54*	*05/01/26 18:35*	*1*
13C3 PFBS	*60.5*		*40 - 135*	*05/01/26 08:54*	*05/01/26 18:35*	*1*
13C6 PFDA	*69.2*		*40 - 130*	*05/01/26 08:54*	*05/01/26 18:35*	*1*
13C2-PFDoA	*71.4*		*40 - 130*	*05/01/26 08:54*	*05/01/26 18:35*	*1*
13C4 PFHpA	*61.8*		*40 - 130*	*05/01/26 08:54*	*05/01/26 18:35*	*1*
13C5 PFHxA	*59.9*		*40 - 130*	*05/01/26 08:54*	*05/01/26 18:35*	*1*
13C3 PFHxS	*60.6*		*40 - 130*	*05/01/26 08:54*	*05/01/26 18:35*	*1*
13C9 PFNA	*66.0*		*40 - 130*	*05/01/26 08:54*	*05/01/26 18:35*	*1*
13C8 PFOA	*57.7*		*40 - 130*	*05/01/26 08:54*	*05/01/26 18:35*	*1*
13C8 PFOS	*58.0*		*40 - 130*	*05/01/26 08:54*	*05/01/26 18:35*	*1*
13C5 PFPeA	*69.6*		*35 - 130*	*05/01/26 08:54*	*05/01/26 18:35*	*1*
13C3-PFPrS	*56.5*		*20 - 150*	*05/01/26 08:54*	*05/01/26 18:35*	*1*
13C2 PFTeDA	*88.7*		*20 - 130*	*05/01/26 08:54*	*05/01/26 18:35*	*1*

Client Sample ID: HA-03-1
Lab Sample ID: 310-330206-9
Date Collected: 04/20/26 11:55
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 71.3

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A - RE (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C7 PFUnA	*69.5*		*40 - 130*	*05/01/26 08:54*	*05/01/26 18:35*	*1*
d5-NEtFOSAA	*66.6*		*40 - 150*	*05/01/26 08:54*	*05/01/26 18:35*	*1*
d9-N-EtFOSE-M	*60.5*		*15 - 130*	*05/01/26 08:54*	*05/01/26 18:35*	*1*
d5-NEtPFOSA	*68.2*		*10 - 130*	*05/01/26 08:54*	*05/01/26 18:35*	*1*
d3-NMeFOSAA	*65.3*		*40 - 135*	*05/01/26 08:54*	*05/01/26 18:35*	*1*
d7-N-MeFOSE-M	*65.7*		*20 - 130*	*05/01/26 08:54*	*05/01/26 18:35*	*1*
d3-NMePFOSA	*65.7*		*10 - 130*	*05/01/26 08:54*	*05/01/26 18:35*	*1*

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**2.35**		1.28		mg/Kg	☼	04/24/26 10:00	04/27/26 19:33	2
Barium	**47.9**		1.28		mg/Kg	☼	04/24/26 10:00	04/27/26 19:33	2
Cadmium	<0.255		0.255		mg/Kg	☼	04/24/26 10:00	04/27/26 19:33	2
Chromium	**22.5**		0.510		mg/Kg	☼	04/24/26 10:00	04/27/26 19:33	2
Lead	**5.18**		0.255		mg/Kg	☼	04/24/26 10:00	04/27/26 19:33	2
Selenium	<1.28		1.28		mg/Kg	☼	04/24/26 10:00	04/27/26 19:33	2
Silver	<0.255		0.255		mg/Kg	☼	04/24/26 10:00	04/27/26 19:33	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.131		0.131		mg/Kg	☼	04/24/26 10:00	04/27/26 13:06	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**28.7**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**71.3**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-03-3
Date Collected: 04/20/26 12:00
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-10
Matrix: Solid
Percent Solids: 79.9

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.708		0.708		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Allyl chloride	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Benzene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Bromobenzene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Bromochloromethane	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Bromodichloromethane	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Bromoform	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Bromomethane	<0.708		0.708		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
2-Butanone (MEK)	<1.06		1.06		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Carbon tetrachloride	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Chlorobenzene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Chlorodibromomethane	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Chloroethane	<0.354		0.354		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Chloroform	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Chloromethane	<0.354		0.354		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
2-Chlorotoluene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
4-Chlorotoluene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
cis-1,2-Dichloroethene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
cis-1,3-Dichloropropene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
1,2-Dibromo-3-chloropropane	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
1,2-Dibromoethane (EDB)	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Dibromomethane	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
1,2-Dichlorobenzene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
1,3-Dichlorobenzene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
1,4-Dichlorobenzene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Dichlorodifluoromethane	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
1,1-Dichloroethane	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
1,2-Dichloroethane	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
1,1-Dichloroethene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Dichlorofluoromethane	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
1,2-Dichloropropane	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
1,3-Dichloropropane	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
2,2-Dichloropropane	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
1,1-Dichloropropene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Diethyl ether	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Ethylbenzene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Hexachlorobutadiene	<0.354		0.354		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Isopropylbenzene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Methylene chloride	<0.354		0.354		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
4-Methyl-2-pentanone (MIBK)	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Methyl tert-butyl ether	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Naphthalene	<0.354		0.354		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
n-Butylbenzene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
n-Propylbenzene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
p-Isopropyltoluene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
sec-Butylbenzene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Styrene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
tert-Butylbenzene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
1,1,1,2-Tetrachloroethane	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1

Client Sample ID: HA-03-3
Date Collected: 04/20/26 12:00
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-10
Matrix: Solid
Percent Solids: 79.9

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Tetrachloroethene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Tetrahydrofuran	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Toluene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
trans-1,2-Dichloroethene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
trans-1,3-Dichloropropene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
1,2,3-Trichlorobenzene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
1,2,4-Trichlorobenzene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
1,1,1-Trichloroethane	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
1,1,2-Trichloroethane	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Trichloroethene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Trichlorofluoromethane	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
1,2,3-Trichloropropane	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
1,1,2-Trichlorotrifluoroethane	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
1,2,4-Trimethylbenzene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
1,3,5-Trimethylbenzene	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Vinyl chloride	<0.142		0.142		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1
Xylenes, Total	<0.212		0.212		mg/Kg	☼	04/27/26 08:51	04/27/26 19:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*	*04/27/26 08:51*	*04/27/26 19:33*	*1*
Dibromofluoromethane (Surr)	*85*		*80 - 120*	*04/27/26 08:51*	*04/27/26 19:33*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*	*04/27/26 08:51*	*04/27/26 19:33*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 01:45	1
Acenaphthylene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 01:45	1
Anthracene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 01:45	1
Benzo(a)anthracene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 01:45	1
Benzo(a)pyrene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 01:45	1
Benzo(b)fluoranthene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 01:45	1
Benzo(g,h,i)perylene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 01:45	1
Benzo(k)fluoranthene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 01:45	1
Chrysene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 01:45	1
Dibenz(a,h)anthracene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 01:45	1
Fluoranthene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 01:45	1
Fluorene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 01:45	1
Indeno(1,2,3-cd)pyrene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 01:45	1
2-Methylnaphthalene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 01:45	1
Naphthalene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 01:45	1
Phenanthrene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 01:45	1
Pyrene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 01:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*80*		*20 - 122*	*04/27/26 08:10*	*04/28/26 01:45*	*1*
Nitrobenzene-d5 (Surr)	*105*		*10 - 132*	*04/27/26 08:10*	*04/28/26 01:45*	*1*
Terphenyl-d14 (Surr)	*78*		*10 - 119*	*04/27/26 08:10*	*04/28/26 01:45*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-03-3

Date Collected: 04/20/26 12:00
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-10

Matrix: Solid
Percent Solids: 79.9

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<11.7		11.7		mg/Kg	☼	04/28/26 11:40	04/28/26 23:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*	*04/28/26 11:40*	*04/28/26 23:01*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	**12.5**		7.34		mg/Kg	☼	04/23/26 07:56	04/23/26 13:31	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.75**		1.11		mg/Kg	☼	04/24/26 10:00	04/27/26 19:36	2
Barium	**38.8**		1.11		mg/Kg	☼	04/24/26 10:00	04/27/26 19:36	2
Cadmium	<0.221		0.221		mg/Kg	☼	04/24/26 10:00	04/27/26 19:36	2
Chromium	**30.1**		0.443		mg/Kg	☼	04/24/26 10:00	04/27/26 19:36	2
Lead	**4.04**		0.221		mg/Kg	☼	04/24/26 10:00	04/27/26 19:36	2
Selenium	<1.11		1.11		mg/Kg	☼	04/24/26 10:00	04/27/26 19:36	2
Silver	<0.221		0.221		mg/Kg	☼	04/24/26 10:00	04/27/26 19:36	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.123		0.123		mg/Kg	☼	04/24/26 10:00	04/27/26 13:08	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**20.1**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**79.9**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-01-1
Date Collected: 04/20/26 12:15
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-11
Matrix: Solid
Percent Solids: 92.9

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.590		0.590		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Allyl chloride	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Benzene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Bromobenzene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Bromochloromethane	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Bromodichloromethane	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Bromoform	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Bromomethane	<0.590		0.590		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
2-Butanone (MEK)	<0.885		0.885		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Carbon tetrachloride	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Chlorobenzene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Chlorodibromomethane	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Chloroethane	<0.295		0.295		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Chloroform	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Chloromethane	<0.295		0.295		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
2-Chlorotoluene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
4-Chlorotoluene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
cis-1,2-Dichloroethene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
cis-1,3-Dichloropropene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
1,2-Dibromo-3-chloropropane	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
1,2-Dibromoethane (EDB)	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Dibromomethane	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
1,2-Dichlorobenzene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
1,3-Dichlorobenzene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
1,4-Dichlorobenzene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Dichlorodifluoromethane	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
1,1-Dichloroethane	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
1,2-Dichloroethane	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
1,1-Dichloroethene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Dichlorofluoromethane	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
1,2-Dichloropropane	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
1,3-Dichloropropane	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
2,2-Dichloropropane	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
1,1-Dichloropropene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Diethyl ether	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Ethylbenzene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Hexachlorobutadiene	<0.295		0.295		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Isopropylbenzene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Methylene chloride	<0.295		0.295		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
4-Methyl-2-pentanone (MIBK)	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Methyl tert-butyl ether	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Naphthalene	<0.295		0.295		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
n-Butylbenzene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
n-Propylbenzene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
p-Isopropyltoluene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
sec-Butylbenzene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Styrene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
tert-Butylbenzene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
1,1,1,2-Tetrachloroethane	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-01-1
Date Collected: 04/20/26 12:15
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-11
Matrix: Solid
Percent Solids: 92.9

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Tetrachloroethene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Tetrahydrofuran	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Toluene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
trans-1,2-Dichloroethene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
trans-1,3-Dichloropropene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
1,2,3-Trichlorobenzene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
1,2,4-Trichlorobenzene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
1,1,1-Trichloroethane	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
1,1,2-Trichloroethane	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Trichloroethene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Trichlorofluoromethane	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
1,2,3-Trichloropropane	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
1,1,2-Trichlorotrifluoroethane	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
1,2,4-Trimethylbenzene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
1,3,5-Trimethylbenzene	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Vinyl chloride	<0.118		0.118		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1
Xylenes, Total	<0.177		0.177		mg/Kg	☼	04/27/26 08:51	04/27/26 19:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*	*04/27/26 08:51*	*04/27/26 19:56*	*1*
Dibromofluoromethane (Surr)	*89*		*80 - 120*	*04/27/26 08:51*	*04/27/26 19:56*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*	*04/27/26 08:51*	*04/27/26 19:56*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00520		0.00520		mg/Kg	☼	04/27/26 08:10	04/28/26 02:10	1
Acenaphthylene	<0.00520		0.00520		mg/Kg	☼	04/27/26 08:10	04/28/26 02:10	1
Anthracene	<0.00520		0.00520		mg/Kg	☼	04/27/26 08:10	04/28/26 02:10	1
Benzo(a)anthracene	<0.00520		0.00520		mg/Kg	☼	04/27/26 08:10	04/28/26 02:10	1
Benzo(a)pyrene	<0.00520		0.00520		mg/Kg	☼	04/27/26 08:10	04/28/26 02:10	1
Benzo(b)fluoranthene	<0.00520		0.00520		mg/Kg	☼	04/27/26 08:10	04/28/26 02:10	1
Benzo(g,h,i)perylene	<0.00520		0.00520		mg/Kg	☼	04/27/26 08:10	04/28/26 02:10	1
Benzo(k)fluoranthene	<0.00520		0.00520		mg/Kg	☼	04/27/26 08:10	04/28/26 02:10	1
Chrysene	<0.00520		0.00520		mg/Kg	☼	04/27/26 08:10	04/28/26 02:10	1
Dibenz(a,h)anthracene	<0.00520		0.00520		mg/Kg	☼	04/27/26 08:10	04/28/26 02:10	1
Fluoranthene	<0.00520		0.00520		mg/Kg	☼	04/27/26 08:10	04/28/26 02:10	1
Fluorene	<0.00520		0.00520		mg/Kg	☼	04/27/26 08:10	04/28/26 02:10	1
Indeno(1,2,3-cd)pyrene	<0.00520		0.00520		mg/Kg	☼	04/27/26 08:10	04/28/26 02:10	1
2-Methylnaphthalene	<0.00520		0.00520		mg/Kg	☼	04/27/26 08:10	04/28/26 02:10	1
Naphthalene	<0.00520		0.00520		mg/Kg	☼	04/27/26 08:10	04/28/26 02:10	1
Phenanthrene	<0.00520		0.00520		mg/Kg	☼	04/27/26 08:10	04/28/26 02:10	1
Pyrene	<0.00520		0.00520		mg/Kg	☼	04/27/26 08:10	04/28/26 02:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*84*		*20 - 122*	*04/27/26 08:10*	*04/28/26 02:10*	*1*
Nitrobenzene-d5 (Surr)	*104*		*10 - 132*	*04/27/26 08:10*	*04/28/26 02:10*	*1*
Terphenyl-d14 (Surr)	*89*		*10 - 119*	*04/27/26 08:10*	*04/28/26 02:10*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-01-1

Date Collected: 04/20/26 12:15
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-11

Matrix: Solid
Percent Solids: 92.9

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<11.0		11.0		mg/Kg	☼	04/28/26 11:40	04/28/26 23:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*	*04/28/26 11:40*	*04/28/26 23:27*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<5.79		5.79		mg/Kg	☼	04/23/26 07:56	04/23/26 13:44	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.207		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.207		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.207		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.207		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.414		0.414		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.414		0.414		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.414		0.414		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.207		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.207		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.03		1.03		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.207		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.207		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.03		1.03		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.207		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
Perfluorobutanesulfonic acid (PFBS)	<0.207		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
Perfluorobutanoic acid (PFBA)	<0.414		0.414		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
Perfluorodecanesulfonic acid (PFDS)	**0.391**		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
Perfluorodecanoic acid (PFDA)	**9.24**		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
Perfluorododecanesulfonic acid (PFDoS)	**0.248**		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
Perfluorododecanoic acid (PFDoA)	**3.90**		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.207		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
Perfluoroheptanesulfonic acid (PFHpS)	**1.53**		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
Perfluoroheptanoic acid (PFHpA)	**0.285**		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	**2.21**		1.03		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-01-1
Date Collected: 04/20/26 12:15
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-11
Matrix: Solid
Percent Solids: 92.9

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	**4.05**		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
Perfluorohexanoic acid (PFHxA)	**0.554**		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.207		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.207		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
Perfluorononanesulfonic acid (PFNS)	**0.440**		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
Perfluorononanoic acid (PFNA)	**1.78**		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
Perfluorooctanesulfonamide (PFOSA)	<0.207		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
Perfluorooctanoic acid (PFOA)	**0.669**		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
Perfluoropentanesulfonic acid (PFPeS)	<0.207		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
Perfluoropentanoic acid (PFPeA)	**0.451**		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	**1.84**		1.03		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.414		0.414		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
Perfluorotetradecanoic acid (PFTeDA)	**0.946**		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
Perfluorotridecanoic acid (PFTrDA)	**0.329**		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1
Perfluoroundecanoic acid (PFUnA)	**1.15**		0.207		ng/g	☼	04/29/26 08:25	04/29/26 21:21	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*77.3*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:21*	*1*
13C2 10:2 FTS	*41.2*		*40 - 275*	*04/29/26 08:25*	*04/29/26 21:21*	*1*
13C2 4:2 FTS	*69.4*		*40 - 165*	*04/29/26 08:25*	*04/29/26 21:21*	*1*
13C2 6:2 FTS	*66.9*		*40 - 215*	*04/29/26 08:25*	*04/29/26 21:21*	*1*
13C2 8:2 FTS	*44.1*		*40 - 275*	*04/29/26 08:25*	*04/29/26 21:21*	*1*
13C3 HFPO-DA	*72.9*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:21*	*1*
13C4 PFBA	*77.0*		*8 - 130*	*04/29/26 08:25*	*04/29/26 21:21*	*1*
13C3 PFBS	*73.0*		*40 - 135*	*04/29/26 08:25*	*04/29/26 21:21*	*1*
13C6 PFDA	*73.3*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:21*	*1*
13C2-PFDoA	*64.3*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:21*	*1*
13C4 PFHpA	*74.7*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:21*	*1*
13C5 PFHxA	*73.2*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:21*	*1*
13C3 PFHxS	*70.0*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:21*	*1*
13C9 PFNA	*71.5*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:21*	*1*
13C8 PFOA	*68.3*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:21*	*1*
13C8 PFOS	*61.7*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:21*	*1*
13C5 PFPeA	*86.7*		*35 - 130*	*04/29/26 08:25*	*04/29/26 21:21*	*1*
13C3-PFPrS	*66.7*		*20 - 150*	*04/29/26 08:25*	*04/29/26 21:21*	*1*
13C2 PFTeDA	*81.3*		*20 - 130*	*04/29/26 08:25*	*04/29/26 21:21*	*1*
13C7 PFUnA	*65.5*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:21*	*1*
d5-NEtFOSAA	*49.8*		*40 - 150*	*04/29/26 08:25*	*04/29/26 21:21*	*1*
d9-N-EtFOSE-M	*51.4*		*15 - 130*	*04/29/26 08:25*	*04/29/26 21:21*	*1*
d5-NEtPFOSA	*74.9*		*10 - 130*	*04/29/26 08:25*	*04/29/26 21:21*	*1*
d3-NMeFOSAA	*55.6*		*40 - 135*	*04/29/26 08:25*	*04/29/26 21:21*	*1*
d7-N-MeFOSE-M	*50.9*		*20 - 130*	*04/29/26 08:25*	*04/29/26 21:21*	*1*
d3-NMePFOSA	*78.1*		*10 - 130*	*04/29/26 08:25*	*04/29/26 21:21*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-01-1

Date Collected: 04/20/26 12:15
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-11

Matrix: Solid
Percent Solids: 92.9

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	176		1.03		ng/g	☼	04/29/26 08:25	05/01/26 21:16	5

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*74.4*		*40 - 130*	*04/29/26 08:25*	*05/01/26 21:16*	*5*
13C2 10:2 FTS	*58.9*		*40 - 275*	*04/29/26 08:25*	*05/01/26 21:16*	*5*
13C2 4:2 FTS	*70.1*		*40 - 165*	*04/29/26 08:25*	*05/01/26 21:16*	*5*
13C2 6:2 FTS	*69.7*		*40 - 215*	*04/29/26 08:25*	*05/01/26 21:16*	*5*
13C2 8:2 FTS	*60.4*		*40 - 275*	*04/29/26 08:25*	*05/01/26 21:16*	*5*
13C3 HFPO-DA	*76.8*		*40 - 130*	*04/29/26 08:25*	*05/01/26 21:16*	*5*
13C4 PFBA	*75.9*		*8 - 130*	*04/29/26 08:25*	*05/01/26 21:16*	*5*
13C3 PFBS	*73.3*		*40 - 135*	*04/29/26 08:25*	*05/01/26 21:16*	*5*
13C6 PFDA	*73.7*		*40 - 130*	*04/29/26 08:25*	*05/01/26 21:16*	*5*
13C2-PFDoA	*70.5*		*40 - 130*	*04/29/26 08:25*	*05/01/26 21:16*	*5*
13C4 PFHpA	*73.1*		*40 - 130*	*04/29/26 08:25*	*05/01/26 21:16*	*5*
13C5 PFHxA	*78.9*		*40 - 130*	*04/29/26 08:25*	*05/01/26 21:16*	*5*
13C3 PFHxS	*70.6*		*40 - 130*	*04/29/26 08:25*	*05/01/26 21:16*	*5*
13C9 PFNA	*72.9*		*40 - 130*	*04/29/26 08:25*	*05/01/26 21:16*	*5*
13C8 PFOA	*74.1*		*40 - 130*	*04/29/26 08:25*	*05/01/26 21:16*	*5*
13C8 PFOS	*58.1*		*40 - 130*	*04/29/26 08:25*	*05/01/26 21:16*	*5*
13C5 PFPeA	*77.7*		*35 - 130*	*04/29/26 08:25*	*05/01/26 21:16*	*5*
13C3-PFPrS	*73.8*		*20 - 150*	*04/29/26 08:25*	*05/01/26 21:16*	*5*
13C2 PFTeDA	*80.5*		*20 - 130*	*04/29/26 08:25*	*05/01/26 21:16*	*5*
13C7 PFUnA	*75.1*		*40 - 130*	*04/29/26 08:25*	*05/01/26 21:16*	*5*
d5-NEtFOSAA	*56.9*		*40 - 150*	*04/29/26 08:25*	*05/01/26 21:16*	*5*
d9-N-EtFOSE-M	*57.8*		*15 - 130*	*04/29/26 08:25*	*05/01/26 21:16*	*5*
d5-NEtPFOSA	*67.5*		*10 - 130*	*04/29/26 08:25*	*05/01/26 21:16*	*5*
d3-NMeFOSAA	*59.5*		*40 - 135*	*04/29/26 08:25*	*05/01/26 21:16*	*5*
d7-N-MeFOSE-M	*53.2*		*20 - 130*	*04/29/26 08:25*	*05/01/26 21:16*	*5*
d3-NMePFOSA	*69.3*		*10 - 130*	*04/29/26 08:25*	*05/01/26 21:16*	*5*

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.62		1.01		mg/Kg	☼	04/24/26 10:00	04/27/26 19:39	2
Barium	37.8		1.01		mg/Kg	☼	04/24/26 10:00	04/27/26 19:39	2
Cadmium	<0.201		0.201		mg/Kg	☼	04/24/26 10:00	04/27/26 19:39	2
Chromium	19.3		0.402		mg/Kg	☼	04/24/26 10:00	04/27/26 19:39	2
Lead	4.78		0.201		mg/Kg	☼	04/24/26 10:00	04/27/26 19:39	2
Selenium	<1.01		1.01		mg/Kg	☼	04/24/26 10:00	04/27/26 19:39	2
Silver	<0.201		0.201		mg/Kg	☼	04/24/26 10:00	04/27/26 19:39	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.0936		0.0936		mg/Kg	☼	04/24/26 10:00	04/27/26 13:10	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	7.1		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	92.9		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-01-3
Date Collected: 04/20/26 12:20
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-12
Matrix: Solid
Percent Solids: 83.0

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.656		0.656		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Allyl chloride	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Benzene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Bromobenzene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Bromochloromethane	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Bromodichloromethane	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Bromoform	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Bromomethane	<0.656		0.656		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
2-Butanone (MEK)	<0.984		0.984		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Carbon tetrachloride	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Chlorobenzene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Chlorodibromomethane	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Chloroethane	<0.328		0.328		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Chloroform	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Chloromethane	<0.328		0.328		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
2-Chlorotoluene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
4-Chlorotoluene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
cis-1,2-Dichloroethene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
cis-1,3-Dichloropropene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
1,2-Dibromo-3-chloropropane	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
1,2-Dibromoethane (EDB)	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Dibromomethane	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
1,2-Dichlorobenzene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
1,3-Dichlorobenzene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
1,4-Dichlorobenzene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Dichlorodifluoromethane	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
1,1-Dichloroethane	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
1,2-Dichloroethane	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
1,1-Dichloroethene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Dichlorofluoromethane	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
1,2-Dichloropropane	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
1,3-Dichloropropane	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
2,2-Dichloropropane	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
1,1-Dichloropropene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Diethyl ether	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Ethylbenzene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Hexachlorobutadiene	<0.328		0.328		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Isopropylbenzene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Methylene chloride	<0.328		0.328		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
4-Methyl-2-pentanone (MIBK)	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Methyl tert-butyl ether	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Naphthalene	<0.328		0.328		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
n-Butylbenzene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
n-Propylbenzene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
p-Isopropyltoluene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
sec-Butylbenzene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Styrene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
tert-Butylbenzene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
1,1,1,2-Tetrachloroethane	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1

Client Sample ID: HA-01-3
Date Collected: 04/20/26 12:20
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-12
Matrix: Solid
Percent Solids: 83.0

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Tetrachloroethene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Tetrahydrofuran	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Toluene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
trans-1,2-Dichloroethene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
trans-1,3-Dichloropropene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
1,2,3-Trichlorobenzene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
1,2,4-Trichlorobenzene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
1,1,1-Trichloroethane	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
1,1,2-Trichloroethane	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Trichloroethene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Trichlorofluoromethane	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
1,2,3-Trichloropropane	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
1,1,2-Trichlorotrifluoroethane	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
1,2,4-Trimethylbenzene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
1,3,5-Trimethylbenzene	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Vinyl chloride	<0.131		0.131		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1
Xylenes, Total	<0.197		0.197		mg/Kg	☼	04/27/26 09:01	04/28/26 00:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*	*04/27/26 09:01*	*04/28/26 00:28*	*1*
Dibromofluoromethane (Surr)	*85*		*80 - 120*	*04/27/26 09:01*	*04/28/26 00:28*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*	*04/27/26 09:01*	*04/28/26 00:28*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 02:35	1
Acenaphthylene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 02:35	1
Anthracene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 02:35	1
Benzo(a)anthracene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 02:35	1
Benzo(a)pyrene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 02:35	1
Benzo(b)fluoranthene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 02:35	1
Benzo(g,h,i)perylene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 02:35	1
Benzo(k)fluoranthene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 02:35	1
Chrysene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 02:35	1
Dibenz(a,h)anthracene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 02:35	1
Fluoranthene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 02:35	1
Fluorene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 02:35	1
Indeno(1,2,3-cd)pyrene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 02:35	1
2-Methylnaphthalene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 02:35	1
Naphthalene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 02:35	1
Phenanthrene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 02:35	1
Pyrene	<0.00580		0.00580		mg/Kg	☼	04/27/26 08:10	04/28/26 02:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*89*		*20 - 122*	*04/27/26 08:10*	*04/28/26 02:35*	*1*
Nitrobenzene-d5 (Surr)	*103*		*10 - 132*	*04/27/26 08:10*	*04/28/26 02:35*	*1*
Terphenyl-d14 (Surr)	*100*		*10 - 119*	*04/27/26 08:10*	*04/28/26 02:35*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-01-3

Date Collected: 04/20/26 12:20
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-12

Matrix: Solid
Percent Solids: 83.0

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<11.1		11.1		mg/Kg	☼	04/28/26 11:40	04/28/26 23:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*	*04/28/26 11:40*	*04/28/26 23:53*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	**11.0**		7.13		mg/Kg	☼	04/23/26 07:56	04/23/26 13:56	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.92**		1.09		mg/Kg	☼	04/24/26 10:00	04/27/26 19:42	2
Barium	**44.7**		1.09		mg/Kg	☼	04/24/26 10:00	04/27/26 19:42	2
Cadmium	<0.219		0.219		mg/Kg	☼	04/24/26 10:00	04/27/26 19:42	2
Chromium	**28.3**		0.438		mg/Kg	☼	04/24/26 10:00	04/27/26 19:42	2
Lead	**5.91**		0.219		mg/Kg	☼	04/24/26 10:00	04/27/26 19:42	2
Selenium	<1.09		1.09		mg/Kg	☼	04/24/26 10:00	04/27/26 19:42	2
Silver	<0.219		0.219		mg/Kg	☼	04/24/26 10:00	04/27/26 19:42	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.125		0.125		mg/Kg	☼	04/24/26 10:00	04/27/26 13:15	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**17.0**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**83.0**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-02-1
Date Collected: 04/20/26 12:35
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-13
Matrix: Solid
Percent Solids: 86.6

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.670		0.670		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Allyl chloride	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Benzene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Bromobenzene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Bromochloromethane	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Bromodichloromethane	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Bromoform	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Bromomethane	<0.670		0.670		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
2-Butanone (MEK)	<1.00		1.00		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Carbon tetrachloride	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Chlorobenzene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Chlorodibromomethane	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Chloroethane	<0.335		0.335		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Chloroform	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Chloromethane	<0.335		0.335		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
2-Chlorotoluene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
4-Chlorotoluene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
cis-1,2-Dichloroethene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
cis-1,3-Dichloropropene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
1,2-Dibromo-3-chloropropane	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
1,2-Dibromoethane (EDB)	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Dibromomethane	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
1,2-Dichlorobenzene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
1,3-Dichlorobenzene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
1,4-Dichlorobenzene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Dichlorodifluoromethane	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
1,1-Dichloroethane	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
1,2-Dichloroethane	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
1,1-Dichloroethene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Dichlorofluoromethane	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
1,2-Dichloropropane	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
1,3-Dichloropropane	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
2,2-Dichloropropane	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
1,1-Dichloropropene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Diethyl ether	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Ethylbenzene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Hexachlorobutadiene	<0.335		0.335		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Isopropylbenzene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Methylene chloride	<0.335		0.335		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
4-Methyl-2-pentanone (MIBK)	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Methyl tert-butyl ether	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Naphthalene	<0.335		0.335		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
n-Butylbenzene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
n-Propylbenzene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
p-Isopropyltoluene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
sec-Butylbenzene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Styrene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
tert-Butylbenzene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
1,1,1,2-Tetrachloroethane	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1

Client Sample ID: HA-02-1
Lab Sample ID: 310-330206-13
Date Collected: 04/20/26 12:35
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 86.6

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Tetrachloroethene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Tetrahydrofuran	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Toluene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
trans-1,2-Dichloroethene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
trans-1,3-Dichloropropene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
1,2,3-Trichlorobenzene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
1,2,4-Trichlorobenzene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
1,1,1-Trichloroethane	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
1,1,2-Trichloroethane	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Trichloroethene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Trichlorofluoromethane	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
1,2,3-Trichloropropane	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
1,1,2-Trichlorotrifluoroethane	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
1,2,4-Trimethylbenzene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
1,3,5-Trimethylbenzene	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Vinyl chloride	<0.134		0.134		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1
Xylenes, Total	<0.201		0.201		mg/Kg	☼	04/27/26 09:01	04/28/26 00:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*	*04/27/26 09:01*	*04/28/26 00:51*	*1*
Dibromofluoromethane (Surr)	*92*		*80 - 120*	*04/27/26 09:01*	*04/28/26 00:51*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*	*04/27/26 09:01*	*04/28/26 00:51*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00547		0.00547		mg/Kg	☼	04/27/26 08:10	04/28/26 02:59	1
Acenaphthylene	<0.00547		0.00547		mg/Kg	☼	04/27/26 08:10	04/28/26 02:59	1
Anthracene	<0.00547		0.00547		mg/Kg	☼	04/27/26 08:10	04/28/26 02:59	1
Benzo(a)anthracene	<0.00547		0.00547		mg/Kg	☼	04/27/26 08:10	04/28/26 02:59	1
Benzo(a)pyrene	**0.00671**		0.00547		mg/Kg	☼	04/27/26 08:10	04/28/26 02:59	1
Benzo(b)fluoranthene	**0.0122**		0.00547		mg/Kg	☼	04/27/26 08:10	04/28/26 02:59	1
Benzo(g,h,i)perylene	**0.00703**		0.00547		mg/Kg	☼	04/27/26 08:10	04/28/26 02:59	1
Benzo(k)fluoranthene	<0.00547		0.00547		mg/Kg	☼	04/27/26 08:10	04/28/26 02:59	1
Chrysene	**0.00712**		0.00547		mg/Kg	☼	04/27/26 08:10	04/28/26 02:59	1
Dibenz(a,h)anthracene	<0.00547		0.00547		mg/Kg	☼	04/27/26 08:10	04/28/26 02:59	1
Fluoranthene	**0.0114**		0.00547		mg/Kg	☼	04/27/26 08:10	04/28/26 02:59	1
Fluorene	<0.00547		0.00547		mg/Kg	☼	04/27/26 08:10	04/28/26 02:59	1
Indeno(1,2,3-cd)pyrene	**0.00570**		0.00547		mg/Kg	☼	04/27/26 08:10	04/28/26 02:59	1
2-Methylnaphthalene	<0.00547		0.00547		mg/Kg	☼	04/27/26 08:10	04/28/26 02:59	1
Naphthalene	<0.00547		0.00547		mg/Kg	☼	04/27/26 08:10	04/28/26 02:59	1
Phenanthrene	<0.00547		0.00547		mg/Kg	☼	04/27/26 08:10	04/28/26 02:59	1
Pyrene	**0.0103**		0.00547		mg/Kg	☼	04/27/26 08:10	04/28/26 02:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*68*		*20 - 122*	*04/27/26 08:10*	*04/28/26 02:59*	*1*
Nitrobenzene-d5 (Surr)	*77*		*10 - 132*	*04/27/26 08:10*	*04/28/26 02:59*	*1*
Terphenyl-d14 (Surr)	*67*		*10 - 119*	*04/27/26 08:10*	*04/28/26 02:59*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-02-1

Date Collected: 04/20/26 12:35
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-13

Matrix: Solid
Percent Solids: 86.6

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<11.8		11.8		mg/Kg	☼	04/28/26 11:40	04/29/26 00:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*	*04/28/26 11:40*	*04/29/26 00:19*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	**11.6**		6.46		mg/Kg	☼	04/23/26 07:56	04/23/26 15:49	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**2.12**		1.11		mg/Kg	☼	04/24/26 10:00	04/27/26 19:44	2
Barium	**52.6**		1.11		mg/Kg	☼	04/24/26 10:00	04/27/26 19:44	2
Cadmium	<0.222		0.222		mg/Kg	☼	04/24/26 10:00	04/27/26 19:44	2
Chromium	**22.9**		0.444		mg/Kg	☼	04/24/26 10:00	04/27/26 19:44	2
Lead	**12.3**		0.222		mg/Kg	☼	04/24/26 10:00	04/27/26 19:44	2
Selenium	<1.11		1.11		mg/Kg	☼	04/24/26 10:00	04/27/26 19:44	2
Silver	<0.222		0.222		mg/Kg	☼	04/24/26 10:00	04/27/26 19:44	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.119		0.119		mg/Kg	☼	04/24/26 10:00	04/27/26 13:16	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**13.4**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**86.6**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-02-3
Date Collected: 04/20/26 12:40
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-14
Matrix: Solid
Percent Solids: 87.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.649		0.649		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Allyl chloride	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Benzene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Bromobenzene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Bromochloromethane	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Bromodichloromethane	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Bromoform	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Bromomethane	<0.649		0.649		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
2-Butanone (MEK)	<0.973		0.973		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Carbon tetrachloride	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Chlorobenzene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Chlorodibromomethane	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Chloroethane	<0.324		0.324		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Chloroform	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Chloromethane	<0.324		0.324		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
2-Chlorotoluene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
4-Chlorotoluene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
cis-1,2-Dichloroethene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
cis-1,3-Dichloropropene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
1,2-Dibromo-3-chloropropane	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
1,2-Dibromoethane (EDB)	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Dibromomethane	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
1,2-Dichlorobenzene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
1,3-Dichlorobenzene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
1,4-Dichlorobenzene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Dichlorodifluoromethane	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
1,1-Dichloroethane	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
1,2-Dichloroethane	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
1,1-Dichloroethene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Dichlorofluoromethane	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
1,2-Dichloropropane	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
1,3-Dichloropropane	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
2,2-Dichloropropane	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
1,1-Dichloropropene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Diethyl ether	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Ethylbenzene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Hexachlorobutadiene	<0.324		0.324		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Isopropylbenzene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Methylene chloride	<0.324		0.324		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
4-Methyl-2-pentanone (MIBK)	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Methyl tert-butyl ether	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Naphthalene	<0.324		0.324		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
n-Butylbenzene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
n-Propylbenzene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
p-Isopropyltoluene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
sec-Butylbenzene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Styrene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
tert-Butylbenzene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
1,1,1,2-Tetrachloroethane	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-02-3
Date Collected: 04/20/26 12:40
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-14
Matrix: Solid
Percent Solids: 87.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Tetrachloroethene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Tetrahydrofuran	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Toluene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
trans-1,2-Dichloroethene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
trans-1,3-Dichloropropene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
1,2,3-Trichlorobenzene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
1,2,4-Trichlorobenzene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
1,1,1-Trichloroethane	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
1,1,2-Trichloroethane	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Trichloroethene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Trichlorofluoromethane	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
1,2,3-Trichloropropane	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
1,1,2-Trichlorotrifluoroethane	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
1,2,4-Trimethylbenzene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
1,3,5-Trimethylbenzene	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Vinyl chloride	<0.130		0.130		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1
Xylenes, Total	<0.195		0.195		mg/Kg	☼	04/27/26 09:01	04/28/26 01:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*	*04/27/26 09:01*	*04/28/26 01:13*	*1*
Dibromofluoromethane (Surr)	*88*		*80 - 120*	*04/27/26 09:01*	*04/28/26 01:13*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*	*04/27/26 09:01*	*04/28/26 01:13*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00562		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 03:24	1
Acenaphthylene	<0.00562		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 03:24	1
Anthracene	<0.00562		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 03:24	1
Benzo(a)anthracene	**0.00828**		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 03:24	1
Benzo(a)pyrene	**0.0108**		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 03:24	1
Benzo(b)fluoranthene	**0.0163**		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 03:24	1
Benzo(g,h,i)perylene	**0.00996**		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 03:24	1
Benzo(k)fluoranthene	<0.00562		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 03:24	1
Chrysene	**0.0133**		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 03:24	1
Dibenz(a,h)anthracene	<0.00562		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 03:24	1
Fluoranthene	**0.0165**		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 03:24	1
Fluorene	<0.00562		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 03:24	1
Indeno(1,2,3-cd)pyrene	**0.00707**		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 03:24	1
2-Methylnaphthalene	<0.00562		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 03:24	1
Naphthalene	<0.00562		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 03:24	1
Phenanthrene	<0.00562		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 03:24	1
Pyrene	**0.0152**		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 03:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*91*		*20 - 122*	*04/27/26 08:10*	*04/28/26 03:24*	*1*
Nitrobenzene-d5 (Surr)	*111*		*10 - 132*	*04/27/26 08:10*	*04/28/26 03:24*	*1*
Terphenyl-d14 (Surr)	*95*		*10 - 119*	*04/27/26 08:10*	*04/28/26 03:24*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-02-3

Date Collected: 04/20/26 12:40
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-14

Matrix: Solid
Percent Solids: 87.2

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<11.4		11.4		mg/Kg	☼	04/28/26 11:40	04/29/26 00:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*	*04/28/26 11:40*	*04/29/26 00:45*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	**10.7**		6.66		mg/Kg	☼	04/23/26 07:56	04/23/26 15:37	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**2.01**		1.04		mg/Kg	☼	04/24/26 10:00	04/27/26 19:47	2
Barium	**40.4**		1.04		mg/Kg	☼	04/24/26 10:00	04/27/26 19:47	2
Cadmium	<0.208		0.208		mg/Kg	☼	04/24/26 10:00	04/27/26 19:47	2
Chromium	**17.1**		0.417		mg/Kg	☼	04/24/26 10:00	04/27/26 19:47	2
Lead	**5.47**		0.208		mg/Kg	☼	04/24/26 10:00	04/27/26 19:47	2
Selenium	<1.04		1.04		mg/Kg	☼	04/24/26 10:00	04/27/26 19:47	2
Silver	<0.208		0.208		mg/Kg	☼	04/24/26 10:00	04/27/26 19:47	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.123		0.123		mg/Kg	☼	04/24/26 10:00	04/27/26 13:18	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**12.8**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**87.2**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-07-1
Date Collected: 04/20/26 12:55
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-15
Matrix: Solid
Percent Solids: 90.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.567		0.567		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Allyl chloride	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Benzene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Bromobenzene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Bromochloromethane	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Bromodichloromethane	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Bromoform	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Bromomethane	<0.567		0.567		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
2-Butanone (MEK)	<0.851		0.851		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Carbon tetrachloride	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Chlorobenzene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Chlorodibromomethane	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Chloroethane	<0.284		0.284		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Chloroform	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Chloromethane	<0.284		0.284		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
2-Chlorotoluene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
4-Chlorotoluene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
cis-1,2-Dichloroethene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
cis-1,3-Dichloropropene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
1,2-Dibromo-3-chloropropane	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
1,2-Dibromoethane (EDB)	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Dibromomethane	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
1,2-Dichlorobenzene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
1,3-Dichlorobenzene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
1,4-Dichlorobenzene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Dichlorodifluoromethane	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
1,1-Dichloroethane	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
1,2-Dichloroethane	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
1,1-Dichloroethene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Dichlorofluoromethane	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
1,2-Dichloropropane	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
1,3-Dichloropropane	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
2,2-Dichloropropane	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
1,1-Dichloropropene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Diethyl ether	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Ethylbenzene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Hexachlorobutadiene	<0.284		0.284		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Isopropylbenzene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Methylene chloride	<0.284		0.284		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
4-Methyl-2-pentanone (MIBK)	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Methyl tert-butyl ether	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Naphthalene	<0.284		0.284		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
n-Butylbenzene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
n-Propylbenzene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
p-Isopropyltoluene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
sec-Butylbenzene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Styrene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
tert-Butylbenzene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
1,1,1,2-Tetrachloroethane	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-07-1
Date Collected: 04/20/26 12:55
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-15
Matrix: Solid
Percent Solids: 90.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Tetrachloroethene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Tetrahydrofuran	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Toluene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
trans-1,2-Dichloroethene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
trans-1,3-Dichloropropene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
1,2,3-Trichlorobenzene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
1,2,4-Trichlorobenzene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
1,1,1-Trichloroethane	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
1,1,2-Trichloroethane	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Trichloroethene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Trichlorofluoromethane	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
1,2,3-Trichloropropane	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
1,1,2-Trichlorotrifluoroethane	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
1,2,4-Trimethylbenzene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
1,3,5-Trimethylbenzene	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Vinyl chloride	<0.113		0.113		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1
Xylenes, Total	<0.170		0.170		mg/Kg	☼	04/27/26 09:01	04/28/26 01:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*	*04/27/26 09:01*	*04/28/26 01:36*	*1*
Dibromofluoromethane (Surr)	*88*		*80 - 120*	*04/27/26 09:01*	*04/28/26 01:36*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*	*04/27/26 09:01*	*04/28/26 01:36*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.0257		0.0257		mg/Kg	☼	04/27/26 08:10	04/28/26 03:48	5
Acenaphthylene	<0.0257		0.0257		mg/Kg	☼	04/27/26 08:10	04/28/26 03:48	5
Anthracene	**0.0423**		0.0257		mg/Kg	☼	04/27/26 08:10	04/28/26 03:48	5
Benzo(a)anthracene	**0.0925**		0.0257		mg/Kg	☼	04/27/26 08:10	04/28/26 03:48	5
Benzo(a)pyrene	**0.108**		0.0257		mg/Kg	☼	04/27/26 08:10	04/28/26 03:48	5
Benzo(b)fluoranthene	**0.139**		0.0257		mg/Kg	☼	04/27/26 08:10	04/28/26 03:48	5
Benzo(g,h,i)perylene	**0.0823**		0.0257		mg/Kg	☼	04/27/26 08:10	04/28/26 03:48	5
Benzo(k)fluoranthene	**0.0518**		0.0257		mg/Kg	☼	04/27/26 08:10	04/28/26 03:48	5
Chrysene	**0.113**		0.0257		mg/Kg	☼	04/27/26 08:10	04/28/26 03:48	5
Dibenz(a,h)anthracene	<0.0257		0.0257		mg/Kg	☼	04/27/26 08:10	04/28/26 03:48	5
Fluoranthene	**0.221**		0.0257		mg/Kg	☼	04/27/26 08:10	04/28/26 03:48	5
Fluorene	<0.0257		0.0257		mg/Kg	☼	04/27/26 08:10	04/28/26 03:48	5
Indeno(1,2,3-cd)pyrene	**0.0648**		0.0257		mg/Kg	☼	04/27/26 08:10	04/28/26 03:48	5
2-Methylnaphthalene	**0.0348**		0.0257		mg/Kg	☼	04/27/26 08:10	04/28/26 12:22	5
Naphthalene	<0.0257		0.0257		mg/Kg	☼	04/27/26 08:10	04/28/26 03:48	5
Phenanthrene	**0.125**		0.0257		mg/Kg	☼	04/27/26 08:10	04/28/26 03:48	5
Pyrene	**0.206**		0.0257		mg/Kg	☼	04/27/26 08:10	04/28/26 03:48	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*81*		*20 - 122*	*04/27/26 08:10*	*04/28/26 03:48*	*5*
Nitrobenzene-d5 (Surr)	*115*		*10 - 132*	*04/27/26 08:10*	*04/28/26 03:48*	*5*
Terphenyl-d14 (Surr)	*83*		*10 - 119*	*04/27/26 08:10*	*04/28/26 03:48*	*5*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-07-1

Date Collected: 04/20/26 12:55
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-15

Matrix: Solid
Percent Solids: 90.2

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<10.3		10.3		mg/Kg	☼	04/28/26 11:40	04/29/26 01:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*	*04/28/26 11:40*	*04/29/26 01:11*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	**57.5**		6.04		mg/Kg	☼	04/23/26 07:56	04/23/26 15:24	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.97**		0.853		mg/Kg	☼	04/24/26 10:00	04/27/26 19:55	2
Barium	**49.3**		0.853		mg/Kg	☼	04/24/26 10:00	04/27/26 19:55	2
Cadmium	<0.171		0.171		mg/Kg	☼	04/24/26 10:00	04/27/26 19:55	2
Chromium	**24.6**		0.341		mg/Kg	☼	04/24/26 10:00	04/27/26 19:55	2
Lead	**11.3**		0.171		mg/Kg	☼	04/24/26 10:00	04/27/26 19:55	2
Selenium	<0.853		0.853		mg/Kg	☼	04/24/26 10:00	04/27/26 19:55	2
Silver	<0.171		0.171		mg/Kg	☼	04/24/26 10:00	04/27/26 19:55	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.106		0.106		mg/Kg	☼	04/24/26 10:00	04/27/26 13:20	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**9.8**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**90.2**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-07-2.5
Date Collected: 04/20/26 13:00
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-16
Matrix: Solid
Percent Solids: 89.1

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.568		0.568		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Allyl chloride	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Benzene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Bromobenzene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Bromochloromethane	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Bromodichloromethane	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Bromoform	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Bromomethane	<0.568		0.568		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
2-Butanone (MEK)	<0.852		0.852		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Carbon tetrachloride	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Chlorobenzene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Chlorodibromomethane	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Chloroethane	<0.284		0.284		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Chloroform	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Chloromethane	<0.284		0.284		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
2-Chlorotoluene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
4-Chlorotoluene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
cis-1,2-Dichloroethene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
cis-1,3-Dichloropropene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
1,2-Dibromo-3-chloropropane	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
1,2-Dibromoethane (EDB)	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Dibromomethane	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
1,2-Dichlorobenzene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
1,3-Dichlorobenzene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
1,4-Dichlorobenzene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Dichlorodifluoromethane	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
1,1-Dichloroethane	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
1,2-Dichloroethane	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
1,1-Dichloroethene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Dichlorofluoromethane	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
1,2-Dichloropropane	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
1,3-Dichloropropane	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
2,2-Dichloropropane	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
1,1-Dichloropropene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Diethyl ether	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Ethylbenzene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Hexachlorobutadiene	<0.284		0.284		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Isopropylbenzene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Methylene chloride	<0.284		0.284		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
4-Methyl-2-pentanone (MIBK)	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Methyl tert-butyl ether	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Naphthalene	<0.284		0.284		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
n-Butylbenzene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
n-Propylbenzene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
p-Isopropyltoluene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
sec-Butylbenzene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Styrene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
tert-Butylbenzene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
1,1,1,2-Tetrachloroethane	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1

Client Sample ID: HA-07-2.5
Date Collected: 04/20/26 13:00
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-16
Matrix: Solid
Percent Solids: 89.1

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Tetrachloroethene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Tetrahydrofuran	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Toluene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
trans-1,2-Dichloroethene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
trans-1,3-Dichloropropene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
1,2,3-Trichlorobenzene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
1,2,4-Trichlorobenzene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
1,1,1-Trichloroethane	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
1,1,2-Trichloroethane	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Trichloroethene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Trichlorofluoromethane	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
1,2,3-Trichloropropane	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
1,1,2-Trichlorotrifluoroethane	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
1,2,4-Trimethylbenzene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
1,3,5-Trimethylbenzene	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Vinyl chloride	<0.114		0.114		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1
Xylenes, Total	<0.170		0.170		mg/Kg	☼	04/27/26 09:01	04/28/26 01:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*80 - 120*	*04/27/26 09:01*	*04/28/26 01:59*	*1*
Dibromofluoromethane (Surr)	*92*		*80 - 120*	*04/27/26 09:01*	*04/28/26 01:59*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*	*04/27/26 09:01*	*04/28/26 01:59*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00533		0.00533		mg/Kg	☼	04/27/26 08:10	04/28/26 04:13	1
Acenaphthylene	**0.00751**		0.00533		mg/Kg	☼	04/27/26 08:10	04/28/26 04:13	1
Anthracene	**0.00920**		0.00533		mg/Kg	☼	04/27/26 08:10	04/28/26 04:13	1
Benzo(a)anthracene	**0.0403**		0.00533		mg/Kg	☼	04/27/26 08:10	04/28/26 04:13	1
Benzo(a)pyrene	**0.0481**		0.00533		mg/Kg	☼	04/27/26 08:10	04/28/26 04:13	1
Benzo(b)fluoranthene	**0.0620**		0.00533		mg/Kg	☼	04/27/26 08:10	04/28/26 04:13	1
Benzo(g,h,i)perylene	**0.0361**		0.00533		mg/Kg	☼	04/27/26 08:10	04/28/26 04:13	1
Benzo(k)fluoranthene	**0.0246**		0.00533		mg/Kg	☼	04/27/26 08:10	04/28/26 04:13	1
Chrysene	**0.0438**		0.00533		mg/Kg	☼	04/27/26 08:10	04/28/26 04:13	1
Dibenz(a,h)anthracene	**0.00921**		0.00533		mg/Kg	☼	04/27/26 08:10	04/28/26 04:13	1
Fluoranthene	**0.0877**		0.00533		mg/Kg	☼	04/27/26 08:10	04/28/26 04:13	1
Fluorene	<0.00533		0.00533		mg/Kg	☼	04/27/26 08:10	04/28/26 04:13	1
Indeno(1,2,3-cd)pyrene	**0.0294**		0.00533		mg/Kg	☼	04/27/26 08:10	04/28/26 04:13	1
2-Methylnaphthalene	<0.00533		0.00533		mg/Kg	☼	04/27/26 08:10	04/28/26 04:13	1
Naphthalene	<0.00533		0.00533		mg/Kg	☼	04/27/26 08:10	04/28/26 04:13	1
Phenanthrene	**0.0312**		0.00533		mg/Kg	☼	04/27/26 08:10	04/28/26 04:13	1
Pyrene	**0.0733**		0.00533		mg/Kg	☼	04/27/26 08:10	04/28/26 04:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*90*		*20 - 122*	*04/27/26 08:10*	*04/28/26 04:13*	*1*
Nitrobenzene-d5 (Surr)	*109*		*10 - 132*	*04/27/26 08:10*	*04/28/26 04:13*	*1*
Terphenyl-d14 (Surr)	*93*		*10 - 119*	*04/27/26 08:10*	*04/28/26 04:13*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-07-2.5

Date Collected: 04/20/26 13:00
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-16

Matrix: Solid
Percent Solids: 89.1

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<10.1		10.1		mg/Kg	☼	04/28/26 11:40	04/29/26 01:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*	*04/28/26 11:40*	*04/29/26 01:37*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	**8.87**		7.34		mg/Kg	☼	04/23/26 07:56	04/23/26 15:12	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**2.18**		1.06		mg/Kg	☼	04/24/26 10:00	04/27/26 19:58	2
Barium	**47.5**		1.06		mg/Kg	☼	04/24/26 10:00	04/27/26 19:58	2
Cadmium	<0.212		0.212		mg/Kg	☼	04/24/26 10:00	04/27/26 19:58	2
Chromium	**26.0**		0.423		mg/Kg	☼	04/24/26 10:00	04/27/26 19:58	2
Lead	**7.52**		0.212		mg/Kg	☼	04/24/26 10:00	04/27/26 19:58	2
Selenium	<1.06		1.06		mg/Kg	☼	04/24/26 10:00	04/27/26 19:58	2
Silver	<0.212		0.212		mg/Kg	☼	04/24/26 10:00	04/27/26 19:58	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.109		0.109		mg/Kg	☼	04/24/26 10:00	04/27/26 13:21	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**10.9**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**89.1**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-09-1
Date Collected: 04/20/26 13:15
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-17
Matrix: Solid
Percent Solids: 79.7

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.788		0.788		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Allyl chloride	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Benzene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Bromobenzene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Bromochloromethane	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Bromodichloromethane	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Bromoform	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Bromomethane	<0.788		0.788		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
2-Butanone (MEK)	<1.18		1.18		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Carbon tetrachloride	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Chlorobenzene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Chlorodibromomethane	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Chloroethane	<0.394		0.394		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Chloroform	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Chloromethane	<0.394		0.394		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
2-Chlorotoluene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
4-Chlorotoluene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
cis-1,2-Dichloroethene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
cis-1,3-Dichloropropene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
1,2-Dibromo-3-chloropropane	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
1,2-Dibromoethane (EDB)	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Dibromomethane	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
1,2-Dichlorobenzene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
1,3-Dichlorobenzene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
1,4-Dichlorobenzene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Dichlorodifluoromethane	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
1,1-Dichloroethane	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
1,2-Dichloroethane	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
1,1-Dichloroethene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Dichlorofluoromethane	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
1,2-Dichloropropane	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
1,3-Dichloropropane	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
2,2-Dichloropropane	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
1,1-Dichloropropene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Diethyl ether	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Ethylbenzene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Hexachlorobutadiene	<0.394		0.394		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Isopropylbenzene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Methylene chloride	<0.394		0.394		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
4-Methyl-2-pentanone (MIBK)	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Methyl tert-butyl ether	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Naphthalene	<0.394		0.394		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
n-Butylbenzene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
n-Propylbenzene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
p-Isopropyltoluene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
sec-Butylbenzene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Styrene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
tert-Butylbenzene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
1,1,1,2-Tetrachloroethane	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1

Client Sample ID: HA-09-1
Lab Sample ID: 310-330206-17
Date Collected: 04/20/26 13:15
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 79.7

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Tetrachloroethene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Tetrahydrofuran	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Toluene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
trans-1,2-Dichloroethene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
trans-1,3-Dichloropropene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
1,2,3-Trichlorobenzene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
1,2,4-Trichlorobenzene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
1,1,1-Trichloroethane	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
1,1,2-Trichloroethane	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Trichloroethene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Trichlorofluoromethane	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
1,2,3-Trichloropropane	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
1,1,2-Trichlorotrifluoroethane	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
1,2,4-Trimethylbenzene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
1,3,5-Trimethylbenzene	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Vinyl chloride	<0.158		0.158		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1
Xylenes, Total	<0.237		0.237		mg/Kg	☼	04/27/26 09:01	04/28/26 02:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*	*04/27/26 09:01*	*04/28/26 02:22*	*1*
Dibromofluoromethane (Surr)	*86*		*80 - 120*	*04/27/26 09:01*	*04/28/26 02:22*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*	*04/27/26 09:01*	*04/28/26 02:22*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**0.00675**		0.00595		mg/Kg	☼	04/27/26 08:10	04/28/26 12:47	1
Acenaphthylene	**0.0200**		0.00595		mg/Kg	☼	04/27/26 08:10	04/28/26 04:38	1
Anthracene	**0.0314**		0.00595		mg/Kg	☼	04/27/26 08:10	04/28/26 04:38	1
Benzo(a)anthracene	**0.137**		0.00595		mg/Kg	☼	04/27/26 08:10	04/28/26 04:38	1
Benzo(a)pyrene	**0.139**		0.00595		mg/Kg	☼	04/27/26 08:10	04/28/26 04:38	1
Benzo(b)fluoranthene	**0.201**		0.00595		mg/Kg	☼	04/27/26 08:10	04/28/26 04:38	1
Benzo(g,h,i)perylene	**0.0802**		0.00595		mg/Kg	☼	04/27/26 08:10	04/28/26 04:38	1
Benzo(k)fluoranthene	**0.0742**		0.00595		mg/Kg	☼	04/27/26 08:10	04/28/26 04:38	1
Chrysene	**0.149**		0.00595		mg/Kg	☼	04/27/26 08:10	04/28/26 04:38	1
Dibenz(a,h)anthracene	**0.0237**		0.00595		mg/Kg	☼	04/27/26 08:10	04/28/26 04:38	1
Fluoranthene	**0.355**		0.00595		mg/Kg	☼	04/27/26 08:10	04/28/26 04:38	1
Fluorene	**0.0105**		0.00595		mg/Kg	☼	04/27/26 08:10	04/28/26 04:38	1
Indeno(1,2,3-cd)pyrene	**0.0774**		0.00595		mg/Kg	☼	04/27/26 08:10	04/28/26 04:38	1
2-Methylnaphthalene	<0.00595		0.00595		mg/Kg	☼	04/27/26 08:10	04/28/26 04:38	1
Naphthalene	<0.00595		0.00595		mg/Kg	☼	04/27/26 08:10	04/28/26 04:38	1
Phenanthrene	**0.138**		0.00595		mg/Kg	☼	04/27/26 08:10	04/28/26 04:38	1
Pyrene	**0.261**		0.00595		mg/Kg	☼	04/27/26 08:10	04/28/26 04:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*93*		*20 - 122*	*04/27/26 08:10*	*04/28/26 04:38*	*1*
Nitrobenzene-d5 (Surr)	*118*		*10 - 132*	*04/27/26 08:10*	*04/28/26 04:38*	*1*
Terphenyl-d14 (Surr)	*90*		*10 - 119*	*04/27/26 08:10*	*04/28/26 04:38*	*1*

Client Sample ID: HA-09-1
Date Collected: 04/20/26 13:15
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-17
Matrix: Solid
Percent Solids: 79.7

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<14.5		14.5		mg/Kg	☼	04/28/26 11:40	04/29/26 02:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*	*04/28/26 11:40*	*04/29/26 02:03*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	**31.5**		6.94		mg/Kg	☼	04/23/26 07:56	04/23/26 14:59	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.244		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.244		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.244		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.244		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.487		0.487		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.487		0.487		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.487		0.487		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.244		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.244		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.22		1.22		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.244		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.244		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.22		1.22		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.244		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
Perfluorobutanesulfonic acid (PFBS)	<0.244		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
Perfluorobutanoic acid (PFBA)	<0.487		0.487		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
Perfluorodecanesulfonic acid (PFDS)	<0.244		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
Perfluorodecanoic acid (PFDA)	<0.244		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
Perfluorododecanesulfonic acid (PFDoS)	<0.244		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
Perfluorododecanoic acid (PFDoA)	<0.244		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.244		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.244		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
Perfluoroheptanoic acid (PFHpA)	<0.244		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.22		1.22		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
Perfluorohexanesulfonic acid (PFHxS)	**10.1**		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-09-1
Date Collected: 04/20/26 13:15
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-17
Matrix: Solid
Percent Solids: 79.7

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	**0.901**		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.244		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.244		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
Perfluorononanesulfonic acid (PFNS)	<0.244		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
Perfluorononanoic acid (PFNA)	<0.244		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
Perfluorooctanesulfonamide (PFOSA)	<0.244		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
Perfluorooctanesulfonic acid (PFOS)	**16.0**		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
Perfluorooctanoic acid (PFOA)	**0.760**		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
Perfluoropentanesulfonic acid (PFPeS)	<0.244		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
Perfluoropentanoic acid (PFPeA)	**0.245**		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.22		1.22		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.487		0.487		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
Perfluorotetradecanoic acid (PFTeDA)	<0.244		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
Perfluorotridecanoic acid (PFTrDA)	<0.244		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1
Perfluoroundecanoic acid (PFUnA)	<0.244		0.244		ng/g	☼	04/28/26 08:24	04/29/26 03:07	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*108*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:07*	*1*
13C2 10:2 FTS	*98.5*		*40 - 275*	*04/28/26 08:24*	*04/29/26 03:07*	*1*
13C2 4:2 FTS	*109*		*40 - 165*	*04/28/26 08:24*	*04/29/26 03:07*	*1*
13C2 6:2 FTS	*95.1*		*40 - 215*	*04/28/26 08:24*	*04/29/26 03:07*	*1*
13C2 8:2 FTS	*95.9*		*40 - 275*	*04/28/26 08:24*	*04/29/26 03:07*	*1*
13C3 HFPO-DA	*57.9*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:07*	*1*
13C4 PFBA	*64.9*		*8 - 130*	*04/28/26 08:24*	*04/29/26 03:07*	*1*
13C3 PFBS	*86.7*		*40 - 135*	*04/28/26 08:24*	*04/29/26 03:07*	*1*
13C6 PFDA	*73.3*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:07*	*1*
13C2-PFDoA	*71.3*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:07*	*1*
13C4 PFHpA	*69.3*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:07*	*1*
13C5 PFHxA	*60.2*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:07*	*1*
13C3 PFHxS	*85.2*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:07*	*1*
13C9 PFNA	*79.2*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:07*	*1*
13C8 PFOA	*66.5*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:07*	*1*
13C8 PFOS	*91.9*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:07*	*1*
13C5 PFPeA	*71.8*		*35 - 130*	*04/28/26 08:24*	*04/29/26 03:07*	*1*
13C3-PFPrS	*60.3*		*20 - 150*	*04/28/26 08:24*	*04/29/26 03:07*	*1*
13C2 PFTeDA	*71.9*		*20 - 130*	*04/28/26 08:24*	*04/29/26 03:07*	*1*
13C7 PFUnA	*64.8*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:07*	*1*
d5-NEtFOSAA	*98.9*		*40 - 150*	*04/28/26 08:24*	*04/29/26 03:07*	*1*
d9-N-EtFOSE-M	*64.9*		*15 - 130*	*04/28/26 08:24*	*04/29/26 03:07*	*1*
d5-NEtPFOSA	*79.8*		*10 - 130*	*04/28/26 08:24*	*04/29/26 03:07*	*1*
d3-NMeFOSAA	*101*		*40 - 135*	*04/28/26 08:24*	*04/29/26 03:07*	*1*
d7-N-MeFOSE-M	*73.8*		*20 - 130*	*04/28/26 08:24*	*04/29/26 03:07*	*1*
d3-NMePFOSA	*85.0*		*10 - 130*	*04/28/26 08:24*	*04/29/26 03:07*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-09-1
Date Collected: 04/20/26 13:15
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-17
Matrix: Solid
Percent Solids: 79.7

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**2.07**		1.17		mg/Kg	☼	04/24/26 10:00	04/27/26 20:01	2
Barium	**47.9**		1.17		mg/Kg	☼	04/24/26 10:00	04/27/26 20:01	2
Cadmium	<0.235		0.235		mg/Kg	☼	04/24/26 10:00	04/27/26 20:01	2
Chromium	**21.9**		0.469		mg/Kg	☼	04/24/26 10:00	04/27/26 20:01	2
Lead	**9.02**		0.235		mg/Kg	☼	04/24/26 10:00	04/27/26 20:01	2
Selenium	<1.17		1.17		mg/Kg	☼	04/24/26 10:00	04/27/26 20:01	2
Silver	<0.235		0.235		mg/Kg	☼	04/24/26 10:00	04/27/26 20:01	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.111		0.111		mg/Kg	☼	04/24/26 10:00	04/27/26 13:32	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**20.3**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**79.7**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-09-3
Date Collected: 04/20/26 13:20
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-18
Matrix: Solid
Percent Solids: 82.7

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.675		0.675		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Allyl chloride	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Benzene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Bromobenzene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Bromochloromethane	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Bromodichloromethane	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Bromoform	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Bromomethane	<0.675		0.675		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
2-Butanone (MEK)	<1.01		1.01		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Carbon tetrachloride	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Chlorobenzene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Chlorodibromomethane	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Chloroethane	<0.338		0.338		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Chloroform	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Chloromethane	<0.338		0.338		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
2-Chlorotoluene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
4-Chlorotoluene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
cis-1,2-Dichloroethene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
cis-1,3-Dichloropropene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
1,2-Dibromo-3-chloropropane	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
1,2-Dibromoethane (EDB)	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Dibromomethane	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
1,2-Dichlorobenzene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
1,3-Dichlorobenzene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
1,4-Dichlorobenzene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Dichlorodifluoromethane	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
1,1-Dichloroethane	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
1,2-Dichloroethane	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
1,1-Dichloroethene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Dichlorofluoromethane	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
1,2-Dichloropropane	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
1,3-Dichloropropane	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
2,2-Dichloropropane	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
1,1-Dichloropropene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Diethyl ether	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Ethylbenzene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Hexachlorobutadiene	<0.338		0.338		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Isopropylbenzene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Methylene chloride	<0.338		0.338		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
4-Methyl-2-pentanone (MIBK)	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Methyl tert-butyl ether	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Naphthalene	<0.338		0.338		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
n-Butylbenzene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
n-Propylbenzene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
p-Isopropyltoluene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
sec-Butylbenzene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Styrene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
tert-Butylbenzene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
1,1,1,2-Tetrachloroethane	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1

Client Sample ID: HA-09-3
Date Collected: 04/20/26 13:20
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-18
Matrix: Solid
Percent Solids: 82.7

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Tetrachloroethene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Tetrahydrofuran	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Toluene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
trans-1,2-Dichloroethene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
trans-1,3-Dichloropropene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
1,2,3-Trichlorobenzene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
1,2,4-Trichlorobenzene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
1,1,1-Trichloroethane	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
1,1,2-Trichloroethane	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Trichloroethene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Trichlorofluoromethane	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
1,2,3-Trichloropropane	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
1,1,2-Trichlorotrifluoroethane	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
1,2,4-Trimethylbenzene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
1,3,5-Trimethylbenzene	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Vinyl chloride	<0.135		0.135		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1
Xylenes, Total	<0.203		0.203		mg/Kg	☼	04/27/26 09:01	04/28/26 02:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*	*04/27/26 09:01*	*04/28/26 02:44*	*1*
Dibromofluoromethane (Surr)	*87*		*80 - 120*	*04/27/26 09:01*	*04/28/26 02:44*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*	*04/27/26 09:01*	*04/28/26 02:44*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00562		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 05:02	1
Acenaphthylene	**0.0130**		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 05:02	1
Anthracene	**0.0253**		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 05:02	1
Benzo(a)anthracene	**0.102**		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 05:02	1
Benzo(a)pyrene	**0.0930**		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 05:02	1
Benzo(b)fluoranthene	**0.130**		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 05:02	1
Benzo(g,h,i)perylene	**0.0523**		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 05:02	1
Benzo(k)fluoranthene	**0.0502**		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 05:02	1
Chrysene	**0.100**		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 05:02	1
Dibenz(a,h)anthracene	**0.0152**		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 05:02	1
Fluoranthene	**0.271**		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 05:02	1
Fluorene	**0.00908**		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 05:02	1
Indeno(1,2,3-cd)pyrene	**0.0513**		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 05:02	1
2-Methylnaphthalene	<0.00562		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 05:02	1
Naphthalene	<0.00562		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 05:02	1
Phenanthrene	**0.118**		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 05:02	1
Pyrene	**0.195**		0.00562		mg/Kg	☼	04/27/26 08:10	04/28/26 05:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*88*		*20 - 122*	*04/27/26 08:10*	*04/28/26 05:02*	*1*
Nitrobenzene-d5 (Surr)	*115*		*10 - 132*	*04/27/26 08:10*	*04/28/26 05:02*	*1*
Terphenyl-d14 (Surr)	*95*		*10 - 119*	*04/27/26 08:10*	*04/28/26 05:02*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-09-3

Date Collected: 04/20/26 13:20
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-18

Matrix: Solid
Percent Solids: 82.7

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<11.4		11.4		mg/Kg	☼	04/28/26 11:40	04/29/26 02:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*	*04/28/26 11:40*	*04/29/26 02:29*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	**13.5**		6.36		mg/Kg	☼	04/23/26 07:56	04/23/26 14:47	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.85**		1.02		mg/Kg	☼	04/24/26 10:00	04/27/26 20:04	2
Barium	**44.5**		1.02		mg/Kg	☼	04/24/26 10:00	04/27/26 20:04	2
Cadmium	<0.203		0.203		mg/Kg	☼	04/24/26 10:00	04/27/26 20:04	2
Chromium	**19.2**		0.407		mg/Kg	☼	04/24/26 10:00	04/27/26 20:04	2
Lead	**6.51**		0.203		mg/Kg	☼	04/24/26 10:00	04/27/26 20:04	2
Selenium	<1.02		1.02		mg/Kg	☼	04/24/26 10:00	04/27/26 20:04	2
Silver	<0.203		0.203		mg/Kg	☼	04/24/26 10:00	04/27/26 20:04	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.113		0.113		mg/Kg	☼	04/24/26 10:00	04/27/26 13:34	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**17.3**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**82.7**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: WS-01
Date Collected: 04/21/26 09:00
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-19
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L			04/29/26 01:33	1
Allyl chloride	<2.00		2.00		ug/L			04/29/26 01:33	1
Benzene	<0.500		0.500		ug/L			04/29/26 01:33	1
Bromobenzene	<1.00		1.00		ug/L			04/29/26 01:33	1
Bromochloromethane	<5.00		5.00		ug/L			04/29/26 01:33	1
Bromodichloromethane	<1.00		1.00		ug/L			04/29/26 01:33	1
Bromoform	<5.00		5.00		ug/L			04/29/26 01:33	1
Bromomethane	<4.00		4.00		ug/L			04/29/26 01:33	1
2-Butanone (MEK)	<10.0		10.0		ug/L			04/29/26 01:33	1
Carbon tetrachloride	<2.00		2.00		ug/L			04/29/26 01:33	1
Chlorobenzene	<1.00		1.00		ug/L			04/29/26 01:33	1
Chlorodibromomethane	<5.00		5.00		ug/L			04/29/26 01:33	1
Chloroethane	<4.00		4.00		ug/L			04/29/26 01:33	1
Chloroform	<3.00		3.00		ug/L			04/29/26 01:33	1
Chloromethane	<3.00		3.00		ug/L			04/29/26 01:33	1
2-Chlorotoluene	<1.00		1.00		ug/L			04/29/26 01:33	1
4-Chlorotoluene	<1.00		1.00		ug/L			04/29/26 01:33	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			04/29/26 01:33	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			04/29/26 01:33	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			04/29/26 01:33	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			04/29/26 01:33	1
Dibromomethane	<1.00		1.00		ug/L			04/29/26 01:33	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			04/29/26 01:33	1
1,3-Dichlorobenzene	<1.00		1.00		ug/L			04/29/26 01:33	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			04/29/26 01:33	1
Dichlorodifluoromethane	<3.00		3.00		ug/L			04/29/26 01:33	1
1,1-Dichloroethane	<1.00		1.00		ug/L			04/29/26 01:33	1
1,2-Dichloroethane	<1.00		1.00		ug/L			04/29/26 01:33	1
1,1-Dichloroethene	<2.00		2.00		ug/L			04/29/26 01:33	1
Dichlorofluoromethane	<1.00		1.00		ug/L			04/29/26 01:33	1
1,2-Dichloropropane	<1.00		1.00		ug/L			04/29/26 01:33	1
1,3-Dichloropropane	<1.00		1.00		ug/L			04/29/26 01:33	1
2,2-Dichloropropane	<4.00		4.00		ug/L			04/29/26 01:33	1
1,1-Dichloropropene	<1.00		1.00		ug/L			04/29/26 01:33	1
Diethyl ether	<2.00		2.00		ug/L			04/29/26 01:33	1
Ethylbenzene	<1.00		1.00		ug/L			04/29/26 01:33	1
Hexachlorobutadiene	<5.00		5.00		ug/L			04/29/26 01:33	1
Isopropylbenzene	<1.00		1.00		ug/L			04/29/26 01:33	1
Methylene chloride	<5.00		5.00		ug/L			04/29/26 01:33	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			04/29/26 01:33	1
Methyl tert-butyl ether	<1.00		1.00		ug/L			04/29/26 01:33	1
Naphthalene	<5.00		5.00		ug/L			04/29/26 01:33	1
n-Butylbenzene	<1.00		1.00		ug/L			04/29/26 01:33	1
n-Propylbenzene	<1.00		1.00		ug/L			04/29/26 01:33	1
p-Isopropyltoluene	<1.00		1.00		ug/L			04/29/26 01:33	1
sec-Butylbenzene	<1.00		1.00		ug/L			04/29/26 01:33	1
Styrene	<1.00		1.00		ug/L			04/29/26 01:33	1
tert-Butylbenzene	<1.00		1.00		ug/L			04/29/26 01:33	1
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L			04/29/26 01:33	1

Client Sample ID: WS-01
Lab Sample ID: 310-330206-19
Date Collected: 04/21/26 09:00
Matrix: Water
Date Received: 04/22/26 13:20

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			04/29/26 01:33	1
Tetrachloroethene	<1.00		1.00		ug/L			04/29/26 01:33	1
Tetrahydrofuran	<10.0		10.0		ug/L			04/29/26 01:33	1
Toluene	<1.00		1.00		ug/L			04/29/26 01:33	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			04/29/26 01:33	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			04/29/26 01:33	1
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L			04/29/26 01:33	1
1,2,4-Trichlorobenzene	<5.00		5.00		ug/L			04/29/26 01:33	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			04/29/26 01:33	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			04/29/26 01:33	1
Trichloroethene	<1.00		1.00		ug/L			04/29/26 01:33	1
Trichlorofluoromethane	<4.00		4.00		ug/L			04/29/26 01:33	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			04/29/26 01:33	1
1,1,2-Trichlorotrifluoroethane	<2.00		2.00		ug/L			04/29/26 01:33	1
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L			04/29/26 01:33	1
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L			04/29/26 01:33	1
Vinyl chloride	<1.00		1.00		ug/L			04/29/26 01:33	1
Xylenes, Total	<3.00		3.00		ug/L			04/29/26 01:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*04/29/26 01:33*	*1*
Dibromofluoromethane (Surr)	*108*		*76 - 130*		*04/29/26 01:33*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*04/29/26 01:33*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	<0.122		0.122		ug/L		04/27/26 13:27	04/29/26 22:09	1
Acenaphthene	<0.122		0.122		ug/L		04/27/26 13:27	04/29/26 22:09	1
Acenaphthylene	<0.122		0.122		ug/L		04/27/26 13:27	04/29/26 22:09	1
Anthracene	<0.122		0.122		ug/L		04/27/26 13:27	04/29/26 22:09	1
Benzo(a)anthracene	<0.122		0.122		ug/L		04/27/26 13:27	04/29/26 22:09	1
Benzo(a)pyrene	<0.122		0.122		ug/L		04/27/26 13:27	04/29/26 22:09	1
Benzo(b)fluoranthene	<0.122		0.122		ug/L		04/27/26 13:27	04/29/26 22:09	1
Benzo(g,h,i)perylene	<0.122		0.122		ug/L		04/27/26 13:27	04/29/26 22:09	1
Benzo(k)fluoranthene	<0.122		0.122		ug/L		04/27/26 13:27	04/29/26 22:09	1
Chrysene	<0.122		0.122		ug/L		04/27/26 13:27	04/29/26 22:09	1
Dibenz(a,h)anthracene	<0.122		0.122		ug/L		04/27/26 13:27	04/29/26 22:09	1
Fluoranthene	<0.122		0.122		ug/L		04/27/26 13:27	04/29/26 22:09	1
Fluorene	<0.122		0.122		ug/L		04/27/26 13:27	04/29/26 22:09	1
Indeno(1,2,3-cd)pyrene	<0.122		0.122		ug/L		04/27/26 13:27	04/29/26 22:09	1
Naphthalene	<0.122		0.122		ug/L		04/27/26 13:27	04/29/26 22:09	1
Phenanthrene	<0.122		0.122		ug/L		04/27/26 13:27	04/29/26 22:09	1
Pyrene	<0.122		0.122		ug/L		04/27/26 13:27	04/29/26 22:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*90*		*13 - 150*	*04/27/26 13:27*	*04/29/26 22:09*	*1*
Nitrobenzene-d5 (Surr)	*115*		*22 - 150*	*04/27/26 13:27*	*04/29/26 22:09*	*1*
Terphenyl-d14 (Surr)	*95*		*10 - 150*	*04/27/26 13:27*	*04/29/26 22:09*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: WS-01

Date Collected: 04/21/26 09:00
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-19

Matrix: Water

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<100		100		ug/L			04/29/26 00:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*04/29/26 00:37*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	**0.257**		0.0989		mg/L		04/23/26 07:27	04/23/26 13:03	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<1.63		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<1.63		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.63		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.22		1.22		ng/L		04/24/26 10:05	04/25/26 07:59	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<3.26		3.26		ng/L		04/24/26 10:05	04/25/26 07:59	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<3.26		3.26		ng/L		04/24/26 10:05	04/25/26 07:59	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	**3.74**		3.26		ng/L		04/24/26 10:05	04/25/26 07:59	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<1.63		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.63		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<8.16		8.16		ng/L		04/24/26 10:05	04/25/26 07:59	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<1.63		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.63		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<8.16		8.16		ng/L		04/24/26 10:05	04/25/26 07:59	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.63		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
Perfluorobutanesulfonic acid (PFBS)	**48.0**		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
Perfluorobutanoic acid (PFBA)	**15.9**		3.26		ng/L		04/24/26 10:05	04/25/26 07:59	1
Perfluorodecanesulfonic acid (PFDS)	<1.63		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
Perfluorodecanoic acid (PFDA)	<1.63		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
Perfluorododecanesulfonic acid (PFDoS)	<1.63		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
Perfluorododecanoic acid (PFDoA)	<1.63		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.63		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
Perfluoroheptanesulfonic acid (PFHpS)	**4.68**		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
Perfluoroheptanoic acid (PFHpA)	**17.9**		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<8.16		8.16		ng/L		04/24/26 10:05	04/25/26 07:59	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: WS-01
Date Collected: 04/21/26 09:00
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-19
Matrix: Water

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	**246**		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
Perfluorohexanoic acid (PFHxA)	**54.3**		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.63		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.63		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
Perfluorononanesulfonic acid (PFNS)	<1.63		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
Perfluorononanoic acid (PFNA)	**2.04**		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
Perfluorooctanesulfonamide (PFOSA)	<1.63		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
Perfluorooctanesulfonic acid (PFOS)	**165**		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
Perfluorooctanoic acid (PFOA)	**41.0**		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
Perfluoropentanesulfonic acid (PFPeS)	**40.9**		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
Perfluoropentanoic acid (PFPeA)	**40.0**		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<8.16		8.16		ng/L		04/24/26 10:05	04/25/26 07:59	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<3.26		3.26		ng/L		04/24/26 10:05	04/25/26 07:59	1
Perfluorotetradecanoic acid (PFTeDA)	<1.63		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
Perfluorotridecanoic acid (PFTrDA)	<1.63		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1
Perfluoroundecanoic acid (PFUnA)	<1.63		1.63		ng/L		04/24/26 10:05	04/25/26 07:59	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*78.0*		*40 - 130*	*04/24/26 10:05*	*04/25/26 07:59*	*1*
13C2 10:2 FTS	*67.2*		*40 - 200*	*04/24/26 10:05*	*04/25/26 07:59*	*1*
13C2 4:2 FTS	*113*		*40 - 200*	*04/24/26 10:05*	*04/25/26 07:59*	*1*
13C2 6:2 FTS	*96.1*		*40 - 200*	*04/24/26 10:05*	*04/25/26 07:59*	*1*
13C2 8:2 FTS	*84.1*		*40 - 300*	*04/24/26 10:05*	*04/25/26 07:59*	*1*
13C3 HFPO-DA	*80.7*		*40 - 130*	*04/24/26 10:05*	*04/25/26 07:59*	*1*
13C4 PFBA	*78.4*		*5 - 130*	*04/24/26 10:05*	*04/25/26 07:59*	*1*
13C3 PFBS	*77.8*		*40 - 135*	*04/24/26 10:05*	*04/25/26 07:59*	*1*
13C6 PFDA	*74.4*		*40 - 130*	*04/24/26 10:05*	*04/25/26 07:59*	*1*
13C2-PFDoA	*60.1*		*10 - 130*	*04/24/26 10:05*	*04/25/26 07:59*	*1*
13C4 PFHpA	*85.1*		*40 - 130*	*04/24/26 10:05*	*04/25/26 07:59*	*1*
13C5 PFHxA	*87.2*		*40 - 130*	*04/24/26 10:05*	*04/25/26 07:59*	*1*
13C3 PFHxS	*84.4*		*40 - 130*	*04/24/26 10:05*	*04/25/26 07:59*	*1*
13C9 PFNA	*83.5*		*40 - 130*	*04/24/26 10:05*	*04/25/26 07:59*	*1*
13C8 PFOA	*91.8*		*40 - 130*	*04/24/26 10:05*	*04/25/26 07:59*	*1*
13C8 PFOS	*84.9*		*40 - 130*	*04/24/26 10:05*	*04/25/26 07:59*	*1*
13C5 PFPeA	*89.9*		*40 - 130*	*04/24/26 10:05*	*04/25/26 07:59*	*1*
13C3-PFPrS	*84.1*		*20 - 150*	*04/24/26 10:05*	*04/25/26 07:59*	*1*
13C2 PFTeDA	*55.4*		*10 - 130*	*04/24/26 10:05*	*04/25/26 07:59*	*1*
13C7 PFUnA	*69.6*		*30 - 130*	*04/24/26 10:05*	*04/25/26 07:59*	*1*
d5-NEtFOSAA	*71.4*		*25 - 135*	*04/24/26 10:05*	*04/25/26 07:59*	*1*
d9-N-EtFOSE-M	*26.7*		*10 - 130*	*04/24/26 10:05*	*04/25/26 07:59*	*1*
d5-NEtPFOSA	*61.9*		*10 - 130*	*04/24/26 10:05*	*04/25/26 07:59*	*1*
d3-NMeFOSAA	*75.0*		*40 - 170*	*04/24/26 10:05*	*04/25/26 07:59*	*1*
d7-N-MeFOSE-M	*28.6*		*10 - 130*	*04/24/26 10:05*	*04/25/26 07:59*	*1*
d3-NMePFOSA	*66.9*		*10 - 130*	*04/24/26 10:05*	*04/25/26 07:59*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-1
Project/Site: Duluth Airport Taxiway A

Client Sample ID: WS-01
Lab Sample ID: 310-330206-19
Date Collected: 04/21/26 09:00
Matrix: Water
Date Received: 04/22/26 13:20

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<5.00		5.00		ug/L		04/24/26 14:00	04/27/26 14:22	1
Barium	**15.3**		5.00		ug/L		04/24/26 14:00	04/27/26 14:22	1
Cadmium	<1.00		1.00		ug/L		04/24/26 14:00	04/27/26 14:22	1
Chromium	<5.00		5.00		ug/L		04/24/26 14:00	04/27/26 14:22	1
Lead	<1.00		1.00		ug/L		04/24/26 14:00	04/27/26 14:22	1
Selenium	<5.00		5.00		ug/L		04/24/26 14:00	04/27/26 14:22	1
Silver	<1.00		1.00		ug/L		04/24/26 14:00	04/27/26 14:22	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.200		0.200		ug/L		04/24/26 14:00	04/27/26 12:56	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: SS-01
Date Collected: 04/21/26 10:00
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-20
Matrix: Solid
Percent Solids: 81.6

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.730		0.730		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Allyl chloride	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Benzene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Bromobenzene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Bromochloromethane	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Bromodichloromethane	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Bromoform	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Bromomethane	<0.730		0.730		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
2-Butanone (MEK)	<1.10		1.10		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Carbon tetrachloride	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Chlorobenzene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Chlorodibromomethane	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Chloroethane	<0.365		0.365		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Chloroform	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Chloromethane	<0.365		0.365		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
2-Chlorotoluene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
4-Chlorotoluene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
cis-1,2-Dichloroethene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
cis-1,3-Dichloropropene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
1,2-Dibromo-3-chloropropane	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
1,2-Dibromoethane (EDB)	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Dibromomethane	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
1,2-Dichlorobenzene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
1,3-Dichlorobenzene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
1,4-Dichlorobenzene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Dichlorodifluoromethane	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
1,1-Dichloroethane	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
1,2-Dichloroethane	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
1,1-Dichloroethene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Dichlorofluoromethane	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
1,2-Dichloropropane	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
1,3-Dichloropropane	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
2,2-Dichloropropane	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
1,1-Dichloropropene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Diethyl ether	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Ethylbenzene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Hexachlorobutadiene	<0.365		0.365		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Isopropylbenzene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Methylene chloride	<0.365		0.365		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
4-Methyl-2-pentanone (MIBK)	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Methyl tert-butyl ether	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Naphthalene	<0.365		0.365		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
n-Butylbenzene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
n-Propylbenzene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
p-Isopropyltoluene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
sec-Butylbenzene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Styrene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
tert-Butylbenzene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
1,1,1,2-Tetrachloroethane	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1

Client Sample ID: SS-01
Lab Sample ID: 310-330206-20
Date Collected: 04/21/26 10:00
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 81.6

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Tetrachloroethene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Tetrahydrofuran	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Toluene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
trans-1,2-Dichloroethene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
trans-1,3-Dichloropropene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
1,2,3-Trichlorobenzene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
1,2,4-Trichlorobenzene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
1,1,1-Trichloroethane	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
1,1,2-Trichloroethane	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Trichloroethene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Trichlorofluoromethane	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
1,2,3-Trichloropropane	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
1,1,2-Trichlorotrifluoroethane	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
1,2,4-Trimethylbenzene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
1,3,5-Trimethylbenzene	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Vinyl chloride	<0.146		0.146		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1
Xylenes, Total	<0.219		0.219		mg/Kg	☼	04/27/26 09:01	04/28/26 03:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*	*04/27/26 09:01*	*04/28/26 03:07*	*1*
Dibromofluoromethane (Surr)	*95*		*80 - 120*	*04/27/26 09:01*	*04/28/26 03:07*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*	*04/27/26 09:01*	*04/28/26 03:07*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00566		0.00566		mg/Kg	☼	04/27/26 08:10	04/28/26 05:27	1
Acenaphthylene	<0.00566		0.00566		mg/Kg	☼	04/27/26 08:10	04/28/26 05:27	1
Anthracene	<0.00566		0.00566		mg/Kg	☼	04/27/26 08:10	04/28/26 05:27	1
Benzo(a)anthracene	<0.00566		0.00566		mg/Kg	☼	04/27/26 08:10	04/28/26 05:27	1
Benzo(a)pyrene	<0.00566		0.00566		mg/Kg	☼	04/27/26 08:10	04/28/26 05:27	1
Benzo(b)fluoranthene	<0.00566		0.00566		mg/Kg	☼	04/27/26 08:10	04/28/26 05:27	1
Benzo(g,h,i)perylene	<0.00566		0.00566		mg/Kg	☼	04/27/26 08:10	04/28/26 05:27	1
Benzo(k)fluoranthene	<0.00566		0.00566		mg/Kg	☼	04/27/26 08:10	04/28/26 05:27	1
Chrysene	<0.00566		0.00566		mg/Kg	☼	04/27/26 08:10	04/28/26 05:27	1
Dibenz(a,h)anthracene	<0.00566		0.00566		mg/Kg	☼	04/27/26 08:10	04/28/26 05:27	1
Fluoranthene	**0.00717**		0.00566		mg/Kg	☼	04/27/26 08:10	04/28/26 05:27	1
Fluorene	<0.00566		0.00566		mg/Kg	☼	04/27/26 08:10	04/28/26 05:27	1
Indeno(1,2,3-cd)pyrene	<0.00566		0.00566		mg/Kg	☼	04/27/26 08:10	04/28/26 05:27	1
2-Methylnaphthalene	<0.00566		0.00566		mg/Kg	☼	04/27/26 08:10	04/28/26 05:27	1
Naphthalene	<0.00566		0.00566		mg/Kg	☼	04/27/26 08:10	04/28/26 05:27	1
Phenanthrene	<0.00566		0.00566		mg/Kg	☼	04/27/26 08:10	04/28/26 05:27	1
Pyrene	<0.00566		0.00566		mg/Kg	☼	04/27/26 08:10	04/28/26 05:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*90*		*20 - 122*	*04/27/26 08:10*	*04/28/26 05:27*	*1*
Nitrobenzene-d5 (Surr)	*57*		*10 - 132*	*04/27/26 08:10*	*04/28/26 05:27*	*1*
Terphenyl-d14 (Surr)	*88*		*10 - 119*	*04/27/26 08:10*	*04/28/26 05:27*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: SS-01
Date Collected: 04/21/26 10:00
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-20
Matrix: Solid
Percent Solids: 81.6

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<12.3		12.3		mg/Kg	☼	04/28/26 11:40	04/29/26 02:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*	*04/28/26 11:40*	*04/29/26 02:55*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<7.45		7.45		mg/Kg	☼	04/23/26 07:56	04/23/26 14:09	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.495		0.495		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.495		0.495		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.495		0.495		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.24		1.24		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.24		1.24		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
Perfluorobutanesulfonic acid (PFBS)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
Perfluorobutanoic acid (PFBA)	<0.495		0.495		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
Perfluorodecanesulfonic acid (PFDS)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
Perfluorodecanoic acid (PFDA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
Perfluorododecanesulfonic acid (PFDoS)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
Perfluorododecanoic acid (PFDoA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
Perfluoroheptanoic acid (PFHpA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.24		1.24		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
Perfluorohexanesulfonic acid (PFHxS)	**0.294**		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: SS-01
Date Collected: 04/21/26 10:00
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-20
Matrix: Solid
Percent Solids: 81.6

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
Perfluorononanesulfonic acid (PFNS)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
Perfluorononanoic acid (PFNA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
Perfluorooctanesulfonamide (PFOSA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
Perfluorooctanesulfonic acid (PFOS)	**1.35**		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
Perfluorooctanoic acid (PFOA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
Perfluoropentanesulfonic acid (PFPeS)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
Perfluoropentanoic acid (PFPeA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.24		1.24		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.495		0.495		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
Perfluorotetradecanoic acid (PFTeDA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
Perfluorotridecanoic acid (PFTrDA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1
Perfluoroundecanoic acid (PFUnA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 03:24	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*64.5*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:24*	*1*
13C2 10:2 FTS	*68.5*		*40 - 275*	*04/28/26 08:24*	*04/29/26 03:24*	*1*
13C2 4:2 FTS	*81.8*		*40 - 165*	*04/28/26 08:24*	*04/29/26 03:24*	*1*
13C2 6:2 FTS	*68.3*		*40 - 215*	*04/28/26 08:24*	*04/29/26 03:24*	*1*
13C2 8:2 FTS	*68.2*		*40 - 275*	*04/28/26 08:24*	*04/29/26 03:24*	*1*
13C3 HFPO-DA	*50.4*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:24*	*1*
13C4 PFBA	*54.1*		*8 - 130*	*04/28/26 08:24*	*04/29/26 03:24*	*1*
13C3 PFBS	*63.9*		*40 - 135*	*04/28/26 08:24*	*04/29/26 03:24*	*1*
13C6 PFDA	*52.9*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:24*	*1*
13C2-PFDoA	*55.7*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:24*	*1*
13C4 PFHpA	*57.0*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:24*	*1*
13C5 PFHxA	*52.2*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:24*	*1*
13C3 PFHxS	*62.7*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:24*	*1*
13C9 PFNA	*57.1*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:24*	*1*
13C8 PFOA	*51.0*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:24*	*1*
13C8 PFOS	*62.9*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:24*	*1*
13C5 PFPeA	*61.0*		*35 - 130*	*04/28/26 08:24*	*04/29/26 03:24*	*1*
13C3-PFPrS	*50.3*		*20 - 150*	*04/28/26 08:24*	*04/29/26 03:24*	*1*
13C2 PFTeDA	*65.8*		*20 - 130*	*04/28/26 08:24*	*04/29/26 03:24*	*1*
13C7 PFUnA	*49.7*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:24*	*1*
d5-NEtFOSAA	*67.0*		*40 - 150*	*04/28/26 08:24*	*04/29/26 03:24*	*1*
d9-N-EtFOSE-M	*43.8*		*15 - 130*	*04/28/26 08:24*	*04/29/26 03:24*	*1*
d5-NEtPFOSA	*53.6*		*10 - 130*	*04/28/26 08:24*	*04/29/26 03:24*	*1*
d3-NMeFOSAA	*66.7*		*40 - 135*	*04/28/26 08:24*	*04/29/26 03:24*	*1*
d7-N-MeFOSE-M	*47.5*		*20 - 130*	*04/28/26 08:24*	*04/29/26 03:24*	*1*
d3-NMePFOSA	*56.3*		*10 - 130*	*04/28/26 08:24*	*04/29/26 03:24*	*1*

Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-1
Project/Site: Duluth Airport Taxiway A

Client Sample ID: SS-01
Lab Sample ID: 310-330206-20
Date Collected: 04/21/26 10:00
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 81.6

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.62**		1.23		mg/Kg	☼	04/24/26 10:00	04/27/26 20:06	2
Barium	**61.3**		1.23		mg/Kg	☼	04/24/26 10:00	04/27/26 20:06	2
Cadmium	<0.245		0.245		mg/Kg	☼	04/24/26 10:00	04/27/26 20:06	2
Chromium	**22.7**		0.490		mg/Kg	☼	04/24/26 10:00	04/27/26 20:06	2
Lead	**5.59**		0.245		mg/Kg	☼	04/24/26 10:00	04/27/26 20:06	2
Selenium	<1.23		1.23		mg/Kg	☼	04/24/26 10:00	04/27/26 20:06	2
Silver	<0.245		0.245		mg/Kg	☼	04/24/26 10:00	04/27/26 20:06	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.115		0.115		mg/Kg	☼	04/24/26 10:00	04/27/26 13:35	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**18.4**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**81.6**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: SS-02
Date Collected: 04/21/26 10:10
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-21
Matrix: Solid
Percent Solids: 72.6

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.882		0.882		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Allyl chloride	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Benzene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Bromobenzene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Bromochloromethane	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Bromodichloromethane	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Bromoform	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Bromomethane	<0.882		0.882		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
2-Butanone (MEK)	<1.32		1.32		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Carbon tetrachloride	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Chlorobenzene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Chlorodibromomethane	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Chloroethane	<0.441		0.441		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Chloroform	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Chloromethane	<0.441		0.441		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
2-Chlorotoluene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
4-Chlorotoluene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
cis-1,2-Dichloroethene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
cis-1,3-Dichloropropene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
1,2-Dibromo-3-chloropropane	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
1,2-Dibromoethane (EDB)	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Dibromomethane	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
1,2-Dichlorobenzene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
1,3-Dichlorobenzene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
1,4-Dichlorobenzene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Dichlorodifluoromethane	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
1,1-Dichloroethane	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
1,2-Dichloroethane	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
1,1-Dichloroethene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Dichlorofluoromethane	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
1,2-Dichloropropane	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
1,3-Dichloropropane	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
2,2-Dichloropropane	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
1,1-Dichloropropene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Diethyl ether	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Ethylbenzene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Hexachlorobutadiene	<0.441		0.441		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Isopropylbenzene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Methylene chloride	<0.441		0.441		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
4-Methyl-2-pentanone (MIBK)	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Methyl tert-butyl ether	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Naphthalene	<0.441		0.441		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
n-Butylbenzene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
n-Propylbenzene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
p-Isopropyltoluene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
sec-Butylbenzene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Styrene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
tert-Butylbenzene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
1,1,1,2-Tetrachloroethane	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: SS-02
Date Collected: 04/21/26 10:10
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-21
Matrix: Solid
Percent Solids: 72.6

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Tetrachloroethene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Tetrahydrofuran	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Toluene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
trans-1,2-Dichloroethene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
trans-1,3-Dichloropropene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
1,2,3-Trichlorobenzene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
1,2,4-Trichlorobenzene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
1,1,1-Trichloroethane	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
1,1,2-Trichloroethane	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Trichloroethene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Trichlorofluoromethane	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
1,2,3-Trichloropropane	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
1,1,2-Trichlorotrifluoroethane	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
1,2,4-Trimethylbenzene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
1,3,5-Trimethylbenzene	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Vinyl chloride	<0.176		0.176		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1
Xylenes, Total	<0.265		0.265		mg/Kg	☼	04/27/26 09:01	04/28/26 03:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*	*04/27/26 09:01*	*04/28/26 03:30*	*1*
Dibromofluoromethane (Surr)	*88*		*80 - 120*	*04/27/26 09:01*	*04/28/26 03:30*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*	*04/27/26 09:01*	*04/28/26 03:30*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**0.00663**		0.00641		mg/Kg	☼	04/27/26 08:10	04/28/26 13:12	1
Acenaphthylene	<0.00641		0.00641		mg/Kg	☼	04/27/26 08:10	04/28/26 05:52	1
Anthracene	**0.00661**		0.00641		mg/Kg	☼	04/27/26 08:10	04/28/26 05:52	1
Benzo(a)anthracene	**0.0118**		0.00641		mg/Kg	☼	04/27/26 08:10	04/28/26 05:52	1
Benzo(a)pyrene	**0.00868**		0.00641		mg/Kg	☼	04/27/26 08:10	04/28/26 05:52	1
Benzo(b)fluoranthene	**0.0184**		0.00641		mg/Kg	☼	04/27/26 08:10	04/28/26 05:52	1
Benzo(g,h,i)perylene	**0.00741**		0.00641		mg/Kg	☼	04/27/26 08:10	04/28/26 05:52	1
Benzo(k)fluoranthene	**0.00676**		0.00641		mg/Kg	☼	04/27/26 08:10	04/28/26 05:52	1
Chrysene	**0.0175**		0.00641		mg/Kg	☼	04/27/26 08:10	04/28/26 05:52	1
Dibenz(a,h)anthracene	<0.00641		0.00641		mg/Kg	☼	04/27/26 08:10	04/28/26 05:52	1
Fluoranthene	**0.0713**		0.00641		mg/Kg	☼	04/27/26 08:10	04/28/26 05:52	1
Fluorene	<0.00641		0.00641		mg/Kg	☼	04/27/26 08:10	04/28/26 05:52	1
Indeno(1,2,3-cd)pyrene	<0.00641		0.00641		mg/Kg	☼	04/27/26 08:10	04/28/26 05:52	1
2-Methylnaphthalene	<0.00641		0.00641		mg/Kg	☼	04/27/26 08:10	04/28/26 05:52	1
Naphthalene	<0.00641		0.00641		mg/Kg	☼	04/27/26 08:10	04/28/26 05:52	1
Phenanthrene	**0.0641**		0.00641		mg/Kg	☼	04/27/26 08:10	04/28/26 05:52	1
Pyrene	**0.0587**		0.00641		mg/Kg	☼	04/27/26 08:10	04/28/26 05:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*91*		*20 - 122*	*04/27/26 08:10*	*04/28/26 05:52*	*1*
Nitrobenzene-d5 (Surr)	*43*		*10 - 132*	*04/27/26 08:10*	*04/28/26 05:52*	*1*
Terphenyl-d14 (Surr)	*81*		*10 - 119*	*04/27/26 08:10*	*04/28/26 05:52*	*1*

Client Sample ID: SS-02
Date Collected: 04/21/26 10:10
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-21
Matrix: Solid
Percent Solids: 72.6

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<13.9		13.9		mg/Kg	☼	04/28/26 11:40	04/29/26 03:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*	*04/28/26 11:40*	*04/29/26 03:21*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<9.33		9.33		mg/Kg	☼	04/23/26 07:56	04/23/26 14:21	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.546		0.546		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.546		0.546		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.546		0.546		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.36		1.36		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.36		1.36		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
Perfluorobutanesulfonic acid (PFBS)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
Perfluorobutanoic acid (PFBA)	<0.546		0.546		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
Perfluorodecanesulfonic acid (PFDS)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
Perfluorodecanoic acid (PFDA)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
Perfluorododecanesulfonic acid (PFDoS)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
Perfluorododecanoic acid (PFDoA)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
Perfluoroheptanoic acid (PFHpA)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.36		1.36		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
Perfluorohexanesulfonic acid (PFHxS)	**0.787**		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: SS-02
Date Collected: 04/21/26 10:10
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-21
Matrix: Solid
Percent Solids: 72.6

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
Perfluorononanesulfonic acid (PFNS)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
Perfluorononanoic acid (PFNA)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
Perfluorooctanesulfonamide (PFOSA)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
Perfluorooctanesulfonic acid (PFOS)	**2.22**		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
Perfluorooctanoic acid (PFOA)	**0.330**		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
Perfluoropentanesulfonic acid (PFPeS)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
Perfluoropentanoic acid (PFPeA)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.36		1.36		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.546		0.546		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
Perfluorotetradecanoic acid (PFTeDA)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
Perfluorotridecanoic acid (PFTrDA)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1
Perfluoroundecanoic acid (PFUnA)	<0.273		0.273		ng/g	☼	04/28/26 08:24	04/29/26 03:41	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*87.7*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:41*	*1*
13C2 10:2 FTS	*88.3*		*40 - 275*	*04/28/26 08:24*	*04/29/26 03:41*	*1*
13C2 4:2 FTS	*100*		*40 - 165*	*04/28/26 08:24*	*04/29/26 03:41*	*1*
13C2 6:2 FTS	*87.9*		*40 - 215*	*04/28/26 08:24*	*04/29/26 03:41*	*1*
13C2 8:2 FTS	*90.3*		*40 - 275*	*04/28/26 08:24*	*04/29/26 03:41*	*1*
13C3 HFPO-DA	*54.8*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:41*	*1*
13C4 PFBA	*60.7*		*8 - 130*	*04/28/26 08:24*	*04/29/26 03:41*	*1*
13C3 PFBS	*77.6*		*40 - 135*	*04/28/26 08:24*	*04/29/26 03:41*	*1*
13C6 PFDA	*66.9*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:41*	*1*
13C2-PFDoA	*66.1*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:41*	*1*
13C4 PFHpA	*64.4*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:41*	*1*
13C5 PFHxA	*58.2*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:41*	*1*
13C3 PFHxS	*79.5*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:41*	*1*
13C9 PFNA	*72.3*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:41*	*1*
13C8 PFOA	*59.2*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:41*	*1*
13C8 PFOS	*81.5*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:41*	*1*
13C5 PFPeA	*68.3*		*35 - 130*	*04/28/26 08:24*	*04/29/26 03:41*	*1*
13C3-PFPrS	*57.5*		*20 - 150*	*04/28/26 08:24*	*04/29/26 03:41*	*1*
13C2 PFTeDA	*68.2*		*20 - 130*	*04/28/26 08:24*	*04/29/26 03:41*	*1*
13C7 PFUnA	*61.7*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:41*	*1*
d5-NEtFOSAA	*80.8*		*40 - 150*	*04/28/26 08:24*	*04/29/26 03:41*	*1*
d9-N-EtFOSE-M	*52.0*		*15 - 130*	*04/28/26 08:24*	*04/29/26 03:41*	*1*
d5-NEtPFOSA	*66.9*		*10 - 130*	*04/28/26 08:24*	*04/29/26 03:41*	*1*
d3-NMeFOSAA	*84.8*		*40 - 135*	*04/28/26 08:24*	*04/29/26 03:41*	*1*
d7-N-MeFOSE-M	*55.9*		*20 - 130*	*04/28/26 08:24*	*04/29/26 03:41*	*1*
d3-NMePFOSA	*64.7*		*10 - 130*	*04/28/26 08:24*	*04/29/26 03:41*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: SS-02
Date Collected: 04/21/26 10:10
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-21
Matrix: Solid
Percent Solids: 72.6

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**4.18**		1.33		mg/Kg	☼	04/24/26 10:00	04/27/26 20:09	2
Barium	**43.5**		1.33		mg/Kg	☼	04/24/26 10:00	04/27/26 20:09	2
Cadmium	<0.265		0.265		mg/Kg	☼	04/24/26 10:00	04/27/26 20:09	2
Chromium	**17.7**		0.530		mg/Kg	☼	04/24/26 10:00	04/27/26 20:09	2
Lead	**4.89**		0.265		mg/Kg	☼	04/24/26 10:00	04/27/26 20:09	2
Selenium	<1.33		1.33		mg/Kg	☼	04/24/26 10:00	04/27/26 20:09	2
Silver	<0.265		0.265		mg/Kg	☼	04/24/26 10:00	04/27/26 20:09	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.156		0.156		mg/Kg	☼	04/24/26 10:00	04/27/26 13:37	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**27.4**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**72.6**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: SS-03
Date Collected: 04/21/26 10:20
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-22
Matrix: Solid
Percent Solids: 75.6

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.841		0.841		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Allyl chloride	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Benzene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Bromobenzene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Bromochloromethane	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Bromodichloromethane	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Bromoform	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Bromomethane	<0.841		0.841		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
2-Butanone (MEK)	<1.26		1.26		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Carbon tetrachloride	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Chlorobenzene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Chlorodibromomethane	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Chloroethane	<0.420		0.420		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Chloroform	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Chloromethane	<0.420		0.420		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
2-Chlorotoluene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
4-Chlorotoluene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
cis-1,2-Dichloroethene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
cis-1,3-Dichloropropene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
1,2-Dibromo-3-chloropropane	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
1,2-Dibromoethane (EDB)	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Dibromomethane	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
1,2-Dichlorobenzene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
1,3-Dichlorobenzene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
1,4-Dichlorobenzene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Dichlorodifluoromethane	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
1,1-Dichloroethane	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
1,2-Dichloroethane	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
1,1-Dichloroethene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Dichlorofluoromethane	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
1,2-Dichloropropane	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
1,3-Dichloropropane	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
2,2-Dichloropropane	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
1,1-Dichloropropene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Diethyl ether	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Ethylbenzene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Hexachlorobutadiene	<0.420		0.420		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Isopropylbenzene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Methylene chloride	<0.420		0.420		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
4-Methyl-2-pentanone (MIBK)	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Methyl tert-butyl ether	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Naphthalene	<0.420		0.420		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
n-Butylbenzene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
n-Propylbenzene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
p-Isopropyltoluene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
sec-Butylbenzene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Styrene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
tert-Butylbenzene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
1,1,1,2-Tetrachloroethane	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1

Client Sample ID: SS-03
Lab Sample ID: 310-330206-22
Date Collected: 04/21/26 10:20
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 75.6

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Tetrachloroethene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Tetrahydrofuran	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Toluene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
trans-1,2-Dichloroethene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
trans-1,3-Dichloropropene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
1,2,3-Trichlorobenzene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
1,2,4-Trichlorobenzene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
1,1,1-Trichloroethane	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
1,1,2-Trichloroethane	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Trichloroethene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Trichlorofluoromethane	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
1,2,3-Trichloropropane	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
1,1,2-Trichlorotrifluoroethane	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
1,2,4-Trimethylbenzene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
1,3,5-Trimethylbenzene	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Vinyl chloride	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1
Xylenes, Total	<0.252		0.252		mg/Kg	☼	04/27/26 09:01	04/28/26 03:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*	*04/27/26 09:01*	*04/28/26 03:53*	*1*
Dibromofluoromethane (Surr)	*84*		*80 - 120*	*04/27/26 09:01*	*04/28/26 03:53*	*1*
Toluene-d8 (Surr)	*107*		*80 - 120*	*04/27/26 09:01*	*04/28/26 03:53*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00626		0.00626		mg/Kg	☼	04/27/26 08:10	04/28/26 06:16	1
Acenaphthylene	<0.00626		0.00626		mg/Kg	☼	04/27/26 08:10	04/28/26 06:16	1
Anthracene	<0.00626		0.00626		mg/Kg	☼	04/27/26 08:10	04/28/26 06:16	1
Benzo(a)anthracene	**0.00687**		0.00626		mg/Kg	☼	04/27/26 08:10	04/28/26 06:16	1
Benzo(a)pyrene	**0.00751**		0.00626		mg/Kg	☼	04/27/26 08:10	04/28/26 06:16	1
Benzo(b)fluoranthene	**0.0139**		0.00626		mg/Kg	☼	04/27/26 08:10	04/28/26 06:16	1
Benzo(g,h,i)perylene	<0.00626		0.00626		mg/Kg	☼	04/27/26 08:10	04/28/26 06:16	1
Benzo(k)fluoranthene	<0.00626		0.00626		mg/Kg	☼	04/27/26 08:10	04/28/26 06:16	1
Chrysene	**0.0112**		0.00626		mg/Kg	☼	04/27/26 08:10	04/28/26 06:16	1
Dibenz(a,h)anthracene	<0.00626		0.00626		mg/Kg	☼	04/27/26 08:10	04/28/26 06:16	1
Fluoranthene	**0.0295**		0.00626		mg/Kg	☼	04/27/26 08:10	04/28/26 06:16	1
Fluorene	<0.00626		0.00626		mg/Kg	☼	04/27/26 08:10	04/28/26 06:16	1
Indeno(1,2,3-cd)pyrene	<0.00626		0.00626		mg/Kg	☼	04/27/26 08:10	04/28/26 06:16	1
2-Methylnaphthalene	<0.00626		0.00626		mg/Kg	☼	04/27/26 08:10	04/28/26 06:16	1
Naphthalene	<0.00626		0.00626		mg/Kg	☼	04/27/26 08:10	04/28/26 06:16	1
Phenanthrene	**0.0178**		0.00626		mg/Kg	☼	04/27/26 08:10	04/28/26 06:16	1
Pyrene	**0.0240**		0.00626		mg/Kg	☼	04/27/26 08:10	04/28/26 06:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*103*		*20 - 122*	*04/27/26 08:10*	*04/28/26 06:16*	*1*
Nitrobenzene-d5 (Surr)	*52*		*10 - 132*	*04/27/26 08:10*	*04/28/26 06:16*	*1*
Terphenyl-d14 (Surr)	*98*		*10 - 119*	*04/27/26 08:10*	*04/28/26 06:16*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: SS-03
Date Collected: 04/21/26 10:20
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-22
Matrix: Solid
Percent Solids: 75.6

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<13.6		13.6		mg/Kg	☼	04/28/26 11:40	04/29/26 03:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*	*04/28/26 11:40*	*04/29/26 03:47*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<8.15		8.15		mg/Kg	☼	04/23/26 08:54	04/23/26 17:17	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.519		0.519		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.519		0.519		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.519		0.519		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.30		1.30		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.30		1.30		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
Perfluorobutanesulfonic acid (PFBS)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
Perfluorobutanoic acid (PFBA)	<0.519		0.519		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
Perfluorodecanesulfonic acid (PFDS)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
Perfluorodecanoic acid (PFDA)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
Perfluorododecanesulfonic acid (PFDoS)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
Perfluorododecanoic acid (PFDoA)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
Perfluoroheptanoic acid (PFHpA)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.30		1.30		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
Perfluorohexanesulfonic acid (PFHxS)	**0.441**		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: SS-03
Date Collected: 04/21/26 10:20
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-22
Matrix: Solid
Percent Solids: 75.6

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
Perfluorononanesulfonic acid (PFNS)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
Perfluorononanoic acid (PFNA)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
Perfluorooctanesulfonamide (PFOSA)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
Perfluorooctanesulfonic acid (PFOS)	**1.98**		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
Perfluorooctanoic acid (PFOA)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
Perfluoropentanesulfonic acid (PFPeS)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
Perfluoropentanoic acid (PFPeA)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.30		1.30		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.519		0.519		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
Perfluorotetradecanoic acid (PFTeDA)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
Perfluorotridecanoic acid (PFTrDA)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1
Perfluoroundecanoic acid (PFUnA)	<0.259		0.259		ng/g	☼	04/28/26 08:24	04/29/26 03:57	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*92.9*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:57*	*1*
13C2 10:2 FTS	*90.2*		*40 - 275*	*04/28/26 08:24*	*04/29/26 03:57*	*1*
13C2 4:2 FTS	*109*		*40 - 165*	*04/28/26 08:24*	*04/29/26 03:57*	*1*
13C2 6:2 FTS	*93.9*		*40 - 215*	*04/28/26 08:24*	*04/29/26 03:57*	*1*
13C2 8:2 FTS	*95.7*		*40 - 275*	*04/28/26 08:24*	*04/29/26 03:57*	*1*
13C3 HFPO-DA	*75.0*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:57*	*1*
13C4 PFBA	*73.7*		*8 - 130*	*04/28/26 08:24*	*04/29/26 03:57*	*1*
13C3 PFBS	*90.1*		*40 - 135*	*04/28/26 08:24*	*04/29/26 03:57*	*1*
13C6 PFDA	*77.1*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:57*	*1*
13C2-PFDoA	*72.0*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:57*	*1*
13C4 PFHpA	*83.9*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:57*	*1*
13C5 PFHxA	*75.4*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:57*	*1*
13C3 PFHxS	*91.9*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:57*	*1*
13C9 PFNA	*84.4*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:57*	*1*
13C8 PFOA	*75.2*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:57*	*1*
13C8 PFOS	*92.7*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:57*	*1*
13C5 PFPeA	*86.1*		*35 - 130*	*04/28/26 08:24*	*04/29/26 03:57*	*1*
13C3-PFPrS	*71.5*		*20 - 150*	*04/28/26 08:24*	*04/29/26 03:57*	*1*
13C2 PFTeDA	*80.7*		*20 - 130*	*04/28/26 08:24*	*04/29/26 03:57*	*1*
13C7 PFUnA	*70.9*		*40 - 130*	*04/28/26 08:24*	*04/29/26 03:57*	*1*
d5-NEtFOSAA	*94.5*		*40 - 150*	*04/28/26 08:24*	*04/29/26 03:57*	*1*
d9-N-EtFOSE-M	*82.3*		*15 - 130*	*04/28/26 08:24*	*04/29/26 03:57*	*1*
d5-NEtPFOSA	*71.3*		*10 - 130*	*04/28/26 08:24*	*04/29/26 03:57*	*1*
d3-NMeFOSAA	*96.1*		*40 - 135*	*04/28/26 08:24*	*04/29/26 03:57*	*1*
d7-N-MeFOSE-M	*81.3*		*20 - 130*	*04/28/26 08:24*	*04/29/26 03:57*	*1*
d3-NMePFOSA	*71.8*		*10 - 130*	*04/28/26 08:24*	*04/29/26 03:57*	*1*

Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-1
Project/Site: Duluth Airport Taxiway A

Client Sample ID: SS-03
Lab Sample ID: 310-330206-22
Date Collected: 04/21/26 10:20
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 75.6

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.84**		1.00		mg/Kg	☼	04/24/26 14:00	04/28/26 16:02	2
Barium	**54.9**		1.00		mg/Kg	☼	04/24/26 14:00	04/28/26 16:02	2
Cadmium	<0.201		0.201		mg/Kg	☼	04/24/26 14:00	04/28/26 16:02	2
Chromium	**25.9**		0.401		mg/Kg	☼	04/24/26 14:00	04/28/26 16:02	2
Lead	**5.97**		0.201		mg/Kg	☼	04/24/26 14:00	04/28/26 16:02	2
Selenium	<1.00		1.00		mg/Kg	☼	04/24/26 14:00	04/28/26 16:02	2
Silver	<0.201		0.201		mg/Kg	☼	04/24/26 14:00	04/28/26 16:02	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.142		0.142		mg/Kg	☼	04/24/26 13:00	04/27/26 14:34	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**24.4**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**75.6**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-10-1
Date Collected: 04/21/26 11:25
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-23
Matrix: Solid
Percent Solids: 72.1

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.892		0.892		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Allyl chloride	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Benzene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Bromobenzene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Bromochloromethane	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Bromodichloromethane	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Bromoform	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Bromomethane	<0.892		0.892		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
2-Butanone (MEK)	<1.34		1.34		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Carbon tetrachloride	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Chlorobenzene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Chlorodibromomethane	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Chloroethane	<0.446		0.446		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Chloroform	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Chloromethane	<0.446		0.446		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
2-Chlorotoluene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
4-Chlorotoluene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
cis-1,2-Dichloroethene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
cis-1,3-Dichloropropene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
1,2-Dibromo-3-chloropropane	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
1,2-Dibromoethane (EDB)	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Dibromomethane	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
1,2-Dichlorobenzene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
1,3-Dichlorobenzene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
1,4-Dichlorobenzene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Dichlorodifluoromethane	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
1,1-Dichloroethane	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
1,2-Dichloroethane	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
1,1-Dichloroethene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Dichlorofluoromethane	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
1,2-Dichloropropane	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
1,3-Dichloropropane	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
2,2-Dichloropropane	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
1,1-Dichloropropene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Diethyl ether	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Ethylbenzene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Hexachlorobutadiene	<0.446		0.446		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Isopropylbenzene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Methylene chloride	<0.446		0.446		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
4-Methyl-2-pentanone (MIBK)	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Methyl tert-butyl ether	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Naphthalene	<0.446		0.446		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
n-Butylbenzene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
n-Propylbenzene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
p-Isopropyltoluene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
sec-Butylbenzene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Styrene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
tert-Butylbenzene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
1,1,1,2-Tetrachloroethane	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1

Client Sample ID: HA-10-1
Lab Sample ID: 310-330206-23
Date Collected: 04/21/26 11:25
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 72.1

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Tetrachloroethene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Tetrahydrofuran	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Toluene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
trans-1,2-Dichloroethene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
trans-1,3-Dichloropropene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
1,2,3-Trichlorobenzene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
1,2,4-Trichlorobenzene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
1,1,1-Trichloroethane	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
1,1,2-Trichloroethane	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Trichloroethene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Trichlorofluoromethane	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
1,2,3-Trichloropropane	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
1,1,2-Trichlorotrifluoroethane	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
1,2,4-Trimethylbenzene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
1,3,5-Trimethylbenzene	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Vinyl chloride	<0.178		0.178		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1
Xylenes, Total	<0.268		0.268		mg/Kg	☼	04/27/26 09:01	04/28/26 04:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*	*04/27/26 09:01*	*04/28/26 04:15*	*1*
Dibromofluoromethane (Surr)	*87*		*80 - 120*	*04/27/26 09:01*	*04/28/26 04:15*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*	*04/27/26 09:01*	*04/28/26 04:15*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00656		0.00656		mg/Kg	☼	04/28/26 08:08	04/29/26 05:27	1
Acenaphthylene	<0.00656		0.00656		mg/Kg	☼	04/28/26 08:08	04/29/26 05:27	1
Anthracene	<0.00656		0.00656		mg/Kg	☼	04/28/26 08:08	04/29/26 05:27	1
Benzo(a)anthracene	**0.0184**		0.00656		mg/Kg	☼	04/28/26 08:08	04/29/26 05:27	1
Benzo(a)pyrene	**0.0178**		0.00656		mg/Kg	☼	04/28/26 08:08	04/29/26 05:27	1
Benzo(b)fluoranthene	**0.0254**		0.00656		mg/Kg	☼	04/28/26 08:08	04/29/26 05:27	1
Benzo(g,h,i)perylene	**0.0126**		0.00656		mg/Kg	☼	04/28/26 08:08	04/29/26 05:27	1
Benzo(k)fluoranthene	**0.0109**		0.00656		mg/Kg	☼	04/28/26 08:08	04/29/26 05:27	1
Chrysene	**0.0218**		0.00656		mg/Kg	☼	04/28/26 08:08	04/29/26 05:27	1
Dibenz(a,h)anthracene	<0.00656		0.00656		mg/Kg	☼	04/28/26 08:08	04/29/26 05:27	1
Fluoranthene	**0.0493**		0.00656		mg/Kg	☼	04/28/26 08:08	04/29/26 05:27	1
Fluorene	<0.00656		0.00656		mg/Kg	☼	04/28/26 08:08	04/29/26 05:27	1
Indeno(1,2,3-cd)pyrene	**0.0122**		0.00656		mg/Kg	☼	04/28/26 08:08	04/29/26 05:27	1
2-Methylnaphthalene	<0.00656		0.00656		mg/Kg	☼	04/28/26 08:08	04/29/26 05:27	1
Naphthalene	<0.00656		0.00656		mg/Kg	☼	04/28/26 08:08	04/29/26 05:27	1
Phenanthrene	**0.0312**		0.00656		mg/Kg	☼	04/28/26 08:08	04/29/26 05:27	1
Pyrene	**0.0379**		0.00656		mg/Kg	☼	04/28/26 08:08	04/29/26 05:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*86*		*20 - 122*	*04/28/26 08:08*	*04/29/26 05:27*	*1*
Nitrobenzene-d5 (Surr)	*106*		*10 - 132*	*04/28/26 08:08*	*04/29/26 05:27*	*1*
Terphenyl-d14 (Surr)	*89*		*10 - 119*	*04/28/26 08:08*	*04/29/26 05:27*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-10-1

Date Collected: 04/21/26 11:25
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-23

Matrix: Solid
Percent Solids: 72.1

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<14.0		14.0		mg/Kg	☼	04/28/26 11:40	04/29/26 04:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*	*04/28/26 11:40*	*04/29/26 04:14*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<7.88		7.88		mg/Kg	☼	04/23/26 08:54	04/23/26 17:29	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.544		0.544		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.544		0.544		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.544		0.544		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.36		1.36		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.36		1.36		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
Perfluorobutanesulfonic acid (PFBS)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
Perfluorobutanoic acid (PFBA)	<0.544		0.544		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
Perfluorodecanesulfonic acid (PFDS)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
Perfluorodecanoic acid (PFDA)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
Perfluorododecanesulfonic acid (PFDoS)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
Perfluorododecanoic acid (PFDoA)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
Perfluoroheptanoic acid (PFHpA)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.36		1.36		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
Perfluorohexanesulfonic acid (PFHxS)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
Perfluorohexanoic acid (PFHxA)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1

Client Sample ID: HA-10-1
Lab Sample ID: 310-330206-23
Date Collected: 04/21/26 11:25
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 72.1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
Perfluorononanesulfonic acid (PFNS)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
Perfluorononanoic acid (PFNA)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
Perfluorooctanesulfonamide (PFOSA)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
Perfluorooctanesulfonic acid (PFOS)	**0.398**		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
Perfluorooctanoic acid (PFOA)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
Perfluoropentanesulfonic acid (PFPeS)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
Perfluoropentanoic acid (PFPeA)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.36		1.36		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.544		0.544		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
Perfluorotetradecanoic acid (PFTeDA)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
Perfluorotridecanoic acid (PFTrDA)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1
Perfluoroundecanoic acid (PFUnA)	<0.272		0.272		ng/g	☼	04/28/26 08:24	04/29/26 04:14	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*90.7*		*40 - 130*	*04/28/26 08:24*	*04/29/26 04:14*	*1*
13C2 10:2 FTS	*89.2*		*40 - 275*	*04/28/26 08:24*	*04/29/26 04:14*	*1*
13C2 4:2 FTS	*99.6*		*40 - 165*	*04/28/26 08:24*	*04/29/26 04:14*	*1*
13C2 6:2 FTS	*86.9*		*40 - 215*	*04/28/26 08:24*	*04/29/26 04:14*	*1*
13C2 8:2 FTS	*86.5*		*40 - 275*	*04/28/26 08:24*	*04/29/26 04:14*	*1*
13C3 HFPO-DA	*62.0*		*40 - 130*	*04/28/26 08:24*	*04/29/26 04:14*	*1*
13C4 PFBA	*67.1*		*8 - 130*	*04/28/26 08:24*	*04/29/26 04:14*	*1*
13C3 PFBS	*84.2*		*40 - 135*	*04/28/26 08:24*	*04/29/26 04:14*	*1*
13C6 PFDA	*75.0*		*40 - 130*	*04/28/26 08:24*	*04/29/26 04:14*	*1*
13C2-PFDoA	*72.3*		*40 - 130*	*04/28/26 08:24*	*04/29/26 04:14*	*1*
13C4 PFHpA	*75.2*		*40 - 130*	*04/28/26 08:24*	*04/29/26 04:14*	*1*
13C5 PFHxA	*68.7*		*40 - 130*	*04/28/26 08:24*	*04/29/26 04:14*	*1*
13C3 PFHxS	*85.6*		*40 - 130*	*04/28/26 08:24*	*04/29/26 04:14*	*1*
13C9 PFNA	*79.6*		*40 - 130*	*04/28/26 08:24*	*04/29/26 04:14*	*1*
13C8 PFOA	*70.7*		*40 - 130*	*04/28/26 08:24*	*04/29/26 04:14*	*1*
13C8 PFOS	*85.8*		*40 - 130*	*04/28/26 08:24*	*04/29/26 04:14*	*1*
13C5 PFPeA	*74.1*		*35 - 130*	*04/28/26 08:24*	*04/29/26 04:14*	*1*
13C3-PFPrS	*61.4*		*20 - 150*	*04/28/26 08:24*	*04/29/26 04:14*	*1*
13C2 PFTeDA	*80.4*		*20 - 130*	*04/28/26 08:24*	*04/29/26 04:14*	*1*
13C7 PFUnA	*69.6*		*40 - 130*	*04/28/26 08:24*	*04/29/26 04:14*	*1*
d5-NEtFOSAA	*89.0*		*40 - 150*	*04/28/26 08:24*	*04/29/26 04:14*	*1*
d9-N-EtFOSE-M	*77.7*		*15 - 130*	*04/28/26 08:24*	*04/29/26 04:14*	*1*
d5-NEtPFOSA	*80.9*		*10 - 130*	*04/28/26 08:24*	*04/29/26 04:14*	*1*
d3-NMeFOSAA	*90.5*		*40 - 135*	*04/28/26 08:24*	*04/29/26 04:14*	*1*
d7-N-MeFOSE-M	*83.8*		*20 - 130*	*04/28/26 08:24*	*04/29/26 04:14*	*1*
d3-NMePFOSA	*80.8*		*10 - 130*	*04/28/26 08:24*	*04/29/26 04:14*	*1*

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**2.58**		1.24		mg/Kg	☼	04/24/26 14:00	04/28/26 16:22	2

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-1
Project/Site: Duluth Airport Taxiway A

Client Sample ID: HA-10-1
Lab Sample ID: 310-330206-23
Date Collected: 04/21/26 11:25
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 72.1

Method: SW846 6020B - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**65.6**		1.24		mg/Kg	☼	04/24/26 14:00	04/28/26 16:22	2
Cadmium	<0.248		0.248		mg/Kg	☼	04/24/26 14:00	04/28/26 16:22	2
Chromium	**35.8**		0.495		mg/Kg	☼	04/24/26 14:00	04/28/26 16:22	2
Lead	**6.84**		0.248		mg/Kg	☼	04/24/26 14:00	04/28/26 16:22	2
Selenium	<1.24		1.24		mg/Kg	☼	04/24/26 14:00	04/28/26 16:22	2
Silver	<0.248		0.248		mg/Kg	☼	04/24/26 14:00	04/28/26 16:22	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.163		0.163		mg/Kg	☼	04/24/26 13:00	04/27/26 14:39	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**27.9**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**72.1**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-10-3
Date Collected: 04/21/26 11:30
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-24
Matrix: Solid
Percent Solids: 81.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.730		0.730		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Allyl chloride	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Benzene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Bromobenzene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Bromochloromethane	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Bromodichloromethane	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Bromoform	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Bromomethane	<0.730		0.730		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
2-Butanone (MEK)	<1.10		1.10		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Carbon tetrachloride	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Chlorobenzene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Chlorodibromomethane	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Chloroethane	<0.365		0.365		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Chloroform	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Chloromethane	<0.365		0.365		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
2-Chlorotoluene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
4-Chlorotoluene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
cis-1,2-Dichloroethene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
cis-1,3-Dichloropropene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
1,2-Dibromo-3-chloropropane	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
1,2-Dibromoethane (EDB)	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Dibromomethane	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
1,2-Dichlorobenzene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
1,3-Dichlorobenzene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
1,4-Dichlorobenzene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Dichlorodifluoromethane	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
1,1-Dichloroethane	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
1,2-Dichloroethane	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
1,1-Dichloroethene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Dichlorofluoromethane	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
1,2-Dichloropropane	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
1,3-Dichloropropane	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
2,2-Dichloropropane	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
1,1-Dichloropropene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Diethyl ether	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Ethylbenzene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Hexachlorobutadiene	<0.365		0.365		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Isopropylbenzene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Methylene chloride	<0.365		0.365		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
4-Methyl-2-pentanone (MIBK)	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Methyl tert-butyl ether	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Naphthalene	<0.365		0.365		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
n-Butylbenzene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
n-Propylbenzene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
p-Isopropyltoluene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
sec-Butylbenzene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Styrene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
tert-Butylbenzene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
1,1,1,2-Tetrachloroethane	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-10-3
Date Collected: 04/21/26 11:30
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-24
Matrix: Solid
Percent Solids: 81.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Tetrachloroethene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Tetrahydrofuran	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Toluene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
trans-1,2-Dichloroethene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
trans-1,3-Dichloropropene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
1,2,3-Trichlorobenzene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
1,2,4-Trichlorobenzene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
1,1,1-Trichloroethane	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
1,1,2-Trichloroethane	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Trichloroethene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Trichlorofluoromethane	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
1,2,3-Trichloropropane	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
1,1,2-Trichlorotrifluoroethane	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
1,2,4-Trimethylbenzene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
1,3,5-Trimethylbenzene	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Vinyl chloride	<0.146		0.146		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1
Xylenes, Total	<0.219		0.219		mg/Kg	☼	04/28/26 08:11	04/29/26 15:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*	*04/28/26 08:11*	*04/29/26 15:10*	*1*
Dibromofluoromethane (Surr)	*90*		*80 - 120*	*04/28/26 08:11*	*04/29/26 15:10*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*	*04/28/26 08:11*	*04/29/26 15:10*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00582		0.00582		mg/Kg	☼	04/28/26 08:08	04/29/26 05:52	1
Acenaphthylene	<0.00582		0.00582		mg/Kg	☼	04/28/26 08:08	04/29/26 05:52	1
Anthracene	<0.00582		0.00582		mg/Kg	☼	04/28/26 08:08	04/29/26 05:52	1
Benzo(a)anthracene	<0.00582		0.00582		mg/Kg	☼	04/28/26 08:08	04/29/26 05:52	1
Benzo(a)pyrene	<0.00582		0.00582		mg/Kg	☼	04/28/26 08:08	04/29/26 05:52	1
Benzo(b)fluoranthene	**0.00941**		0.00582		mg/Kg	☼	04/28/26 08:08	04/29/26 05:52	1
Benzo(g,h,i)perylene	<0.00582		0.00582		mg/Kg	☼	04/28/26 08:08	04/29/26 05:52	1
Benzo(k)fluoranthene	<0.00582		0.00582		mg/Kg	☼	04/28/26 08:08	04/29/26 05:52	1
Chrysene	**0.00777**		0.00582		mg/Kg	☼	04/28/26 08:08	04/29/26 05:52	1
Dibenz(a,h)anthracene	<0.00582		0.00582		mg/Kg	☼	04/28/26 08:08	04/29/26 05:52	1
Fluoranthene	**0.0121**		0.00582		mg/Kg	☼	04/28/26 08:08	04/29/26 05:52	1
Fluorene	<0.00582		0.00582		mg/Kg	☼	04/28/26 08:08	04/29/26 05:52	1
Indeno(1,2,3-cd)pyrene	<0.00582		0.00582		mg/Kg	☼	04/28/26 08:08	04/29/26 05:52	1
2-Methylnaphthalene	<0.00582		0.00582		mg/Kg	☼	04/28/26 08:08	04/29/26 05:52	1
Naphthalene	<0.00582		0.00582		mg/Kg	☼	04/28/26 08:08	04/29/26 05:52	1
Phenanthrene	<0.00582		0.00582		mg/Kg	☼	04/28/26 08:08	04/29/26 05:52	1
Pyrene	**0.00973**		0.00582		mg/Kg	☼	04/28/26 08:08	04/29/26 05:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*102*		*20 - 122*	*04/28/26 08:08*	*04/29/26 05:52*	*1*
Nitrobenzene-d5 (Surr)	*113*		*10 - 132*	*04/28/26 08:08*	*04/29/26 05:52*	*1*
Terphenyl-d14 (Surr)	*99*		*10 - 119*	*04/28/26 08:08*	*04/29/26 05:52*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-10-3

Date Collected: 04/21/26 11:30
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-24

Matrix: Solid
Percent Solids: 81.2

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<11.6		11.6		mg/Kg	☼	04/28/26 11:40	04/29/26 04:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*	*04/28/26 11:40*	*04/29/26 04:40*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<6.95		6.95		mg/Kg	☼	04/23/26 08:54	04/23/26 17:42	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.483		0.483		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.483		0.483		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.483		0.483		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.21		1.21		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.21		1.21		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
Perfluorobutanesulfonic acid (PFBS)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
Perfluorobutanoic acid (PFBA)	<0.483		0.483		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
Perfluorodecanesulfonic acid (PFDS)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
Perfluorodecanoic acid (PFDA)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
Perfluorododecanesulfonic acid (PFDoS)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
Perfluorododecanoic acid (PFDoA)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
Perfluoroheptanoic acid (PFHpA)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.21		1.21		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
Perfluorohexanesulfonic acid (PFHxS)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
Perfluorohexanoic acid (PFHxA)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1

Client Sample ID: HA-10-3
Lab Sample ID: 310-330206-24
Date Collected: 04/21/26 11:30
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 81.2

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
Perfluorononanesulfonic acid (PFNS)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
Perfluorononanoic acid (PFNA)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
Perfluorooctanesulfonamide (PFOSA)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
Perfluorooctanesulfonic acid (PFOS)	**0.335**		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
Perfluorooctanoic acid (PFOA)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
Perfluoropentanesulfonic acid (PFPeS)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
Perfluoropentanoic acid (PFPeA)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.21		1.21		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.483		0.483		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
Perfluorotetradecanoic acid (PFTeDA)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
Perfluorotridecanoic acid (PFTrDA)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1
Perfluoroundecanoic acid (PFUnA)	<0.242		0.242		ng/g	☼	04/28/26 08:24	04/29/26 04:30	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*66.3*		*40 - 130*	*04/28/26 08:24*	*04/29/26 04:30*	*1*
13C2 10:2 FTS	*67.5*		*40 - 275*	*04/28/26 08:24*	*04/29/26 04:30*	*1*
13C2 4:2 FTS	*65.4*		*40 - 165*	*04/28/26 08:24*	*04/29/26 04:30*	*1*
13C2 6:2 FTS	*62.7*		*40 - 215*	*04/28/26 08:24*	*04/29/26 04:30*	*1*
13C2 8:2 FTS	*66.7*		*40 - 275*	*04/28/26 08:24*	*04/29/26 04:30*	*1*
13C3 HFPO-DA	*47.4*		*40 - 130*	*04/28/26 08:24*	*04/29/26 04:30*	*1*
13C4 PFBA	*47.8*		*8 - 130*	*04/28/26 08:24*	*04/29/26 04:30*	*1*
13C3 PFBS	*58.5*		*40 - 135*	*04/28/26 08:24*	*04/29/26 04:30*	*1*
13C6 PFDA	*56.9*		*40 - 130*	*04/28/26 08:24*	*04/29/26 04:30*	*1*
13C2-PFDoA	*59.5*		*40 - 130*	*04/28/26 08:24*	*04/29/26 04:30*	*1*
13C4 PFHpA	*57.1*		*40 - 130*	*04/28/26 08:24*	*04/29/26 04:30*	*1*
13C5 PFHxA	*50.1*		*40 - 130*	*04/28/26 08:24*	*04/29/26 04:30*	*1*
13C3 PFHxS	*62.0*		*40 - 130*	*04/28/26 08:24*	*04/29/26 04:30*	*1*
13C9 PFNA	*59.8*		*40 - 130*	*04/28/26 08:24*	*04/29/26 04:30*	*1*
13C8 PFOA	*52.8*		*40 - 130*	*04/28/26 08:24*	*04/29/26 04:30*	*1*
13C8 PFOS	*66.0*		*40 - 130*	*04/28/26 08:24*	*04/29/26 04:30*	*1*
13C5 PFPeA	*54.5*		*35 - 130*	*04/28/26 08:24*	*04/29/26 04:30*	*1*
13C3-PFPrS	*47.3*		*20 - 150*	*04/28/26 08:24*	*04/29/26 04:30*	*1*
13C2 PFTeDA	*67.8*		*20 - 130*	*04/28/26 08:24*	*04/29/26 04:30*	*1*
13C7 PFUnA	*55.9*		*40 - 130*	*04/28/26 08:24*	*04/29/26 04:30*	*1*
d5-NEtFOSAA	*73.1*		*40 - 150*	*04/28/26 08:24*	*04/29/26 04:30*	*1*
d9-N-EtFOSE-M	*43.1*		*15 - 130*	*04/28/26 08:24*	*04/29/26 04:30*	*1*
d5-NEtPFOSA	*65.8*		*10 - 130*	*04/28/26 08:24*	*04/29/26 04:30*	*1*
d3-NMeFOSAA	*70.8*		*40 - 135*	*04/28/26 08:24*	*04/29/26 04:30*	*1*
d7-N-MeFOSE-M	*45.9*		*20 - 130*	*04/28/26 08:24*	*04/29/26 04:30*	*1*
d3-NMePFOSA	*63.7*		*10 - 130*	*04/28/26 08:24*	*04/29/26 04:30*	*1*

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**3.03**		0.986		mg/Kg	☼	04/24/26 14:00	04/28/26 16:25	2

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-10-3
Date Collected: 04/21/26 11:30
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-24
Matrix: Solid
Percent Solids: 81.2

Method: SW846 6020B - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**64.7**		0.986		mg/Kg	☼	04/24/26 14:00	04/28/26 16:25	2
Cadmium	<0.197		0.197		mg/Kg	☼	04/24/26 14:00	04/28/26 16:25	2
Chromium	**37.7**		0.394		mg/Kg	☼	04/24/26 14:00	04/28/26 16:25	2
Lead	**7.12**		0.197		mg/Kg	☼	04/24/26 14:00	04/28/26 16:25	2
Selenium	<0.986		0.986		mg/Kg	☼	04/24/26 14:00	04/28/26 16:25	2
Silver	<0.197		0.197		mg/Kg	☼	04/24/26 14:00	04/28/26 16:25	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.139		0.139		mg/Kg	☼	04/24/26 13:00	04/27/26 14:40	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**18.8**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**81.2**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-11-1
Date Collected: 04/21/26 11:45
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-25
Matrix: Solid
Percent Solids: 74.6

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.866		0.866		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Allyl chloride	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Benzene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Bromobenzene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Bromochloromethane	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Bromodichloromethane	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Bromoform	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Bromomethane	<0.866		0.866		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
2-Butanone (MEK)	<1.30		1.30		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Carbon tetrachloride	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Chlorobenzene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Chlorodibromomethane	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Chloroethane	<0.433		0.433		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Chloroform	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Chloromethane	<0.433		0.433		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
2-Chlorotoluene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
4-Chlorotoluene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
cis-1,2-Dichloroethene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
cis-1,3-Dichloropropene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
1,2-Dibromo-3-chloropropane	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
1,2-Dibromoethane (EDB)	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Dibromomethane	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
1,2-Dichlorobenzene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
1,3-Dichlorobenzene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
1,4-Dichlorobenzene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Dichlorodifluoromethane	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
1,1-Dichloroethane	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
1,2-Dichloroethane	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
1,1-Dichloroethene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Dichlorofluoromethane	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
1,2-Dichloropropane	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
1,3-Dichloropropane	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
2,2-Dichloropropane	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
1,1-Dichloropropene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Diethyl ether	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Ethylbenzene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Hexachlorobutadiene	<0.433		0.433		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Isopropylbenzene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Methylene chloride	<0.433		0.433		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
4-Methyl-2-pentanone (MIBK)	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Methyl tert-butyl ether	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Naphthalene	<0.433		0.433		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
n-Butylbenzene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
n-Propylbenzene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
p-Isopropyltoluene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
sec-Butylbenzene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Styrene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
tert-Butylbenzene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
1,1,1,2-Tetrachloroethane	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-11-1
Date Collected: 04/21/26 11:45
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-25
Matrix: Solid
Percent Solids: 74.6

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Tetrachloroethene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Tetrahydrofuran	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Toluene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
trans-1,2-Dichloroethene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
trans-1,3-Dichloropropene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
1,2,3-Trichlorobenzene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
1,2,4-Trichlorobenzene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
1,1,1-Trichloroethane	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
1,1,2-Trichloroethane	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Trichloroethene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Trichlorofluoromethane	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
1,2,3-Trichloropropane	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
1,1,2-Trichlorotrifluoroethane	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
1,2,4-Trimethylbenzene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
1,3,5-Trimethylbenzene	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Vinyl chloride	<0.173		0.173		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1
Xylenes, Total	<0.260		0.260		mg/Kg	☼	04/27/26 09:01	04/28/26 05:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*	*04/27/26 09:01*	*04/28/26 05:01*	*1*
Dibromofluoromethane (Surr)	*88*		*80 - 120*	*04/27/26 09:01*	*04/28/26 05:01*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*	*04/27/26 09:01*	*04/28/26 05:01*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00638		0.00638		mg/Kg	☼	04/28/26 08:08	04/29/26 06:17	1
Acenaphthylene	<0.00638		0.00638		mg/Kg	☼	04/28/26 08:08	04/29/26 06:17	1
Anthracene	<0.00638		0.00638		mg/Kg	☼	04/28/26 08:08	04/29/26 06:17	1
Benzo(a)anthracene	**0.0159**		0.00638		mg/Kg	☼	04/28/26 08:08	04/29/26 06:17	1
Benzo(a)pyrene	**0.0620**		0.00638		mg/Kg	☼	04/28/26 08:08	04/29/26 06:17	1
Benzo(b)fluoranthene	**0.0725**		0.00638		mg/Kg	☼	04/28/26 08:08	04/29/26 06:17	1
Benzo(g,h,i)perylene	**0.0511**		0.00638		mg/Kg	☼	04/28/26 08:08	04/29/26 06:17	1
Benzo(k)fluoranthene	**0.0268**		0.00638		mg/Kg	☼	04/28/26 08:08	04/29/26 06:17	1
Chrysene	**0.0254**		0.00638		mg/Kg	☼	04/28/26 08:08	04/29/26 06:17	1
Dibenz(a,h)anthracene	**0.0116**		0.00638		mg/Kg	☼	04/28/26 08:08	04/29/26 06:17	1
Fluoranthene	**0.0180**		0.00638		mg/Kg	☼	04/28/26 08:08	04/29/26 06:17	1
Fluorene	<0.00638		0.00638		mg/Kg	☼	04/28/26 08:08	04/29/26 06:17	1
Indeno(1,2,3-cd)pyrene	**0.0439**		0.00638		mg/Kg	☼	04/28/26 08:08	04/29/26 06:17	1
2-Methylnaphthalene	**0.0251**		0.00638		mg/Kg	☼	04/28/26 08:08	04/29/26 06:17	1
Naphthalene	**0.0109**		0.00638		mg/Kg	☼	04/28/26 08:08	04/29/26 06:17	1
Phenanthrene	**0.00657**		0.00638		mg/Kg	☼	04/28/26 08:08	04/29/26 06:17	1
Pyrene	**0.0183**		0.00638		mg/Kg	☼	04/28/26 08:08	04/29/26 06:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*101*		*20 - 122*	*04/28/26 08:08*	*04/29/26 06:17*	*1*
Nitrobenzene-d5 (Surr)	*125*		*10 - 132*	*04/28/26 08:08*	*04/29/26 06:17*	*1*
Terphenyl-d14 (Surr)	*99*		*10 - 119*	*04/28/26 08:08*	*04/29/26 06:17*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-11-1

Date Collected: 04/21/26 11:45
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-25

Matrix: Solid
Percent Solids: 74.6

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<13.9		13.9		mg/Kg	☼	04/28/26 11:40	04/29/26 05:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*	*04/28/26 11:40*	*04/29/26 05:06*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<7.29		7.29		mg/Kg	☼	04/23/26 08:54	04/23/26 17:54	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.539		0.539		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.539		0.539		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.539		0.539		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.35		1.35		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.35		1.35		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
Perfluorobutanesulfonic acid (PFBS)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
Perfluorobutanoic acid (PFBA)	<0.539		0.539		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
Perfluorodecanesulfonic acid (PFDS)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
Perfluorodecanoic acid (PFDA)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
Perfluorododecanesulfonic acid (PFDoS)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
Perfluorododecanoic acid (PFDoA)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
Perfluoroheptanoic acid (PFHpA)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.35		1.35		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
Perfluorohexanesulfonic acid (PFHxS)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
Perfluorohexanoic acid (PFHxA)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1

Client Sample ID: HA-11-1
Lab Sample ID: 310-330206-25
Date Collected: 04/21/26 11:45
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 74.6

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
Perfluorononanesulfonic acid (PFNS)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
Perfluorononanoic acid (PFNA)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
Perfluorooctanesulfonamide (PFOSA)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
Perfluorooctanesulfonic acid (PFOS)	**0.527**		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
Perfluorooctanoic acid (PFOA)	**0.291**		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
Perfluoropentanesulfonic acid (PFPeS)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
Perfluoropentanoic acid (PFPeA)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.35		1.35		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.539		0.539		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
Perfluorotetradecanoic acid (PFTeDA)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
Perfluorotridecanoic acid (PFTrDA)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1
Perfluoroundecanoic acid (PFUnA)	<0.269		0.269		ng/g	☼	04/28/26 08:24	04/29/26 05:20	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*115*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:20*	*1*
13C2 10:2 FTS	*96.2*		*40 - 275*	*04/28/26 08:24*	*04/29/26 05:20*	*1*
13C2 4:2 FTS	*104*		*40 - 165*	*04/28/26 08:24*	*04/29/26 05:20*	*1*
13C2 6:2 FTS	*93.5*		*40 - 215*	*04/28/26 08:24*	*04/29/26 05:20*	*1*
13C2 8:2 FTS	*96.6*		*40 - 275*	*04/28/26 08:24*	*04/29/26 05:20*	*1*
13C3 HFPO-DA	*56.3*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:20*	*1*
13C4 PFBA	*63.1*		*8 - 130*	*04/28/26 08:24*	*04/29/26 05:20*	*1*
13C3 PFBS	*81.4*		*40 - 135*	*04/28/26 08:24*	*04/29/26 05:20*	*1*
13C6 PFDA	*74.2*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:20*	*1*
13C2-PFDoA	*74.9*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:20*	*1*
13C4 PFHpA	*70.6*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:20*	*1*
13C5 PFHxA	*60.6*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:20*	*1*
13C3 PFHxS	*84.2*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:20*	*1*
13C9 PFNA	*78.4*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:20*	*1*
13C8 PFOA	*64.5*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:20*	*1*
13C8 PFOS	*88.4*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:20*	*1*
13C5 PFPeA	*73.5*		*35 - 130*	*04/28/26 08:24*	*04/29/26 05:20*	*1*
13C3-PFPrS	*57.6*		*20 - 150*	*04/28/26 08:24*	*04/29/26 05:20*	*1*
13C2 PFTeDA	*79.7*		*20 - 130*	*04/28/26 08:24*	*04/29/26 05:20*	*1*
13C7 PFUnA	*66.8*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:20*	*1*
d5-NEtFOSAA	*101*		*40 - 150*	*04/28/26 08:24*	*04/29/26 05:20*	*1*
d9-N-EtFOSE-M	*91.0*		*15 - 130*	*04/28/26 08:24*	*04/29/26 05:20*	*1*
d5-NEtPFOSA	*84.7*		*10 - 130*	*04/28/26 08:24*	*04/29/26 05:20*	*1*
d3-NMeFOSAA	*103*		*40 - 135*	*04/28/26 08:24*	*04/29/26 05:20*	*1*
d7-N-MeFOSE-M	*98.0*		*20 - 130*	*04/28/26 08:24*	*04/29/26 05:20*	*1*
d3-NMePFOSA	*82.3*		*10 - 130*	*04/28/26 08:24*	*04/29/26 05:20*	*1*

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**2.48**		1.30		mg/Kg	☼	04/24/26 14:00	04/28/26 16:28	2

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-1
Project/Site: Duluth Airport Taxiway A

Client Sample ID: HA-11-1
Lab Sample ID: 310-330206-25
Date Collected: 04/21/26 11:45
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 74.6

Method: SW846 6020B - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**59.2**		1.30		mg/Kg	☼	04/24/26 14:00	04/28/26 16:28	2
Cadmium	<0.260		0.260		mg/Kg	☼	04/24/26 14:00	04/28/26 16:28	2
Chromium	**30.6**		0.520		mg/Kg	☼	04/24/26 14:00	04/28/26 16:28	2
Lead	**6.99**		0.260		mg/Kg	☼	04/24/26 14:00	04/28/26 16:28	2
Selenium	<1.30		1.30		mg/Kg	☼	04/24/26 14:00	04/28/26 16:28	2
Silver	<0.260		0.260		mg/Kg	☼	04/24/26 14:00	04/28/26 16:28	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.122		0.122		mg/Kg	☼	04/24/26 13:00	04/27/26 14:46	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**25.4**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**74.6**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-11-3
Date Collected: 04/21/26 11:50
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-26
Matrix: Solid
Percent Solids: 80.6

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.667		0.667		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Allyl chloride	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Benzene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Bromobenzene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Bromochloromethane	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Bromodichloromethane	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Bromoform	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Bromomethane	<0.667		0.667		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
2-Butanone (MEK)	<1.00		1.00		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Carbon tetrachloride	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Chlorobenzene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Chlorodibromomethane	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Chloroethane	<0.333		0.333		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Chloroform	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Chloromethane	<0.333		0.333		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
2-Chlorotoluene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
4-Chlorotoluene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
cis-1,2-Dichloroethene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
cis-1,3-Dichloropropene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
1,2-Dibromo-3-chloropropane	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
1,2-Dibromoethane (EDB)	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Dibromomethane	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
1,2-Dichlorobenzene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
1,3-Dichlorobenzene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
1,4-Dichlorobenzene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Dichlorodifluoromethane	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
1,1-Dichloroethane	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
1,2-Dichloroethane	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
1,1-Dichloroethene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Dichlorofluoromethane	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
1,2-Dichloropropane	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
1,3-Dichloropropane	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
2,2-Dichloropropane	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
1,1-Dichloropropene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Diethyl ether	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Ethylbenzene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Hexachlorobutadiene	<0.333		0.333		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Isopropylbenzene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Methylene chloride	<0.333		0.333		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
4-Methyl-2-pentanone (MIBK)	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Methyl tert-butyl ether	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Naphthalene	<0.333		0.333		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
n-Butylbenzene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
n-Propylbenzene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
p-Isopropyltoluene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
sec-Butylbenzene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Styrene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
tert-Butylbenzene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
1,1,1,2-Tetrachloroethane	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-11-3
Date Collected: 04/21/26 11:50
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-26
Matrix: Solid
Percent Solids: 80.6

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Tetrachloroethene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Tetrahydrofuran	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Toluene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
trans-1,2-Dichloroethene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
trans-1,3-Dichloropropene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
1,2,3-Trichlorobenzene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
1,2,4-Trichlorobenzene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
1,1,1-Trichloroethane	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
1,1,2-Trichloroethane	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Trichloroethene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Trichlorofluoromethane	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
1,2,3-Trichloropropane	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
1,1,2-Trichlorotrifluoroethane	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
1,2,4-Trimethylbenzene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
1,3,5-Trimethylbenzene	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Vinyl chloride	<0.133		0.133		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1
Xylenes, Total	<0.200		0.200		mg/Kg	☼	04/27/26 09:01	04/28/26 05:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*	*04/27/26 09:01*	*04/28/26 05:24*	*1*
Dibromofluoromethane (Surr)	*84*		*80 - 120*	*04/27/26 09:01*	*04/28/26 05:24*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*	*04/27/26 09:01*	*04/28/26 05:24*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00590		0.00590		mg/Kg	☼	04/28/26 08:08	04/29/26 06:42	1
Acenaphthylene	<0.00590		0.00590		mg/Kg	☼	04/28/26 08:08	04/29/26 06:42	1
Anthracene	<0.00590		0.00590		mg/Kg	☼	04/28/26 08:08	04/29/26 06:42	1
Benzo(a)anthracene	<0.00590		0.00590		mg/Kg	☼	04/28/26 08:08	04/29/26 06:42	1
Benzo(a)pyrene	<0.00590		0.00590		mg/Kg	☼	04/28/26 08:08	04/29/26 06:42	1
Benzo(b)fluoranthene	<0.00590		0.00590		mg/Kg	☼	04/28/26 08:08	04/29/26 06:42	1
Benzo(g,h,i)perylene	<0.00590		0.00590		mg/Kg	☼	04/28/26 08:08	04/29/26 06:42	1
Benzo(k)fluoranthene	<0.00590		0.00590		mg/Kg	☼	04/28/26 08:08	04/29/26 06:42	1
Chrysene	<0.00590		0.00590		mg/Kg	☼	04/28/26 08:08	04/29/26 06:42	1
Dibenz(a,h)anthracene	<0.00590		0.00590		mg/Kg	☼	04/28/26 08:08	04/29/26 06:42	1
Fluoranthene	<0.00590		0.00590		mg/Kg	☼	04/28/26 08:08	04/29/26 06:42	1
Fluorene	<0.00590		0.00590		mg/Kg	☼	04/28/26 08:08	04/29/26 06:42	1
Indeno(1,2,3-cd)pyrene	<0.00590		0.00590		mg/Kg	☼	04/28/26 08:08	04/29/26 06:42	1
2-Methylnaphthalene	<0.00590		0.00590		mg/Kg	☼	04/28/26 08:08	04/29/26 06:42	1
Naphthalene	<0.00590		0.00590		mg/Kg	☼	04/28/26 08:08	04/29/26 06:42	1
Phenanthrene	<0.00590		0.00590		mg/Kg	☼	04/28/26 08:08	04/29/26 06:42	1
Pyrene	<0.00590		0.00590		mg/Kg	☼	04/28/26 08:08	04/29/26 06:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*85*		*20 - 122*	*04/28/26 08:08*	*04/29/26 06:42*	*1*
Nitrobenzene-d5 (Surr)	*118*		*10 - 132*	*04/28/26 08:08*	*04/29/26 06:42*	*1*
Terphenyl-d14 (Surr)	*101*		*10 - 119*	*04/28/26 08:08*	*04/29/26 06:42*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-11-3

Date Collected: 04/21/26 11:50
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-26

Matrix: Solid
Percent Solids: 80.6

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<12.1		12.1		mg/Kg	☼	04/28/26 11:48	04/29/26 10:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*	*04/28/26 11:48*	*04/29/26 10:22*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<6.63		6.63		mg/Kg	☼	04/23/26 08:54	04/23/26 18:07	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.482		0.482		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.482		0.482		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.482		0.482		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.20		1.20		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.20		1.20		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
Perfluorobutanesulfonic acid (PFBS)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
Perfluorobutanoic acid (PFBA)	<0.482		0.482		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
Perfluorodecanesulfonic acid (PFDS)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
Perfluorodecanoic acid (PFDA)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
Perfluorododecanesulfonic acid (PFDoS)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
Perfluorododecanoic acid (PFDoA)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
Perfluoroheptanoic acid (PFHpA)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.20		1.20		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
Perfluorohexanesulfonic acid (PFHxS)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
Perfluorohexanoic acid (PFHxA)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1

Client Sample ID: HA-11-3
Date Collected: 04/21/26 11:50
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-26
Matrix: Solid
Percent Solids: 80.6

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
Perfluorononanesulfonic acid (PFNS)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
Perfluorononanoic acid (PFNA)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
Perfluorooctanesulfonamide (PFOSA)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
Perfluorooctanesulfonic acid (PFOS)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
Perfluorooctanoic acid (PFOA)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
Perfluoropentanesulfonic acid (PFPeS)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
Perfluoropentanoic acid (PFPeA)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.20		1.20		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.482		0.482		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
Perfluorotetradecanoic acid (PFTeDA)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
Perfluorotridecanoic acid (PFTrDA)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1
Perfluoroundecanoic acid (PFUnA)	<0.241		0.241		ng/g	☼	04/28/26 08:24	04/29/26 05:37	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*77.6*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:37*	*1*
13C2 10:2 FTS	*58.8*		*40 - 275*	*04/28/26 08:24*	*04/29/26 05:37*	*1*
13C2 4:2 FTS	*75.0*		*40 - 165*	*04/28/26 08:24*	*04/29/26 05:37*	*1*
13C2 6:2 FTS	*69.1*		*40 - 215*	*04/28/26 08:24*	*04/29/26 05:37*	*1*
13C2 8:2 FTS	*65.5*		*40 - 275*	*04/28/26 08:24*	*04/29/26 05:37*	*1*
13C3 HFPO-DA	*69.9*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:37*	*1*
13C4 PFBA	*66.7*		*8 - 130*	*04/28/26 08:24*	*04/29/26 05:37*	*1*
13C3 PFBS	*72.4*		*40 - 135*	*04/28/26 08:24*	*04/29/26 05:37*	*1*
13C6 PFDA	*66.6*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:37*	*1*
13C2-PFDoA	*62.6*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:37*	*1*
13C4 PFHpA	*79.8*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:37*	*1*
13C5 PFHxA	*74.9*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:37*	*1*
13C3 PFHxS	*75.3*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:37*	*1*
13C9 PFNA	*73.6*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:37*	*1*
13C8 PFOA	*64.6*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:37*	*1*
13C8 PFOS	*71.4*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:37*	*1*
13C5 PFPeA	*79.6*		*35 - 130*	*04/28/26 08:24*	*04/29/26 05:37*	*1*
13C3-PFPrS	*59.7*		*20 - 150*	*04/28/26 08:24*	*04/29/26 05:37*	*1*
13C2 PFTeDA	*52.4*		*20 - 130*	*04/28/26 08:24*	*04/29/26 05:37*	*1*
13C7 PFUnA	*60.0*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:37*	*1*
d5-NEtFOSAA	*70.8*		*40 - 150*	*04/28/26 08:24*	*04/29/26 05:37*	*1*
d9-N-EtFOSE-M	*54.5*		*15 - 130*	*04/28/26 08:24*	*04/29/26 05:37*	*1*
d5-NEtPFOSA	*65.1*		*10 - 130*	*04/28/26 08:24*	*04/29/26 05:37*	*1*
d3-NMeFOSAA	*71.7*		*40 - 135*	*04/28/26 08:24*	*04/29/26 05:37*	*1*
d7-N-MeFOSE-M	*52.8*		*20 - 130*	*04/28/26 08:24*	*04/29/26 05:37*	*1*
d3-NMePFOSA	*68.0*		*10 - 130*	*04/28/26 08:24*	*04/29/26 05:37*	*1*

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<1.13		1.13		mg/Kg	☼	04/24/26 14:00	04/28/26 16:31	2
Barium	**39.4**		1.13		mg/Kg	☼	04/24/26 14:00	04/28/26 16:31	2

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-11-3
Date Collected: 04/21/26 11:50
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-26
Matrix: Solid
Percent Solids: 80.6

Method: SW846 6020B - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.226		0.226		mg/Kg	☼	04/24/26 14:00	04/28/26 16:31	2
Chromium	**21.9**		0.451		mg/Kg	☼	04/24/26 14:00	04/28/26 16:31	2
Lead	**2.49**		0.226		mg/Kg	☼	04/24/26 14:00	04/28/26 16:31	2
Selenium	<1.13		1.13		mg/Kg	☼	04/24/26 14:00	04/28/26 16:31	2
Silver	<0.226		0.226		mg/Kg	☼	04/24/26 14:00	04/28/26 16:31	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.131		0.131		mg/Kg	☼	04/24/26 13:00	04/27/26 14:47	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**19.4**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**80.6**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-12-1
Date Collected: 04/21/26 12:05
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-27
Matrix: Solid
Percent Solids: 77.8

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.772		0.772		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Allyl chloride	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Benzene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Bromobenzene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Bromochloromethane	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Bromodichloromethane	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Bromoform	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Bromomethane	<0.772		0.772		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
2-Butanone (MEK)	<1.16		1.16		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Carbon tetrachloride	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Chlorobenzene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Chlorodibromomethane	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Chloroethane	<0.386		0.386		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Chloroform	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Chloromethane	<0.386		0.386		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
2-Chlorotoluene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
4-Chlorotoluene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
cis-1,2-Dichloroethene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
cis-1,3-Dichloropropene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
1,2-Dibromo-3-chloropropane	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
1,2-Dibromoethane (EDB)	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Dibromomethane	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
1,2-Dichlorobenzene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
1,3-Dichlorobenzene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
1,4-Dichlorobenzene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Dichlorodifluoromethane	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
1,1-Dichloroethane	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
1,2-Dichloroethane	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
1,1-Dichloroethene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Dichlorofluoromethane	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
1,2-Dichloropropane	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
1,3-Dichloropropane	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
2,2-Dichloropropane	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
1,1-Dichloropropene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Diethyl ether	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Ethylbenzene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Hexachlorobutadiene	<0.386		0.386		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Isopropylbenzene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Methylene chloride	<0.386		0.386		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
4-Methyl-2-pentanone (MIBK)	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Methyl tert-butyl ether	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Naphthalene	<0.386		0.386		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
n-Butylbenzene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
n-Propylbenzene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
p-Isopropyltoluene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
sec-Butylbenzene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Styrene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
tert-Butylbenzene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
1,1,1,2-Tetrachloroethane	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1

Client Sample ID: HA-12-1
Lab Sample ID: 310-330206-27
Date Collected: 04/21/26 12:05
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 77.8

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Tetrachloroethene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Tetrahydrofuran	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Toluene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
trans-1,2-Dichloroethene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
trans-1,3-Dichloropropene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
1,2,3-Trichlorobenzene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
1,2,4-Trichlorobenzene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
1,1,1-Trichloroethane	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
1,1,2-Trichloroethane	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Trichloroethene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Trichlorofluoromethane	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
1,2,3-Trichloropropane	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
1,1,2-Trichlorotrifluoroethane	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
1,2,4-Trimethylbenzene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
1,3,5-Trimethylbenzene	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Vinyl chloride	<0.154		0.154		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1
Xylenes, Total	<0.231		0.231		mg/Kg	☼	04/27/26 09:01	04/28/26 05:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*	*04/27/26 09:01*	*04/28/26 05:47*	*1*
Dibromofluoromethane (Surr)	*86*		*80 - 120*	*04/27/26 09:01*	*04/28/26 05:47*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*	*04/27/26 09:01*	*04/28/26 05:47*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00616		0.00616		mg/Kg	☼	04/28/26 08:08	04/29/26 07:06	1
Acenaphthylene	<0.00616		0.00616		mg/Kg	☼	04/28/26 08:08	04/29/26 07:06	1
Anthracene	<0.00616		0.00616		mg/Kg	☼	04/28/26 08:08	04/29/26 07:06	1
Benzo(a)anthracene	**0.00714**		0.00616		mg/Kg	☼	04/28/26 08:08	04/29/26 07:06	1
Benzo(a)pyrene	**0.00777**		0.00616		mg/Kg	☼	04/28/26 08:08	04/29/26 07:06	1
Benzo(b)fluoranthene	**0.0143**		0.00616		mg/Kg	☼	04/28/26 08:08	04/29/26 07:06	1
Benzo(g,h,i)perylene	**0.00727**		0.00616		mg/Kg	☼	04/28/26 08:08	04/29/26 07:06	1
Benzo(k)fluoranthene	<0.00616		0.00616		mg/Kg	☼	04/28/26 08:08	04/29/26 07:06	1
Chrysene	**0.0117**		0.00616		mg/Kg	☼	04/28/26 08:08	04/29/26 07:06	1
Dibenz(a,h)anthracene	<0.00616		0.00616		mg/Kg	☼	04/28/26 08:08	04/29/26 07:06	1
Fluoranthene	**0.0238**		0.00616		mg/Kg	☼	04/28/26 08:08	04/29/26 07:06	1
Fluorene	<0.00616		0.00616		mg/Kg	☼	04/28/26 08:08	04/29/26 07:06	1
Indeno(1,2,3-cd)pyrene	**0.00620**		0.00616		mg/Kg	☼	04/28/26 08:08	04/29/26 07:06	1
2-Methylnaphthalene	**0.00806**		0.00616		mg/Kg	☼	04/28/26 08:08	04/29/26 07:06	1
Naphthalene	<0.00616		0.00616		mg/Kg	☼	04/28/26 08:08	04/29/26 07:06	1
Phenanthrene	**0.0115**		0.00616		mg/Kg	☼	04/28/26 08:08	04/29/26 07:06	1
Pyrene	**0.0175**		0.00616		mg/Kg	☼	04/28/26 08:08	04/29/26 07:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*99*		*20 - 122*	*04/28/26 08:08*	*04/29/26 07:06*	*1*
Nitrobenzene-d5 (Surr)	*104*		*10 - 132*	*04/28/26 08:08*	*04/29/26 07:06*	*1*
Terphenyl-d14 (Surr)	*101*		*10 - 119*	*04/28/26 08:08*	*04/29/26 07:06*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-12-1

Date Collected: 04/21/26 12:05
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-27

Matrix: Solid
Percent Solids: 77.8

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<12.6		12.6		mg/Kg	☼	04/28/26 11:48	04/29/26 10:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*	*04/28/26 11:48*	*04/29/26 10:48*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<7.50		7.50		mg/Kg	☼	04/23/26 08:54	04/23/26 18:19	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.514		0.514		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.514		0.514		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.514		0.514		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.29		1.29		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.29		1.29		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
Perfluorobutanesulfonic acid (PFBS)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
Perfluorobutanoic acid (PFBA)	<0.514		0.514		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
Perfluorodecanesulfonic acid (PFDS)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
Perfluorodecanoic acid (PFDA)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
Perfluorododecanesulfonic acid (PFDoS)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
Perfluorododecanoic acid (PFDoA)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
Perfluoroheptanoic acid (PFHpA)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.29		1.29		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
Perfluorohexanesulfonic acid (PFHxS)	**0.263**	**I**	0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-12-1
Date Collected: 04/21/26 12:05
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-27
Matrix: Solid
Percent Solids: 77.8

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
Perfluorononanesulfonic acid (PFNS)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
Perfluorononanoic acid (PFNA)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
Perfluorooctanesulfonamide (PFOSA)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
Perfluorooctanesulfonic acid (PFOS)	**0.399**		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
Perfluorooctanoic acid (PFOA)	**0.275**		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
Perfluoropentanesulfonic acid (PFPeS)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
Perfluoropentanoic acid (PFPeA)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.29		1.29		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.514		0.514		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
Perfluorotetradecanoic acid (PFTeDA)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
Perfluorotridecanoic acid (PFTrDA)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1
Perfluoroundecanoic acid (PFUnA)	<0.257		0.257		ng/g	☼	04/28/26 08:24	04/29/26 05:53	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*99.4*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:53*	*1*
13C2 10:2 FTS	*87.0*		*40 - 275*	*04/28/26 08:24*	*04/29/26 05:53*	*1*
13C2 4:2 FTS	*88.2*		*40 - 165*	*04/28/26 08:24*	*04/29/26 05:53*	*1*
13C2 6:2 FTS	*80.8*		*40 - 215*	*04/28/26 08:24*	*04/29/26 05:53*	*1*
13C2 8:2 FTS	*83.5*		*40 - 275*	*04/28/26 08:24*	*04/29/26 05:53*	*1*
13C3 HFPO-DA	*47.9*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:53*	*1*
13C4 PFBA	*55.7*		*8 - 130*	*04/28/26 08:24*	*04/29/26 05:53*	*1*
13C3 PFBS	*71.7*		*40 - 135*	*04/28/26 08:24*	*04/29/26 05:53*	*1*
13C6 PFDA	*64.5*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:53*	*1*
13C2-PFDoA	*70.1*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:53*	*1*
13C4 PFHpA	*60.3*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:53*	*1*
13C5 PFHxA	*54.6*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:53*	*1*
13C3 PFHxS	*74.9*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:53*	*1*
13C9 PFNA	*69.5*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:53*	*1*
13C8 PFOA	*58.3*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:53*	*1*
13C8 PFOS	*76.8*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:53*	*1*
13C5 PFPeA	*63.8*		*35 - 130*	*04/28/26 08:24*	*04/29/26 05:53*	*1*
13C3-PFPrS	*52.5*		*20 - 150*	*04/28/26 08:24*	*04/29/26 05:53*	*1*
13C2 PFTeDA	*77.1*		*20 - 130*	*04/28/26 08:24*	*04/29/26 05:53*	*1*
13C7 PFUnA	*60.7*		*40 - 130*	*04/28/26 08:24*	*04/29/26 05:53*	*1*
d5-NEtFOSAA	*84.6*		*40 - 150*	*04/28/26 08:24*	*04/29/26 05:53*	*1*
d9-N-EtFOSE-M	*72.7*		*15 - 130*	*04/28/26 08:24*	*04/29/26 05:53*	*1*
d5-NEtPFOSA	*73.9*		*10 - 130*	*04/28/26 08:24*	*04/29/26 05:53*	*1*
d3-NMeFOSAA	*87.1*		*40 - 135*	*04/28/26 08:24*	*04/29/26 05:53*	*1*
d7-N-MeFOSE-M	*81.4*		*20 - 130*	*04/28/26 08:24*	*04/29/26 05:53*	*1*
d3-NMePFOSA	*73.9*		*10 - 130*	*04/28/26 08:24*	*04/29/26 05:53*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-12-1
Date Collected: 04/21/26 12:05
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-27
Matrix: Solid
Percent Solids: 77.8

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**2.51**		0.945		mg/Kg	☼	04/24/26 14:00	04/28/26 16:34	2
Barium	**82.4**		0.945		mg/Kg	☼	04/24/26 14:00	04/28/26 16:34	2
Cadmium	<0.189		0.189		mg/Kg	☼	04/24/26 14:00	04/28/26 16:34	2
Chromium	**38.3**		0.378		mg/Kg	☼	04/24/26 14:00	04/28/26 16:34	2
Lead	**8.85**		0.189		mg/Kg	☼	04/24/26 14:00	04/28/26 16:34	2
Selenium	<0.945		0.945		mg/Kg	☼	04/24/26 14:00	04/28/26 16:34	2
Silver	<0.189		0.189		mg/Kg	☼	04/24/26 14:00	04/28/26 16:34	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.131		0.131		mg/Kg	☼	04/24/26 13:00	04/27/26 14:49	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**22.2**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**77.8**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-12-3
Date Collected: 04/21/26 12:10
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-28
Matrix: Solid
Percent Solids: 81.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.761		0.761		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Allyl chloride	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Benzene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Bromobenzene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Bromochloromethane	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Bromodichloromethane	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Bromoform	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Bromomethane	<0.761		0.761		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
2-Butanone (MEK)	<1.14		1.14		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Carbon tetrachloride	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Chlorobenzene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Chlorodibromomethane	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Chloroethane	<0.380		0.380		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Chloroform	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Chloromethane	<0.380		0.380		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
2-Chlorotoluene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
4-Chlorotoluene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
cis-1,2-Dichloroethene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
cis-1,3-Dichloropropene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
1,2-Dibromo-3-chloropropane	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
1,2-Dibromoethane (EDB)	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Dibromomethane	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
1,2-Dichlorobenzene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
1,3-Dichlorobenzene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
1,4-Dichlorobenzene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Dichlorodifluoromethane	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
1,1-Dichloroethane	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
1,2-Dichloroethane	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
1,1-Dichloroethene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Dichlorofluoromethane	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
1,2-Dichloropropane	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
1,3-Dichloropropane	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
2,2-Dichloropropane	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
1,1-Dichloropropene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Diethyl ether	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Ethylbenzene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Hexachlorobutadiene	<0.380		0.380		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Isopropylbenzene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Methylene chloride	<0.380		0.380		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
4-Methyl-2-pentanone (MIBK)	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Methyl tert-butyl ether	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Naphthalene	<0.380		0.380		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
n-Butylbenzene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
n-Propylbenzene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
p-Isopropyltoluene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
sec-Butylbenzene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Styrene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
tert-Butylbenzene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
1,1,1,2-Tetrachloroethane	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1

Client Sample ID: HA-12-3
Lab Sample ID: 310-330206-28
Date Collected: 04/21/26 12:10
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 81.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Tetrachloroethene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Tetrahydrofuran	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Toluene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
trans-1,2-Dichloroethene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
trans-1,3-Dichloropropene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
1,2,3-Trichlorobenzene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
1,2,4-Trichlorobenzene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
1,1,1-Trichloroethane	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
1,1,2-Trichloroethane	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Trichloroethene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Trichlorofluoromethane	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
1,2,3-Trichloropropane	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
1,1,2-Trichlorotrifluoroethane	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
1,2,4-Trimethylbenzene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
1,3,5-Trimethylbenzene	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Vinyl chloride	<0.152		0.152		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1
Xylenes, Total	<0.228		0.228		mg/Kg	☼	04/27/26 09:01	04/28/26 06:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*80 - 120*	*04/27/26 09:01*	*04/28/26 06:09*	*1*
Dibromofluoromethane (Surr)	*90*		*80 - 120*	*04/27/26 09:01*	*04/28/26 06:09*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*	*04/27/26 09:01*	*04/28/26 06:09*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00593		0.00593		mg/Kg	☼	04/28/26 08:08	04/29/26 07:31	1
Acenaphthylene	<0.00593		0.00593		mg/Kg	☼	04/28/26 08:08	04/29/26 07:31	1
Anthracene	<0.00593		0.00593		mg/Kg	☼	04/28/26 08:08	04/29/26 07:31	1
Benzo(a)anthracene	<0.00593		0.00593		mg/Kg	☼	04/28/26 08:08	04/29/26 07:31	1
Benzo(a)pyrene	<0.00593		0.00593		mg/Kg	☼	04/28/26 08:08	04/29/26 07:31	1
Benzo(b)fluoranthene	<0.00593		0.00593		mg/Kg	☼	04/28/26 08:08	04/29/26 07:31	1
Benzo(g,h,i)perylene	<0.00593		0.00593		mg/Kg	☼	04/28/26 08:08	04/29/26 07:31	1
Benzo(k)fluoranthene	<0.00593		0.00593		mg/Kg	☼	04/28/26 08:08	04/29/26 07:31	1
Chrysene	<0.00593		0.00593		mg/Kg	☼	04/28/26 08:08	04/29/26 07:31	1
Dibenz(a,h)anthracene	<0.00593		0.00593		mg/Kg	☼	04/28/26 08:08	04/29/26 07:31	1
Fluoranthene	<0.00593		0.00593		mg/Kg	☼	04/28/26 08:08	04/29/26 07:31	1
Fluorene	<0.00593		0.00593		mg/Kg	☼	04/28/26 08:08	04/29/26 07:31	1
Indeno(1,2,3-cd)pyrene	<0.00593		0.00593		mg/Kg	☼	04/28/26 08:08	04/29/26 07:31	1
2-Methylnaphthalene	<0.00593		0.00593		mg/Kg	☼	04/28/26 08:08	04/29/26 07:31	1
Naphthalene	<0.00593		0.00593		mg/Kg	☼	04/28/26 08:08	04/29/26 07:31	1
Phenanthrene	<0.00593		0.00593		mg/Kg	☼	04/28/26 08:08	04/29/26 07:31	1
Pyrene	<0.00593		0.00593		mg/Kg	☼	04/28/26 08:08	04/29/26 07:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*86*		*20 - 122*	*04/28/26 08:08*	*04/29/26 07:31*	*1*
Nitrobenzene-d5 (Surr)	*102*		*10 - 132*	*04/28/26 08:08*	*04/29/26 07:31*	*1*
Terphenyl-d14 (Surr)	*92*		*10 - 119*	*04/28/26 08:08*	*04/29/26 07:31*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-12-3

Date Collected: 04/21/26 12:10
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-28

Matrix: Solid
Percent Solids: 81.2

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<12.9		12.9		mg/Kg	☼	04/28/26 11:48	04/29/26 11:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*	*04/28/26 11:48*	*04/29/26 11:14*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<7.37		7.37		mg/Kg	☼	04/23/26 08:54	04/23/26 18:32	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.503		0.503		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.503		0.503		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.503		0.503		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.26		1.26		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.26		1.26		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
Perfluorobutanesulfonic acid (PFBS)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
Perfluorobutanoic acid (PFBA)	<0.503		0.503		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
Perfluorodecanesulfonic acid (PFDS)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
Perfluorodecanoic acid (PFDA)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
Perfluorododecanesulfonic acid (PFDoS)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
Perfluorododecanoic acid (PFDoA)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
Perfluoroheptanoic acid (PFHpA)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.26		1.26		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
Perfluorohexanesulfonic acid (PFHxS)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
Perfluorohexanoic acid (PFHxA)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1

Client Sample ID: HA-12-3
Date Collected: 04/21/26 12:10
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-28
Matrix: Solid
Percent Solids: 81.2

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
Perfluorononanesulfonic acid (PFNS)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
Perfluorononanoic acid (PFNA)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
Perfluorooctanesulfonamide (PFOSA)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
Perfluorooctanesulfonic acid (PFOS)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
Perfluorooctanoic acid (PFOA)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
Perfluoropentanesulfonic acid (PFPeS)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
Perfluoropentanoic acid (PFPeA)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.26		1.26		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.503		0.503		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
Perfluorotetradecanoic acid (PFTeDA)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
Perfluorotridecanoic acid (PFTrDA)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1
Perfluoroundecanoic acid (PFUnA)	<0.251		0.251		ng/g	☼	04/28/26 08:24	04/29/26 06:10	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*69.3*		*40 - 130*	*04/28/26 08:24*	*04/29/26 06:10*	*1*
13C2 10:2 FTS	*50.7*		*40 - 275*	*04/28/26 08:24*	*04/29/26 06:10*	*1*
13C2 4:2 FTS	*71.1*		*40 - 165*	*04/28/26 08:24*	*04/29/26 06:10*	*1*
13C2 6:2 FTS	*61.5*		*40 - 215*	*04/28/26 08:24*	*04/29/26 06:10*	*1*
13C2 8:2 FTS	*57.3*		*40 - 275*	*04/28/26 08:24*	*04/29/26 06:10*	*1*
13C3 HFPO-DA	*57.2*		*40 - 130*	*04/28/26 08:24*	*04/29/26 06:10*	*1*
13C4 PFBA	*56.5*		*8 - 130*	*04/28/26 08:24*	*04/29/26 06:10*	*1*
13C3 PFBS	*65.0*		*40 - 135*	*04/28/26 08:24*	*04/29/26 06:10*	*1*
13C6 PFDA	*58.2*		*40 - 130*	*04/28/26 08:24*	*04/29/26 06:10*	*1*
13C2-PFDoA	*49.8*		*40 - 130*	*04/28/26 08:24*	*04/29/26 06:10*	*1*
13C4 PFHpA	*65.7*		*40 - 130*	*04/28/26 08:24*	*04/29/26 06:10*	*1*
13C5 PFHxA	*60.0*		*40 - 130*	*04/28/26 08:24*	*04/29/26 06:10*	*1*
13C3 PFHxS	*66.7*		*40 - 130*	*04/28/26 08:24*	*04/29/26 06:10*	*1*
13C9 PFNA	*63.6*		*40 - 130*	*04/28/26 08:24*	*04/29/26 06:10*	*1*
13C8 PFOA	*57.5*		*40 - 130*	*04/28/26 08:24*	*04/29/26 06:10*	*1*
13C8 PFOS	*64.1*		*40 - 130*	*04/28/26 08:24*	*04/29/26 06:10*	*1*
13C5 PFPeA	*66.3*		*35 - 130*	*04/28/26 08:24*	*04/29/26 06:10*	*1*
13C3-PFPrS	*53.2*		*20 - 150*	*04/28/26 08:24*	*04/29/26 06:10*	*1*
13C2 PFTeDA	*52.4*		*20 - 130*	*04/28/26 08:24*	*04/29/26 06:10*	*1*
13C7 PFUnA	*52.1*		*40 - 130*	*04/28/26 08:24*	*04/29/26 06:10*	*1*
d5-NEtFOSAA	*63.0*		*40 - 150*	*04/28/26 08:24*	*04/29/26 06:10*	*1*
d9-N-EtFOSE-M	*31.1*		*15 - 130*	*04/28/26 08:24*	*04/29/26 06:10*	*1*
d5-NEtPFOSA	*55.1*		*10 - 130*	*04/28/26 08:24*	*04/29/26 06:10*	*1*
d3-NMeFOSAA	*64.7*		*40 - 135*	*04/28/26 08:24*	*04/29/26 06:10*	*1*
d7-N-MeFOSE-M	*29.5*		*20 - 130*	*04/28/26 08:24*	*04/29/26 06:10*	*1*
d3-NMePFOSA	*60.0*		*10 - 130*	*04/28/26 08:24*	*04/29/26 06:10*	*1*

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**3.08**		1.01		mg/Kg	☼	04/24/26 14:00	04/28/26 16:37	2
Barium	**85.1**		1.01		mg/Kg	☼	04/24/26 14:00	04/28/26 16:37	2

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-12-3
Date Collected: 04/21/26 12:10
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-28
Matrix: Solid
Percent Solids: 81.2

Method: SW846 6020B - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.202		0.202		mg/Kg	☼	04/24/26 14:00	04/28/26 16:37	2
Chromium	**50.1**		0.404		mg/Kg	☼	04/24/26 14:00	04/28/26 16:37	2
Lead	**6.44**		0.202		mg/Kg	☼	04/24/26 14:00	04/28/26 16:37	2
Selenium	<1.01		1.01		mg/Kg	☼	04/24/26 14:00	04/28/26 16:37	2
Silver	<0.202		0.202		mg/Kg	☼	04/24/26 14:00	04/28/26 16:37	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.112		0.112		mg/Kg	☼	04/24/26 13:00	04/27/26 14:51	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**18.8**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**81.2**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-13-1
Date Collected: 04/21/26 12:25
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-29
Matrix: Solid
Percent Solids: 79.6

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.723		0.723		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Allyl chloride	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Benzene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Bromobenzene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Bromochloromethane	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Bromodichloromethane	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Bromoform	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Bromomethane	<0.723		0.723		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
2-Butanone (MEK)	<1.08		1.08		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Carbon tetrachloride	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Chlorobenzene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Chlorodibromomethane	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Chloroethane	<0.362		0.362		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Chloroform	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Chloromethane	<0.362		0.362		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
2-Chlorotoluene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
4-Chlorotoluene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
cis-1,2-Dichloroethene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
cis-1,3-Dichloropropene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
1,2-Dibromo-3-chloropropane	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
1,2-Dibromoethane (EDB)	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Dibromomethane	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
1,2-Dichlorobenzene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
1,3-Dichlorobenzene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
1,4-Dichlorobenzene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Dichlorodifluoromethane	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
1,1-Dichloroethane	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
1,2-Dichloroethane	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
1,1-Dichloroethene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Dichlorofluoromethane	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
1,2-Dichloropropane	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
1,3-Dichloropropane	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
2,2-Dichloropropane	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
1,1-Dichloropropene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Diethyl ether	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Ethylbenzene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Hexachlorobutadiene	<0.362		0.362		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Isopropylbenzene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Methylene chloride	<0.362		0.362		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
4-Methyl-2-pentanone (MIBK)	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Methyl tert-butyl ether	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Naphthalene	<0.362		0.362		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
n-Butylbenzene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
n-Propylbenzene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
p-Isopropyltoluene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
sec-Butylbenzene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Styrene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
tert-Butylbenzene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
1,1,1,2-Tetrachloroethane	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-13-1
Date Collected: 04/21/26 12:25
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-29
Matrix: Solid
Percent Solids: 79.6

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Tetrachloroethene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Tetrahydrofuran	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Toluene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
trans-1,2-Dichloroethene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
trans-1,3-Dichloropropene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
1,2,3-Trichlorobenzene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
1,2,4-Trichlorobenzene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
1,1,1-Trichloroethane	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
1,1,2-Trichloroethane	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Trichloroethene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Trichlorofluoromethane	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
1,2,3-Trichloropropane	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
1,1,2-Trichlorotrifluoroethane	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
1,2,4-Trimethylbenzene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
1,3,5-Trimethylbenzene	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Vinyl chloride	<0.145		0.145		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1
Xylenes, Total	<0.217		0.217		mg/Kg	☼	04/27/26 09:01	04/28/26 06:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*	*04/27/26 09:01*	*04/28/26 06:32*	*1*
Dibromofluoromethane (Surr)	*88*		*80 - 120*	*04/27/26 09:01*	*04/28/26 06:32*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*	*04/27/26 09:01*	*04/28/26 06:32*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00609		0.00609		mg/Kg	☼	04/28/26 08:08	04/29/26 07:56	1
Acenaphthylene	<0.00609		0.00609		mg/Kg	☼	04/28/26 08:08	04/29/26 07:56	1
Anthracene	<0.00609		0.00609		mg/Kg	☼	04/28/26 08:08	04/29/26 07:56	1
Benzo(a)anthracene	<0.00609		0.00609		mg/Kg	☼	04/28/26 08:08	04/29/26 07:56	1
Benzo(a)pyrene	<0.00609		0.00609		mg/Kg	☼	04/28/26 08:08	04/29/26 07:56	1
Benzo(b)fluoranthene	<0.00609		0.00609		mg/Kg	☼	04/28/26 08:08	04/29/26 07:56	1
Benzo(g,h,i)perylene	<0.00609		0.00609		mg/Kg	☼	04/28/26 08:08	04/29/26 07:56	1
Benzo(k)fluoranthene	<0.00609		0.00609		mg/Kg	☼	04/28/26 08:08	04/29/26 07:56	1
Chrysene	<0.00609		0.00609		mg/Kg	☼	04/28/26 08:08	04/29/26 07:56	1
Dibenz(a,h)anthracene	<0.00609		0.00609		mg/Kg	☼	04/28/26 08:08	04/29/26 07:56	1
Fluoranthene	**0.00679**		0.00609		mg/Kg	☼	04/28/26 08:08	04/29/26 07:56	1
Fluorene	<0.00609		0.00609		mg/Kg	☼	04/28/26 08:08	04/29/26 07:56	1
Indeno(1,2,3-cd)pyrene	<0.00609		0.00609		mg/Kg	☼	04/28/26 08:08	04/29/26 07:56	1
2-Methylnaphthalene	<0.00609		0.00609		mg/Kg	☼	04/28/26 08:08	04/29/26 07:56	1
Naphthalene	<0.00609		0.00609		mg/Kg	☼	04/28/26 08:08	04/29/26 07:56	1
Phenanthrene	<0.00609		0.00609		mg/Kg	☼	04/28/26 08:08	04/29/26 07:56	1
Pyrene	<0.00609		0.00609		mg/Kg	☼	04/28/26 08:08	04/29/26 07:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*92*		*20 - 122*	*04/28/26 08:08*	*04/29/26 07:56*	*1*
Nitrobenzene-d5 (Surr)	*124*		*10 - 132*	*04/28/26 08:08*	*04/29/26 07:56*	*1*
Terphenyl-d14 (Surr)	*110*		*10 - 119*	*04/28/26 08:08*	*04/29/26 07:56*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-13-1

Date Collected: 04/21/26 12:25
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-29

Matrix: Solid
Percent Solids: 79.6

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<11.9		11.9		mg/Kg	☼	04/28/26 11:48	04/29/26 11:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*	*04/28/26 11:48*	*04/29/26 11:40*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<6.18		6.18		mg/Kg	☼	04/23/26 08:54	04/23/26 18:44	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.495		0.495		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.495		0.495		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.495		0.495		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.24		1.24		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.24		1.24		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
Perfluorobutanesulfonic acid (PFBS)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
Perfluorobutanoic acid (PFBA)	<0.495		0.495		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
Perfluorodecanesulfonic acid (PFDS)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
Perfluorodecanoic acid (PFDA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
Perfluorododecanesulfonic acid (PFDoS)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
Perfluorododecanoic acid (PFDoA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
Perfluoroheptanoic acid (PFHpA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.24		1.24		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
Perfluorohexanesulfonic acid (PFHxS)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
Perfluorohexanoic acid (PFHxA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1

Client Sample ID: HA-13-1
Date Collected: 04/21/26 12:25
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-29
Matrix: Solid
Percent Solids: 79.6

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
Perfluorononanesulfonic acid (PFNS)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
Perfluorononanoic acid (PFNA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
Perfluorooctanesulfonamide (PFOSA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
Perfluorooctanesulfonic acid (PFOS)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
Perfluorooctanoic acid (PFOA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
Perfluoropentanesulfonic acid (PFPeS)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
Perfluoropentanoic acid (PFPeA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.24		1.24		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.495		0.495		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
Perfluorotetradecanoic acid (PFTeDA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
Perfluorotridecanoic acid (PFTrDA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1
Perfluoroundecanoic acid (PFUnA)	<0.248		0.248		ng/g	☼	04/28/26 08:24	04/29/26 06:27	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*71.7*		*40 - 130*	*04/28/26 08:24*	*04/29/26 06:27*	*1*
13C2 10:2 FTS	*71.4*		*40 - 275*	*04/28/26 08:24*	*04/29/26 06:27*	*1*
13C2 4:2 FTS	*77.2*		*40 - 165*	*04/28/26 08:24*	*04/29/26 06:27*	*1*
13C2 6:2 FTS	*64.2*		*40 - 215*	*04/28/26 08:24*	*04/29/26 06:27*	*1*
13C2 8:2 FTS	*67.3*		*40 - 275*	*04/28/26 08:24*	*04/29/26 06:27*	*1*
13C3 HFPO-DA	*54.7*		*40 - 130*	*04/28/26 08:24*	*04/29/26 06:27*	*1*
13C4 PFBA	*52.7*		*8 - 130*	*04/28/26 08:24*	*04/29/26 06:27*	*1*
13C3 PFBS	*64.2*		*40 - 135*	*04/28/26 08:24*	*04/29/26 06:27*	*1*
13C6 PFDA	*60.2*		*40 - 130*	*04/28/26 08:24*	*04/29/26 06:27*	*1*
13C2-PFDoA	*62.2*		*40 - 130*	*04/28/26 08:24*	*04/29/26 06:27*	*1*
13C4 PFHpA	*62.9*		*40 - 130*	*04/28/26 08:24*	*04/29/26 06:27*	*1*
13C5 PFHxA	*58.2*		*40 - 130*	*04/28/26 08:24*	*04/29/26 06:27*	*1*
13C3 PFHxS	*68.4*		*40 - 130*	*04/28/26 08:24*	*04/29/26 06:27*	*1*
13C9 PFNA	*62.7*		*40 - 130*	*04/28/26 08:24*	*04/29/26 06:27*	*1*
13C8 PFOA	*53.7*		*40 - 130*	*04/28/26 08:24*	*04/29/26 06:27*	*1*
13C8 PFOS	*69.0*		*40 - 130*	*04/28/26 08:24*	*04/29/26 06:27*	*1*
13C5 PFPeA	*63.8*		*35 - 130*	*04/28/26 08:24*	*04/29/26 06:27*	*1*
13C3-PFPrS	*49.4*		*20 - 150*	*04/28/26 08:24*	*04/29/26 06:27*	*1*
13C2 PFTeDA	*69.4*		*20 - 130*	*04/28/26 08:24*	*04/29/26 06:27*	*1*
13C7 PFUnA	*58.8*		*40 - 130*	*04/28/26 08:24*	*04/29/26 06:27*	*1*
d5-NEtFOSAA	*76.5*		*40 - 150*	*04/28/26 08:24*	*04/29/26 06:27*	*1*
d9-N-EtFOSE-M	*52.7*		*15 - 130*	*04/28/26 08:24*	*04/29/26 06:27*	*1*
d5-NEtPFOSA	*66.2*		*10 - 130*	*04/28/26 08:24*	*04/29/26 06:27*	*1*
d3-NMeFOSAA	*79.8*		*40 - 135*	*04/28/26 08:24*	*04/29/26 06:27*	*1*
d7-N-MeFOSE-M	*56.7*		*20 - 130*	*04/28/26 08:24*	*04/29/26 06:27*	*1*
d3-NMePFOSA	*64.8*		*10 - 130*	*04/28/26 08:24*	*04/29/26 06:27*	*1*

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**2.67**		1.11		mg/Kg	☼	04/24/26 14:00	04/28/26 16:40	2
Barium	**65.9**		1.11		mg/Kg	☼	04/24/26 14:00	04/28/26 16:40	2

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-13-1
Date Collected: 04/21/26 12:25
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-29
Matrix: Solid
Percent Solids: 79.6

Method: SW846 6020B - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.222		0.222		mg/Kg	☼	04/24/26 14:00	04/28/26 16:40	2
Chromium	**40.7**		0.445		mg/Kg	☼	04/24/26 14:00	04/28/26 16:40	2
Lead	**5.98**		0.222		mg/Kg	☼	04/24/26 14:00	04/28/26 16:40	2
Selenium	<1.11		1.11		mg/Kg	☼	04/24/26 14:00	04/28/26 16:40	2
Silver	<0.222		0.222		mg/Kg	☼	04/24/26 14:00	04/28/26 16:40	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.126		0.126		mg/Kg	☼	04/24/26 13:00	04/27/26 14:52	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**20.4**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**79.6**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: Rinsate Blank
Date Collected: 04/21/26 13:00
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-31
Matrix: Water

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.19		1.19		ng/L		04/24/26 10:05	04/25/26 08:33	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<3.18		3.18		ng/L		04/24/26 10:05	04/25/26 08:33	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<3.18		3.18		ng/L		04/24/26 10:05	04/25/26 08:33	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<3.18		3.18		ng/L		04/24/26 10:05	04/25/26 08:33	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<7.96		7.96		ng/L		04/24/26 10:05	04/25/26 08:33	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<7.96		7.96		ng/L		04/24/26 10:05	04/25/26 08:33	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
Perfluorobutanesulfonic acid (PFBS)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
Perfluorobutanoic acid (PFBA)	<3.18		3.18		ng/L		04/24/26 10:05	04/25/26 08:33	1
Perfluorodecanesulfonic acid (PFDS)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
Perfluorodecanoic acid (PFDA)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
Perfluorododecanesulfonic acid (PFDoS)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
Perfluorododecanoic acid (PFDoA)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
Perfluoroheptanoic acid (PFHpA)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<7.96		7.96		ng/L		04/24/26 10:05	04/25/26 08:33	1
Perfluorohexanesulfonic acid (PFHxS)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
Perfluorohexanoic acid (PFHxA)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
Perfluorononanesulfonic acid (PFNS)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
Perfluorononanoic acid (PFNA)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
Perfluorooctanesulfonamide (PFOSA)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
Perfluorooctanesulfonic acid (PFOS)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
Perfluorooctanoic acid (PFOA)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
Perfluoropentanesulfonic acid (PFPeS)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1

Client Sample ID: Rinsate Blank
Lab Sample ID: 310-330206-31
Date Collected: 04/21/26 13:00
Matrix: Water
Date Received: 04/22/26 13:20

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<7.96		7.96		ng/L		04/24/26 10:05	04/25/26 08:33	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<3.18		3.18		ng/L		04/24/26 10:05	04/25/26 08:33	1
Perfluorotetradecanoic acid (PFTeDA)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
Perfluorotridecanoic acid (PFTrDA)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1
Perfluoroundecanoic acid (PFUnA)	<1.59		1.59		ng/L		04/24/26 10:05	04/25/26 08:33	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*89.7*		*40 - 130*	*04/24/26 10:05*	*04/25/26 08:33*	*1*
13C2 10:2 FTS	*88.7*		*40 - 200*	*04/24/26 10:05*	*04/25/26 08:33*	*1*
13C2 4:2 FTS	*111*		*40 - 200*	*04/24/26 10:05*	*04/25/26 08:33*	*1*
13C2 6:2 FTS	*95.2*		*40 - 200*	*04/24/26 10:05*	*04/25/26 08:33*	*1*
13C2 8:2 FTS	*95.4*		*40 - 300*	*04/24/26 10:05*	*04/25/26 08:33*	*1*
13C3 HFPO-DA	*96.2*		*40 - 130*	*04/24/26 10:05*	*04/25/26 08:33*	*1*
13C4 PFBA	*87.9*		*5 - 130*	*04/24/26 10:05*	*04/25/26 08:33*	*1*
13C3 PFBS	*89.1*		*40 - 135*	*04/24/26 10:05*	*04/25/26 08:33*	*1*
13C6 PFDA	*86.4*		*40 - 130*	*04/24/26 10:05*	*04/25/26 08:33*	*1*
13C2-PFDoA	*69.8*		*10 - 130*	*04/24/26 10:05*	*04/25/26 08:33*	*1*
13C4 PFHpA	*97.2*		*40 - 130*	*04/24/26 10:05*	*04/25/26 08:33*	*1*
13C5 PFHxA	*105*		*40 - 130*	*04/24/26 10:05*	*04/25/26 08:33*	*1*
13C3 PFHxS	*92.4*		*40 - 130*	*04/24/26 10:05*	*04/25/26 08:33*	*1*
13C9 PFNA	*90.1*		*40 - 130*	*04/24/26 10:05*	*04/25/26 08:33*	*1*
13C8 PFOA	*102*		*40 - 130*	*04/24/26 10:05*	*04/25/26 08:33*	*1*
13C8 PFOS	*91.4*		*40 - 130*	*04/24/26 10:05*	*04/25/26 08:33*	*1*
13C5 PFPeA	*98.4*		*40 - 130*	*04/24/26 10:05*	*04/25/26 08:33*	*1*
13C3-PFPrS	*80.8*		*20 - 150*	*04/24/26 10:05*	*04/25/26 08:33*	*1*
13C2 PFTeDA	*74.0*		*10 - 130*	*04/24/26 10:05*	*04/25/26 08:33*	*1*
13C7 PFUnA	*77.7*		*30 - 130*	*04/24/26 10:05*	*04/25/26 08:33*	*1*
d5-NEtFOSAA	*91.3*		*25 - 135*	*04/24/26 10:05*	*04/25/26 08:33*	*1*
d9-N-EtFOSE-M	*38.7*		*10 - 130*	*04/24/26 10:05*	*04/25/26 08:33*	*1*
d5-NEtPFOSA	*66.6*		*10 - 130*	*04/24/26 10:05*	*04/25/26 08:33*	*1*
d3-NMeFOSAA	*59.8*		*40 - 170*	*04/24/26 10:05*	*04/25/26 08:33*	*1*
d7-N-MeFOSE-M	*41.4*		*10 - 130*	*04/24/26 10:05*	*04/25/26 08:33*	*1*
d3-NMePFOSA	*75.0*		*10 - 130*	*04/24/26 10:05*	*04/25/26 08:33*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: Trip Blank - Soil 1

Date Collected: 04/21/26 14:00
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-32

Matrix: Solid

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.500		0.500		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Allyl chloride	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Benzene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Bromobenzene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Bromochloromethane	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Bromodichloromethane	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Bromoform	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Bromomethane	<0.500		0.500		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
2-Butanone (MEK)	<0.750		0.750		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Carbon tetrachloride	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Chlorobenzene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Chlorodibromomethane	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Chloroethane	<0.250		0.250		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Chloroform	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Chloromethane	<0.250		0.250		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
2-Chlorotoluene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
4-Chlorotoluene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
cis-1,2-Dichloroethene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
cis-1,3-Dichloropropene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
1,2-Dibromo-3-chloropropane	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
1,2-Dibromoethane (EDB)	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Dibromomethane	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
1,2-Dichlorobenzene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
1,3-Dichlorobenzene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
1,4-Dichlorobenzene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Dichlorodifluoromethane	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
1,1-Dichloroethane	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
1,2-Dichloroethane	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
1,1-Dichloroethene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Dichlorofluoromethane	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
1,2-Dichloropropane	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
1,3-Dichloropropane	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
2,2-Dichloropropane	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
1,1-Dichloropropene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Diethyl ether	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Ethylbenzene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Hexachlorobutadiene	<0.250		0.250		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Isopropylbenzene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Methylene chloride	<0.250		0.250		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
4-Methyl-2-pentanone (MIBK)	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Methyl tert-butyl ether	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Naphthalene	<0.250		0.250		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
n-Butylbenzene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
n-Propylbenzene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
p-Isopropyltoluene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
sec-Butylbenzene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Styrene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
tert-Butylbenzene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
1,1,1,2-Tetrachloroethane	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: Trip Blank - Soil 1

Date Collected: 04/21/26 14:00
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-32

Matrix: Solid

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Tetrachloroethene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Tetrahydrofuran	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Toluene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
trans-1,2-Dichloroethene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
trans-1,3-Dichloropropene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
1,2,3-Trichlorobenzene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
1,2,4-Trichlorobenzene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
1,1,1-Trichloroethane	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
1,1,2-Trichloroethane	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Trichloroethene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Trichlorofluoromethane	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
1,2,3-Trichloropropane	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
1,1,2-Trichlorotrifluoroethane	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
1,2,4-Trimethylbenzene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
1,3,5-Trimethylbenzene	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Vinyl chloride	<0.100		0.100		mg/Kg		04/27/26 09:01	04/28/26 06:55	1
Xylenes, Total	<0.150		0.150		mg/Kg		04/27/26 09:01	04/28/26 06:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*	*04/27/26 09:01*	*04/28/26 06:55*	*1*
Dibromofluoromethane (Surr)	*87*		*80 - 120*	*04/27/26 09:01*	*04/28/26 06:55*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*	*04/27/26 09:01*	*04/28/26 06:55*	*1*

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<10.0		10.0		mg/Kg		04/28/26 11:48	04/29/26 12:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*	*04/28/26 11:48*	*04/29/26 12:32*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: Trip Blank - Water
Date Collected: 04/21/26 15:00
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-33
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L			04/29/26 00:49	1
Allyl chloride	<2.00		2.00		ug/L			04/29/26 00:49	1
Benzene	<0.500		0.500		ug/L			04/29/26 00:49	1
Bromobenzene	<1.00		1.00		ug/L			04/29/26 00:49	1
Bromochloromethane	<5.00		5.00		ug/L			04/29/26 00:49	1
Bromodichloromethane	<1.00		1.00		ug/L			04/29/26 00:49	1
Bromoform	<5.00		5.00		ug/L			04/29/26 00:49	1
Bromomethane	<4.00		4.00		ug/L			04/29/26 00:49	1
2-Butanone (MEK)	<10.0		10.0		ug/L			04/29/26 00:49	1
Carbon tetrachloride	<2.00		2.00		ug/L			04/29/26 00:49	1
Chlorobenzene	<1.00		1.00		ug/L			04/29/26 00:49	1
Chlorodibromomethane	<5.00		5.00		ug/L			04/29/26 00:49	1
Chloroethane	<4.00		4.00		ug/L			04/29/26 00:49	1
Chloroform	<3.00		3.00		ug/L			04/29/26 00:49	1
Chloromethane	<3.00		3.00		ug/L			04/29/26 00:49	1
2-Chlorotoluene	<1.00		1.00		ug/L			04/29/26 00:49	1
4-Chlorotoluene	<1.00		1.00		ug/L			04/29/26 00:49	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			04/29/26 00:49	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			04/29/26 00:49	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			04/29/26 00:49	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			04/29/26 00:49	1
Dibromomethane	<1.00		1.00		ug/L			04/29/26 00:49	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			04/29/26 00:49	1
1,3-Dichlorobenzene	<1.00		1.00		ug/L			04/29/26 00:49	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			04/29/26 00:49	1
Dichlorodifluoromethane	<3.00		3.00		ug/L			04/29/26 00:49	1
1,1-Dichloroethane	<1.00		1.00		ug/L			04/29/26 00:49	1
1,2-Dichloroethane	<1.00		1.00		ug/L			04/29/26 00:49	1
1,1-Dichloroethene	<2.00		2.00		ug/L			04/29/26 00:49	1
Dichlorofluoromethane	<1.00		1.00		ug/L			04/29/26 00:49	1
1,2-Dichloropropane	<1.00		1.00		ug/L			04/29/26 00:49	1
1,3-Dichloropropane	<1.00		1.00		ug/L			04/29/26 00:49	1
2,2-Dichloropropane	<4.00		4.00		ug/L			04/29/26 00:49	1
1,1-Dichloropropene	<1.00		1.00		ug/L			04/29/26 00:49	1
Diethyl ether	<2.00		2.00		ug/L			04/29/26 00:49	1
Ethylbenzene	<1.00		1.00		ug/L			04/29/26 00:49	1
Hexachlorobutadiene	<5.00		5.00		ug/L			04/29/26 00:49	1
Isopropylbenzene	<1.00		1.00		ug/L			04/29/26 00:49	1
Methylene chloride	<5.00		5.00		ug/L			04/29/26 00:49	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			04/29/26 00:49	1
Methyl tert-butyl ether	<1.00		1.00		ug/L			04/29/26 00:49	1
Naphthalene	<5.00		5.00		ug/L			04/29/26 00:49	1
n-Butylbenzene	<1.00		1.00		ug/L			04/29/26 00:49	1
n-Propylbenzene	<1.00		1.00		ug/L			04/29/26 00:49	1
p-Isopropyltoluene	<1.00		1.00		ug/L			04/29/26 00:49	1
sec-Butylbenzene	<1.00		1.00		ug/L			04/29/26 00:49	1
Styrene	<1.00		1.00		ug/L			04/29/26 00:49	1
tert-Butylbenzene	<1.00		1.00		ug/L			04/29/26 00:49	1
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L			04/29/26 00:49	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: Trip Blank - Water

Date Collected: 04/21/26 15:00
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-33

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			04/29/26 00:49	1
Tetrachloroethene	<1.00		1.00		ug/L			04/29/26 00:49	1
Tetrahydrofuran	<10.0		10.0		ug/L			04/29/26 00:49	1
Toluene	<1.00		1.00		ug/L			04/29/26 00:49	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			04/29/26 00:49	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			04/29/26 00:49	1
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L			04/29/26 00:49	1
1,2,4-Trichlorobenzene	<5.00		5.00		ug/L			04/29/26 00:49	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			04/29/26 00:49	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			04/29/26 00:49	1
Trichloroethene	<1.00		1.00		ug/L			04/29/26 00:49	1
Trichlorofluoromethane	<4.00		4.00		ug/L			04/29/26 00:49	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			04/29/26 00:49	1
1,1,2-Trichlorotrifluoroethane	<2.00		2.00		ug/L			04/29/26 00:49	1
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L			04/29/26 00:49	1
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L			04/29/26 00:49	1
Vinyl chloride	<1.00		1.00		ug/L			04/29/26 00:49	1
Xylenes, Total	<3.00		3.00		ug/L			04/29/26 00:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*04/29/26 00:49*	*1*
Dibromofluoromethane (Surr)	*101*		*76 - 130*		*04/29/26 00:49*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*04/29/26 00:49*	*1*

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<100		100		ug/L			04/28/26 23:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*04/28/26 23:25*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-1
Project/Site: Duluth Airport Taxiway A

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.

LCMS

Qualifier	Qualifier Description
I	Ion ratio outside limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Surrogate Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)								
		BFB	DBFM	TOL						
Lab Sample ID	Client Sample ID	(80-120)	(80-120)	(80-120)						
310-330206-1	HA-08-1	102	89	103						
310-330206-2	HA-08-3	102	87	105						
310-330206-3	HA-06-1	107	87	102						
310-330206-4	HA-06-3	105	86	107						
310-330206-5	HA-05-1	104	89	104						
310-330206-6	HA-05-3	107	88	103						
310-330206-7	HA-04-1	97	84	106						
310-330206-8	HA-04-3	104	89	106						
310-330206-9	HA-03-1	106	91	105						
310-330206-10	HA-03-3	96	85	99						
310-330206-11	HA-01-1	103	89	106						
310-330206-11 MS	HA-01-1	99	98	107						
310-330206-11 MSD	HA-01-1	99	98	97						
310-330206-12	HA-01-3	107	85	101						
310-330206-12 MS	HA-01-3	98	95	104						
310-330206-12 MSD	HA-01-3	102	97	101						
310-330206-13	HA-02-1	106	92	104						
310-330206-14	HA-02-3	99	88	101						
310-330206-15	HA-07-1	105	88	103						
310-330206-16	HA-07-2.5	111	92	103						
310-330206-17	HA-09-1	107	86	103						
310-330206-18	HA-09-3	107	87	102						
310-330206-20	SS-01	102	95	105						
310-330206-21	SS-02	94	88	99						
310-330206-22	SS-03	99	84	107						
310-330206-23	HA-10-1	102	87	105						
310-330206-24	HA-10-3	103	90	106						
310-330206-25	HA-11-1	104	88	104						
310-330206-26	HA-11-3	103	84	106						
310-330206-27	HA-12-1	101	86	102						
310-330206-28	HA-12-3	109	90	106						
310-330206-29	HA-13-1	99	88	104						
310-330206-32	Trip Blank - Soil 1	97	87	103						
LCS 310-487058/2-A	Lab Control Sample	102	100	97						
LCS 310-487060/2-A	Lab Control Sample	98	105	99						
LCS 310-487184/2-A	Lab Control Sample	101	96	100						
MB 310-487058/1-A	Method Blank	101	88	104						
MB 310-487060/1-A	Method Blank	106	88	108						
MB 310-487184/1-A	Method Blank	104	86	99						

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Surrogate Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-1
Project/Site: Duluth Airport Taxiway A

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(76-130)	(80-120)
310-330206-19	WS-01	102	108	98
310-330206-33	Trip Blank - Water	101	101	99
LCS 310-487263/6	Lab Control Sample	107	97	102
LCS 310-487263/7	Lab Control Sample	101	100	99
MB 310-487263/5	Method Blank	101	97	100

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		FBP	NBZ	TPHL
Lab Sample ID	Client Sample ID	(20-122)	(10-132)	(10-119)
310-330206-1	HA-08-1	112	124	117
310-330206-2	HA-08-3	98	83	89
310-330206-2 MS	HA-08-3	116	102	112
310-330206-2 MSD	HA-08-3	121	125	121 S1+
310-330206-3	HA-06-1	126 S1+	133 S1+	122 S1+
310-330206-4	HA-06-3	107	100	94
310-330206-5	HA-05-1	111	100	98
310-330206-6	HA-05-3	105	102	104
310-330206-7	HA-04-1	114	102	107
310-330206-8	HA-04-3	86	103	96
310-330206-8 MS	HA-04-3	92	105	93
310-330206-8 MSD	HA-04-3	67	93	78
310-330206-9	HA-03-1	78	94	71
310-330206-10	HA-03-3	80	105	78
310-330206-11	HA-01-1	84	104	89
310-330206-12	HA-01-3	89	103	100
310-330206-13	HA-02-1	68	77	67
310-330206-14	HA-02-3	91	111	95
310-330206-15	HA-07-1	81	115	83
310-330206-16	HA-07-2.5	90	109	93
310-330206-17	HA-09-1	93	118	90
310-330206-18	HA-09-3	88	115	95
310-330206-20	SS-01	90	57	88
310-330206-21	SS-02	91	43	81
310-330206-22	SS-03	103	52	98
310-330206-23	HA-10-1	86	106	89
310-330206-23 MS	HA-10-1	98	133 S1+	114
310-330206-23 MSD	HA-10-1	85	112	95
310-330206-24	HA-10-3	102	113	99
310-330206-25	HA-11-1	101	125	99
310-330206-26	HA-11-3	85	118	101
310-330206-27	HA-12-1	99	104	101
310-330206-28	HA-12-3	86	102	92
310-330206-29	HA-13-1	92	124	110

Method: 8270E - Semivolatile Organic Compounds (GC-MS/MS) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		FBP	NBZ	TPHL
Lab Sample ID	Client Sample ID	(20-122)	(10-132)	(10-119)
LCS 310-487020/2-A	Lab Control Sample	81	96	86
LCS 310-487056/2-A	Lab Control Sample	87	100	99
LCS 310-487182/2-A	Lab Control Sample	108	128	118
MB 310-487020/1-A	Method Blank	100	112	120 S1+
MB 310-487056/1-A	Method Blank	105	110	100
MB 310-487182/1-A	Method Blank	100	128	115

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)

Method: 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		FBP	NBZ	TPHL
Lab Sample ID	Client Sample ID	(13-150)	(22-150)	(10-150)
310-330206-19	WS-01	90	115	95

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	(80-120)
310-330206-1	HA-08-1	82
310-330206-2	HA-08-3	83
310-330206-3	HA-06-1	83
310-330206-4	HA-06-3	81
310-330206-5	HA-05-1	83
310-330206-6	HA-05-3	83
310-330206-7	HA-04-1	98
310-330206-8	HA-04-3	100
310-330206-9	HA-03-1	96
310-330206-10	HA-03-3	101
310-330206-11	HA-01-1	101
310-330206-12	HA-01-3	104
310-330206-13	HA-02-1	103
310-330206-14	HA-02-3	103
310-330206-15	HA-07-1	108
310-330206-16	HA-07-2.5	107
310-330206-17	HA-09-1	102
310-330206-18	HA-09-3	100
310-330206-20	SS-01	101
310-330206-21	SS-02	101
310-330206-22	SS-03	101

Surrogate Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-1
Project/Site: Duluth Airport Taxiway A

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)								
Lab Sample ID	Client Sample ID	BFB (80-120)								
310-330206-23	HA-10-1	105								
310-330206-24	HA-10-3	101								
310-330206-25	HA-11-1	104								
310-330206-26	HA-11-3	100								
310-330206-27	HA-12-1	101								
310-330206-28	HA-12-3	96								
310-330206-29	HA-13-1	100								
310-330206-32	Trip Blank - Soil 1	104								
LCS 310-486957/2-A	Lab Control Sample	80								
LCS 310-487246/2-A	Lab Control Sample	96								
LCS 310-487248/2-A	Lab Control Sample	97								
LCSD 310-486957/23-A	Lab Control Sample Dup	87								
LCSD 310-487246/23-A	Lab Control Sample Dup	100								
LCSD 310-487248/23-A	Lab Control Sample Dup	98								
MB 310-486957/1-A	Method Blank	83								
MB 310-487246/1-A	Method Blank	101								
MB 310-487248/1-A	Method Blank	98								

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)								
Lab Sample ID	Client Sample ID	BFB (80-120)								
310-330206-19	WS-01	102								
310-330206-33	Trip Blank - Water	101								
LCS 310-487223/2	Lab Control Sample	96								
LCSD 310-487223/24	Lab Control Sample Dup	99								
MB 310-487223/1	Method Blank	102								

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 310-487058/1-A
Matrix: Solid
Analysis Batch: 487059

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487058

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.476		0.476		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Allyl chloride	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Benzene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Bromobenzene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Bromochloromethane	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Bromodichloromethane	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Bromoform	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Bromomethane	<0.476		0.476		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
2-Butanone (MEK)	<0.714		0.714		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Carbon tetrachloride	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Chlorobenzene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Chlorodibromomethane	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Chloroethane	<0.238		0.238		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Chloroform	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Chloromethane	<0.238		0.238		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
2-Chlorotoluene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
4-Chlorotoluene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
cis-1,2-Dichloroethene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
cis-1,3-Dichloropropene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
1,2-Dibromo-3-chloropropane	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
1,2-Dibromoethane (EDB)	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Dibromomethane	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
1,2-Dichlorobenzene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
1,3-Dichlorobenzene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
1,4-Dichlorobenzene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Dichlorodifluoromethane	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
1,1-Dichloroethane	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
1,2-Dichloroethane	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
1,1-Dichloroethene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Dichlorofluoromethane	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
1,2-Dichloropropane	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
1,3-Dichloropropane	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
2,2-Dichloropropane	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
1,1-Dichloropropene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Diethyl ether	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Ethylbenzene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Hexachlorobutadiene	<0.238		0.238		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Isopropylbenzene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Methylene chloride	<0.238		0.238		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
4-Methyl-2-pentanone (MIBK)	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Methyl tert-butyl ether	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Naphthalene	<0.238		0.238		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
n-Butylbenzene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
n-Propylbenzene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
p-Isopropyltoluene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
sec-Butylbenzene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Styrene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
tert-Butylbenzene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-487058/1-A
Matrix: Solid
Analysis Batch: 487059

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487058

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
1,1,2,2-Tetrachloroethane	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Tetrachloroethene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Tetrahydrofuran	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Toluene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
trans-1,2-Dichloroethene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
trans-1,3-Dichloropropene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
1,2,3-Trichlorobenzene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
1,2,4-Trichlorobenzene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
1,1,1-Trichloroethane	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
1,1,2-Trichloroethane	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Trichloroethene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Trichlorofluoromethane	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
1,2,3-Trichloropropane	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
1,1,2-Trichlorotrifluoroethane	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
1,2,4-Trimethylbenzene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
1,3,5-Trimethylbenzene	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Vinyl chloride	<0.0953		0.0953		mg/Kg		04/27/26 08:51	04/27/26 13:08	1
Xylenes, Total	<0.143		0.143		mg/Kg		04/27/26 08:51	04/27/26 13:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*	*04/27/26 08:51*	*04/27/26 13:08*	*1*
Dibromofluoromethane (Surr)	*88*		*80 - 120*	*04/27/26 08:51*	*04/27/26 13:08*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*	*04/27/26 08:51*	*04/27/26 13:08*	*1*

Lab Sample ID: LCS 310-487058/2-A
Matrix: Solid
Analysis Batch: 487059

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487058

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	1.94	2.141		mg/Kg		110	54 - 150
Allyl chloride	0.971	1.055		mg/Kg		109	68 - 135
Benzene	0.971	0.9359		mg/Kg		96	76 - 129
Bromobenzene	0.971	0.8792		mg/Kg		91	76 - 125
Bromochloromethane	0.971	0.9676		mg/Kg		100	74 - 136
Bromodichloromethane	0.971	0.9482		mg/Kg		98	73 - 126
Bromoform	0.971	0.8633		mg/Kg		89	64 - 130
2-Butanone (MEK)	1.94	1.960		mg/Kg		101	66 - 147
Carbon tetrachloride	0.971	0.9257		mg/Kg		95	73 - 136
Chlorobenzene	0.971	0.9332		mg/Kg		96	78 - 123
Chlorodibromomethane	0.971	0.8908		mg/Kg		92	73 - 121
Chloroform	0.971	0.9419		mg/Kg		97	75 - 131
2-Chlorotoluene	0.971	0.9060		mg/Kg		93	78 - 126
4-Chlorotoluene	0.971	0.9386		mg/Kg		97	76 - 123
cis-1,2-Dichloroethene	0.971	0.9711		mg/Kg		100	76 - 134
cis-1,3-Dichloropropene	0.971	0.9394		mg/Kg		97	73 - 126
1,2-Dibromo-3-chloropropane	0.971	0.9962		mg/Kg		103	65 - 130
1,2-Dibromoethane (EDB)	0.971	0.9153		mg/Kg		94	80 - 126

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-487058/2-A
Matrix: Solid
Analysis Batch: 487059

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487058

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dibromomethane	0.971	1.013		mg/Kg		104	79 - 130
1,2-Dichlorobenzene	0.971	0.9340		mg/Kg		96	77 - 122
1,3-Dichlorobenzene	0.971	0.9484		mg/Kg		98	77 - 124
1,4-Dichlorobenzene	0.971	0.9144		mg/Kg		94	75 - 122
1,1-Dichloroethane	0.971	0.8995		mg/Kg		93	68 - 142
1,2-Dichloroethane	0.971	0.9543		mg/Kg		98	70 - 140
1,1-Dichloroethene	0.971	0.9927		mg/Kg		102	64 - 141
1,2-Dichloropropane	0.971	0.9286		mg/Kg		96	77 - 129
1,3-Dichloropropane	0.971	0.9185		mg/Kg		95	77 - 132
2,2-Dichloropropane	0.971	0.9987		mg/Kg		103	55 - 145
1,1-Dichloropropene	0.971	0.9607		mg/Kg		99	75 - 136
Diethyl ether	0.971	1.051		mg/Kg		108	68 - 138
Ethylbenzene	0.971	0.9075		mg/Kg		93	76 - 128
Hexachlorobutadiene	0.971	0.9146		mg/Kg		94	66 - 141
Isopropylbenzene	0.971	0.9178		mg/Kg		94	76 - 126
Methylene chloride	0.971	1.016		mg/Kg		105	68 - 139
4-Methyl-2-pentanone (MIBK)	1.94	1.630		mg/Kg		84	66 - 139
Methyl tert-butyl ether	0.971	0.9675		mg/Kg		100	68 - 139
Naphthalene	0.971	0.8576		mg/Kg		88	71 - 125
n-Butylbenzene	0.971	0.9780		mg/Kg		101	70 - 131
n-Propylbenzene	0.971	0.9263		mg/Kg		95	77 - 127
p-Isopropyltoluene	0.971	0.9430		mg/Kg		97	74 - 128
sec-Butylbenzene	0.971	0.9662		mg/Kg		99	75 - 127
Styrene	0.971	0.8952		mg/Kg		92	77 - 124
tert-Butylbenzene	0.971	0.9600		mg/Kg		99	76 - 128
1,1,1,2-Tetrachloroethane	0.971	0.9298		mg/Kg		96	77 - 126
1,1,2,2-Tetrachloroethane	0.971	0.9252		mg/Kg		95	76 - 126
Tetrachloroethene	0.971	0.9096		mg/Kg		94	73 - 135
Tetrahydrofuran	1.94	1.914		mg/Kg		98	67 - 143
Toluene	0.971	0.9012		mg/Kg		93	75 - 126
trans-1,2-Dichloroethene	0.971	0.9626		mg/Kg		99	68 - 138
trans-1,3-Dichloropropene	0.971	0.8962		mg/Kg		92	72 - 126
1,2,3-Trichlorobenzene	0.971	0.8511		mg/Kg		88	67 - 127
1,2,4-Trichlorobenzene	0.971	0.8883		mg/Kg		91	70 - 125
1,1,1-Trichloroethane	0.971	0.9334		mg/Kg		96	74 - 135
1,1,2-Trichloroethane	0.971	0.9585		mg/Kg		99	77 - 131
Trichloroethene	0.971	0.9491		mg/Kg		98	77 - 132
1,2,3-Trichloropropane	0.971	0.9296		mg/Kg		96	77 - 133
1,1,2-Trichlorotrifluoroethane	0.971	1.080		mg/Kg		111	57 - 150
1,2,4-Trimethylbenzene	0.971	0.9619		mg/Kg		99	75 - 126
1,3,5-Trimethylbenzene	0.971	0.8911		mg/Kg		92	74 - 127
Xylenes, Total	1.94	1.821		mg/Kg		94	77 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*
Toluene-d8 (Surr)	*97*		*80 - 120*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 310-330206-11 MS
Matrix: Solid
Analysis Batch: 487059

Client Sample ID: HA-01-1
Prep Type: Total/NA
Prep Batch: 487058

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	<0.590		2.06	2.490		mg/Kg	☼	121	22 - 150
Allyl chloride	<0.118		1.03	0.9960		mg/Kg	☼	97	30 - 145
Benzene	<0.118		1.03	0.9732		mg/Kg	☼	94	34 - 146
Bromobenzene	<0.118		1.03	1.003		mg/Kg	☼	97	34 - 150
Bromochloromethane	<0.118		1.03	0.9767		mg/Kg	☼	95	36 - 150
Bromodichloromethane	<0.118		1.03	1.044		mg/Kg	☼	101	32 - 148
Bromoform	<0.118		1.03	1.042		mg/Kg	☼	101	26 - 147
2-Butanone (MEK)	<0.885		2.06	2.115		mg/Kg	☼	103	30 - 150
Carbon tetrachloride	<0.118		1.03	0.9358		mg/Kg	☼	91	33 - 150
Chlorobenzene	<0.118		1.03	1.068		mg/Kg	☼	104	36 - 148
Chlorodibromomethane	<0.118		1.03	1.077		mg/Kg	☼	105	32 - 142
Chloroform	<0.118		1.03	0.9596		mg/Kg	☼	93	36 - 150
2-Chlorotoluene	<0.118		1.03	1.054		mg/Kg	☼	102	29 - 150
4-Chlorotoluene	<0.118		1.03	1.076		mg/Kg	☼	104	31 - 150
cis-1,2-Dichloroethene	<0.118		1.03	0.9444		mg/Kg	☼	92	37 - 150
cis-1,3-Dichloropropene	<0.118		1.03	1.103		mg/Kg	☼	107	33 - 144
1,2-Dibromo-3-chloropropane	<0.118		1.03	1.020		mg/Kg	☼	99	25 - 150
1,2-Dibromoethane (EDB)	<0.118		1.03	1.080		mg/Kg	☼	105	36 - 150
Dibromomethane	<0.118		1.03	1.070		mg/Kg	☼	104	36 - 150
1,2-Dichlorobenzene	<0.118		1.03	0.9563		mg/Kg	☼	93	34 - 149
1,3-Dichlorobenzene	<0.118		1.03	0.9729		mg/Kg	☼	94	34 - 149
1,4-Dichlorobenzene	<0.118		1.03	0.9758		mg/Kg	☼	95	34 - 147
1,1-Dichloroethane	<0.118		1.03	0.9612		mg/Kg	☼	93	33 - 150
1,2-Dichloroethane	<0.118		1.03	0.9973		mg/Kg	☼	97	34 - 150
1,1-Dichloroethene	<0.118		1.03	0.9672		mg/Kg	☼	94	30 - 147
1,2-Dichloropropane	<0.118		1.03	1.029		mg/Kg	☼	100	36 - 150
1,3-Dichloropropane	<0.118		1.03	1.117		mg/Kg	☼	108	36 - 150
2,2-Dichloropropane	<0.118		1.03	0.8847		mg/Kg	☼	86	21 - 145
1,1-Dichloropropene	<0.118		1.03	0.9898		mg/Kg	☼	96	36 - 150
Diethyl ether	<0.118		1.03	1.090		mg/Kg	☼	106	31 - 150
Ethylbenzene	<0.118		1.03	1.061		mg/Kg	☼	103	29 - 150
Hexachlorobutadiene	<0.295		1.03	0.9679		mg/Kg	☼	94	14 - 150
Isopropylbenzene	<0.118		1.03	1.048		mg/Kg	☼	102	30 - 150
Methylene chloride	<0.295		1.03	1.053		mg/Kg	☼	102	27 - 150
4-Methyl-2-pentanone (MIBK)	<0.118		2.06	2.154		mg/Kg	☼	105	29 - 150
Methyl tert-butyl ether	<0.118		1.03	1.109		mg/Kg	☼	108	31 - 150
Naphthalene	<0.295		1.03	0.9514		mg/Kg	☼	92	20 - 150
n-Butylbenzene	<0.118		1.03	1.019		mg/Kg	☼	99	18 - 150
n-Propylbenzene	<0.118		1.03	1.070		mg/Kg	☼	104	29 - 150
p-Isopropyltoluene	<0.118		1.03	0.9713		mg/Kg	☼	94	25 - 150
sec-Butylbenzene	<0.118		1.03	1.005		mg/Kg	☼	98	26 - 150
Styrene	<0.118		1.03	1.043		mg/Kg	☼	101	33 - 150
tert-Butylbenzene	<0.118		1.03	0.9999		mg/Kg	☼	97	33 - 150
1,1,1,2-Tetrachloroethane	<0.118		1.03	1.070		mg/Kg	☼	104	33 - 150
1,1,2,2-Tetrachloroethane	<0.118		1.03	1.170		mg/Kg	☼	114	25 - 150
Tetrachloroethene	<0.118		1.03	0.9702		mg/Kg	☼	94	33 - 150
Tetrahydrofuran	<0.118		2.06	2.009		mg/Kg	☼	98	31 - 150
Toluene	<0.118		1.03	1.028		mg/Kg	☼	100	34 - 146

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 310-330206-11 MS
Matrix: Solid
Analysis Batch: 487059

Client Sample ID: HA-01-1
Prep Type: Total/NA
Prep Batch: 487058

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
trans-1,2-Dichloroethene	<0.118		1.03	0.9824		mg/Kg	☼	95	34 - 148
trans-1,3-Dichloropropene	<0.118		1.03	1.068		mg/Kg	☼	104	32 - 144
1,2,3-Trichlorobenzene	<0.118		1.03	0.9223		mg/Kg	☼	90	24 - 150
1,2,4-Trichlorobenzene	<0.118		1.03	0.9399		mg/Kg	☼	91	25 - 150
1,1,1-Trichloroethane	<0.118		1.03	0.9451		mg/Kg	☼	92	35 - 150
1,1,2-Trichloroethane	<0.118		1.03	1.150		mg/Kg	☼	112	34 - 150
Trichloroethene	<0.118		1.03	0.9802		mg/Kg	☼	95	35 - 150
1,2,3-Trichloropropane	<0.118		1.03	1.121		mg/Kg	☼	109	33 - 150
1,1,2-Trichlorotrifluoroethane	<0.118		1.03	1.063		mg/Kg	☼	103	28 - 150
1,2,4-Trimethylbenzene	<0.118		1.03	1.016		mg/Kg	☼	99	19 - 150
1,3,5-Trimethylbenzene	<0.118		1.03	1.047		mg/Kg	☼	102	24 - 150
Xylenes, Total	<0.177		2.06	2.149		mg/Kg	☼	104	28 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*98*		*80 - 120*
Toluene-d8 (Surr)	*107*		*80 - 120*

Lab Sample ID: 310-330206-11 MSD
Matrix: Solid
Analysis Batch: 487059

Client Sample ID: HA-01-1
Prep Type: Total/NA
Prep Batch: 487058

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone	<0.590		2.03	2.687		mg/Kg	☼	132	22 - 150	8	40
Allyl chloride	<0.118		1.02	1.073		mg/Kg	☼	106	30 - 145	7	40
Benzene	<0.118		1.02	1.012		mg/Kg	☼	100	34 - 146	4	40
Bromobenzene	<0.118		1.02	0.9753		mg/Kg	☼	96	34 - 150	3	40
Bromochloromethane	<0.118		1.02	1.024		mg/Kg	☼	101	36 - 150	5	40
Bromodichloromethane	<0.118		1.02	1.043		mg/Kg	☼	103	32 - 148	0	40
Bromoform	<0.118		1.02	0.9542		mg/Kg	☼	94	26 - 147	9	40
2-Butanone (MEK)	<0.885		2.03	2.093		mg/Kg	☼	103	30 - 150	1	40
Carbon tetrachloride	<0.118		1.02	0.9682		mg/Kg	☼	95	33 - 150	3	40
Chlorobenzene	<0.118		1.02	1.071		mg/Kg	☼	105	36 - 148	0	40
Chlorodibromomethane	<0.118		1.02	1.018		mg/Kg	☼	100	32 - 142	6	40
Chloroform	<0.118		1.02	0.9869		mg/Kg	☼	97	36 - 150	3	40
2-Chlorotoluene	<0.118		1.02	1.036		mg/Kg	☼	102	29 - 150	2	40
4-Chlorotoluene	<0.118		1.02	1.047		mg/Kg	☼	103	31 - 150	3	40
cis-1,2-Dichloroethene	<0.118		1.02	0.9841		mg/Kg	☼	97	37 - 150	4	40
cis-1,3-Dichloropropene	<0.118		1.02	1.037		mg/Kg	☼	102	33 - 144	6	40
1,2-Dibromo-3-chloropropane	<0.118		1.02	1.100		mg/Kg	☼	108	25 - 150	8	40
1,2-Dibromoethane (EDB)	<0.118		1.02	1.052		mg/Kg	☼	103	36 - 150	3	40
Dibromomethane	<0.118		1.02	1.081		mg/Kg	☼	106	36 - 150	1	40
1,2-Dichlorobenzene	<0.118		1.02	1.016		mg/Kg	☼	100	34 - 149	6	40
1,3-Dichlorobenzene	<0.118		1.02	1.001		mg/Kg	☼	99	34 - 149	3	40
1,4-Dichlorobenzene	<0.118		1.02	0.9964		mg/Kg	☼	98	34 - 147	2	40
1,1-Dichloroethane	<0.118		1.02	1.044		mg/Kg	☼	103	33 - 150	8	40
1,2-Dichloroethane	<0.118		1.02	1.053		mg/Kg	☼	104	34 - 150	5	40
1,1-Dichloroethene	<0.118		1.02	1.006		mg/Kg	☼	99	30 - 147	4	40

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 310-330206-11 MSD
Matrix: Solid
Analysis Batch: 487059

Client Sample ID: HA-01-1
Prep Type: Total/NA
Prep Batch: 487058

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dichloropropane	<0.118		1.02	1.076		mg/Kg	☼	106	36 - 150	4	40
1,3-Dichloropropane	<0.118		1.02	1.082		mg/Kg	☼	106	36 - 150	3	40
2,2-Dichloropropane	<0.118		1.02	0.9076		mg/Kg	☼	89	21 - 145	3	40
1,1-Dichloropropene	<0.118		1.02	1.018		mg/Kg	☼	100	36 - 150	3	40
Diethyl ether	<0.118		1.02	1.137		mg/Kg	☼	112	31 - 150	4	40
Ethylbenzene	<0.118		1.02	1.025		mg/Kg	☼	101	29 - 150	3	40
Hexachlorobutadiene	<0.295		1.02	0.9561		mg/Kg	☼	94	14 - 150	1	40
Isopropylbenzene	<0.118		1.02	1.025		mg/Kg	☼	101	30 - 150	2	40
Methylene chloride	<0.295		1.02	1.123		mg/Kg	☼	110	27 - 150	6	40
4-Methyl-2-pentanone (MIBK)	<0.118		2.03	2.110		mg/Kg	☼	104	29 - 150	2	40
Methyl tert-butyl ether	<0.118		1.02	1.209		mg/Kg	☼	119	31 - 150	9	40
Naphthalene	<0.295		1.02	1.030		mg/Kg	☼	101	20 - 150	8	40
n-Butylbenzene	<0.118		1.02	1.065		mg/Kg	☼	105	18 - 150	4	40
n-Propylbenzene	<0.118		1.02	1.032		mg/Kg	☼	101	29 - 150	4	40
p-Isopropyltoluene	<0.118		1.02	1.002		mg/Kg	☼	99	25 - 150	3	40
sec-Butylbenzene	<0.118		1.02	1.054		mg/Kg	☼	104	26 - 150	5	40
Styrene	<0.118		1.02	1.033		mg/Kg	☼	102	33 - 150	1	40
tert-Butylbenzene	<0.118		1.02	1.041		mg/Kg	☼	102	33 - 150	4	40
1,1,1,2-Tetrachloroethane	<0.118		1.02	1.041		mg/Kg	☼	102	33 - 150	3	40
1,1,2,2-Tetrachloroethane	<0.118		1.02	1.120		mg/Kg	☼	110	25 - 150	4	40
Tetrachloroethene	<0.118		1.02	0.9483		mg/Kg	☼	93	33 - 150	2	40
Tetrahydrofuran	<0.118		2.03	2.250		mg/Kg	☼	111	31 - 150	11	40
Toluene	<0.118		1.02	1.009		mg/Kg	☼	99	34 - 146	2	40
trans-1,2-Dichloroethene	<0.118		1.02	1.111		mg/Kg	☼	109	34 - 148	12	40
trans-1,3-Dichloropropene	<0.118		1.02	0.9958		mg/Kg	☼	98	32 - 144	7	40
1,2,3-Trichlorobenzene	<0.118		1.02	0.9472		mg/Kg	☼	93	24 - 150	3	40
1,2,4-Trichlorobenzene	<0.118		1.02	0.9889		mg/Kg	☼	97	25 - 150	5	40
1,1,1-Trichloroethane	<0.118		1.02	0.9813		mg/Kg	☼	97	35 - 150	4	40
1,1,2-Trichloroethane	<0.118		1.02	1.125		mg/Kg	☼	111	34 - 150	2	40
Trichloroethene	<0.118		1.02	1.055		mg/Kg	☼	104	35 - 150	7	40
1,2,3-Trichloropropane	<0.118		1.02	1.103		mg/Kg	☼	108	33 - 150	2	40
1,1,2-Trichlorotrifluoroethane	<0.118		1.02	1.124		mg/Kg	☼	111	28 - 150	6	40
1,2,4-Trimethylbenzene	<0.118		1.02	1.060		mg/Kg	☼	104	19 - 150	4	40
1,3,5-Trimethylbenzene	<0.118		1.02	1.018		mg/Kg	☼	100	24 - 150	3	40
Xylenes, Total	<0.177		2.03	2.055		mg/Kg	☼	101	28 - 150	4	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*98*		*80 - 120*
Toluene-d8 (Surr)	*97*		*80 - 120*

Lab Sample ID: MB 310-487060/1-A
Matrix: Solid
Analysis Batch: 487062

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487060

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.484		0.484		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Allyl chloride	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-487060/1-A
Matrix: Solid
Analysis Batch: 487062

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487060

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Bromobenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Bromochloromethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Bromodichloromethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Bromoform	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Bromomethane	<0.484		0.484		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
2-Butanone (MEK)	<0.726		0.726		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Carbon tetrachloride	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Chlorobenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Chlorodibromomethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Chloroethane	<0.242		0.242		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Chloroform	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Chloromethane	<0.242		0.242		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
2-Chlorotoluene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
4-Chlorotoluene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
cis-1,2-Dichloroethene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
cis-1,3-Dichloropropene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,2-Dibromo-3-chloropropane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,2-Dibromoethane (EDB)	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Dibromomethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,2-Dichlorobenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,3-Dichlorobenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,4-Dichlorobenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Dichlorodifluoromethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,1-Dichloroethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,2-Dichloroethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,1-Dichloroethene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Dichlorofluoromethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,2-Dichloropropane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,3-Dichloropropane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
2,2-Dichloropropane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,1-Dichloropropene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Diethyl ether	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Ethylbenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Hexachlorobutadiene	<0.242		0.242		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Isopropylbenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Methylene chloride	<0.242		0.242		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
4-Methyl-2-pentanone (MIBK)	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Methyl tert-butyl ether	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Naphthalene	<0.242		0.242		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
n-Butylbenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
n-Propylbenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
p-Isopropyltoluene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
sec-Butylbenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Styrene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
tert-Butylbenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,1,1,2-Tetrachloroethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,1,2,2-Tetrachloroethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Tetrachloroethene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-487060/1-A
Matrix: Solid
Analysis Batch: 487062

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487060

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Toluene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
trans-1,2-Dichloroethene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
trans-1,3-Dichloropropene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,2,3-Trichlorobenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,2,4-Trichlorobenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,1,1-Trichloroethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,1,2-Trichloroethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Trichloroethene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Trichlorofluoromethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,2,3-Trichloropropane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,1,2-Trichlorotrifluoroethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,2,4-Trimethylbenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,3,5-Trimethylbenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Vinyl chloride	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Xylenes, Total	<0.145		0.145		mg/Kg		04/27/26 09:01	04/27/26 23:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*	*04/27/26 09:01*	*04/27/26 23:43*	*1*
Dibromofluoromethane (Surr)	*88*		*80 - 120*	*04/27/26 09:01*	*04/27/26 23:43*	*1*
Toluene-d8 (Surr)	*108*		*80 - 120*	*04/27/26 09:01*	*04/27/26 23:43*	*1*

Lab Sample ID: LCS 310-487060/2-A
Matrix: Solid
Analysis Batch: 487062

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487060

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	1.89	2.605		mg/Kg		138	54 - 150
Allyl chloride	0.947	1.020		mg/Kg		108	68 - 135
Benzene	0.947	0.9574		mg/Kg		101	76 - 129
Bromobenzene	0.947	0.8466		mg/Kg		89	76 - 125
Bromochloromethane	0.947	0.9159		mg/Kg		97	74 - 136
Bromodichloromethane	0.947	0.8981		mg/Kg		95	73 - 126
Bromoform	0.947	0.8240		mg/Kg		87	64 - 130
2-Butanone (MEK)	1.89	2.111		mg/Kg		111	66 - 147
Carbon tetrachloride	0.947	0.8632		mg/Kg		91	73 - 136
Chlorobenzene	0.947	0.8918		mg/Kg		94	78 - 123
Chlorodibromomethane	0.947	0.8698		mg/Kg		92	73 - 121
Chloroform	0.947	0.9066		mg/Kg		96	75 - 131
2-Chlorotoluene	0.947	0.8866		mg/Kg		94	78 - 126
4-Chlorotoluene	0.947	0.8967		mg/Kg		95	76 - 123
cis-1,2-Dichloroethene	0.947	0.9167		mg/Kg		97	76 - 134
cis-1,3-Dichloropropene	0.947	0.8945		mg/Kg		94	73 - 126
1,2-Dibromo-3-chloropropane	0.947	0.9974		mg/Kg		105	65 - 130
1,2-Dibromoethane (EDB)	0.947	0.9266		mg/Kg		98	80 - 126
Dibromomethane	0.947	0.9776		mg/Kg		103	79 - 130
1,2-Dichlorobenzene	0.947	0.9103		mg/Kg		96	77 - 122
1,3-Dichlorobenzene	0.947	0.9144		mg/Kg		97	77 - 124

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-487060/2-A
Matrix: Solid
Analysis Batch: 487062

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487060

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dichlorobenzene	0.947	0.8773		mg/Kg		93	75 - 122
1,1-Dichloroethane	0.947	0.9882		mg/Kg		104	68 - 142
1,2-Dichloroethane	0.947	0.9423		mg/Kg		99	70 - 140
1,1-Dichloroethene	0.947	0.9955		mg/Kg		105	64 - 141
1,2-Dichloropropane	0.947	0.9665		mg/Kg		102	77 - 129
1,3-Dichloropropane	0.947	0.9418		mg/Kg		99	77 - 132
2,2-Dichloropropane	0.947	0.8158		mg/Kg		86	55 - 145
1,1-Dichloropropene	0.947	0.9583		mg/Kg		101	75 - 136
Diethyl ether	0.947	1.067		mg/Kg		113	68 - 138
Ethylbenzene	0.947	0.9091		mg/Kg		96	76 - 128
Hexachlorobutadiene	0.947	0.8803		mg/Kg		93	66 - 141
Isopropylbenzene	0.947	0.8862		mg/Kg		94	76 - 126
Methylene chloride	0.947	1.019		mg/Kg		108	68 - 139
4-Methyl-2-pentanone (MIBK)	1.89	1.818		mg/Kg		96	66 - 139
Methyl tert-butyl ether	0.947	1.086		mg/Kg		115	68 - 139
Naphthalene	0.947	0.8999		mg/Kg		95	71 - 125
n-Butylbenzene	0.947	0.9409		mg/Kg		99	70 - 131
n-Propylbenzene	0.947	0.8915		mg/Kg		94	77 - 127
p-Isopropyltoluene	0.947	0.9006		mg/Kg		95	74 - 128
sec-Butylbenzene	0.947	0.9424		mg/Kg		100	75 - 127
Styrene	0.947	0.8706		mg/Kg		92	77 - 124
tert-Butylbenzene	0.947	0.8983		mg/Kg		95	76 - 128
1,1,1,2-Tetrachloroethane	0.947	0.8821		mg/Kg		93	77 - 126
1,1,2,2-Tetrachloroethane	0.947	0.9614		mg/Kg		102	76 - 126
Tetrachloroethene	0.947	0.8793		mg/Kg		93	73 - 135
Tetrahydrofuran	1.89	2.175		mg/Kg		115	67 - 143
Toluene	0.947	0.8851		mg/Kg		93	75 - 126
trans-1,2-Dichloroethene	0.947	1.040		mg/Kg		110	68 - 138
trans-1,3-Dichloropropene	0.947	0.8615		mg/Kg		91	72 - 126
1,2,3-Trichlorobenzene	0.947	0.8466		mg/Kg		89	67 - 127
1,2,4-Trichlorobenzene	0.947	0.8920		mg/Kg		94	70 - 125
1,1,1-Trichloroethane	0.947	0.8962		mg/Kg		95	74 - 135
1,1,2-Trichloroethane	0.947	0.9642		mg/Kg		102	77 - 131
Trichloroethene	0.947	0.9552		mg/Kg		101	77 - 132
1,2,3-Trichloropropane	0.947	0.9062		mg/Kg		96	77 - 133
1,1,2-Trichlorotrifluoroethane	0.947	1.013		mg/Kg		107	57 - 150
1,2,4-Trimethylbenzene	0.947	0.9414		mg/Kg		99	75 - 126
1,3,5-Trimethylbenzene	0.947	0.8913		mg/Kg		94	74 - 127
Xylenes, Total	1.89	1.834		mg/Kg		97	77 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*105*		*80 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 310-330206-12 MS
Matrix: Solid
Analysis Batch: 487062

Client Sample ID: HA-01-3
Prep Type: Total/NA
Prep Batch: 487060

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	<0.656		2.38	2.860		mg/Kg	☼	120	22 - 150
Allyl chloride	<0.131		1.19	1.218		mg/Kg	☼	102	30 - 145
Benzene	<0.131		1.19	1.234		mg/Kg	☼	104	34 - 146
Bromobenzene	<0.131		1.19	1.215		mg/Kg	☼	102	34 - 150
Bromochloromethane	<0.131		1.19	1.142		mg/Kg	☼	96	36 - 150
Bromodichloromethane	<0.131		1.19	1.238		mg/Kg	☼	104	32 - 148
Bromoform	<0.131		1.19	1.176		mg/Kg	☼	99	26 - 147
2-Butanone (MEK)	<0.984		2.38	2.624		mg/Kg	☼	110	30 - 150
Carbon tetrachloride	<0.131		1.19	1.153		mg/Kg	☼	97	33 - 150
Chlorobenzene	<0.131		1.19	1.264		mg/Kg	☼	106	36 - 148
Chlorodibromomethane	<0.131		1.19	1.284		mg/Kg	☼	108	32 - 142
Chloroform	<0.131		1.19	1.204		mg/Kg	☼	101	36 - 150
2-Chlorotoluene	<0.131		1.19	1.246		mg/Kg	☼	105	29 - 150
4-Chlorotoluene	<0.131		1.19	1.269		mg/Kg	☼	107	31 - 150
cis-1,2-Dichloroethene	<0.131		1.19	1.176		mg/Kg	☼	99	37 - 150
cis-1,3-Dichloropropene	<0.131		1.19	1.290		mg/Kg	☼	108	33 - 144
1,2-Dibromo-3-chloropropane	<0.131		1.19	1.344		mg/Kg	☼	113	25 - 150
1,2-Dibromoethane (EDB)	<0.131		1.19	1.364		mg/Kg	☼	115	36 - 150
Dibromomethane	<0.131		1.19	1.310		mg/Kg	☼	110	36 - 150
1,2-Dichlorobenzene	<0.131		1.19	1.230		mg/Kg	☼	103	34 - 149
1,3-Dichlorobenzene	<0.131		1.19	1.222		mg/Kg	☼	103	34 - 149
1,4-Dichlorobenzene	<0.131		1.19	1.226		mg/Kg	☼	103	34 - 147
1,1-Dichloroethane	<0.131		1.19	1.245		mg/Kg	☼	105	33 - 150
1,2-Dichloroethane	<0.131		1.19	1.253		mg/Kg	☼	105	34 - 150
1,1-Dichloroethene	<0.131		1.19	1.165		mg/Kg	☼	98	30 - 147
1,2-Dichloropropane	<0.131		1.19	1.307		mg/Kg	☼	110	36 - 150
1,3-Dichloropropane	<0.131		1.19	1.366		mg/Kg	☼	115	36 - 150
2,2-Dichloropropane	<0.131		1.19	0.9715		mg/Kg	☼	82	21 - 145
1,1-Dichloropropene	<0.131		1.19	1.240		mg/Kg	☼	104	36 - 150
Diethyl ether	<0.131		1.19	1.382		mg/Kg	☼	116	31 - 150
Ethylbenzene	<0.131		1.19	1.243		mg/Kg	☼	104	29 - 150
Hexachlorobutadiene	<0.328		1.19	1.207		mg/Kg	☼	101	14 - 150
Isopropylbenzene	<0.131		1.19	1.268		mg/Kg	☼	107	30 - 150
Methylene chloride	<0.328		1.19	1.324		mg/Kg	☼	111	27 - 150
4-Methyl-2-pentanone (MIBK)	<0.131		2.38	2.643		mg/Kg	☼	111	29 - 150
Methyl tert-butyl ether	<0.131		1.19	1.443		mg/Kg	☼	121	31 - 150
Naphthalene	<0.328		1.19	1.190		mg/Kg	☼	100	20 - 150
n-Butylbenzene	<0.131		1.19	1.275		mg/Kg	☼	107	18 - 150
n-Propylbenzene	<0.131		1.19	1.258		mg/Kg	☼	106	29 - 150
p-Isopropyltoluene	<0.131		1.19	1.220		mg/Kg	☼	103	25 - 150
sec-Butylbenzene	<0.131		1.19	1.270		mg/Kg	☼	107	26 - 150
Styrene	<0.131		1.19	1.242		mg/Kg	☼	104	33 - 150
tert-Butylbenzene	<0.131		1.19	1.288		mg/Kg	☼	108	33 - 150
1,1,1,2-Tetrachloroethane	<0.131		1.19	1.321		mg/Kg	☼	111	33 - 150
1,1,2,2-Tetrachloroethane	<0.131		1.19	1.386		mg/Kg	☼	116	25 - 150
Tetrachloroethene	<0.131		1.19	1.160		mg/Kg	☼	98	33 - 150
Tetrahydrofuran	<0.131		2.38	2.691		mg/Kg	☼	113	31 - 150
Toluene	<0.131		1.19	1.230		mg/Kg	☼	103	34 - 146

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 310-330206-12 MS
Matrix: Solid
Analysis Batch: 487062

Client Sample ID: HA-01-3
Prep Type: Total/NA
Prep Batch: 487060

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
trans-1,2-Dichloroethene	<0.131		1.19	1.258		mg/Kg	☼	106	34 - 148
trans-1,3-Dichloropropene	<0.131		1.19	1.194		mg/Kg	☼	100	32 - 144
1,2,3-Trichlorobenzene	<0.131		1.19	1.176		mg/Kg	☼	99	24 - 150
1,2,4-Trichlorobenzene	<0.131		1.19	1.161		mg/Kg	☼	98	25 - 150
1,1,1-Trichloroethane	<0.131		1.19	1.153		mg/Kg	☼	97	35 - 150
1,1,2-Trichloroethane	<0.131		1.19	1.354		mg/Kg	☼	114	34 - 150
Trichloroethene	<0.131		1.19	1.256		mg/Kg	☼	106	35 - 150
1,2,3-Trichloropropane	<0.131		1.19	1.328		mg/Kg	☼	112	33 - 150
1,1,2-Trichlorotrifluoroethane	<0.131		1.19	1.225		mg/Kg	☼	103	28 - 150
1,2,4-Trimethylbenzene	<0.131		1.19	1.248		mg/Kg	☼	105	19 - 150
1,3,5-Trimethylbenzene	<0.131		1.19	1.238		mg/Kg	☼	104	24 - 150
Xylenes, Total	<0.197		2.38	2.479		mg/Kg	☼	104	28 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*95*		*80 - 120*
Toluene-d8 (Surr)	*104*		*80 - 120*

Lab Sample ID: 310-330206-12 MSD
Matrix: Solid
Analysis Batch: 487062

Client Sample ID: HA-01-3
Prep Type: Total/NA
Prep Batch: 487060

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone	<0.656		2.29	3.252		mg/Kg	☼	142	22 - 150	13	40
Allyl chloride	<0.131		1.15	1.149		mg/Kg	☼	100	30 - 145	6	40
Benzene	<0.131		1.15	1.212		mg/Kg	☼	106	34 - 146	2	40
Bromobenzene	<0.131		1.15	1.193		mg/Kg	☼	104	34 - 150	2	40
Bromochloromethane	<0.131		1.15	1.144		mg/Kg	☼	100	36 - 150	0	40
Bromodichloromethane	<0.131		1.15	1.179		mg/Kg	☼	103	32 - 148	5	40
Bromoform	<0.131		1.15	1.146		mg/Kg	☼	100	26 - 147	3	40
2-Butanone (MEK)	<0.984		2.29	2.880		mg/Kg	☼	126	30 - 150	9	40
Carbon tetrachloride	<0.131		1.15	1.158		mg/Kg	☼	101	33 - 150	0	40
Chlorobenzene	<0.131		1.15	1.221		mg/Kg	☼	107	36 - 148	3	40
Chlorodibromomethane	<0.131		1.15	1.192		mg/Kg	☼	104	32 - 142	7	40
Chloroform	<0.131		1.15	1.166		mg/Kg	☼	102	36 - 150	3	40
2-Chlorotoluene	<0.131		1.15	1.283		mg/Kg	☼	112	29 - 150	3	40
4-Chlorotoluene	<0.131		1.15	1.191		mg/Kg	☼	104	31 - 150	6	40
cis-1,2-Dichloroethene	<0.131		1.15	1.173		mg/Kg	☼	102	37 - 150	0	40
cis-1,3-Dichloropropene	<0.131		1.15	1.142		mg/Kg	☼	100	33 - 144	12	40
1,2-Dibromo-3-chloropropane	<0.131		1.15	1.313		mg/Kg	☼	115	25 - 150	2	40
1,2-Dibromoethane (EDB)	<0.131		1.15	1.227		mg/Kg	☼	107	36 - 150	11	40
Dibromomethane	<0.131		1.15	1.234		mg/Kg	☼	108	36 - 150	6	40
1,2-Dichlorobenzene	<0.131		1.15	1.266		mg/Kg	☼	111	34 - 149	3	40
1,3-Dichlorobenzene	<0.131		1.15	1.289		mg/Kg	☼	113	34 - 149	5	40
1,4-Dichlorobenzene	<0.131		1.15	1.242		mg/Kg	☼	108	34 - 147	1	40
1,1-Dichloroethane	<0.131		1.15	1.288		mg/Kg	☼	113	33 - 150	3	40
1,2-Dichloroethane	<0.131		1.15	1.203		mg/Kg	☼	105	34 - 150	4	40
1,1-Dichloroethene	<0.131		1.15	1.150		mg/Kg	☼	100	30 - 147	1	40

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 310-330206-12 MSD
Matrix: Solid
Analysis Batch: 487062

Client Sample ID: HA-01-3
Prep Type: Total/NA
Prep Batch: 487060

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dichloropropane	<0.131		1.15	1.273		mg/Kg	☼	111	36 - 150	3	40
1,3-Dichloropropane	<0.131		1.15	1.238		mg/Kg	☼	108	36 - 150	10	40
2,2-Dichloropropane	<0.131		1.15	0.9444		mg/Kg	☼	82	21 - 145	3	40
1,1-Dichloropropene	<0.131		1.15	1.227		mg/Kg	☼	107	36 - 150	1	40
Diethyl ether	<0.131		1.15	1.302		mg/Kg	☼	114	31 - 150	6	40
Ethylbenzene	<0.131		1.15	1.211		mg/Kg	☼	106	29 - 150	3	40
Hexachlorobutadiene	<0.328		1.15	1.137		mg/Kg	☼	99	14 - 150	6	40
Isopropylbenzene	<0.131		1.15	1.250		mg/Kg	☼	109	30 - 150	1	40
Methylene chloride	<0.328		1.15	1.227		mg/Kg	☼	107	27 - 150	8	40
4-Methyl-2-pentanone (MIBK)	<0.131		2.29	2.509		mg/Kg	☼	110	29 - 150	5	40
Methyl tert-butyl ether	<0.131		1.15	1.352		mg/Kg	☼	118	31 - 150	7	40
Naphthalene	<0.328		1.15	1.259		mg/Kg	☼	110	20 - 150	6	40
n-Butylbenzene	<0.131		1.15	1.299		mg/Kg	☼	113	18 - 150	2	40
n-Propylbenzene	<0.131		1.15	1.259		mg/Kg	☼	110	29 - 150	0	40
p-Isopropyltoluene	<0.131		1.15	1.244		mg/Kg	☼	109	25 - 150	2	40
sec-Butylbenzene	<0.131		1.15	1.336		mg/Kg	☼	117	26 - 150	5	40
Styrene	<0.131		1.15	1.225		mg/Kg	☼	107	33 - 150	1	40
tert-Butylbenzene	<0.131		1.15	1.321		mg/Kg	☼	115	33 - 150	3	40
1,1,1,2-Tetrachloroethane	<0.131		1.15	1.200		mg/Kg	☼	105	33 - 150	10	40
1,1,2,2-Tetrachloroethane	<0.131		1.15	1.336		mg/Kg	☼	117	25 - 150	4	40
Tetrachloroethene	<0.131		1.15	1.171		mg/Kg	☼	102	33 - 150	1	40
Tetrahydrofuran	<0.131		2.29	2.738		mg/Kg	☼	120	31 - 150	2	40
Toluene	<0.131		1.15	1.202		mg/Kg	☼	105	34 - 146	2	40
trans-1,2-Dichloroethene	<0.131		1.15	1.221		mg/Kg	☼	107	34 - 148	3	40
trans-1,3-Dichloropropene	<0.131		1.15	1.142		mg/Kg	☼	100	32 - 144	4	40
1,2,3-Trichlorobenzene	<0.131		1.15	1.199		mg/Kg	☼	105	24 - 150	2	40
1,2,4-Trichlorobenzene	<0.131		1.15	1.202		mg/Kg	☼	105	25 - 150	3	40
1,1,1-Trichloroethane	<0.131		1.15	1.149		mg/Kg	☼	100	35 - 150	0	40
1,1,2-Trichloroethane	<0.131		1.15	1.293		mg/Kg	☼	113	34 - 150	5	40
Trichloroethene	<0.131		1.15	1.226		mg/Kg	☼	107	35 - 150	2	40
1,2,3-Trichloropropane	<0.131		1.15	1.394		mg/Kg	☼	122	33 - 150	5	40
1,1,2-Trichlorotrifluoroethane	<0.131		1.15	1.248		mg/Kg	☼	109	28 - 150	2	40
1,2,4-Trimethylbenzene	<0.131		1.15	1.299		mg/Kg	☼	113	19 - 150	4	40
1,3,5-Trimethylbenzene	<0.131		1.15	1.214		mg/Kg	☼	106	24 - 150	2	40
Xylenes, Total	<0.197		2.29	2.430		mg/Kg	☼	106	28 - 150	2	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*
Dibromofluoromethane (Surr)	*97*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*

Lab Sample ID: MB 310-487184/1-A
Matrix: Solid
Analysis Batch: 487186

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487184

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.484		0.484		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Allyl chloride	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-487184/1-A
Matrix: Solid
Analysis Batch: 487186

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487184

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Bromobenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Bromochloromethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Bromodichloromethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Bromoform	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Bromomethane	<0.484		0.484		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
2-Butanone (MEK)	<0.726		0.726		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Carbon tetrachloride	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Chlorobenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Chlorodibromomethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Chloroethane	<0.242		0.242		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Chloroform	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Chloromethane	<0.242		0.242		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
2-Chlorotoluene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
4-Chlorotoluene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
cis-1,2-Dichloroethene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
cis-1,3-Dichloropropene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,2-Dibromo-3-chloropropane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,2-Dibromoethane (EDB)	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Dibromomethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,2-Dichlorobenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,3-Dichlorobenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,4-Dichlorobenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Dichlorodifluoromethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,1-Dichloroethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,2-Dichloroethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,1-Dichloroethene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Dichlorofluoromethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,2-Dichloropropane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,3-Dichloropropane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
2,2-Dichloropropane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,1-Dichloropropene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Diethyl ether	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Ethylbenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Hexachlorobutadiene	<0.242		0.242		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Isopropylbenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Methylene chloride	<0.242		0.242		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
4-Methyl-2-pentanone (MIBK)	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Methyl tert-butyl ether	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Naphthalene	<0.242		0.242		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
n-Butylbenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
n-Propylbenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
p-Isopropyltoluene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
sec-Butylbenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Styrene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
tert-Butylbenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,1,1,2-Tetrachloroethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,1,2,2-Tetrachloroethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Tetrachloroethene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-487184/1-A
Matrix: Solid
Analysis Batch: 487186

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487184

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Toluene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
trans-1,2-Dichloroethene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
trans-1,3-Dichloropropene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,2,3-Trichlorobenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,2,4-Trichlorobenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,1,1-Trichloroethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,1,2-Trichloroethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Trichloroethene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Trichlorofluoromethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,2,3-Trichloropropane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,1,2-Trichlorotrifluoroethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,2,4-Trimethylbenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,3,5-Trimethylbenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Vinyl chloride	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Xylenes, Total	<0.145		0.145		mg/Kg		04/28/26 08:11	04/29/26 08:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*	*04/28/26 08:11*	*04/29/26 08:45*	*1*
Dibromofluoromethane (Surr)	*86*		*80 - 120*	*04/28/26 08:11*	*04/29/26 08:45*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*	*04/28/26 08:11*	*04/29/26 08:45*	*1*

Lab Sample ID: LCS 310-487184/2-A
Matrix: Solid
Analysis Batch: 487186

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487184

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	1.93	2.280		mg/Kg		118	54 - 150
Allyl chloride	0.963	0.9542		mg/Kg		99	68 - 135
Benzene	0.963	0.9672		mg/Kg		100	76 - 129
Bromobenzene	0.963	0.9764		mg/Kg		101	76 - 125
Bromochloromethane	0.963	0.9039		mg/Kg		94	74 - 136
Bromodichloromethane	0.963	1.002		mg/Kg		104	73 - 126
Bromoform	0.963	0.9612		mg/Kg		100	64 - 130
2-Butanone (MEK)	1.93	1.995		mg/Kg		104	66 - 147
Carbon tetrachloride	0.963	0.9312		mg/Kg		97	73 - 136
Chlorobenzene	0.963	1.011		mg/Kg		105	78 - 123
Chlorodibromomethane	0.963	1.001		mg/Kg		104	73 - 121
Chloroform	0.963	0.9451		mg/Kg		98	75 - 131
2-Chlorotoluene	0.963	1.027		mg/Kg		107	78 - 126
4-Chlorotoluene	0.963	0.9987		mg/Kg		104	76 - 123
cis-1,2-Dichloroethene	0.963	0.9322		mg/Kg		97	76 - 134
cis-1,3-Dichloropropene	0.963	0.9605		mg/Kg		100	73 - 126
1,2-Dibromo-3-chloropropane	0.963	1.170		mg/Kg		122	65 - 130
1,2-Dibromoethane (EDB)	0.963	1.036		mg/Kg		108	80 - 126
Dibromomethane	0.963	0.9860		mg/Kg		102	79 - 130
1,2-Dichlorobenzene	0.963	1.020		mg/Kg		106	77 - 122
1,3-Dichlorobenzene	0.963	0.9935		mg/Kg		103	77 - 124

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-487184/2-A
Matrix: Solid
Analysis Batch: 487186

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487184

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dichlorobenzene	0.963	0.9906		mg/Kg		103	75 - 122
1,1-Dichloroethane	0.963	0.9124		mg/Kg		95	68 - 142
1,2-Dichloroethane	0.963	0.9842		mg/Kg		102	70 - 140
1,1-Dichloroethene	0.963	0.9738		mg/Kg		101	64 - 141
1,2-Dichloropropane	0.963	0.9855		mg/Kg		102	77 - 129
1,3-Dichloropropane	0.963	1.046		mg/Kg		109	77 - 132
2,2-Dichloropropane	0.963	0.7124		mg/Kg		74	55 - 145
1,1-Dichloropropene	0.963	0.9623		mg/Kg		100	75 - 136
Diethyl ether	0.963	1.104		mg/Kg		115	68 - 138
Ethylbenzene	0.963	0.9883		mg/Kg		103	76 - 128
Hexachlorobutadiene	0.963	0.9998		mg/Kg		104	66 - 141
Isopropylbenzene	0.963	1.016		mg/Kg		106	76 - 126
Methylene chloride	0.963	1.037		mg/Kg		108	68 - 139
4-Methyl-2-pentanone (MIBK)	1.93	1.945		mg/Kg		101	66 - 139
Methyl tert-butyl ether	0.963	1.038		mg/Kg		108	68 - 139
Naphthalene	0.963	0.9397		mg/Kg		98	71 - 125
n-Butylbenzene	0.963	1.029		mg/Kg		107	70 - 131
n-Propylbenzene	0.963	1.004		mg/Kg		104	77 - 127
p-Isopropyltoluene	0.963	0.9906		mg/Kg		103	74 - 128
sec-Butylbenzene	0.963	1.032		mg/Kg		107	75 - 127
Styrene	0.963	0.9928		mg/Kg		103	77 - 124
tert-Butylbenzene	0.963	0.9926		mg/Kg		103	76 - 128
1,1,1,2-Tetrachloroethane	0.963	1.010		mg/Kg		105	77 - 126
1,1,2,2-Tetrachloroethane	0.963	1.052		mg/Kg		109	76 - 126
Tetrachloroethene	0.963	0.9749		mg/Kg		101	73 - 135
Tetrahydrofuran	1.93	1.999		mg/Kg		104	67 - 143
Toluene	0.963	0.9784		mg/Kg		102	75 - 126
trans-1,2-Dichloroethene	0.963	0.9789		mg/Kg		102	68 - 138
trans-1,3-Dichloropropene	0.963	0.9523		mg/Kg		99	72 - 126
1,2,3-Trichlorobenzene	0.963	0.9337		mg/Kg		97	67 - 127
1,2,4-Trichlorobenzene	0.963	0.9613		mg/Kg		100	70 - 125
1,1,1-Trichloroethane	0.963	0.9133		mg/Kg		95	74 - 135
1,1,2-Trichloroethane	0.963	1.077		mg/Kg		112	77 - 131
Trichloroethene	0.963	1.003		mg/Kg		104	77 - 132
1,2,3-Trichloropropane	0.963	1.066		mg/Kg		111	77 - 133
1,1,2-Trichlorotrifluoroethane	0.963	1.008		mg/Kg		105	57 - 150
1,2,4-Trimethylbenzene	0.963	0.9980		mg/Kg		104	75 - 126
1,3,5-Trimethylbenzene	0.963	0.9922		mg/Kg		103	74 - 127
Xylenes, Total	1.93	1.979		mg/Kg		103	77 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-487263/5
Matrix: Water
Analysis Batch: 487263

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L			04/28/26 23:43	1
Allyl chloride	<2.00		2.00		ug/L			04/28/26 23:43	1
Benzene	<0.500		0.500		ug/L			04/28/26 23:43	1
Bromobenzene	<1.00		1.00		ug/L			04/28/26 23:43	1
Bromochloromethane	<5.00		5.00		ug/L			04/28/26 23:43	1
Bromodichloromethane	<1.00		1.00		ug/L			04/28/26 23:43	1
Bromoform	<5.00		5.00		ug/L			04/28/26 23:43	1
Bromomethane	<4.00		4.00		ug/L			04/28/26 23:43	1
2-Butanone (MEK)	<10.0		10.0		ug/L			04/28/26 23:43	1
Carbon tetrachloride	<2.00		2.00		ug/L			04/28/26 23:43	1
Chlorobenzene	<1.00		1.00		ug/L			04/28/26 23:43	1
Chlorodibromomethane	<5.00		5.00		ug/L			04/28/26 23:43	1
Chloroethane	<4.00		4.00		ug/L			04/28/26 23:43	1
Chloroform	<3.00		3.00		ug/L			04/28/26 23:43	1
Chloromethane	<3.00		3.00		ug/L			04/28/26 23:43	1
2-Chlorotoluene	<1.00		1.00		ug/L			04/28/26 23:43	1
4-Chlorotoluene	<1.00		1.00		ug/L			04/28/26 23:43	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			04/28/26 23:43	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			04/28/26 23:43	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			04/28/26 23:43	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			04/28/26 23:43	1
Dibromomethane	<1.00		1.00		ug/L			04/28/26 23:43	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			04/28/26 23:43	1
1,3-Dichlorobenzene	<1.00		1.00		ug/L			04/28/26 23:43	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			04/28/26 23:43	1
Dichlorodifluoromethane	<3.00		3.00		ug/L			04/28/26 23:43	1
1,1-Dichloroethane	<1.00		1.00		ug/L			04/28/26 23:43	1
1,2-Dichloroethane	<1.00		1.00		ug/L			04/28/26 23:43	1
1,1-Dichloroethene	<2.00		2.00		ug/L			04/28/26 23:43	1
Dichlorofluoromethane	<1.00		1.00		ug/L			04/28/26 23:43	1
1,2-Dichloropropane	<1.00		1.00		ug/L			04/28/26 23:43	1
1,3-Dichloropropane	<1.00		1.00		ug/L			04/28/26 23:43	1
2,2-Dichloropropane	<4.00		4.00		ug/L			04/28/26 23:43	1
1,1-Dichloropropene	<1.00		1.00		ug/L			04/28/26 23:43	1
Diethyl ether	<2.00		2.00		ug/L			04/28/26 23:43	1
Ethylbenzene	<1.00		1.00		ug/L			04/28/26 23:43	1
Hexachlorobutadiene	<5.00		5.00		ug/L			04/28/26 23:43	1
Isopropylbenzene	<1.00		1.00		ug/L			04/28/26 23:43	1
Methylene chloride	<5.00		5.00		ug/L			04/28/26 23:43	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			04/28/26 23:43	1
Methyl tert-butyl ether	<1.00		1.00		ug/L			04/28/26 23:43	1
Naphthalene	<5.00		5.00		ug/L			04/28/26 23:43	1
n-Butylbenzene	<1.00		1.00		ug/L			04/28/26 23:43	1
n-Propylbenzene	<1.00		1.00		ug/L			04/28/26 23:43	1
p-Isopropyltoluene	<1.00		1.00		ug/L			04/28/26 23:43	1
sec-Butylbenzene	<1.00		1.00		ug/L			04/28/26 23:43	1
Styrene	<1.00		1.00		ug/L			04/28/26 23:43	1
tert-Butylbenzene	<1.00		1.00		ug/L			04/28/26 23:43	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-487263/5
Matrix: Water
Analysis Batch: 487263

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L			04/28/26 23:43	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			04/28/26 23:43	1
Tetrachloroethene	<1.00		1.00		ug/L			04/28/26 23:43	1
Tetrahydrofuran	<10.0		10.0		ug/L			04/28/26 23:43	1
Toluene	<1.00		1.00		ug/L			04/28/26 23:43	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			04/28/26 23:43	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			04/28/26 23:43	1
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L			04/28/26 23:43	1
1,2,4-Trichlorobenzene	<5.00		5.00		ug/L			04/28/26 23:43	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			04/28/26 23:43	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			04/28/26 23:43	1
Trichloroethene	<1.00		1.00		ug/L			04/28/26 23:43	1
Trichlorofluoromethane	<4.00		4.00		ug/L			04/28/26 23:43	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			04/28/26 23:43	1
1,1,2-Trichlorotrifluoroethane	<2.00		2.00		ug/L			04/28/26 23:43	1
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L			04/28/26 23:43	1
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L			04/28/26 23:43	1
Vinyl chloride	<1.00		1.00		ug/L			04/28/26 23:43	1
Xylenes, Total	<3.00		3.00		ug/L			04/28/26 23:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*04/28/26 23:43*	*1*
Dibromofluoromethane (Surr)	*97*		*76 - 130*		*04/28/26 23:43*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*04/28/26 23:43*	*1*

Lab Sample ID: LCS 310-487263/6
Matrix: Water
Analysis Batch: 487263

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	50.0	50.66		ug/L		101	59 - 136
Allyl chloride	25.0	22.80		ug/L		91	61 - 136
Benzene	25.0	21.82		ug/L		87	71 - 125
Bromobenzene	25.0	24.97		ug/L		100	71 - 120
Bromochloromethane	25.0	22.93		ug/L		92	69 - 131
Bromodichloromethane	25.0	23.24		ug/L		93	70 - 122
Bromoform	25.0	25.69		ug/L		103	62 - 122
2-Butanone (MEK)	50.0	47.90		ug/L		96	60 - 134
Carbon tetrachloride	25.0	21.96		ug/L		88	63 - 136
Chlorobenzene	25.0	24.01		ug/L		96	74 - 120
Chlorodibromomethane	25.0	25.28		ug/L		101	69 - 121
Chloroform	25.0	21.42		ug/L		86	72 - 122
2-Chlorotoluene	25.0	24.83		ug/L		99	73 - 121
4-Chlorotoluene	25.0	25.17		ug/L		101	72 - 121
cis-1,2-Dichloroethene	25.0	22.36		ug/L		89	72 - 123
cis-1,3-Dichloropropene	25.0	25.09		ug/L		100	72 - 123
1,2-Dibromo-3-chloropropane	25.0	26.15		ug/L		105	62 - 132
1,2-Dibromoethane (EDB)	25.0	25.02		ug/L		100	74 - 122

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-487263/6
Matrix: Water
Analysis Batch: 487263

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dibromomethane	25.0	22.85		ug/L		91	72 - 122
1,2-Dichlorobenzene	25.0	24.46		ug/L		98	74 - 120
1,3-Dichlorobenzene	25.0	23.82		ug/L		95	71 - 120
1,4-Dichlorobenzene	25.0	23.87		ug/L		95	72 - 120
1,1-Dichloroethane	25.0	21.85		ug/L		87	69 - 127
1,2-Dichloroethane	25.0	22.59		ug/L		90	68 - 125
1,1-Dichloroethene	25.0	22.14		ug/L		89	64 - 134
1,2-Dichloropropane	25.0	22.86		ug/L		91	72 - 128
1,3-Dichloropropane	25.0	23.96		ug/L		96	72 - 125
2,2-Dichloropropane	25.0	20.79		ug/L		83	51 - 146
1,1-Dichloropropene	25.0	22.01		ug/L		88	70 - 133
Diethyl ether	25.0	24.13		ug/L		97	59 - 139
Ethylbenzene	25.0	23.82		ug/L		95	75 - 120
Hexachlorobutadiene	25.0	22.93		ug/L		92	67 - 127
Isopropylbenzene	25.0	25.03		ug/L		100	74 - 122
Methylene chloride	25.0	22.76		ug/L		91	72 - 128
4-Methyl-2-pentanone (MIBK)	50.0	55.73		ug/L		111	62 - 136
Methyl tert-butyl ether	25.0	23.94		ug/L		96	66 - 130
Naphthalene	25.0	26.12		ug/L		104	69 - 126
n-Butylbenzene	25.0	23.70		ug/L		95	70 - 130
n-Propylbenzene	25.0	24.80		ug/L		99	73 - 125
p-Isopropyltoluene	25.0	24.44		ug/L		98	72 - 127
sec-Butylbenzene	25.0	24.36		ug/L		97	72 - 127
Styrene	25.0	25.47		ug/L		102	74 - 122
tert-Butylbenzene	25.0	24.75		ug/L		99	72 - 125
1,1,1,2-Tetrachloroethane	25.0	25.02		ug/L		100	70 - 121
1,1,2,2-Tetrachloroethane	25.0	25.82		ug/L		103	70 - 122
Tetrachloroethene	25.0	22.84		ug/L		91	70 - 128
Tetrahydrofuran	50.0	46.38		ug/L		93	64 - 131
Toluene	25.0	23.01		ug/L		92	74 - 120
trans-1,2-Dichloroethene	25.0	21.99		ug/L		88	67 - 127
trans-1,3-Dichloropropene	25.0	24.80		ug/L		99	67 - 123
1,2,3-Trichlorobenzene	25.0	24.24		ug/L		97	69 - 124
1,2,4-Trichlorobenzene	25.0	24.28		ug/L		97	69 - 125
1,1,1-Trichloroethane	25.0	21.94		ug/L		88	69 - 130
1,1,2-Trichloroethane	25.0	24.41		ug/L		98	75 - 121
Trichloroethene	25.0	22.28		ug/L		89	70 - 128
1,2,3-Trichloropropane	25.0	26.96		ug/L		108	70 - 122
1,1,2-Trichlorotrifluoroethane	25.0	22.92		ug/L		92	57 - 148
1,2,4-Trimethylbenzene	25.0	24.87		ug/L		99	71 - 125
1,3,5-Trimethylbenzene	25.0	24.15		ug/L		97	72 - 124
Xylenes, Total	50.0	50.06		ug/L		100	74 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*
Dibromofluoromethane (Surr)	*97*		*76 - 130*
Toluene-d8 (Surr)	*102*		*80 - 120*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-487263/7
Matrix: Water
Analysis Batch: 487263

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	20.0	18.41		ug/L		92	33 - 138
Chloroethane	20.0	20.73		ug/L		104	59 - 139
Chloromethane	20.0	22.56		ug/L		113	52 - 146
Dichlorodifluoromethane	20.0	19.87		ug/L		99	45 - 150
Dichlorofluoromethane	20.0	22.71		ug/L		114	61 - 142
Trichlorofluoromethane	20.0	21.73		ug/L		109	55 - 150
Vinyl chloride	20.0	17.13		ug/L		86	60 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*76 - 130*
Toluene-d8 (Surr)	*99*		*80 - 120*

Method: 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Lab Sample ID: MB 310-487020/1-A
Matrix: Solid
Analysis Batch: 487054

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487020

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00491		0.00491		mg/Kg		04/24/26 16:44	04/27/26 11:01	1
Acenaphthylene	<0.00491		0.00491		mg/Kg		04/24/26 16:44	04/27/26 11:01	1
Anthracene	<0.00491		0.00491		mg/Kg		04/24/26 16:44	04/27/26 11:01	1
Benzo(a)anthracene	<0.00491		0.00491		mg/Kg		04/24/26 16:44	04/27/26 11:01	1
Benzo(a)pyrene	<0.00491		0.00491		mg/Kg		04/24/26 16:44	04/27/26 11:01	1
Benzo(b)fluoranthene	<0.00491		0.00491		mg/Kg		04/24/26 16:44	04/27/26 11:01	1
Benzo(g,h,i)perylene	<0.00491		0.00491		mg/Kg		04/24/26 16:44	04/27/26 11:01	1
Benzo(k)fluoranthene	<0.00491		0.00491		mg/Kg		04/24/26 16:44	04/27/26 11:01	1
Chrysene	<0.00491		0.00491		mg/Kg		04/24/26 16:44	04/27/26 11:01	1
Dibenz(a,h)anthracene	<0.00491		0.00491		mg/Kg		04/24/26 16:44	04/27/26 11:01	1
Fluoranthene	<0.00491		0.00491		mg/Kg		04/24/26 16:44	04/27/26 11:01	1
Fluorene	<0.00491		0.00491		mg/Kg		04/24/26 16:44	04/27/26 11:01	1
Indeno(1,2,3-cd)pyrene	<0.00491		0.00491		mg/Kg		04/24/26 16:44	04/27/26 11:01	1
2-Methylnaphthalene	<0.00491		0.00491		mg/Kg		04/24/26 16:44	04/27/26 11:01	1
Naphthalene	<0.00491		0.00491		mg/Kg		04/24/26 16:44	04/27/26 11:01	1
Phenanthrene	<0.00491		0.00491		mg/Kg		04/24/26 16:44	04/27/26 11:01	1
Pyrene	<0.00491		0.00491		mg/Kg		04/24/26 16:44	04/27/26 11:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*100*		*20 - 122*	*04/24/26 16:44*	*04/27/26 11:01*	*1*
Nitrobenzene-d5 (Surr)	*112*		*10 - 132*	*04/24/26 16:44*	*04/27/26 11:01*	*1*
Terphenyl-d14 (Surr)	*120*	*S1+*	*10 - 119*	*04/24/26 16:44*	*04/27/26 11:01*	*1*

Method: 8270E - Semivolatile Organic Compounds (GC-MS/MS) (Continued)

Lab Sample ID: LCS 310-487020/2-A
Matrix: Solid
Analysis Batch: 487054

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487020

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Acenaphthene			0.0663	0.06430		mg/Kg		97	32 - 132		
Acenaphthylene			0.0663	0.06734		mg/Kg		102	31 - 133		
Anthracene			0.0663	0.06438		mg/Kg		97	25 - 124		
Benzo(a)anthracene			0.0663	0.07204		mg/Kg		109	19 - 124		
Benzo(a)pyrene			0.0663	0.06788		mg/Kg		102	14 - 122		
Benzo(b)fluoranthene			0.0663	0.06458		mg/Kg		97	17 - 121		
Benzo(g,h,i)perylene			0.0663	0.07089		mg/Kg		107	12 - 135		
Benzo(k)fluoranthene			0.0663	0.06863		mg/Kg		104	18 - 124		
Chrysene			0.0663	0.07125		mg/Kg		107	20 - 126		
Dibenz(a,h)anthracene			0.0663	0.07007		mg/Kg		106	11 - 130		
Fluoranthene			0.0663	0.07610		mg/Kg		115	24 - 125		
Fluorene			0.0663	0.06720		mg/Kg		101	27 - 127		
Indeno(1,2,3-cd)pyrene			0.0663	0.07269		mg/Kg		110	12 - 125		
2-Methylnaphthalene			0.0663	0.06621		mg/Kg		100	33 - 125		
Naphthalene			0.0663	0.06621		mg/Kg		100	33 - 127		
Phenanthrene			0.0663	0.06470		mg/Kg		98	23 - 124		
Pyrene			0.0663	0.07491		mg/Kg		113	19 - 124		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*81*		*20 - 122*
Nitrobenzene-d5 (Surr)	*96*		*10 - 132*
Terphenyl-d14 (Surr)	*86*		*10 - 119*

Lab Sample ID: 310-330206-2 MS
Matrix: Solid
Analysis Batch: 487054

Client Sample ID: HA-08-3
Prep Type: Total/NA
Prep Batch: 487020

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Acenaphthene	<0.00563		0.0748	0.09012		mg/Kg	☼	120	10 - 150		
Acenaphthylene	<0.00563		0.0748	0.09834		mg/Kg	☼	126	10 - 148		
Anthracene	0.00718	F1	0.0748	0.1147	F1	mg/Kg	☼	144	10 - 138		
Benzo(a)anthracene	0.0329	F1	0.0748	0.1509	F1	mg/Kg	☼	158	10 - 149		
Benzo(a)pyrene	0.0416	F1	0.0748	0.1590	F1	mg/Kg	☼	157	10 - 131		
Benzo(b)fluoranthene	0.0647	F1	0.0748	0.1723	F1	mg/Kg	☼	144	10 - 134		
Benzo(g,h,i)perylene	0.0296	F1	0.0748	0.1463	F1	mg/Kg	☼	156	10 - 139		
Benzo(k)fluoranthene	0.0232	F1	0.0748	0.1272	F1	mg/Kg	☼	139	10 - 129		
Chrysene	0.0460		0.0748	0.1525		mg/Kg	☼	142	10 - 143		
Dibenz(a,h)anthracene	0.00842		0.0748	0.09288		mg/Kg	☼	113	10 - 130		
Fluoranthene	0.0865	F1	0.0748	0.2398	F1	mg/Kg	☼	205	10 - 150		
Fluorene	<0.00563		0.0748	0.1040		mg/Kg	☼	139	10 - 140		
Indeno(1,2,3-cd)pyrene	0.0277	F1	0.0748	0.1331	F1	mg/Kg	☼	141	10 - 129		
2-Methylnaphthalene	<0.00563		0.0748	0.09305		mg/Kg	☼	124	10 - 150		
Naphthalene	<0.00563		0.0748	0.09446		mg/Kg	☼	126	10 - 150		
Phenanthrene	0.0287	F1	0.0748	0.1518	F1	mg/Kg	☼	165	10 - 150		
Pyrene	0.0627	F1	0.0748	0.1985	F1	mg/Kg	☼	182	10 - 150		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*116*		*20 - 122*

Method: 8270E - Semivolatile Organic Compounds (GC-MS/MS) (Continued)

Lab Sample ID: 310-330206-2 MS
Matrix: Solid
Analysis Batch: 487054

Client Sample ID: HA-08-3
Prep Type: Total/NA
Prep Batch: 487020

Surrogate	MS %Recovery	MS Qualifier	Limits
Nitrobenzene-d5 (Surr)	*102*		*10 - 132*
Terphenyl-d14 (Surr)	*112*		*10 - 119*

Lab Sample ID: 310-330206-2 MSD
Matrix: Solid
Analysis Batch: 487054

Client Sample ID: HA-08-3
Prep Type: Total/NA
Prep Batch: 487020

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene	<0.00563		0.0771	0.09125		mg/Kg	☼	118	10 - 150	1	40
Acenaphthylene	<0.00563		0.0771	0.09108		mg/Kg	☼	113	10 - 148	8	40
Anthracene	0.00718	F1	0.0771	0.09099		mg/Kg	☼	109	10 - 138	23	40
Benzo(a)anthracene	0.0329	F1	0.0771	0.1182		mg/Kg	☼	111	10 - 149	24	40
Benzo(a)pyrene	0.0416	F1	0.0771	0.1229		mg/Kg	☼	105	10 - 131	26	40
Benzo(b)fluoranthene	0.0647	F1	0.0771	0.1283		mg/Kg	☼	82	10 - 134	29	40
Benzo(g,h,i)perylene	0.0296	F1	0.0771	0.1055		mg/Kg	☼	99	10 - 139	32	40
Benzo(k)fluoranthene	0.0232	F1	0.0771	0.1142		mg/Kg	☼	118	10 - 129	11	40
Chrysene	0.0460		0.0771	0.1252		mg/Kg	☼	103	10 - 143	20	40
Dibenz(a,h)anthracene	0.00842		0.0771	0.08480		mg/Kg	☼	99	10 - 130	9	40
Fluoranthene	0.0865	F1	0.0771	0.1621		mg/Kg	☼	98	10 - 150	39	40
Fluorene	<0.00563		0.0771	0.1004		mg/Kg	☼	130	10 - 140	3	40
Indeno(1,2,3-cd)pyrene	0.0277	F1	0.0771	0.1034		mg/Kg	☼	98	10 - 129	25	40
2-Methylnaphthalene	<0.00563		0.0771	0.08779		mg/Kg	☼	114	10 - 150	6	40
Naphthalene	<0.00563		0.0771	0.09726		mg/Kg	☼	126	10 - 150	3	40
Phenanthrene	0.0287	F1	0.0771	0.1172		mg/Kg	☼	115	10 - 150	26	40
Pyrene	0.0627	F1	0.0771	0.1458		mg/Kg	☼	108	10 - 150	31	40

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	*121*		*20 - 122*
Nitrobenzene-d5 (Surr)	*125*		*10 - 132*
Terphenyl-d14 (Surr)	*121*	*S1+*	*10 - 119*

Lab Sample ID: MB 310-487056/1-A
Matrix: Solid
Analysis Batch: 487149

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487056

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00480		0.00480		mg/Kg		04/27/26 08:10	04/27/26 23:18	1
Acenaphthylene	<0.00480		0.00480		mg/Kg		04/27/26 08:10	04/27/26 23:18	1
Anthracene	<0.00480		0.00480		mg/Kg		04/27/26 08:10	04/27/26 23:18	1
Benzo(a)anthracene	<0.00480		0.00480		mg/Kg		04/27/26 08:10	04/27/26 23:18	1
Benzo(a)pyrene	<0.00480		0.00480		mg/Kg		04/27/26 08:10	04/27/26 23:18	1
Benzo(b)fluoranthene	<0.00480		0.00480		mg/Kg		04/27/26 08:10	04/27/26 23:18	1
Benzo(g,h,i)perylene	<0.00480		0.00480		mg/Kg		04/27/26 08:10	04/27/26 23:18	1
Benzo(k)fluoranthene	<0.00480		0.00480		mg/Kg		04/27/26 08:10	04/27/26 23:18	1
Chrysene	<0.00480		0.00480		mg/Kg		04/27/26 08:10	04/27/26 23:18	1
Dibenz(a,h)anthracene	<0.00480		0.00480		mg/Kg		04/27/26 08:10	04/27/26 23:18	1
Fluoranthene	<0.00480		0.00480		mg/Kg		04/27/26 08:10	04/27/26 23:18	1
Fluorene	<0.00480		0.00480		mg/Kg		04/27/26 08:10	04/27/26 23:18	1

Method: 8270E - Semivolatile Organic Compounds (GC-MS/MS) (Continued)

Lab Sample ID: MB 310-487056/1-A
Matrix: Solid
Analysis Batch: 487149

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487056

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Indeno(1,2,3-cd)pyrene	<0.00480		0.00480		mg/Kg		04/27/26 08:10	04/27/26 23:18	1
2-Methylnaphthalene	<0.00480		0.00480		mg/Kg		04/27/26 08:10	04/27/26 23:18	1
Naphthalene	<0.00480		0.00480		mg/Kg		04/27/26 08:10	04/27/26 23:18	1
Phenanthrene	<0.00480		0.00480		mg/Kg		04/27/26 08:10	04/27/26 23:18	1
Pyrene	<0.00480		0.00480		mg/Kg		04/27/26 08:10	04/27/26 23:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*105*		*20 - 122*	*04/27/26 08:10*	*04/27/26 23:18*	*1*
Nitrobenzene-d5 (Surr)	*110*		*10 - 132*	*04/27/26 08:10*	*04/27/26 23:18*	*1*
Terphenyl-d14 (Surr)	*100*		*10 - 119*	*04/27/26 08:10*	*04/27/26 23:18*	*1*

Lab Sample ID: LCS 310-487056/2-A
Matrix: Solid
Analysis Batch: 487149

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487056

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	0.0636	0.07133		mg/Kg		112	32 - 132
Acenaphthylene	0.0636	0.07275		mg/Kg		114	31 - 133
Anthracene	0.0636	0.06524		mg/Kg		103	25 - 124
Benzo(a)anthracene	0.0636	0.06517		mg/Kg		102	19 - 124
Benzo(a)pyrene	0.0636	0.06297		mg/Kg		99	14 - 122
Benzo(b)fluoranthene	0.0636	0.06078		mg/Kg		95	17 - 121
Benzo(g,h,i)perylene	0.0636	0.06461		mg/Kg		102	12 - 135
Benzo(k)fluoranthene	0.0636	0.06520		mg/Kg		102	18 - 124
Chrysene	0.0636	0.06590		mg/Kg		104	20 - 126
Dibenz(a,h)anthracene	0.0636	0.06309		mg/Kg		99	11 - 130
Fluoranthene	0.0636	0.07121		mg/Kg		112	24 - 125
Fluorene	0.0636	0.06420		mg/Kg		101	27 - 127
Indeno(1,2,3-cd)pyrene	0.0636	0.06515		mg/Kg		102	12 - 125
2-Methylnaphthalene	0.0636	0.05961		mg/Kg		94	33 - 125
Naphthalene	0.0636	0.05623		mg/Kg		88	33 - 127
Phenanthrene	0.0636	0.06484		mg/Kg		102	23 - 124
Pyrene	0.0636	0.06968		mg/Kg		109	19 - 124

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*87*		*20 - 122*
Nitrobenzene-d5 (Surr)	*100*		*10 - 132*
Terphenyl-d14 (Surr)	*99*		*10 - 119*

Lab Sample ID: 310-330206-8 MS
Matrix: Solid
Analysis Batch: 487149

Client Sample ID: HA-04-3
Prep Type: Total/NA
Prep Batch: 487056

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	<0.00526		0.0683	0.07977		mg/Kg	☼	117	10 - 150
Acenaphthylene	<0.00526		0.0683	0.07358		mg/Kg	☼	108	10 - 148
Anthracene	<0.00526		0.0683	0.06013		mg/Kg	☼	88	10 - 138
Benzo(a)anthracene	<0.00526		0.0683	0.06299		mg/Kg	☼	92	10 - 149

Method: 8270E - Semivolatile Organic Compounds (GC-MS/MS) (Continued)

Lab Sample ID: 310-330206-8 MS
Matrix: Solid
Analysis Batch: 487149

Client Sample ID: HA-04-3
Prep Type: Total/NA
Prep Batch: 487056

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzo(a)pyrene	<0.00526		0.0683	0.06091		mg/Kg	☼	89	10 - 131
Benzo(b)fluoranthene	<0.00526		0.0683	0.05708		mg/Kg	☼	84	10 - 134
Benzo(g,h,i)perylene	<0.00526		0.0683	0.05629		mg/Kg	☼	82	10 - 139
Benzo(k)fluoranthene	<0.00526		0.0683	0.06212		mg/Kg	☼	91	10 - 129
Chrysene	<0.00526		0.0683	0.06231		mg/Kg	☼	91	10 - 143
Dibenz(a,h)anthracene	<0.00526		0.0683	0.05607		mg/Kg	☼	82	10 - 130
Fluoranthene	<0.00526		0.0683	0.06732		mg/Kg	☼	99	10 - 150
Fluorene	<0.00526		0.0683	0.06862		mg/Kg	☼	100	10 - 140
Indeno(1,2,3-cd)pyrene	<0.00526		0.0683	0.05499		mg/Kg	☼	81	10 - 129
2-Methylnaphthalene	<0.00526		0.0683	0.06894		mg/Kg	☼	101	10 - 150
Naphthalene	<0.00526		0.0683	0.06552		mg/Kg	☼	90	10 - 150
Phenanthrene	<0.00526		0.0683	0.06341		mg/Kg	☼	93	10 - 150
Pyrene	<0.00526		0.0683	0.06848		mg/Kg	☼	100	10 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*92*		*20 - 122*
Nitrobenzene-d5 (Surr)	*105*		*10 - 132*
Terphenyl-d14 (Surr)	*93*		*10 - 119*

Lab Sample ID: 310-330206-8 MSD
Matrix: Solid
Analysis Batch: 487149

Client Sample ID: HA-04-3
Prep Type: Total/NA
Prep Batch: 487056

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene	<0.00526		0.0694	0.07497		mg/Kg	☼	108	10 - 150	6	40
Acenaphthylene	<0.00526		0.0694	0.07483		mg/Kg	☼	108	10 - 148	2	40
Anthracene	<0.00526		0.0694	0.06356		mg/Kg	☼	92	10 - 138	6	40
Benzo(a)anthracene	<0.00526		0.0694	0.06271		mg/Kg	☼	90	10 - 149	0	40
Benzo(a)pyrene	<0.00526		0.0694	0.05914		mg/Kg	☼	85	10 - 131	3	40
Benzo(b)fluoranthene	<0.00526		0.0694	0.05627		mg/Kg	☼	81	10 - 134	1	40
Benzo(g,h,i)perylene	<0.00526		0.0694	0.05477		mg/Kg	☼	79	10 - 139	3	40
Benzo(k)fluoranthene	<0.00526		0.0694	0.06022		mg/Kg	☼	87	10 - 129	3	40
Chrysene	<0.00526		0.0694	0.05994		mg/Kg	☼	86	10 - 143	4	40
Dibenz(a,h)anthracene	<0.00526		0.0694	0.05382		mg/Kg	☼	78	10 - 130	4	40
Fluoranthene	<0.00526		0.0694	0.06861		mg/Kg	☼	99	10 - 150	2	40
Fluorene	<0.00526		0.0694	0.06345		mg/Kg	☼	91	10 - 140	8	40
Indeno(1,2,3-cd)pyrene	<0.00526		0.0694	0.05472		mg/Kg	☼	79	10 - 129	1	40
2-Methylnaphthalene	<0.00526		0.0694	0.05748		mg/Kg	☼	83	10 - 150	18	40
Naphthalene	<0.00526		0.0694	0.05161		mg/Kg	☼	68	10 - 150	24	40
Phenanthrene	<0.00526		0.0694	0.06456		mg/Kg	☼	93	10 - 150	2	40
Pyrene	<0.00526		0.0694	0.06845		mg/Kg	☼	99	10 - 150	0	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*67*		*20 - 122*
Nitrobenzene-d5 (Surr)	*93*		*10 - 132*
Terphenyl-d14 (Surr)	*78*		*10 - 119*

Method: 8270E - Semivolatile Organic Compounds (GC-MS/MS) (Continued)

Lab Sample ID: MB 310-487182/1-A
Matrix: Solid
Analysis Batch: 487291

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487182

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00461		0.00461		mg/Kg		04/28/26 08:08	04/29/26 03:48	1
Acenaphthylene	<0.00461		0.00461		mg/Kg		04/28/26 08:08	04/29/26 03:48	1
Anthracene	<0.00461		0.00461		mg/Kg		04/28/26 08:08	04/29/26 03:48	1
Benzo(a)anthracene	<0.00461		0.00461		mg/Kg		04/28/26 08:08	04/29/26 03:48	1
Benzo(a)pyrene	<0.00461		0.00461		mg/Kg		04/28/26 08:08	04/29/26 03:48	1
Benzo(b)fluoranthene	<0.00461		0.00461		mg/Kg		04/28/26 08:08	04/29/26 03:48	1
Benzo(g,h,i)perylene	<0.00461		0.00461		mg/Kg		04/28/26 08:08	04/29/26 03:48	1
Benzo(k)fluoranthene	<0.00461		0.00461		mg/Kg		04/28/26 08:08	04/29/26 03:48	1
Chrysene	<0.00461		0.00461		mg/Kg		04/28/26 08:08	04/29/26 03:48	1
Dibenz(a,h)anthracene	<0.00461		0.00461		mg/Kg		04/28/26 08:08	04/29/26 03:48	1
Fluoranthene	<0.00461		0.00461		mg/Kg		04/28/26 08:08	04/29/26 03:48	1
Fluorene	<0.00461		0.00461		mg/Kg		04/28/26 08:08	04/29/26 03:48	1
Indeno(1,2,3-cd)pyrene	<0.00461		0.00461		mg/Kg		04/28/26 08:08	04/29/26 03:48	1
2-Methylnaphthalene	<0.00461		0.00461		mg/Kg		04/28/26 08:08	04/29/26 03:48	1
Naphthalene	<0.00461		0.00461		mg/Kg		04/28/26 08:08	04/29/26 03:48	1
Phenanthrene	<0.00461		0.00461		mg/Kg		04/28/26 08:08	04/29/26 03:48	1
Pyrene	<0.00461		0.00461		mg/Kg		04/28/26 08:08	04/29/26 03:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*100*		*20 - 122*	*04/28/26 08:08*	*04/29/26 03:48*	*1*
Nitrobenzene-d5 (Surr)	*128*		*10 - 132*	*04/28/26 08:08*	*04/29/26 03:48*	*1*
Terphenyl-d14 (Surr)	*115*		*10 - 119*	*04/28/26 08:08*	*04/29/26 03:48*	*1*

Lab Sample ID: LCS 310-487182/2-A
Matrix: Solid
Analysis Batch: 487291

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487182

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	0.0639	0.06999		mg/Kg		109	32 - 132
Acenaphthylene	0.0639	0.07282		mg/Kg		114	31 - 133
Anthracene	0.0639	0.06943		mg/Kg		109	25 - 124
Benzo(a)anthracene	0.0639	0.06820		mg/Kg		107	19 - 124
Benzo(a)pyrene	0.0639	0.06387		mg/Kg		100	14 - 122
Benzo(b)fluoranthene	0.0639	0.06219		mg/Kg		97	17 - 121
Benzo(g,h,i)perylene	0.0639	0.07407		mg/Kg		116	12 - 135
Benzo(k)fluoranthene	0.0639	0.06628		mg/Kg		104	18 - 124
Chrysene	0.0639	0.06882		mg/Kg		108	20 - 126
Dibenz(a,h)anthracene	0.0639	0.07787		mg/Kg		122	11 - 130
Fluoranthene	0.0639	0.07408		mg/Kg		116	24 - 125
Fluorene	0.0639	0.06423		mg/Kg		100	27 - 127
Indeno(1,2,3-cd)pyrene	0.0639	0.07668		mg/Kg		120	12 - 125
2-Methylnaphthalene	0.0639	0.07063		mg/Kg		110	33 - 125
Naphthalene	0.0639	0.05658		mg/Kg		88	33 - 127
Phenanthrene	0.0639	0.06685		mg/Kg		105	23 - 124
Pyrene	0.0639	0.07124		mg/Kg		111	19 - 124

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*108*		*20 - 122*

Method: 8270E - Semivolatile Organic Compounds (GC-MS/MS) (Continued)

Lab Sample ID: LCS 310-487182/2-A
Matrix: Solid
Analysis Batch: 487291

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487182

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5 (Surr)	128		10 - 132
Terphenyl-d14 (Surr)	118		10 - 119

Lab Sample ID: 310-330206-23 MS
Matrix: Solid
Analysis Batch: 487291

Client Sample ID: HA-10-1
Prep Type: Total/NA
Prep Batch: 487182

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	<0.00656		0.0902	0.1028		mg/Kg	☼	114	10 - 150
Acenaphthylene	<0.00656		0.0902	0.1098		mg/Kg	☼	118	10 - 148
Anthracene	<0.00656		0.0902	0.09516		mg/Kg	☼	100	10 - 138
Benzo(a)anthracene	0.0184		0.0902	0.1028		mg/Kg	☼	94	10 - 149
Benzo(a)pyrene	0.0178		0.0902	0.09555		mg/Kg	☼	86	10 - 131
Benzo(b)fluoranthene	0.0254		0.0902	0.09470		mg/Kg	☼	77	10 - 134
Benzo(g,h,i)perylene	0.0126		0.0902	0.09708		mg/Kg	☼	94	10 - 139
Benzo(k)fluoranthene	0.0109		0.0902	0.09334		mg/Kg	☼	91	10 - 129
Chrysene	0.0218		0.0902	0.09803		mg/Kg	☼	85	10 - 143
Dibenz(a,h)anthracene	<0.00656		0.0902	0.09711		mg/Kg	☼	103	10 - 130
Fluoranthene	0.0493		0.0902	0.1199		mg/Kg	☼	78	10 - 150
Fluorene	<0.00656		0.0902	0.09262		mg/Kg	☼	97	10 - 140
Indeno(1,2,3-cd)pyrene	0.0122		0.0902	0.1001		mg/Kg	☼	97	10 - 129
2-Methylnaphthalene	<0.00656		0.0902	0.09993		mg/Kg	☼	111	10 - 150
Naphthalene	<0.00656		0.0902	0.08980		mg/Kg	☼	100	10 - 150
Phenanthrene	0.0312		0.0902	0.1082		mg/Kg	☼	85	10 - 150
Pyrene	0.0379		0.0902	0.1197		mg/Kg	☼	91	10 - 150

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Fluorobiphenyl (Surr)	98		20 - 122
Nitrobenzene-d5 (Surr)	133	S1+	10 - 132
Terphenyl-d14 (Surr)	114		10 - 119

Lab Sample ID: 310-330206-23 MSD
Matrix: Solid
Analysis Batch: 487291

Client Sample ID: HA-10-1
Prep Type: Total/NA
Prep Batch: 487182

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene	<0.00656		0.0888	0.08931		mg/Kg	☼	101	10 - 150	14	40
Acenaphthylene	<0.00656		0.0888	0.09308		mg/Kg	☼	102	10 - 148	17	40
Anthracene	<0.00656		0.0888	0.08013		mg/Kg	☼	84	10 - 138	17	40
Benzo(a)anthracene	0.0184		0.0888	0.09031		mg/Kg	☼	81	10 - 149	13	40
Benzo(a)pyrene	0.0178		0.0888	0.08784		mg/Kg	☼	79	10 - 131	8	40
Benzo(b)fluoranthene	0.0254		0.0888	0.08806		mg/Kg	☼	71	10 - 134	7	40
Benzo(g,h,i)perylene	0.0126		0.0888	0.08402		mg/Kg	☼	80	10 - 139	14	40
Benzo(k)fluoranthene	0.0109		0.0888	0.08562		mg/Kg	☼	84	10 - 129	9	40
Chrysene	0.0218		0.0888	0.08598		mg/Kg	☼	72	10 - 143	13	40
Dibenz(a,h)anthracene	<0.00656		0.0888	0.08506		mg/Kg	☼	91	10 - 130	13	40
Fluoranthene	0.0493		0.0888	0.1017		mg/Kg	☼	59	10 - 150	16	40
Fluorene	<0.00656		0.0888	0.07238		mg/Kg	☼	76	10 - 140	25	40

Method: 8270E - Semivolatile Organic Compounds (GC-MS/MS) (Continued)

Lab Sample ID: 310-330206-23 MSD
Matrix: Solid
Analysis Batch: 487291

Client Sample ID: HA-10-1
Prep Type: Total/NA
Prep Batch: 487182

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Indeno(1,2,3-cd)pyrene	0.0122		0.0888	0.08746		mg/Kg	☼	85	10 - 129	13	40
2-Methylnaphthalene	<0.00656		0.0888	0.08337		mg/Kg	☼	94	10 - 150	18	40
Naphthalene	<0.00656		0.0888	0.07650		mg/Kg	☼	86	10 - 150	16	40
Phenanthrene	0.0312		0.0888	0.09100		mg/Kg	☼	67	10 - 150	17	40
Pyrene	0.0379		0.0888	0.1047		mg/Kg	☼	75	10 - 150	13	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*85*		*20 - 122*
Nitrobenzene-d5 (Surr)	*112*		*10 - 132*
Terphenyl-d14 (Surr)	*95*		*10 - 119*

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Lab Sample ID: MB 310-486957/1-A
Matrix: Solid
Analysis Batch: 486962

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 486957

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<9.29		9.29		mg/Kg		04/24/26 11:30	04/25/26 12:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*80 - 120*	*04/24/26 11:30*	*04/25/26 12:24*	*1*

Lab Sample ID: LCS 310-486957/2-A
Matrix: Solid
Analysis Batch: 486962

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 486957

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Wisconsin GRO			18.5	17.92		mg/Kg		97	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*80*		*80 - 120*

Lab Sample ID: LCSD 310-486957/23-A
Matrix: Solid
Analysis Batch: 486962

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 486957

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Wisconsin GRO			19.9	18.86		mg/Kg		95	80 - 120	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*87*		*80 - 120*

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC) (Continued)

Lab Sample ID: MB 310-487223/1
Matrix: Water
Analysis Batch: 487223

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<100		100		ug/L			04/28/26 22:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*04/28/26 22:38*	*1*

Lab Sample ID: LCS 310-487223/2
Matrix: Water
Analysis Batch: 487223

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Wisconsin GRO			400	394.9		ug/L		99	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*

Lab Sample ID: LCSD 310-487223/24
Matrix: Water
Analysis Batch: 487223

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Wisconsin GRO			400	426.5		ug/L		107	80 - 120	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*

Lab Sample ID: MB 310-487246/1-A
Matrix: Solid
Analysis Batch: 487249

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487246

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<9.86		9.86		mg/Kg		04/28/26 11:40	04/28/26 20:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*	*04/28/26 11:40*	*04/28/26 20:50*	*1*

Lab Sample ID: LCS 310-487246/2-A
Matrix: Solid
Analysis Batch: 487249

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487246

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Wisconsin GRO			19.2	16.84		mg/Kg		88	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC) (Continued)

Lab Sample ID: LCSD 310-487246/23-A
Matrix: Solid
Analysis Batch: 487249

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 487246

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Wisconsin GRO			19.2	16.86		mg/Kg		88	80 - 120	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*

Lab Sample ID: MB 310-487248/1-A
Matrix: Solid
Analysis Batch: 487252

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487248

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<9.82		9.82		mg/Kg		04/28/26 11:48	04/29/26 09:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*	*04/28/26 11:48*	*04/29/26 09:29*	*1*

Lab Sample ID: LCS 310-487248/2-A
Matrix: Solid
Analysis Batch: 487252

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487248

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Wisconsin GRO			19.5	16.92		mg/Kg		87	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*

Lab Sample ID: LCSD 310-487248/23-A
Matrix: Solid
Analysis Batch: 487252

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 487248

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Wisconsin GRO			19.8	15.86		mg/Kg		80	80 - 120	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Lab Sample ID: MB 310-486746/1-A
Matrix: Water
Analysis Batch: 486756

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 486746

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<0.0992		0.0992		mg/L		04/23/26 07:27	04/23/26 11:01	1

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC) (Continued)

Lab Sample ID: LCS 310-486746/9-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 486756
Prep Batch: 486746

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics (DRO)	1.67	1.492		mg/L		89	75 - 115

Lab Sample ID: LCSD 310-486746/10-A
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 486756
Prep Batch: 486746

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics (DRO)	1.68	1.552		mg/L		93	75 - 115	4	20

Lab Sample ID: MB 310-486758/1-A
Client Sample ID: Method Blank
Matrix: Solid
Prep Type: Silica Gel Cleanup
Analysis Batch: 486753
Prep Batch: 486758

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<6.79		6.79		mg/Kg		04/23/26 07:56	04/23/26 12:03	1

Lab Sample ID: LCS 310-486758/2-A
Client Sample ID: Lab Control Sample
Matrix: Solid
Prep Type: Silica Gel Cleanup
Analysis Batch: 486753
Prep Batch: 486758

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics (DRO)	98.0	95.73		mg/Kg		98	70 - 120

Lab Sample ID: LCSD 310-486758/3-A
Client Sample ID: Lab Control Sample Dup
Matrix: Solid
Prep Type: Silica Gel Cleanup
Analysis Batch: 486753
Prep Batch: 486758

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics (DRO)	99.1	95.80		mg/Kg		97	70 - 120	0	20

Lab Sample ID: MB 310-486774/1-A
Client Sample ID: Method Blank
Matrix: Solid
Prep Type: Silica Gel Cleanup
Analysis Batch: 486753
Prep Batch: 486774

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<6.98		6.98		mg/Kg		04/23/26 08:54	04/23/26 16:52	1

Lab Sample ID: LCS 310-486774/2-A
Client Sample ID: Lab Control Sample
Matrix: Solid
Prep Type: Silica Gel Cleanup
Analysis Batch: 486753
Prep Batch: 486774

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics (DRO)	98.5	94.40		mg/Kg		96	70 - 120

Lab Sample ID: LCSD 310-486774/3-A
Client Sample ID: Lab Control Sample Dup
Matrix: Solid
Prep Type: Silica Gel Cleanup
Analysis Batch: 486753
Prep Batch: 486774

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics (DRO)	99.3	92.04		mg/Kg		93	70 - 120	3	20

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Lab Sample ID: MB 240-699234/1-A
Matrix: Water
Analysis Batch: 699297

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699234

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.50		1.50		ng/L		04/24/26 10:05	04/25/26 03:34	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<4.00		4.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<4.00		4.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<4.00		4.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<10.0		10.0		ng/L		04/24/26 10:05	04/25/26 03:34	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<10.0		10.0		ng/L		04/24/26 10:05	04/25/26 03:34	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorobutanesulfonic acid (PFBS)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorobutanoic acid (PFBA)	<4.00		4.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorodecanesulfonic acid (PFDS)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorodecanoic acid (PFDA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorododecanesulfonic acid (PFDoS)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorododecanoic acid (PFDoA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluoroheptanoic acid (PFHpA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<10.0		10.0		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorohexanesulfonic acid (PFHxS)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorohexanoic acid (PFHxA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorononanesulfonic acid (PFNS)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorononanoic acid (PFNA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorooctanesulfonamide (PFOSA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorooctanesulfonic acid (PFOS)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorooctanoic acid (PFOA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: MB 240-699234/1-A
Matrix: Water
Analysis Batch: 699297

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699234

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluoropentanoic acid (PFPeA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<10.0		10.0		ng/L		04/24/26 10:05	04/25/26 03:34	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<4.00		4.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorotetradecanoic acid (PFTeDA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorotridecanoic acid (PFTrDA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluoroundecanoic acid (PFUnA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*51.2*		*40 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C2 10:2 FTS	*62.1*		*40 - 200*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C2 4:2 FTS	*56.3*		*40 - 200*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C2 6:2 FTS	*51.0*		*40 - 200*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C2 8:2 FTS	*53.1*		*40 - 300*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C3 HFPO-DA	*54.9*		*40 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C4 PFBA	*47.4*		*5 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C3 PFBS	*48.3*		*40 - 135*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C6 PFDA	*52.3*		*40 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C2-PFDoA	*57.3*		*10 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C4 PFHpA	*53.4*		*40 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C5 PFHxA	*58.9*		*40 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C3 PFHxS	*49.5*		*40 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C9 PFNA	*50.4*		*40 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C8 PFOA	*52.6*		*40 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C8 PFOS	*54.3*		*40 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C5 PFPeA	*56.0*		*40 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C3-PFPrS	*39.9*		*20 - 150*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C2 PFTeDA	*61.7*		*10 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C7 PFUnA	*59.3*		*30 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
d5-NEtFOSAA	*64.5*		*25 - 135*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
d9-N-EtFOSE-M	*45.3*		*10 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
d5-NEtPFOSA	*46.1*		*10 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
d3-NMeFOSAA	*62.9*		*40 - 170*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
d7-N-MeFOSE-M	*44.5*		*10 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
d3-NMePFOSA	*49.3*		*10 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*

Lab Sample ID: LCS 240-699234/3-A
Matrix: Water
Analysis Batch: 699297

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699234

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	37.8	36.83		ng/L		98	55 - 160
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	37.4	41.22		ng/L		110	70 - 155

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LCS 240-699234/3-A
Matrix: Water
Analysis Batch: 699297

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699234

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	43.98		ng/L		116	65 - 145
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	30.0	34.44		ng/L		115	70 - 140
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	76.8	83.08		ng/L		108	60 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	75.0	75.71		ng/L		101	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	76.2	79.50		ng/L		104	65 - 155
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	45.47		ng/L		114	65 - 145
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	46.06		ng/L		115	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	222.7		ng/L		111	70 - 135
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	43.71		ng/L		109	60 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	43.76		ng/L		109	50 - 140
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	232.2		ng/L		116	70 - 145
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	36.34		ng/L		91	50 - 150
Perfluorobutanesulfonic acid (PFBS)	35.5	32.83		ng/L		92	60 - 145
Perfluorobutanoic acid (PFBA)	80.0	92.15		ng/L		115	70 - 140
Perfluorodecanesulfonic acid (PFDS)	38.6	38.65		ng/L		100	60 - 145
Perfluorodecanoic acid (PFDA)	40.0	42.21		ng/L		106	70 - 140
Perfluorododecanesulfonic acid (PFDoS)	38.8	35.98		ng/L		93	50 - 145
Perfluorododecanoic acid (PFDoA)	40.0	44.13		ng/L		110	70 - 140
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	35.7	38.15		ng/L		107	70 - 140
Perfluoroheptanesulfonic acid (PFHpS)	38.2	42.29		ng/L		111	70 - 150
Perfluoroheptanoic acid (PFHpA)	40.0	44.17		ng/L		110	70 - 150
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	172.4		ng/L		86	50 - 145
Perfluorohexanesulfonic acid (PFHxS)	36.5	27.07		ng/L		74	65 - 145
Perfluorohexanoic acid (PFHxA)	40.0	40.35		ng/L		101	70 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	42.15		ng/L		105	60 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	44.38		ng/L		111	55 - 140
Perfluorononanesulfonic acid (PFNS)	38.5	40.71		ng/L		106	65 - 145
Perfluorononanoic acid (PFNA)	40.0	42.48		ng/L		106	70 - 150
Perfluorooctanesulfonamide (PFOSA)	40.0	44.37		ng/L		111	70 - 145
Perfluorooctanesulfonic acid (PFOS)	37.2	38.88		ng/L		105	55 - 150

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LCS 240-699234/3-A
Matrix: Water
Analysis Batch: 699297

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699234

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanoic acid (PFOA)	40.0	42.10		ng/L		105	70 - 150
Perfluoropentanesulfonic acid (PFPeS)	37.6	40.95		ng/L		109	65 - 140
Perfluoropentanoic acid (PFPeA)	40.0	42.62		ng/L		107	65 - 135
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	192.7		ng/L		96	70 - 135
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	78.22		ng/L		98	65 - 130
Perfluorotetradecanoic acid (PFTeDA)	40.0	38.53		ng/L		96	60 - 140
Perfluorotridecanoic acid (PFTrDA)	40.0	41.02		ng/L		103	65 - 140
Perfluoroundecanoic acid (PFUnA)	40.0	42.78		ng/L		107	70 - 145

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C8 FOSA	*96.3*		*40 - 130*
13C2 10:2 FTS	*96.1*		*10 - 200*
13C2 4:2 FTS	*118*		*40 - 200*
13C2 6:2 FTS	*105*		*40 - 200*
13C2 8:2 FTS	*98.4*		*40 - 300*
13C3 HFPO-DA	*102*		*40 - 130*
13C4 PFBA	*99.7*		*5 - 130*
13C3 PFBS	*103*		*40 - 135*
13C6 PFDA	*98.7*		*40 - 130*
13C2-PFDoA	*86.7*		*10 - 130*
13C4 PFHpA	*104*		*40 - 130*
13C5 PFHxA	*105*		*40 - 130*
13C3 PFHxS	*104*		*40 - 130*
13C9 PFNA	*101*		*40 - 130*
13C8 PFOA	*110*		*40 - 130*
13C8 PFOS	*108*		*40 - 130*
13C5 PFPeA	*110*		*40 - 130*
13C3-PFPrS	*94.9*		*20 - 150*
13C2 PFTeDA	*91.5*		*10 - 130*
13C7 PFUnA	*95.8*		*30 - 130*
d5-NEtFOSAA	*94.5*		*25 - 135*
d9-N-EtFOSE-M	*55.5*		*10 - 130*
d5-NEtPFOSA	*75.7*		*10 - 130*
d3-NMeFOSAA	*99.9*		*40 - 170*
d7-N-MeFOSE-M	*56.0*		*10 - 130*
d3-NMePFOSA	*87.0*		*10 - 130*

Lab Sample ID: LLCS 240-699234/2-A
Matrix: Water
Analysis Batch: 699297

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699234

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	3.78	3.982		ng/L		105	55 - 160

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LLCS 240-699234/2-A
Matrix: Water
Analysis Batch: 699297

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699234

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	3.74	4.316		ng/L		116	70 - 155
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	4.267		ng/L		113	65 - 145
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	3.00	3.622		ng/L		121	70 - 140
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	7.68	8.506		ng/L		111	60 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	7.50	8.190		ng/L		109	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	7.62	8.909		ng/L		117	65 - 155
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	4.848		ng/L		121	65 - 145
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	4.853		ng/L		121	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	25.83		ng/L		129	70 - 135
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	4.474		ng/L		112	60 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	4.904		ng/L		123	50 - 140
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	23.64		ng/L		118	70 - 145
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	3.749		ng/L		94	50 - 150
Perfluorobutanesulfonic acid (PFBS)	3.55	3.587		ng/L		101	60 - 145
Perfluorobutanoic acid (PFBA)	8.00	9.673		ng/L		121	70 - 140
Perfluorodecanesulfonic acid (PFDS)	3.86	4.132		ng/L		107	60 - 145
Perfluorodecanoic acid (PFDA)	4.00	5.015		ng/L		125	70 - 140
Perfluorododecanesulfonic acid (PFDoS)	3.88	3.882		ng/L		100	50 - 145
Perfluorododecanoic acid (PFDoA)	4.00	4.693		ng/L		117	70 - 140
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.57	3.389		ng/L		95	70 - 140
Perfluoroheptanesulfonic acid (PFHpS)	3.82	4.495		ng/L		118	70 - 150
Perfluoroheptanoic acid (PFHpA)	4.00	4.823		ng/L		121	70 - 150
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20.0	14.17		ng/L		71	50 - 145
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.166		ng/L		87	65 - 145
Perfluorohexanoic acid (PFHxA)	4.00	4.278		ng/L		107	70 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.580		ng/L		115	60 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	4.635		ng/L		116	55 - 140
Perfluorononanesulfonic acid (PFNS)	3.85	4.471		ng/L		116	65 - 145
Perfluorononanoic acid (PFNA)	4.00	4.528		ng/L		113	70 - 150

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LLCS 240-699234/2-A
Matrix: Water
Analysis Batch: 699297

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699234

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluorooctanesulfonamide (PFOSA)			4.00	4.657		ng/L		116	70 - 145		
Perfluorooctanesulfonic acid (PFOS)			3.72	4.375		ng/L		118	55 - 150		
Perfluorooctanoic acid (PFOA)			4.00	4.409		ng/L		110	70 - 150		
Perfluoropentanesulfonic acid (PFPeS)			3.76	4.238		ng/L		113	65 - 140		
Perfluoropentanoic acid (PFPeA)			4.00	4.477		ng/L		112	65 - 135		
3-Perfluoropentylpropanoic acid (5:3 FTCA)			20.0	17.21		ng/L		86	70 - 135		
3-Perfluoropropylpropanoic acid (3:3 FTCA)			8.00	7.433		ng/L		93	65 - 130		
Perfluorotetradecanoic acid (PFTeDA)			4.00	4.097		ng/L		102	60 - 140		
Perfluorotridecanoic acid (PFTrDA)			4.00	4.115		ng/L		103	65 - 140		
Perfluoroundecanoic acid (PFUnA)			4.00	4.621		ng/L		116	70 - 145		

Isotope Dilution	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C8 FOSA	*74.8*		*40 - 130*
13C2 10:2 FTS	*76.0*		*10 - 200*
13C2 4:2 FTS	*95.2*		*40 - 200*
13C2 6:2 FTS	*82.7*		*40 - 200*
13C2 8:2 FTS	*77.7*		*40 - 300*
13C3 HFPO-DA	*87.0*		*40 - 130*
13C4 PFBA	*82.0*		*5 - 130*
13C3 PFBS	*80.1*		*40 - 135*
13C6 PFDA	*76.0*		*40 - 130*
13C2-PFDoA	*68.5*		*10 - 130*
13C4 PFHpA	*89.6*		*40 - 130*
13C5 PFHxA	*99.8*		*40 - 130*
13C3 PFHxS	*81.6*		*40 - 130*
13C9 PFNA	*81.4*		*40 - 130*
13C8 PFOA	*89.4*		*40 - 130*
13C8 PFOS	*83.9*		*40 - 130*
13C5 PFPeA	*96.5*		*40 - 130*
13C3-PFPrS	*72.8*		*20 - 150*
13C2 PFTeDA	*71.2*		*10 - 130*
13C7 PFUnA	*73.9*		*30 - 130*
d5-NEtFOSAA	*73.1*		*25 - 135*
d9-N-EtFOSE-M	*43.4*		*10 - 130*
d5-NEtPFOSA	*55.7*		*10 - 130*
d3-NMeFOSAA	*76.2*		*40 - 170*
d7-N-MeFOSE-M	*46.6*		*10 - 130*
d3-NMePFOSA	*59.4*		*10 - 130*

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: MB 240-699578/1-A
Matrix: Solid
Analysis Batch: 699712

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699578

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.400		0.400		ng/g		04/28/26 08:24	04/29/26 02:01	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.400		0.400		ng/g		04/28/26 08:24	04/29/26 02:01	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.400		0.400		ng/g		04/28/26 08:24	04/29/26 02:01	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.00		1.00		ng/g		04/28/26 08:24	04/29/26 02:01	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.00		1.00		ng/g		04/28/26 08:24	04/29/26 02:01	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorobutanesulfonic acid (PFBS)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorobutanoic acid (PFBA)	<0.400		0.400		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorodecanesulfonic acid (PFDS)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorodecanoic acid (PFDA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorododecanesulfonic acid (PFDoS)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorododecanoic acid (PFDoA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluoroheptanoic acid (PFHpA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.00		1.00		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorohexanesulfonic acid (PFHxS)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorohexanoic acid (PFHxA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorononanesulfonic acid (PFNS)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorononanoic acid (PFNA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorooctanesulfonamide (PFOSA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorooctanesulfonic acid (PFOS)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorooctanoic acid (PFOA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: MB 240-699578/1-A
Matrix: Solid
Analysis Batch: 699712

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699578

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluoropentanoic acid (PFPeA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.00		1.00		ng/g		04/28/26 08:24	04/29/26 02:01	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.400		0.400		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorotetradecanoic acid (PFTeDA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorotridecanoic acid (PFTrDA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluoroundecanoic acid (PFUnA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*55.5*		*40 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C2 10:2 FTS	*54.4*		*40 - 275*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C2 4:2 FTS	*68.8*		*40 - 165*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C2 6:2 FTS	*60.0*		*40 - 215*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C2 8:2 FTS	*58.1*		*40 - 275*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C3 HFPO-DA	*44.5*		*40 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C4 PFBA	*47.4*		*8 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C3 PFBS	*54.3*		*40 - 135*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C6 PFDA	*46.1*		*40 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C2-PFDoA	*47.2*		*40 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C4 PFHpA	*49.4*		*40 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C5 PFHxA	*45.9*		*40 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C3 PFHxS	*58.1*		*40 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C9 PFNA	*51.6*		*40 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C8 PFOA	*45.0*		*40 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C8 PFOS	*57.0*		*40 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C5 PFPeA	*50.0*		*35 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C3-PFPrS	*45.5*		*20 - 150*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C2 PFTeDA	*52.8*		*20 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C7 PFUnA	*42.4*		*40 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
d5-NEtFOSAA	*58.7*		*40 - 150*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
d9-N-EtFOSE-M	*43.1*		*15 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
d5-NEtPFOSA	*50.3*		*10 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
d3-NMeFOSAA	*60.1*		*40 - 135*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
d7-N-MeFOSE-M	*45.8*		*20 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
d3-NMePFOSA	*47.4*		*10 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*

Lab Sample ID: LCS 240-699578/3-A
Matrix: Solid
Analysis Batch: 699712

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699578

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.36	2.625		ng/g		111	45 - 160
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.34	2.522		ng/g		108	70 - 150

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LCS 240-699578/3-A
Matrix: Solid
Analysis Batch: 699712

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699578

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.37	3.099		ng/g		131	70 - 160
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1.88	2.347		ng/g		125	70 - 145
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	4.80	5.569		ng/g		116	70 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	4.69	4.849		ng/g		103	60 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	4.76	5.126		ng/g		108	55 - 200
N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.50	2.855		ng/g		114	70 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.50	3.124		ng/g		125	65 - 165
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	12.5	11.87		ng/g		95	70 - 135
N-methylperfluorooctane sulfonamide (NMeFOSA)	2.50	2.884		ng/g		115	70 - 155
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.50	2.953		ng/g		118	65 - 155
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.5	12.55		ng/g		100	70 - 140
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.50	2.874		ng/g		115	60 - 155
Perfluorobutanesulfonic acid (PFBS)	2.22	2.306		ng/g		104	65 - 145
Perfluorobutanoic acid (PFBA)	5.00	6.039		ng/g		121	70 - 140
Perfluorodecanesulfonic acid (PFDS)	2.41	2.793		ng/g		116	40 - 155
Perfluorodecanoic acid (PFDA)	2.50	2.624		ng/g		105	70 - 155
Perfluorododecanesulfonic acid (PFDoS)	2.43	2.484		ng/g		102	25 - 160
Perfluorododecanoic acid (PFDoA)	2.50	2.687		ng/g		107	70 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.23	2.318		ng/g		104	70 - 140
Perfluoroheptanesulfonic acid (PFHpS)	2.39	2.858		ng/g		120	65 - 155
Perfluoroheptanoic acid (PFHpA)	2.50	2.675		ng/g		107	65 - 145
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	12.5	13.46		ng/g		108	60 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.28	2.273		ng/g		100	60 - 150
Perfluorohexanoic acid (PFHxA)	2.50	2.962		ng/g		118	65 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.50	2.617		ng/g		105	60 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.50	2.507		ng/g		100	30 - 140
Perfluorononanesulfonic acid (PFNS)	2.41	2.445		ng/g		102	55 - 140
Perfluorononanoic acid (PFNA)	2.50	2.700		ng/g		108	70 - 155
Perfluorooctanesulfonamide (PFOSA)	2.50	3.015		ng/g		121	70 - 140
Perfluorooctanesulfonic acid (PFOS)	2.33	2.430		ng/g		105	65 - 160

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LCS 240-699578/3-A
Matrix: Solid
Analysis Batch: 699712

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699578

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanoic acid (PFOA)	2.50	2.803		ng/g		112	70 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.35	2.773		ng/g		118	55 - 160
Perfluoropentanoic acid (PFPeA)	2.50	2.558		ng/g		102	60 - 150
3-Perfluoropentylpropanoic acid (5:3 FTCA)	12.5	14.61		ng/g		117	60 - 130
3-Perfluoropropylpropanoic acid (3:3 FTCA)	5.00	4.339		ng/g		87	45 - 130
Perfluorotetradecanoic acid (PFTeDA)	2.50	2.330		ng/g		93	65 - 150
Perfluorotridecanoic acid (PFTrDA)	2.50	2.691		ng/g		108	65 - 150
Perfluoroundecanoic acid (PFUnA)	2.50	2.949		ng/g		118	70 - 155

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C8 FOSA	*86.7*		*40 - 130*
13C2 10:2 FTS	*90.3*		*10 - 200*
13C2 4:2 FTS	*109*		*40 - 165*
13C2 6:2 FTS	*94.9*		*40 - 215*
13C2 8:2 FTS	*88.8*		*40 - 275*
13C3 HFPO-DA	*65.6*		*40 - 130*
13C4 PFBA	*71.0*		*8 - 130*
13C3 PFBS	*88.1*		*40 - 135*
13C6 PFDA	*74.6*		*40 - 130*
13C2-PFDoA	*73.4*		*40 - 130*
13C4 PFHpA	*81.5*		*40 - 130*
13C5 PFHxA	*72.6*		*40 - 130*
13C3 PFHxS	*94.0*		*40 - 130*
13C9 PFNA	*82.1*		*40 - 130*
13C8 PFOA	*71.5*		*40 - 130*
13C8 PFOS	*89.2*		*40 - 130*
13C5 PFPeA	*82.8*		*35 - 130*
13C3-PFPrS	*71.2*		*20 - 150*
13C2 PFTeDA	*72.6*		*20 - 130*
13C7 PFUnA	*73.5*		*40 - 130*
d5-NEtFOSAA	*93.1*		*40 - 150*
d9-N-EtFOSE-M	*54.5*		*15 - 130*
d5-NEtPFOSA	*71.5*		*10 - 130*
d3-NMeFOSAA	*98.0*		*40 - 135*
d7-N-MeFOSE-M	*58.9*		*20 - 130*
d3-NMePFOSA	*71.0*		*10 - 130*

Lab Sample ID: LLCS 240-699578/2-A
Matrix: Solid
Analysis Batch: 699712

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699578

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.236	0.2780		ng/g		118	45 - 160

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LLCS 240-699578/2-A
Matrix: Solid
Analysis Batch: 699712

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699578

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.234	0.2420		ng/g		104	70 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.237	0.2880		ng/g		122	70 - 160
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.188	0.2297		ng/g		123	70 - 145
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.480	0.5376		ng/g		112	70 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.469	0.4897		ng/g		104	60 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.476	0.5368		ng/g		113	55 - 200
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.250	0.2811		ng/g		112	70 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.250	0.2899		ng/g		116	65 - 165
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1.25	1.600		ng/g		128	70 - 135
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.250	0.2853		ng/g		114	70 - 155
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.250	0.3055		ng/g		122	65 - 155
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1.25	1.068		ng/g		85	70 - 140
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.250	0.3132		ng/g		125	60 - 155
Perfluorobutanesulfonic acid (PFBS)	0.222	0.1897	J	ng/g		85	65 - 145
Perfluorobutanoic acid (PFBA)	0.500	0.6073		ng/g		121	70 - 140
Perfluorodecanesulfonic acid (PFDS)	0.241	0.2803		ng/g		116	40 - 155
Perfluorodecanoic acid (PFDA)	0.250	0.2330		ng/g		93	70 - 155
Perfluorododecanesulfonic acid (PFDoS)	0.243	0.2793		ng/g		115	25 - 160
Perfluorododecanoic acid (PFDoA)	0.250	0.2715		ng/g		109	70 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.223	0.2269		ng/g		102	70 - 140
Perfluoroheptanesulfonic acid (PFHpS)	0.239	0.2796		ng/g		117	65 - 155
Perfluoroheptanoic acid (PFHpA)	0.250	0.2725		ng/g		109	65 - 145
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1.25	1.259		ng/g		101	60 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.228	0.1965	J	ng/g		86	60 - 150
Perfluorohexanoic acid (PFHxA)	0.250	0.3113		ng/g		125	65 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.250	0.2724		ng/g		109	60 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.250	0.2613		ng/g		105	30 - 140
Perfluorononanesulfonic acid (PFNS)	0.241	0.2449		ng/g		102	55 - 140
Perfluorononanoic acid (PFNA)	0.250	0.2582		ng/g		103	70 - 155

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LLCS 240-699578/2-A
Matrix: Solid
Analysis Batch: 699712

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699578

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluorooctanesulfonamide (PFOSA)			0.250	0.3094		ng/g		124	70 - 140		
Perfluorooctanesulfonic acid (PFOS)			0.233	0.2593		ng/g		112	65 - 160		
Perfluorooctanoic acid (PFOA)			0.250	0.3027		ng/g		121	70 - 150		
Perfluoropentanesulfonic acid (PFPeS)			0.235	0.2827		ng/g		120	55 - 160		
Perfluoropentanoic acid (PFPeA)			0.250	0.2774		ng/g		111	60 - 150		
3-Perfluoropentylpropanoic acid (5:3 FTCA)			1.25	1.321		ng/g		106	60 - 130		
3-Perfluoropropylpropanoic acid (3:3 FTCA)			0.500	0.5115		ng/g		102	45 - 130		
Perfluorotetradecanoic acid (PFTeDA)			0.250	0.2351		ng/g		94	65 - 150		
Perfluorotridecanoic acid (PFTrDA)			0.250	0.2615		ng/g		105	65 - 150		
Perfluoroundecanoic acid (PFUnA)			0.250	0.3097		ng/g		124	70 - 155		

Isotope Dilution	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C8 FOSA	*71.0*		*40 - 130*
13C2 10:2 FTS	*74.8*		*10 - 200*
13C2 4:2 FTS	*88.0*		*40 - 165*
13C2 6:2 FTS	*77.3*		*40 - 215*
13C2 8:2 FTS	*73.7*		*40 - 275*
13C3 HFPO-DA	*61.0*		*40 - 130*
13C4 PFBA	*60.5*		*8 - 130*
13C3 PFBS	*74.3*		*40 - 135*
13C6 PFDA	*64.4*		*40 - 130*
13C2-PFDoA	*62.2*		*40 - 130*
13C4 PFHpA	*70.6*		*40 - 130*
13C5 PFHxA	*65.0*		*40 - 130*
13C3 PFHxS	*76.4*		*40 - 130*
13C9 PFNA	*66.7*		*40 - 130*
13C8 PFOA	*58.3*		*40 - 130*
13C8 PFOS	*72.9*		*40 - 130*
13C5 PFPeA	*72.4*		*35 - 130*
13C3-PFPrS	*60.6*		*20 - 150*
13C2 PFTeDA	*73.4*		*20 - 130*
13C7 PFUnA	*58.6*		*40 - 130*
d5-NEtFOSAA	*78.7*		*40 - 150*
d9-N-EtFOSE-M	*59.7*		*15 - 130*
d5-NEtPFOSA	*59.4*		*10 - 130*
d3-NMeFOSAA	*80.4*		*40 - 135*
d7-N-MeFOSE-M	*59.2*		*20 - 130*
d3-NMePFOSA	*58.6*		*10 - 130*

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: MB 240-699767/1-A
Matrix: Solid
Analysis Batch: 699825

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699767

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.400		0.400		ng/g		04/29/26 08:25	04/29/26 14:26	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.400		0.400		ng/g		04/29/26 08:25	04/29/26 14:26	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.400		0.400		ng/g		04/29/26 08:25	04/29/26 14:26	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.00		1.00		ng/g		04/29/26 08:25	04/29/26 14:26	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.00		1.00		ng/g		04/29/26 08:25	04/29/26 14:26	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorobutanesulfonic acid (PFBS)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorobutanoic acid (PFBA)	<0.400		0.400		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorodecanesulfonic acid (PFDS)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorodecanoic acid (PFDA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorododecanesulfonic acid (PFDoS)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorododecanoic acid (PFDoA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluoroheptanoic acid (PFHpA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.00		1.00		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorohexanesulfonic acid (PFHxS)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorohexanoic acid (PFHxA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorononanesulfonic acid (PFNS)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorononanoic acid (PFNA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorooctanesulfonamide (PFOSA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorooctanesulfonic acid (PFOS)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorooctanoic acid (PFOA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: MB 240-699767/1-A
Matrix: Solid
Analysis Batch: 699825

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699767

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluoropentanoic acid (PFPeA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.00		1.00		ng/g		04/29/26 08:25	04/29/26 14:26	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.400		0.400		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorotetradecanoic acid (PFTeDA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorotridecanoic acid (PFTrDA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluoroundecanoic acid (PFUnA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*77.0*		*40 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C2 10:2 FTS	*45.0*		*40 - 275*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C2 4:2 FTS	*70.9*		*40 - 165*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C2 6:2 FTS	*73.8*		*40 - 215*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C2 8:2 FTS	*51.5*		*40 - 275*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C3 HFPO-DA	*75.4*		*40 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C4 PFBA	*72.2*		*8 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C3 PFBS	*73.7*		*40 - 135*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C6 PFDA	*72.6*		*40 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C2-PFDoA	*63.7*		*40 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C4 PFHpA	*76.7*		*40 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C5 PFHxA	*75.4*		*40 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C3 PFHxS	*74.6*		*40 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C9 PFNA	*75.5*		*40 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C8 PFOA	*69.4*		*40 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C8 PFOS	*63.3*		*40 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C5 PFPeA	*84.9*		*35 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C3-PFPrS	*66.4*		*20 - 150*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C2 PFTeDA	*86.2*		*20 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C7 PFUnA	*67.5*		*40 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
d5-NEtFOSAA	*53.5*		*40 - 150*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
d9-N-EtFOSE-M	*53.7*		*15 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
d5-NEtPFOSA	*69.6*		*10 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
d3-NMeFOSAA	*54.2*		*40 - 135*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
d7-N-MeFOSE-M	*47.2*		*20 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
d3-NMePFOSA	*77.7*		*10 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*

Lab Sample ID: LCS 240-699767/3-A
Matrix: Solid
Analysis Batch: 699827

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699767

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.30	2.794		ng/g		121	45 - 160
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.28	2.918		ng/g		128	70 - 150

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LCS 240-699767/3-A
Matrix: Solid
Analysis Batch: 699827

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699767

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.31	2.546		ng/g		110	70 - 160
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1.83	2.223		ng/g		122	70 - 145
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	4.68	5.622		ng/g		120	70 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	4.58	5.258		ng/g		115	60 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	4.64	4.990		ng/g		107	55 - 200
N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.44	2.826		ng/g		116	70 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.44	2.845		ng/g		117	65 - 165
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	12.2	12.12		ng/g		99	70 - 135
N-methylperfluorooctane sulfonamide (NMeFOSA)	2.44	2.879		ng/g		118	70 - 155
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.44	2.844		ng/g		117	65 - 155
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.2	13.50		ng/g		111	70 - 140
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.44	2.873		ng/g		118	60 - 155
Perfluorobutanesulfonic acid (PFBS)	2.17	2.450		ng/g		113	65 - 145
Perfluorobutanoic acid (PFBA)	4.88	5.721		ng/g		117	70 - 140
Perfluorodecanesulfonic acid (PFDS)	2.35	3.063		ng/g		130	40 - 155
Perfluorodecanoic acid (PFDA)	2.44	2.745		ng/g		113	70 - 155
Perfluorododecanesulfonic acid (PFDoS)	2.37	2.865		ng/g		121	25 - 160
Perfluorododecanoic acid (PFDoA)	2.44	2.750		ng/g		113	70 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.18	2.369		ng/g		109	70 - 140
Perfluoroheptanesulfonic acid (PFHpS)	2.33	3.169		ng/g		136	65 - 155
Perfluoroheptanoic acid (PFHpA)	2.44	2.809		ng/g		115	65 - 145
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	12.2	12.80		ng/g		105	60 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.22	2.437		ng/g		110	60 - 150
Perfluorohexanoic acid (PFHxA)	2.44	2.689		ng/g		110	65 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.44	2.785		ng/g		114	60 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.44	2.750		ng/g		113	30 - 140
Perfluorononanesulfonic acid (PFNS)	2.35	3.277		ng/g		140	55 - 140
Perfluorononanoic acid (PFNA)	2.44	2.675		ng/g		110	70 - 155
Perfluorooctanesulfonamide (PFOSA)	2.44	2.668		ng/g		109	70 - 140
Perfluorooctanesulfonic acid (PFOS)	2.27	2.788		ng/g		123	65 - 160

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LCS 240-699767/3-A
Matrix: Solid
Analysis Batch: 699827

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699767

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanoic acid (PFOA)	2.44	2.722		ng/g		112	70 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.29	2.642		ng/g		115	55 - 160
Perfluoropentanoic acid (PFPeA)	2.44	2.571		ng/g		105	60 - 150
3-Perfluoropentylpropanoic acid (5:3 FTCA)	12.2	13.14		ng/g		108	60 - 130
3-Perfluoropropylpropanoic acid (3:3 FTCA)	4.88	5.566		ng/g		114	45 - 130
Perfluorotetradecanoic acid (PFTeDA)	2.44	2.267		ng/g		93	65 - 150
Perfluorotridecanoic acid (PFTrDA)	2.44	2.297		ng/g		94	65 - 150
Perfluoroundecanoic acid (PFUnA)	2.44	2.822		ng/g		116	70 - 155

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C8 FOSA	*83.9*		*40 - 130*
13C2 10:2 FTS	*66.8*		*10 - 200*
13C2 4:2 FTS	*80.0*		*40 - 165*
13C2 6:2 FTS	*78.0*		*40 - 215*
13C2 8:2 FTS	*69.2*		*40 - 275*
13C3 HFPO-DA	*79.8*		*40 - 130*
13C4 PFBA	*80.1*		*8 - 130*
13C3 PFBS	*82.6*		*40 - 135*
13C6 PFDA	*78.5*		*40 - 130*
13C2-PFDoA	*75.0*		*40 - 130*
13C4 PFHpA	*76.9*		*40 - 130*
13C5 PFHxA	*83.4*		*40 - 130*
13C3 PFHxS	*79.2*		*40 - 130*
13C9 PFNA	*78.7*		*40 - 130*
13C8 PFOA	*76.5*		*40 - 130*
13C8 PFOS	*65.3*		*40 - 130*
13C5 PFPeA	*85.9*		*35 - 130*
13C3-PFPrS	*74.3*		*20 - 150*
13C2 PFTeDA	*91.5*		*20 - 130*
13C7 PFUnA	*74.8*		*40 - 130*
d5-NEtFOSAA	*69.8*		*40 - 150*
d9-N-EtFOSE-M	*68.4*		*15 - 130*
d5-NEtPFOSA	*68.0*		*10 - 130*
d3-NMeFOSAA	*71.6*		*40 - 135*
d7-N-MeFOSE-M	*67.0*		*20 - 130*
d3-NMePFOSA	*70.1*		*10 - 130*

Lab Sample ID: LLCS 240-699767/2-A
Matrix: Solid
Analysis Batch: 699825

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699767

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.230	0.2666		ng/g		116	45 - 160

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LLCS 240-699767/2-A
Matrix: Solid
Analysis Batch: 699825

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699767

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.228	0.2618		ng/g		115	70 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.231	0.2525		ng/g		109	70 - 160
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.183	0.2035		ng/g		111	70 - 145
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.468	0.5079		ng/g		108	70 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.458	0.5306		ng/g		116	60 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.464	0.4921		ng/g		106	55 - 200
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.244	0.2498		ng/g		102	70 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.244	0.2841		ng/g		116	65 - 165
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1.22	1.399		ng/g		115	70 - 135
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.244	0.2287		ng/g		94	70 - 155
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.244	0.2431		ng/g		100	65 - 155
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1.22	1.204		ng/g		99	70 - 140
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.244	0.3192		ng/g		131	60 - 155
Perfluorobutanesulfonic acid (PFBS)	0.217	0.2145		ng/g		99	65 - 145
Perfluorobutanoic acid (PFBA)	0.488	0.5326		ng/g		109	70 - 140
Perfluorodecanesulfonic acid (PFDS)	0.235	0.2612		ng/g		111	40 - 155
Perfluorodecanoic acid (PFDA)	0.244	0.2413		ng/g		99	70 - 155
Perfluorododecanesulfonic acid (PFDoS)	0.237	0.2582		ng/g		109	25 - 160
Perfluorododecanoic acid (PFDoA)	0.244	0.2552		ng/g		105	70 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.218	0.2196		ng/g		101	70 - 140
Perfluoroheptanesulfonic acid (PFHpS)	0.233	0.2886		ng/g		124	65 - 155
Perfluoroheptanoic acid (PFHpA)	0.244	0.2577		ng/g		106	65 - 145
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1.22	1.204		ng/g		99	60 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.222	0.2158		ng/g		97	60 - 150
Perfluorohexanoic acid (PFHxA)	0.244	0.2743		ng/g		112	65 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.244	0.2474		ng/g		101	60 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.244	0.2519		ng/g		103	30 - 140
Perfluorononanesulfonic acid (PFNS)	0.235	0.2491		ng/g		106	55 - 140
Perfluorononanoic acid (PFNA)	0.244	0.2383		ng/g		98	70 - 155

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LLCS 240-699767/2-A
Matrix: Solid
Analysis Batch: 699825

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699767

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluorooctanesulfonamide (PFOSA)			0.244	0.2583		ng/g		106	70 - 140		
Perfluorooctanesulfonic acid (PFOS)			0.227	0.2817		ng/g		124	65 - 160		
Perfluorooctanoic acid (PFOA)			0.244	0.2681		ng/g		110	70 - 150		
Perfluoropentanesulfonic acid (PFPeS)			0.229	0.2387		ng/g		104	55 - 160		
Perfluoropentanoic acid (PFPeA)			0.244	0.2558		ng/g		105	60 - 150		
3-Perfluoropentylpropanoic acid (5:3 FTCA)			1.22	1.398		ng/g		115	60 - 130		
3-Perfluoropropylpropanoic acid (3:3 FTCA)			0.488	0.5507		ng/g		113	45 - 130		
Perfluorotetradecanoic acid (PFTeDA)			0.244	0.2149		ng/g		88	65 - 150		
Perfluorotridecanoic acid (PFTrDA)			0.244	0.2177		ng/g		89	65 - 150		
Perfluoroundecanoic acid (PFUnA)			0.244	0.2647		ng/g		109	70 - 155		

Isotope Dilution	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C8 FOSA	*104*		*40 - 130*
13C2 10:2 FTS	*60.9*		*10 - 200*
13C2 4:2 FTS	*91.9*		*40 - 165*
13C2 6:2 FTS	*94.0*		*40 - 215*
13C2 8:2 FTS	*72.6*		*40 - 275*
13C3 HFPO-DA	*95.6*		*40 - 130*
13C4 PFBA	*95.5*		*8 - 130*
13C3 PFBS	*97.9*		*40 - 135*
13C6 PFDA	*95.3*		*40 - 130*
13C2-PFDoA	*85.6*		*40 - 130*
13C4 PFHpA	*98.1*		*40 - 130*
13C5 PFHxA	*98.4*		*40 - 130*
13C3 PFHxS	*97.8*		*40 - 130*
13C9 PFNA	*99.4*		*40 - 130*
13C8 PFOA	*91.5*		*40 - 130*
13C8 PFOS	*84.6*		*40 - 130*
13C5 PFPeA	*110*		*35 - 130*
13C3-PFPrS	*87.4*		*20 - 150*
13C2 PFTeDA	*103*		*20 - 130*
13C7 PFUnA	*86.4*		*40 - 130*
d5-NEtFOSAA	*72.4*		*40 - 150*
d9-N-EtFOSE-M	*58.8*		*15 - 130*
d5-NEtPFOSA	*97.2*		*10 - 130*
d3-NMeFOSAA	*77.1*		*40 - 135*
d7-N-MeFOSE-M	*57.5*		*20 - 130*
d3-NMePFOSA	*103*		*10 - 130*

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: MB 240-700122/1-A
Matrix: Solid
Analysis Batch: 700142

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 700122

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.400		0.400		ng/g		05/01/26 08:54	05/01/26 14:09	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.400		0.400		ng/g		05/01/26 08:54	05/01/26 14:09	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.400		0.400		ng/g		05/01/26 08:54	05/01/26 14:09	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.00		1.00		ng/g		05/01/26 08:54	05/01/26 14:09	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.00		1.00		ng/g		05/01/26 08:54	05/01/26 14:09	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
Perfluorobutanesulfonic acid (PFBS)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
Perfluorobutanoic acid (PFBA)	<0.400		0.400		ng/g		05/01/26 08:54	05/01/26 14:09	1
Perfluorodecanesulfonic acid (PFDS)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
Perfluorodecanoic acid (PFDA)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
Perfluorododecanesulfonic acid (PFDoS)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
Perfluorododecanoic acid (PFDoA)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
Perfluoroheptanoic acid (PFHpA)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.00		1.00		ng/g		05/01/26 08:54	05/01/26 14:09	1
Perfluorohexanesulfonic acid (PFHxS)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
Perfluorohexanoic acid (PFHxA)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
Perfluorononanesulfonic acid (PFNS)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
Perfluorononanoic acid (PFNA)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
Perfluorooctanesulfonamide (PFOSA)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
Perfluorooctanesulfonic acid (PFOS)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
Perfluorooctanoic acid (PFOA)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: MB 240-700122/1-A
Matrix: Solid
Analysis Batch: 700142

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 700122

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
Perfluoropentanoic acid (PFPeA)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.00		1.00		ng/g		05/01/26 08:54	05/01/26 14:09	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.400		0.400		ng/g		05/01/26 08:54	05/01/26 14:09	1
Perfluorotetradecanoic acid (PFTeDA)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
Perfluorotridecanoic acid (PFTrDA)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1
Perfluoroundecanoic acid (PFUnA)	<0.200		0.200		ng/g		05/01/26 08:54	05/01/26 14:09	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*81.8*		*40 - 130*	*05/01/26 08:54*	*05/01/26 14:09*	*1*
13C2 10:2 FTS	*76.1*		*40 - 275*	*05/01/26 08:54*	*05/01/26 14:09*	*1*
13C2 4:2 FTS	*73.3*		*40 - 165*	*05/01/26 08:54*	*05/01/26 14:09*	*1*
13C2 6:2 FTS	*78.0*		*40 - 215*	*05/01/26 08:54*	*05/01/26 14:09*	*1*
13C2 8:2 FTS	*77.5*		*40 - 275*	*05/01/26 08:54*	*05/01/26 14:09*	*1*
13C3 HFPO-DA	*76.3*		*40 - 130*	*05/01/26 08:54*	*05/01/26 14:09*	*1*
13C4 PFBA	*77.0*		*8 - 130*	*05/01/26 08:54*	*05/01/26 14:09*	*1*
13C3 PFBS	*79.4*		*40 - 135*	*05/01/26 08:54*	*05/01/26 14:09*	*1*
13C6 PFDA	*81.7*		*40 - 130*	*05/01/26 08:54*	*05/01/26 14:09*	*1*
13C2-PFDoA	*77.5*		*40 - 130*	*05/01/26 08:54*	*05/01/26 14:09*	*1*
13C4 PFHpA	*77.5*		*40 - 130*	*05/01/26 08:54*	*05/01/26 14:09*	*1*
13C5 PFHxA	*80.2*		*40 - 130*	*05/01/26 08:54*	*05/01/26 14:09*	*1*
13C3 PFHxS	*77.4*		*40 - 130*	*05/01/26 08:54*	*05/01/26 14:09*	*1*
13C9 PFNA	*79.9*		*40 - 130*	*05/01/26 08:54*	*05/01/26 14:09*	*1*
13C8 PFOA	*74.4*		*40 - 130*	*05/01/26 08:54*	*05/01/26 14:09*	*1*
13C8 PFOS	*68.1*		*40 - 130*	*05/01/26 08:54*	*05/01/26 14:09*	*1*
13C5 PFPeA	*84.5*		*35 - 130*	*05/01/26 08:54*	*05/01/26 14:09*	*1*
13C3-PFPrS	*72.7*		*20 - 150*	*05/01/26 08:54*	*05/01/26 14:09*	*1*
13C2 PFTeDA	*93.2*		*20 - 130*	*05/01/26 08:54*	*05/01/26 14:09*	*1*
13C7 PFUnA	*77.7*		*40 - 130*	*05/01/26 08:54*	*05/01/26 14:09*	*1*
d5-NEtFOSAA	*73.5*		*40 - 150*	*05/01/26 08:54*	*05/01/26 14:09*	*1*
d9-N-EtFOSE-M	*73.1*		*15 - 130*	*05/01/26 08:54*	*05/01/26 14:09*	*1*
d5-NEtPFOSA	*71.0*		*10 - 130*	*05/01/26 08:54*	*05/01/26 14:09*	*1*
d3-NMeFOSAA	*73.6*		*40 - 135*	*05/01/26 08:54*	*05/01/26 14:09*	*1*
d7-N-MeFOSE-M	*77.4*		*20 - 130*	*05/01/26 08:54*	*05/01/26 14:09*	*1*
d3-NMePFOSA	*69.2*		*10 - 130*	*05/01/26 08:54*	*05/01/26 14:09*	*1*

Lab Sample ID: LCS 240-700122/3-A
Matrix: Solid
Analysis Batch: 700142

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 700122

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.36	3.093		ng/g		131	45 - 160
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.34	3.108		ng/g		133	70 - 150

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LCS 240-700122/3-A
Matrix: Solid
Analysis Batch: 700142

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 700122

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.37	3.009		ng/g		127	70 - 160
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1.88	2.199		ng/g		117	70 - 145
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	4.80	5.424		ng/g		113	70 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	4.69	5.573		ng/g		119	60 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	4.76	5.033		ng/g		106	55 - 200
N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.50	2.939		ng/g		118	70 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.50	2.806		ng/g		112	65 - 165
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	12.5	13.39		ng/g		107	70 - 135
N-methylperfluorooctane sulfonamide (NMeFOSA)	2.50	2.868		ng/g		115	70 - 155
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.50	2.925		ng/g		117	65 - 155
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.5	13.63		ng/g		109	70 - 140
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.50	2.919		ng/g		117	60 - 155
Perfluorobutanesulfonic acid (PFBS)	2.22	2.526		ng/g		114	65 - 145
Perfluorobutanoic acid (PFBA)	5.00	6.154		ng/g		123	70 - 140
Perfluorodecanesulfonic acid (PFDS)	2.41	3.090		ng/g		128	40 - 155
Perfluorodecanoic acid (PFDA)	2.50	2.703		ng/g		108	70 - 155
Perfluorododecanesulfonic acid (PFDoS)	2.43	2.880		ng/g		119	25 - 160
Perfluorododecanoic acid (PFDoA)	2.50	2.805		ng/g		112	70 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.23	2.588		ng/g		116	70 - 140
Perfluoroheptanesulfonic acid (PFHpS)	2.39	3.054		ng/g		128	65 - 155
Perfluoroheptanoic acid (PFHpA)	2.50	2.812		ng/g		112	65 - 145
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	12.5	15.16		ng/g		121	60 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.28	2.350		ng/g		103	60 - 150
Perfluorohexanoic acid (PFHxA)	2.50	2.797		ng/g		112	65 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.50	2.660		ng/g		106	60 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.50	2.677		ng/g		107	30 - 140
Perfluorononanesulfonic acid (PFNS)	2.41	3.024		ng/g		126	55 - 140
Perfluorononanoic acid (PFNA)	2.50	2.714		ng/g		109	70 - 155
Perfluorooctanesulfonamide (PFOSA)	2.50	2.737		ng/g		109	70 - 140
Perfluorooctanesulfonic acid (PFOS)	2.33	2.856		ng/g		123	65 - 160

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LCS 240-700122/3-A
Matrix: Solid
Analysis Batch: 700142

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 700122

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanoic acid (PFOA)	2.50	2.823		ng/g		113	70 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.35	2.827		ng/g		120	55 - 160
Perfluoropentanoic acid (PFPeA)	2.50	2.621		ng/g		105	60 - 150
3-Perfluoropentylpropanoic acid (5:3 FTCA)	12.5	14.97		ng/g		120	60 - 130
3-Perfluoropropylpropanoic acid (3:3 FTCA)	5.00	5.172		ng/g		103	45 - 130
Perfluorotetradecanoic acid (PFTeDA)	2.50	2.527		ng/g		101	65 - 150
Perfluorotridecanoic acid (PFTrDA)	2.50	2.453		ng/g		98	65 - 150
Perfluoroundecanoic acid (PFUnA)	2.50	2.964		ng/g		119	70 - 155

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C8 FOSA	*76.1*		*40 - 130*
13C2 10:2 FTS	*70.7*		*10 - 200*
13C2 4:2 FTS	*68.3*		*40 - 165*
13C2 6:2 FTS	*72.8*		*40 - 215*
13C2 8:2 FTS	*73.2*		*40 - 275*
13C3 HFPO-DA	*69.1*		*40 - 130*
13C4 PFBA	*68.0*		*8 - 130*
13C3 PFBS	*71.1*		*40 - 135*
13C6 PFDA	*75.1*		*40 - 130*
13C2-PFDoA	*73.7*		*40 - 130*
13C4 PFHpA	*73.5*		*40 - 130*
13C5 PFHxA	*71.5*		*40 - 130*
13C3 PFHxS	*72.4*		*40 - 130*
13C9 PFNA	*74.1*		*40 - 130*
13C8 PFOA	*68.0*		*40 - 130*
13C8 PFOS	*64.6*		*40 - 130*
13C5 PFPeA	*78.4*		*35 - 130*
13C3-PFPrS	*65.9*		*20 - 150*
13C2 PFTeDA	*81.6*		*20 - 130*
13C7 PFUnA	*72.7*		*40 - 130*
d5-NEtFOSAA	*72.3*		*40 - 150*
d9-N-EtFOSE-M	*48.9*		*15 - 130*
d5-NEtPFOSA	*76.4*		*10 - 130*
d3-NMeFOSAA	*71.6*		*40 - 135*
d7-N-MeFOSE-M	*48.8*		*20 - 130*
d3-NMePFOSA	*74.0*		*10 - 130*

Lab Sample ID: LLCS 240-700122/2-A
Matrix: Solid
Analysis Batch: 700142

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 700122

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.236	0.3290		ng/g		139	45 - 160

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LLCS 240-700122/2-A
Matrix: Solid
Analysis Batch: 700142

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 700122

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.234	0.3347		ng/g		143	70 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.237	0.2894		ng/g		122	70 - 160
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.188	0.2428		ng/g		129	70 - 145
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.480	0.5566		ng/g		116	70 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.469	0.6043		ng/g		129	60 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.476	0.5421		ng/g		114	55 - 200
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.250	0.3156		ng/g		126	70 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.250	0.3138		ng/g		126	65 - 165
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1.25	1.258		ng/g		101	70 - 135
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.250	0.2603		ng/g		104	70 - 155
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.250	0.3163		ng/g		127	65 - 155
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1.25	1.334		ng/g		107	70 - 140
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.250	0.3005		ng/g		120	60 - 155
Perfluorobutanesulfonic acid (PFBS)	0.222	0.2376		ng/g		107	65 - 145
Perfluorobutanoic acid (PFBA)	0.500	0.6228		ng/g		125	70 - 140
Perfluorodecanesulfonic acid (PFDS)	0.241	0.3266		ng/g		136	40 - 155
Perfluorodecanoic acid (PFDA)	0.250	0.2796		ng/g		112	70 - 155
Perfluorododecanesulfonic acid (PFDoS)	0.243	0.3293		ng/g		136	25 - 160
Perfluorododecanoic acid (PFDoA)	0.250	0.2862		ng/g		114	70 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.223	0.2574		ng/g		115	70 - 140
Perfluoroheptanesulfonic acid (PFHpS)	0.239	0.3322		ng/g		139	65 - 155
Perfluoroheptanoic acid (PFHpA)	0.250	0.3071		ng/g		123	65 - 145
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1.25	1.465		ng/g		117	60 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.228	0.2364		ng/g		104	60 - 150
Perfluorohexanoic acid (PFHxA)	0.250	0.3167		ng/g		127	65 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.250	0.2771		ng/g		111	60 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.250	0.2829		ng/g		113	30 - 140
Perfluorononanesulfonic acid (PFNS)	0.241	0.3281		ng/g		136	55 - 140
Perfluorononanoic acid (PFNA)	0.250	0.2879		ng/g		115	70 - 155

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LLCS 240-700122/2-A
Matrix: Solid
Analysis Batch: 700142

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 700122

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonamide (PFOSA)	0.250	0.2758		ng/g		110	70 - 140
Perfluorooctanesulfonic acid (PFOS)	0.233	0.3150		ng/g		135	65 - 160
Perfluorooctanoic acid (PFOA)	0.250	0.2951		ng/g		118	70 - 150
Perfluoropentanesulfonic acid (PFPeS)	0.235	0.2811		ng/g		120	55 - 160
Perfluoropentanoic acid (PFPeA)	0.250	0.2974		ng/g		119	60 - 150
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.25	1.319		ng/g		106	60 - 130
3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.500	0.4743		ng/g		95	45 - 130
Perfluorotetradecanoic acid (PFTeDA)	0.250	0.2686		ng/g		107	65 - 150
Perfluorotridecanoic acid (PFTrDA)	0.250	0.2598		ng/g		104	65 - 150
Perfluoroundecanoic acid (PFUnA)	0.250	0.3014		ng/g		121	70 - 155

Isotope Dilution	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C8 FOSA	*77.8*		*40 - 130*
13C2 10:2 FTS	*77.5*		*10 - 200*
13C2 4:2 FTS	*72.1*		*40 - 165*
13C2 6:2 FTS	*78.1*		*40 - 215*
13C2 8:2 FTS	*79.2*		*40 - 275*
13C3 HFPO-DA	*74.6*		*40 - 130*
13C4 PFBA	*74.0*		*8 - 130*
13C3 PFBS	*77.0*		*40 - 135*
13C6 PFDA	*76.4*		*40 - 130*
13C2-PFDoA	*77.7*		*40 - 130*
13C4 PFHpA	*75.2*		*40 - 130*
13C5 PFHxA	*77.2*		*40 - 130*
13C3 PFHxS	*76.6*		*40 - 130*
13C9 PFNA	*77.4*		*40 - 130*
13C8 PFOA	*71.0*		*40 - 130*
13C8 PFOS	*66.9*		*40 - 130*
13C5 PFPeA	*83.7*		*35 - 130*
13C3-PFPrS	*72.0*		*20 - 150*
13C2 PFTeDA	*96.4*		*20 - 130*
13C7 PFUnA	*76.5*		*40 - 130*
d5-NEtFOSAA	*75.2*		*40 - 150*
d9-N-EtFOSE-M	*73.8*		*15 - 130*
d5-NEtPFOSA	*72.4*		*10 - 130*
d3-NMeFOSAA	*73.4*		*40 - 135*
d7-N-MeFOSE-M	*70.2*		*20 - 130*
d3-NMePFOSA	*70.0*		*10 - 130*

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-699168/1-A
Matrix: Solid
Analysis Batch: 699552

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699168

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<1.00		1.00		mg/Kg		04/24/26 10:00	04/27/26 18:50	2
Barium	<1.00		1.00		mg/Kg		04/24/26 10:00	04/27/26 18:50	2
Cadmium	<0.200		0.200		mg/Kg		04/24/26 10:00	04/27/26 18:50	2
Chromium	<0.400		0.400		mg/Kg		04/24/26 10:00	04/27/26 18:50	2
Lead	<0.200		0.200		mg/Kg		04/24/26 10:00	04/27/26 18:50	2
Selenium	<1.00		1.00		mg/Kg		04/24/26 10:00	04/27/26 18:50	2
Silver	<0.200		0.200		mg/Kg		04/24/26 10:00	04/27/26 18:50	2

Lab Sample ID: LCS 240-699168/2-A
Matrix: Solid
Analysis Batch: 699552

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699168

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic			100	94.62		mg/Kg		95	80 - 120		
Barium			100	96.95		mg/Kg		97	80 - 120		
Cadmium			50.0	47.64		mg/Kg		95	80 - 120		
Chromium			50.0	49.38		mg/Kg		99	80 - 120		
Lead			50.0	48.72		mg/Kg		97	80 - 120		
Selenium			100	97.13		mg/Kg		97	80 - 120		
Silver			10.0	9.865		mg/Kg		99	80 - 120		

Lab Sample ID: 310-330206-1 MS
Matrix: Solid
Analysis Batch: 699552

Client Sample ID: HA-08-1
Prep Type: Total/NA
Prep Batch: 699168

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic	2.06		123	118.2		mg/Kg	☼	94	80 - 120		
Barium	46.5		123	171.4		mg/Kg	☼	101	80 - 120		
Cadmium	<0.261		61.6	58.71		mg/Kg	☼	95	80 - 120		
Chromium	23.5		61.6	89.70		mg/Kg	☼	107	80 - 120		
Lead	4.95		61.6	65.25		mg/Kg	☼	98	80 - 120		
Selenium	<1.30		123	113.9		mg/Kg	☼	92	80 - 120		
Silver	<0.261		12.3	12.36		mg/Kg	☼	100	80 - 120		

Lab Sample ID: 310-330206-1 MSD
Matrix: Solid
Analysis Batch: 699552

Client Sample ID: HA-08-1
Prep Type: Total/NA
Prep Batch: 699168

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	2.06		123	120.1		mg/Kg	☼	96	80 - 120	2	20
Barium	46.5		123	175.0		mg/Kg	☼	104	80 - 120	2	20
Cadmium	<0.261		61.6	59.64		mg/Kg	☼	97	80 - 120	2	20
Chromium	23.5		61.6	88.38		mg/Kg	☼	105	80 - 120	1	20
Lead	4.95		61.6	66.99		mg/Kg	☼	101	80 - 120	3	20
Selenium	<1.30		123	116.1		mg/Kg	☼	94	80 - 120	2	20
Silver	<0.261		12.3	12.59		mg/Kg	☼	102	80 - 120	2	20

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 240-699271/1-A
Matrix: Solid
Analysis Batch: 699560

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699271

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<1.00		1.00		mg/Kg		04/24/26 14:00	04/27/26 13:16	2
Barium	<1.00		1.00		mg/Kg		04/24/26 14:00	04/27/26 13:16	2
Cadmium	<0.200		0.200		mg/Kg		04/24/26 14:00	04/27/26 13:16	2
Chromium	<0.400		0.400		mg/Kg		04/24/26 14:00	04/27/26 13:16	2
Lead	<0.200		0.200		mg/Kg		04/24/26 14:00	04/27/26 13:16	2
Selenium	<1.00		1.00		mg/Kg		04/24/26 14:00	04/27/26 13:16	2
Silver	<0.200		0.200		mg/Kg		04/24/26 14:00	04/27/26 13:16	2

Lab Sample ID: LCS 240-699271/2-A
Matrix: Solid
Analysis Batch: 699560

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699271

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	99.84		mg/Kg		100	80 - 120
Barium	100	99.51		mg/Kg		100	80 - 120
Cadmium	50.0	48.93		mg/Kg		98	80 - 120
Chromium	50.0	51.05		mg/Kg		102	80 - 120
Lead	50.0	50.46		mg/Kg		101	80 - 120
Selenium	100	98.78		mg/Kg		99	80 - 120
Silver	10.0	10.17		mg/Kg		102	80 - 120

Lab Sample ID: 310-330206-22 MS
Matrix: Solid
Analysis Batch: 699658

Client Sample ID: SS-03
Prep Type: Total/NA
Prep Batch: 699271

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	1.84		117	121.3		mg/Kg	☼	102	80 - 120
Barium	54.9		117	167.3		mg/Kg	☼	96	80 - 120
Cadmium	<0.201		58.6	57.86		mg/Kg	☼	99	80 - 120
Chromium	25.9		58.6	82.95		mg/Kg	☼	97	80 - 120
Lead	5.97		58.6	63.69		mg/Kg	☼	99	80 - 120
Selenium	<1.00		117	111.0		mg/Kg	☼	95	80 - 120
Silver	<0.201		11.7	12.16		mg/Kg	☼	103	80 - 120

Lab Sample ID: 310-330206-22 MSD
Matrix: Solid
Analysis Batch: 699658

Client Sample ID: SS-03
Prep Type: Total/NA
Prep Batch: 699271

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	1.84		117	116.5		mg/Kg	☼	98	80 - 120	4	20
Barium	54.9		117	172.7		mg/Kg	☼	101	80 - 120	3	20
Cadmium	<0.201		58.6	56.90		mg/Kg	☼	97	80 - 120	2	20
Chromium	25.9		58.6	83.29		mg/Kg	☼	98	80 - 120	0	20
Lead	5.97		58.6	63.21		mg/Kg	☼	98	80 - 120	1	20
Selenium	<1.00		117	107.4		mg/Kg	☼	92	80 - 120	3	20
Silver	<0.201		11.7	11.87		mg/Kg	☼	101	80 - 120	2	20

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 240-699253/1-A
Matrix: Water
Analysis Batch: 699560

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 699253

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<5.00		5.00		ug/L		04/24/26 14:00	04/27/26 12:58	1
Barium	<5.00		5.00		ug/L		04/24/26 14:00	04/27/26 12:58	1
Cadmium	<1.00		1.00		ug/L		04/24/26 14:00	04/27/26 12:58	1
Chromium	<5.00		5.00		ug/L		04/24/26 14:00	04/27/26 12:58	1
Lead	<1.00		1.00		ug/L		04/24/26 14:00	04/27/26 12:58	1
Selenium	<5.00		5.00		ug/L		04/24/26 14:00	04/27/26 12:58	1
Silver	<1.00		1.00		ug/L		04/24/26 14:00	04/27/26 12:58	1

Lab Sample ID: LCS 240-699253/2-A
Matrix: Water
Analysis Batch: 699560

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 699253

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	1000	1001		ug/L		100	80 - 120
Barium	1000	975.9		ug/L		98	80 - 120
Cadmium	500	476.9		ug/L		95	80 - 120
Chromium	500	528.1		ug/L		106	80 - 120
Lead	500	495.7		ug/L		99	80 - 120
Selenium	1000	987.4		ug/L		99	80 - 120
Silver	100	98.79		ug/L		99	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-699257/1-A
Matrix: Water
Analysis Batch: 699608

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699257

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.200		0.200		ug/L		04/24/26 14:00	04/27/26 12:42	1

Lab Sample ID: LCS 240-699257/2-A
Matrix: Water
Analysis Batch: 699608

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699257

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.872		ug/L		97	80 - 120

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 240-699169/1-A
Matrix: Solid
Analysis Batch: 699620

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699169

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.100		0.100		mg/Kg		04/24/26 10:00	04/27/26 12:42	1

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 240-699169/2-A
Client Sample ID: Lab Control Sample
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 699620
Prep Batch: 699169

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			0.833	0.7099		mg/Kg		85	80 - 120		

Lab Sample ID: 310-330206-1 MS
Client Sample ID: HA-08-1
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 699620
Prep Batch: 699169

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury	<0.129		0.218	0.2150		mg/Kg	☼	99	80 - 120		

Lab Sample ID: 310-330206-1 MSD
Client Sample ID: HA-08-1
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 699620
Prep Batch: 699169

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	<0.129		0.218	0.2207		mg/Kg	☼	101	80 - 120	3	20

Lab Sample ID: MB 240-699274/1-A
Client Sample ID: Method Blank
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 699620
Prep Batch: 699274

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.100		0.100		mg/Kg		04/24/26 13:00	04/27/26 14:30	1

Lab Sample ID: LCS 240-699274/2-A
Client Sample ID: Lab Control Sample
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 699620
Prep Batch: 699274

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			0.833	0.7727		mg/Kg		93	80 - 120		

Lab Sample ID: 310-330206-22 MS
Client Sample ID: SS-03
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 699620
Prep Batch: 699274

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury	<0.142		0.232	0.2469		mg/Kg	☼	106	80 - 120		

Lab Sample ID: 310-330206-22 MSD
Client Sample ID: SS-03
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 699620
Prep Batch: 699274

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	<0.142		0.232	0.2478		mg/Kg	☼	107	80 - 120	0	20

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-1
Project/Site: Duluth Airport Taxiway A

Method: Moisture - Percent Moisture

Lab Sample ID: 310-330206-8 DU
Client Sample ID: HA-04-3
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 486736

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	7.5			8.2		%				10	40
Percent Solids	92.5			91.8		%				0.8	19

Lab Sample ID: 310-330206-18 DU
Client Sample ID: HA-09-3
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 486736

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	17.3			18.5		%				7	40
Percent Solids	82.7			81.5		%				1	19

Lab Sample ID: 310-330206-29 DU
Client Sample ID: HA-13-1
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 486736

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	20.4			18.7		%				8	40
Percent Solids	79.6			81.3		%				2	19

GC/MS VOA

Prep Batch: 487058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-1	HA-08-1	Total/NA	Solid	5035	
310-330206-2	HA-08-3	Total/NA	Solid	5035	
310-330206-3	HA-06-1	Total/NA	Solid	5035	
310-330206-4	HA-06-3	Total/NA	Solid	5035	
310-330206-5	HA-05-1	Total/NA	Solid	5035	
310-330206-6	HA-05-3	Total/NA	Solid	5035	
310-330206-7	HA-04-1	Total/NA	Solid	5035	
310-330206-8	HA-04-3	Total/NA	Solid	5035	
310-330206-9	HA-03-1	Total/NA	Solid	5035	
310-330206-10	HA-03-3	Total/NA	Solid	5035	
310-330206-11	HA-01-1	Total/NA	Solid	5035	
MB 310-487058/1-A	Method Blank	Total/NA	Solid	5035	
LCS 310-487058/2-A	Lab Control Sample	Total/NA	Solid	5035	
310-330206-11 MS	HA-01-1	Total/NA	Solid	5035	
310-330206-11 MSD	HA-01-1	Total/NA	Solid	5035	

Analysis Batch: 487059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-1	HA-08-1	Total/NA	Solid	8260D	487058
310-330206-2	HA-08-3	Total/NA	Solid	8260D	487058
310-330206-3	HA-06-1	Total/NA	Solid	8260D	487058
310-330206-4	HA-06-3	Total/NA	Solid	8260D	487058
310-330206-5	HA-05-1	Total/NA	Solid	8260D	487058
310-330206-6	HA-05-3	Total/NA	Solid	8260D	487058
310-330206-7	HA-04-1	Total/NA	Solid	8260D	487058
310-330206-8	HA-04-3	Total/NA	Solid	8260D	487058
310-330206-9	HA-03-1	Total/NA	Solid	8260D	487058
310-330206-10	HA-03-3	Total/NA	Solid	8260D	487058
310-330206-11	HA-01-1	Total/NA	Solid	8260D	487058
MB 310-487058/1-A	Method Blank	Total/NA	Solid	8260D	487058
LCS 310-487058/2-A	Lab Control Sample	Total/NA	Solid	8260D	487058
310-330206-11 MS	HA-01-1	Total/NA	Solid	8260D	487058
310-330206-11 MSD	HA-01-1	Total/NA	Solid	8260D	487058

Prep Batch: 487060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-12	HA-01-3	Total/NA	Solid	5035	
310-330206-13	HA-02-1	Total/NA	Solid	5035	
310-330206-14	HA-02-3	Total/NA	Solid	5035	
310-330206-15	HA-07-1	Total/NA	Solid	5035	
310-330206-16	HA-07-2.5	Total/NA	Solid	5035	
310-330206-17	HA-09-1	Total/NA	Solid	5035	
310-330206-18	HA-09-3	Total/NA	Solid	5035	
310-330206-20	SS-01	Total/NA	Solid	5035	
310-330206-21	SS-02	Total/NA	Solid	5035	
310-330206-22	SS-03	Total/NA	Solid	5035	
310-330206-23	HA-10-1	Total/NA	Solid	5035	
310-330206-25	HA-11-1	Total/NA	Solid	5035	
310-330206-26	HA-11-3	Total/NA	Solid	5035	
310-330206-27	HA-12-1	Total/NA	Solid	5035	
310-330206-28	HA-12-3	Total/NA	Solid	5035	

GC/MS VOA (Continued)

Prep Batch: 487060 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-29	HA-13-1	Total/NA	Solid	5035	
310-330206-32	Trip Blank - Soil 1	Total/NA	Solid	5035	
MB 310-487060/1-A	Method Blank	Total/NA	Solid	5035	
LCS 310-487060/2-A	Lab Control Sample	Total/NA	Solid	5035	
310-330206-12 MS	HA-01-3	Total/NA	Solid	5035	
310-330206-12 MSD	HA-01-3	Total/NA	Solid	5035	

Analysis Batch: 487062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-12	HA-01-3	Total/NA	Solid	8260D	487060
310-330206-13	HA-02-1	Total/NA	Solid	8260D	487060
310-330206-14	HA-02-3	Total/NA	Solid	8260D	487060
310-330206-15	HA-07-1	Total/NA	Solid	8260D	487060
310-330206-16	HA-07-2.5	Total/NA	Solid	8260D	487060
310-330206-17	HA-09-1	Total/NA	Solid	8260D	487060
310-330206-18	HA-09-3	Total/NA	Solid	8260D	487060
310-330206-20	SS-01	Total/NA	Solid	8260D	487060
310-330206-21	SS-02	Total/NA	Solid	8260D	487060
310-330206-22	SS-03	Total/NA	Solid	8260D	487060
310-330206-23	HA-10-1	Total/NA	Solid	8260D	487060
310-330206-25	HA-11-1	Total/NA	Solid	8260D	487060
310-330206-26	HA-11-3	Total/NA	Solid	8260D	487060
310-330206-27	HA-12-1	Total/NA	Solid	8260D	487060
310-330206-28	HA-12-3	Total/NA	Solid	8260D	487060
310-330206-29	HA-13-1	Total/NA	Solid	8260D	487060
310-330206-32	Trip Blank - Soil 1	Total/NA	Solid	8260D	487060
MB 310-487060/1-A	Method Blank	Total/NA	Solid	8260D	487060
LCS 310-487060/2-A	Lab Control Sample	Total/NA	Solid	8260D	487060
310-330206-12 MS	HA-01-3	Total/NA	Solid	8260D	487060
310-330206-12 MSD	HA-01-3	Total/NA	Solid	8260D	487060

Prep Batch: 487184

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-24	HA-10-3	Total/NA	Solid	5035	
MB 310-487184/1-A	Method Blank	Total/NA	Solid	5035	
LCS 310-487184/2-A	Lab Control Sample	Total/NA	Solid	5035	

Analysis Batch: 487186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-24	HA-10-3	Total/NA	Solid	8260D	487184
MB 310-487184/1-A	Method Blank	Total/NA	Solid	8260D	487184
LCS 310-487184/2-A	Lab Control Sample	Total/NA	Solid	8260D	487184

Analysis Batch: 487263

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-19	WS-01	Total/NA	Water	8260D	
310-330206-33	Trip Blank - Water	Total/NA	Water	8260D	
MB 310-487263/5	Method Blank	Total/NA	Water	8260D	
LCS 310-487263/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-487263/7	Lab Control Sample	Total/NA	Water	8260D	

GC/MS Semi VOA

Prep Batch: 487020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-1	HA-08-1	Total/NA	Solid	3546	
310-330206-2	HA-08-3	Total/NA	Solid	3546	
310-330206-3	HA-06-1	Total/NA	Solid	3546	
310-330206-4	HA-06-3	Total/NA	Solid	3546	
310-330206-5	HA-05-1	Total/NA	Solid	3546	
310-330206-6	HA-05-3	Total/NA	Solid	3546	
310-330206-7	HA-04-1	Total/NA	Solid	3546	
MB 310-487020/1-A	Method Blank	Total/NA	Solid	3546	
LCS 310-487020/2-A	Lab Control Sample	Total/NA	Solid	3546	
310-330206-2 MS	HA-08-3	Total/NA	Solid	3546	
310-330206-2 MSD	HA-08-3	Total/NA	Solid	3546	

Analysis Batch: 487054

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-1	HA-08-1	Total/NA	Solid	8270E	487020
310-330206-2	HA-08-3	Total/NA	Solid	8270E	487020
310-330206-3	HA-06-1	Total/NA	Solid	8270E	487020
310-330206-4	HA-06-3	Total/NA	Solid	8270E	487020
310-330206-5	HA-05-1	Total/NA	Solid	8270E	487020
310-330206-6	HA-05-3	Total/NA	Solid	8270E	487020
310-330206-7	HA-04-1	Total/NA	Solid	8270E	487020
MB 310-487020/1-A	Method Blank	Total/NA	Solid	8270E	487020
LCS 310-487020/2-A	Lab Control Sample	Total/NA	Solid	8270E	487020
310-330206-2 MS	HA-08-3	Total/NA	Solid	8270E	487020
310-330206-2 MSD	HA-08-3	Total/NA	Solid	8270E	487020

Prep Batch: 487056

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-8	HA-04-3	Total/NA	Solid	3546	
310-330206-9	HA-03-1	Total/NA	Solid	3546	
310-330206-10	HA-03-3	Total/NA	Solid	3546	
310-330206-11	HA-01-1	Total/NA	Solid	3546	
310-330206-12	HA-01-3	Total/NA	Solid	3546	
310-330206-13	HA-02-1	Total/NA	Solid	3546	
310-330206-14	HA-02-3	Total/NA	Solid	3546	
310-330206-15	HA-07-1	Total/NA	Solid	3546	
310-330206-16	HA-07-2.5	Total/NA	Solid	3546	
310-330206-17	HA-09-1	Total/NA	Solid	3546	
310-330206-18	HA-09-3	Total/NA	Solid	3546	
310-330206-20	SS-01	Total/NA	Solid	3546	
310-330206-21	SS-02	Total/NA	Solid	3546	
310-330206-22	SS-03	Total/NA	Solid	3546	
MB 310-487056/1-A	Method Blank	Total/NA	Solid	3546	
LCS 310-487056/2-A	Lab Control Sample	Total/NA	Solid	3546	
310-330206-8 MS	HA-04-3	Total/NA	Solid	3546	
310-330206-8 MSD	HA-04-3	Total/NA	Solid	3546	

Prep Batch: 487132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-19	WS-01	Total/NA	Water	3511	

GC/MS Semi VOA

Analysis Batch: 487149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-8	HA-04-3	Total/NA	Solid	8270E	487056
310-330206-9	HA-03-1	Total/NA	Solid	8270E	487056
310-330206-10	HA-03-3	Total/NA	Solid	8270E	487056
310-330206-11	HA-01-1	Total/NA	Solid	8270E	487056
310-330206-12	HA-01-3	Total/NA	Solid	8270E	487056
310-330206-13	HA-02-1	Total/NA	Solid	8270E	487056
310-330206-14	HA-02-3	Total/NA	Solid	8270E	487056
310-330206-15	HA-07-1	Total/NA	Solid	8270E	487056
310-330206-16	HA-07-2.5	Total/NA	Solid	8270E	487056
310-330206-17	HA-09-1	Total/NA	Solid	8270E	487056
310-330206-18	HA-09-3	Total/NA	Solid	8270E	487056
310-330206-20	SS-01	Total/NA	Solid	8270E	487056
310-330206-21	SS-02	Total/NA	Solid	8270E	487056
310-330206-22	SS-03	Total/NA	Solid	8270E	487056
MB 310-487056/1-A	Method Blank	Total/NA	Solid	8270E	487056
LCS 310-487056/2-A	Lab Control Sample	Total/NA	Solid	8270E	487056
310-330206-8 MS	HA-04-3	Total/NA	Solid	8270E	487056
310-330206-8 MSD	HA-04-3	Total/NA	Solid	8270E	487056

Prep Batch: 487182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-23	HA-10-1	Total/NA	Solid	3546	
310-330206-24	HA-10-3	Total/NA	Solid	3546	
310-330206-25	HA-11-1	Total/NA	Solid	3546	
310-330206-26	HA-11-3	Total/NA	Solid	3546	
310-330206-27	HA-12-1	Total/NA	Solid	3546	
310-330206-28	HA-12-3	Total/NA	Solid	3546	
310-330206-29	HA-13-1	Total/NA	Solid	3546	
MB 310-487182/1-A	Method Blank	Total/NA	Solid	3546	
LCS 310-487182/2-A	Lab Control Sample	Total/NA	Solid	3546	
310-330206-23 MS	HA-10-1	Total/NA	Solid	3546	
310-330206-23 MSD	HA-10-1	Total/NA	Solid	3546	

Analysis Batch: 487217

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-15	HA-07-1	Total/NA	Solid	8270E	487056
310-330206-17	HA-09-1	Total/NA	Solid	8270E	487056
310-330206-21	SS-02	Total/NA	Solid	8270E	487056

Analysis Batch: 487291

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-23	HA-10-1	Total/NA	Solid	8270E	487182
310-330206-24	HA-10-3	Total/NA	Solid	8270E	487182
310-330206-25	HA-11-1	Total/NA	Solid	8270E	487182
310-330206-26	HA-11-3	Total/NA	Solid	8270E	487182
310-330206-27	HA-12-1	Total/NA	Solid	8270E	487182
310-330206-28	HA-12-3	Total/NA	Solid	8270E	487182
310-330206-29	HA-13-1	Total/NA	Solid	8270E	487182
MB 310-487182/1-A	Method Blank	Total/NA	Solid	8270E	487182
LCS 310-487182/2-A	Lab Control Sample	Total/NA	Solid	8270E	487182
310-330206-23 MS	HA-10-1	Total/NA	Solid	8270E	487182

GC/MS Semi VOA (Continued)

Analysis Batch: 487291 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-23 MSD	HA-10-1	Total/NA	Solid	8270E	487182

Analysis Batch: 487299

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-19	WS-01	Total/NA	Water	8270E	487132

GC VOA

Prep Batch: 486957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-1	HA-08-1	Total/NA	Solid	WI GRO	
310-330206-2	HA-08-3	Total/NA	Solid	WI GRO	
310-330206-3	HA-06-1	Total/NA	Solid	WI GRO	
310-330206-4	HA-06-3	Total/NA	Solid	WI GRO	
310-330206-5	HA-05-1	Total/NA	Solid	WI GRO	
310-330206-6	HA-05-3	Total/NA	Solid	WI GRO	
MB 310-486957/1-A	Method Blank	Total/NA	Solid	WI GRO	
LCS 310-486957/2-A	Lab Control Sample	Total/NA	Solid	WI GRO	
LCSD 310-486957/23-A	Lab Control Sample Dup	Total/NA	Solid	WI GRO	

Analysis Batch: 486962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-1	HA-08-1	Total/NA	Solid	WI-GRO	486957
310-330206-2	HA-08-3	Total/NA	Solid	WI-GRO	486957
310-330206-3	HA-06-1	Total/NA	Solid	WI-GRO	486957
310-330206-4	HA-06-3	Total/NA	Solid	WI-GRO	486957
310-330206-5	HA-05-1	Total/NA	Solid	WI-GRO	486957
310-330206-6	HA-05-3	Total/NA	Solid	WI-GRO	486957
MB 310-486957/1-A	Method Blank	Total/NA	Solid	WI-GRO	486957
LCS 310-486957/2-A	Lab Control Sample	Total/NA	Solid	WI-GRO	486957
LCSD 310-486957/23-A	Lab Control Sample Dup	Total/NA	Solid	WI-GRO	486957

Analysis Batch: 487223

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-19	WS-01	Total/NA	Water	WI-GRO	
310-330206-33	Trip Blank - Water	Total/NA	Water	WI-GRO	
MB 310-487223/1	Method Blank	Total/NA	Water	WI-GRO	
LCS 310-487223/2	Lab Control Sample	Total/NA	Water	WI-GRO	
LCSD 310-487223/24	Lab Control Sample Dup	Total/NA	Water	WI-GRO	

Prep Batch: 487246

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-7	HA-04-1	Total/NA	Solid	WI GRO	
310-330206-8	HA-04-3	Total/NA	Solid	WI GRO	
310-330206-9	HA-03-1	Total/NA	Solid	WI GRO	
310-330206-10	HA-03-3	Total/NA	Solid	WI GRO	
310-330206-11	HA-01-1	Total/NA	Solid	WI GRO	
310-330206-12	HA-01-3	Total/NA	Solid	WI GRO	
310-330206-13	HA-02-1	Total/NA	Solid	WI GRO	
310-330206-14	HA-02-3	Total/NA	Solid	WI GRO	
310-330206-15	HA-07-1	Total/NA	Solid	WI GRO	

GC VOA (Continued)

Prep Batch: 487246 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-16	HA-07-2.5	Total/NA	Solid	WI GRO	
310-330206-17	HA-09-1	Total/NA	Solid	WI GRO	
310-330206-18	HA-09-3	Total/NA	Solid	WI GRO	
310-330206-20	SS-01	Total/NA	Solid	WI GRO	
310-330206-21	SS-02	Total/NA	Solid	WI GRO	
310-330206-22	SS-03	Total/NA	Solid	WI GRO	
310-330206-23	HA-10-1	Total/NA	Solid	WI GRO	
310-330206-24	HA-10-3	Total/NA	Solid	WI GRO	
310-330206-25	HA-11-1	Total/NA	Solid	WI GRO	
MB 310-487246/1-A	Method Blank	Total/NA	Solid	WI GRO	
LCS 310-487246/2-A	Lab Control Sample	Total/NA	Solid	WI GRO	
LCSD 310-487246/23-A	Lab Control Sample Dup	Total/NA	Solid	WI GRO	

Prep Batch: 487248

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-26	HA-11-3	Total/NA	Solid	WI GRO	
310-330206-27	HA-12-1	Total/NA	Solid	WI GRO	
310-330206-28	HA-12-3	Total/NA	Solid	WI GRO	
310-330206-29	HA-13-1	Total/NA	Solid	WI GRO	
310-330206-32	Trip Blank - Soil 1	Total/NA	Solid	WI GRO	
MB 310-487248/1-A	Method Blank	Total/NA	Solid	WI GRO	
LCS 310-487248/2-A	Lab Control Sample	Total/NA	Solid	WI GRO	
LCSD 310-487248/23-A	Lab Control Sample Dup	Total/NA	Solid	WI GRO	

Analysis Batch: 487249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-7	HA-04-1	Total/NA	Solid	WI-GRO	487246
310-330206-8	HA-04-3	Total/NA	Solid	WI-GRO	487246
310-330206-9	HA-03-1	Total/NA	Solid	WI-GRO	487246
310-330206-10	HA-03-3	Total/NA	Solid	WI-GRO	487246
310-330206-11	HA-01-1	Total/NA	Solid	WI-GRO	487246
310-330206-12	HA-01-3	Total/NA	Solid	WI-GRO	487246
310-330206-13	HA-02-1	Total/NA	Solid	WI-GRO	487246
310-330206-14	HA-02-3	Total/NA	Solid	WI-GRO	487246
310-330206-15	HA-07-1	Total/NA	Solid	WI-GRO	487246
310-330206-16	HA-07-2.5	Total/NA	Solid	WI-GRO	487246
310-330206-17	HA-09-1	Total/NA	Solid	WI-GRO	487246
310-330206-18	HA-09-3	Total/NA	Solid	WI-GRO	487246
310-330206-20	SS-01	Total/NA	Solid	WI-GRO	487246
310-330206-21	SS-02	Total/NA	Solid	WI-GRO	487246
310-330206-22	SS-03	Total/NA	Solid	WI-GRO	487246
310-330206-23	HA-10-1	Total/NA	Solid	WI-GRO	487246
310-330206-24	HA-10-3	Total/NA	Solid	WI-GRO	487246
310-330206-25	HA-11-1	Total/NA	Solid	WI-GRO	487246
MB 310-487246/1-A	Method Blank	Total/NA	Solid	WI-GRO	487246
LCS 310-487246/2-A	Lab Control Sample	Total/NA	Solid	WI-GRO	487246
LCSD 310-487246/23-A	Lab Control Sample Dup	Total/NA	Solid	WI-GRO	487246

Analysis Batch: 487252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-26	HA-11-3	Total/NA	Solid	WI-GRO	487248

GC VOA (Continued)

Analysis Batch: 487252 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-27	HA-12-1	Total/NA	Solid	WI-GRO	487248
310-330206-28	HA-12-3	Total/NA	Solid	WI-GRO	487248
310-330206-29	HA-13-1	Total/NA	Solid	WI-GRO	487248
310-330206-32	Trip Blank - Soil 1	Total/NA	Solid	WI-GRO	487248
MB 310-487248/1-A	Method Blank	Total/NA	Solid	WI-GRO	487248
LCS 310-487248/2-A	Lab Control Sample	Total/NA	Solid	WI-GRO	487248
LCSD 310-487248/23-A	Lab Control Sample Dup	Total/NA	Solid	WI-GRO	487248

GC Semi VOA

Prep Batch: 486746

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-19	WS-01	Total/NA	Water	3511	
MB 310-486746/1-A	Method Blank	Total/NA	Water	3511	
LCS 310-486746/9-A	Lab Control Sample	Total/NA	Water	3511	
LCSD 310-486746/10-A	Lab Control Sample Dup	Total/NA	Water	3511	

Analysis Batch: 486753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-1	HA-08-1	Total/NA	Solid	WI-DRO	486758
310-330206-2	HA-08-3	Total/NA	Solid	WI-DRO	486758
310-330206-3	HA-06-1	Total/NA	Solid	WI-DRO	486758
310-330206-4	HA-06-3	Total/NA	Solid	WI-DRO	486758
310-330206-5	HA-05-1	Total/NA	Solid	WI-DRO	486758
310-330206-6	HA-05-3	Total/NA	Solid	WI-DRO	486758
310-330206-7	HA-04-1	Total/NA	Solid	WI-DRO	486758
310-330206-8	HA-04-3	Total/NA	Solid	WI-DRO	486758
310-330206-9	HA-03-1	Total/NA	Solid	WI-DRO	486758
310-330206-10	HA-03-3	Total/NA	Solid	WI-DRO	486758
310-330206-11	HA-01-1	Total/NA	Solid	WI-DRO	486758
310-330206-12	HA-01-3	Total/NA	Solid	WI-DRO	486758
310-330206-13	HA-02-1	Total/NA	Solid	WI-DRO	486758
310-330206-14	HA-02-3	Total/NA	Solid	WI-DRO	486758
310-330206-15	HA-07-1	Total/NA	Solid	WI-DRO	486758
310-330206-16	HA-07-2.5	Total/NA	Solid	WI-DRO	486758
310-330206-17	HA-09-1	Total/NA	Solid	WI-DRO	486758
310-330206-18	HA-09-3	Total/NA	Solid	WI-DRO	486758
310-330206-20	SS-01	Silica Gel Cleanup	Solid	WI-DRO	486758
310-330206-21	SS-02	Silica Gel Cleanup	Solid	WI-DRO	486758
310-330206-22	SS-03	Silica Gel Cleanup	Solid	WI-DRO	486774
310-330206-23	HA-10-1	Total/NA	Solid	WI-DRO	486774
310-330206-24	HA-10-3	Total/NA	Solid	WI-DRO	486774
310-330206-25	HA-11-1	Total/NA	Solid	WI-DRO	486774
310-330206-26	HA-11-3	Total/NA	Solid	WI-DRO	486774
310-330206-27	HA-12-1	Total/NA	Solid	WI-DRO	486774
310-330206-28	HA-12-3	Total/NA	Solid	WI-DRO	486774
310-330206-29	HA-13-1	Total/NA	Solid	WI-DRO	486774
MB 310-486758/1-A	Method Blank	Silica Gel Cleanup	Solid	WI-DRO	486758
MB 310-486774/1-A	Method Blank	Silica Gel Cleanup	Solid	WI-DRO	486774
LCS 310-486758/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	WI-DRO	486758
LCS 310-486774/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	WI-DRO	486774

GC Semi VOA (Continued)

Analysis Batch: 486753 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 310-486758/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	WI-DRO	486758
LCSD 310-486774/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	WI-DRO	486774

Analysis Batch: 486756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-19	WS-01	Total/NA	Water	WI-DRO	486746
MB 310-486746/1-A	Method Blank	Total/NA	Water	WI-DRO	486746
LCS 310-486746/9-A	Lab Control Sample	Total/NA	Water	WI-DRO	486746
LCSD 310-486746/10-A	Lab Control Sample Dup	Total/NA	Water	WI-DRO	486746

Prep Batch: 486758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-1	HA-08-1	Total/NA	Solid	WI DRO PREP	
310-330206-2	HA-08-3	Total/NA	Solid	WI DRO PREP	
310-330206-3	HA-06-1	Total/NA	Solid	WI DRO PREP	
310-330206-4	HA-06-3	Total/NA	Solid	WI DRO PREP	
310-330206-5	HA-05-1	Total/NA	Solid	WI DRO PREP	
310-330206-6	HA-05-3	Total/NA	Solid	WI DRO PREP	
310-330206-7	HA-04-1	Total/NA	Solid	WI DRO PREP	
310-330206-8	HA-04-3	Total/NA	Solid	WI DRO PREP	
310-330206-9	HA-03-1	Total/NA	Solid	WI DRO PREP	
310-330206-10	HA-03-3	Total/NA	Solid	WI DRO PREP	
310-330206-11	HA-01-1	Total/NA	Solid	WI DRO PREP	
310-330206-12	HA-01-3	Total/NA	Solid	WI DRO PREP	
310-330206-13	HA-02-1	Total/NA	Solid	WI DRO PREP	
310-330206-14	HA-02-3	Total/NA	Solid	WI DRO PREP	
310-330206-15	HA-07-1	Total/NA	Solid	WI DRO PREP	
310-330206-16	HA-07-2.5	Total/NA	Solid	WI DRO PREP	
310-330206-17	HA-09-1	Total/NA	Solid	WI DRO PREP	
310-330206-18	HA-09-3	Total/NA	Solid	WI DRO PREP	
310-330206-20	SS-01	Silica Gel Cleanup	Solid	WI DRO PREP	
310-330206-21	SS-02	Silica Gel Cleanup	Solid	WI DRO PREP	
MB 310-486758/1-A	Method Blank	Silica Gel Cleanup	Solid	WI DRO PREP	
LCS 310-486758/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	WI DRO PREP	
LCSD 310-486758/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	WI DRO PREP	

Prep Batch: 486774

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-22	SS-03	Silica Gel Cleanup	Solid	WI DRO PREP	
310-330206-23	HA-10-1	Total/NA	Solid	WI DRO PREP	
310-330206-24	HA-10-3	Total/NA	Solid	WI DRO PREP	
310-330206-25	HA-11-1	Total/NA	Solid	WI DRO PREP	
310-330206-26	HA-11-3	Total/NA	Solid	WI DRO PREP	
310-330206-27	HA-12-1	Total/NA	Solid	WI DRO PREP	
310-330206-28	HA-12-3	Total/NA	Solid	WI DRO PREP	
310-330206-29	HA-13-1	Total/NA	Solid	WI DRO PREP	
MB 310-486774/1-A	Method Blank	Silica Gel Cleanup	Solid	WI DRO PREP	
LCS 310-486774/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	WI DRO PREP	
LCSD 310-486774/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	WI DRO PREP	

LCMS

Prep Batch: 699234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-19	WS-01	Total/NA	Water	1633	
310-330206-31	Rinsate Blank	Total/NA	Water	1633	
MB 240-699234/1-A	Method Blank	Total/NA	Water	1633	
LCS 240-699234/3-A	Lab Control Sample	Total/NA	Water	1633	
LLCS 240-699234/2-A	Lab Control Sample	Total/NA	Water	1633	

Analysis Batch: 699297

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-19	WS-01	Total/NA	Water	1633A	699234
310-330206-31	Rinsate Blank	Total/NA	Water	1633A	699234
MB 240-699234/1-A	Method Blank	Total/NA	Water	1633A	699234
LCS 240-699234/3-A	Lab Control Sample	Total/NA	Water	1633A	699234
LLCS 240-699234/2-A	Lab Control Sample	Total/NA	Water	1633A	699234

Prep Batch: 699578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-17	HA-09-1	Total/NA	Solid	1633 Shake	
310-330206-20	SS-01	Total/NA	Solid	1633 Shake	
310-330206-21	SS-02	Total/NA	Solid	1633 Shake	
310-330206-22	SS-03	Total/NA	Solid	1633 Shake	
310-330206-23	HA-10-1	Total/NA	Solid	1633 Shake	
310-330206-24	HA-10-3	Total/NA	Solid	1633 Shake	
310-330206-25	HA-11-1	Total/NA	Solid	1633 Shake	
310-330206-26	HA-11-3	Total/NA	Solid	1633 Shake	
310-330206-27	HA-12-1	Total/NA	Solid	1633 Shake	
310-330206-28	HA-12-3	Total/NA	Solid	1633 Shake	
310-330206-29	HA-13-1	Total/NA	Solid	1633 Shake	
MB 240-699578/1-A	Method Blank	Total/NA	Solid	1633 Shake	
LCS 240-699578/3-A	Lab Control Sample	Total/NA	Solid	1633 Shake	
LLCS 240-699578/2-A	Lab Control Sample	Total/NA	Solid	1633 Shake	

Analysis Batch: 699712

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-17	HA-09-1	Total/NA	Solid	1633A	699578
310-330206-20	SS-01	Total/NA	Solid	1633A	699578
310-330206-21	SS-02	Total/NA	Solid	1633A	699578
310-330206-22	SS-03	Total/NA	Solid	1633A	699578
310-330206-23	HA-10-1	Total/NA	Solid	1633A	699578
310-330206-24	HA-10-3	Total/NA	Solid	1633A	699578
310-330206-25	HA-11-1	Total/NA	Solid	1633A	699578
310-330206-26	HA-11-3	Total/NA	Solid	1633A	699578
310-330206-27	HA-12-1	Total/NA	Solid	1633A	699578
310-330206-28	HA-12-3	Total/NA	Solid	1633A	699578
310-330206-29	HA-13-1	Total/NA	Solid	1633A	699578
MB 240-699578/1-A	Method Blank	Total/NA	Solid	1633A	699578
LCS 240-699578/3-A	Lab Control Sample	Total/NA	Solid	1633A	699578
LLCS 240-699578/2-A	Lab Control Sample	Total/NA	Solid	1633A	699578

Prep Batch: 699767

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-3	HA-06-1	Total/NA	Solid	1633 Shake	

LCMS (Continued)

Prep Batch: 699767 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-9	HA-03-1	Total/NA	Solid	1633 Shake	
310-330206-11	HA-01-1	Total/NA	Solid	1633 Shake	
310-330206-11 - DL	HA-01-1	Total/NA	Solid	1633 Shake	
MB 240-699767/1-A	Method Blank	Total/NA	Solid	1633 Shake	
LCS 240-699767/3-A	Lab Control Sample	Total/NA	Solid	1633 Shake	
LLCS 240-699767/2-A	Lab Control Sample	Total/NA	Solid	1633 Shake	

Analysis Batch: 699825

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-3	HA-06-1	Total/NA	Solid	1633A	699767
310-330206-9	HA-03-1	Total/NA	Solid	1633A	699767
310-330206-11	HA-01-1	Total/NA	Solid	1633A	699767
MB 240-699767/1-A	Method Blank	Total/NA	Solid	1633A	699767
LLCS 240-699767/2-A	Lab Control Sample	Total/NA	Solid	1633A	699767

Analysis Batch: 699827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-699767/3-A	Lab Control Sample	Total/NA	Solid	1633A	699767

Analysis Batch: 700120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-11 - DL	HA-01-1	Total/NA	Solid	1633A	699767

Prep Batch: 700122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-9 - RE	HA-03-1	Total/NA	Solid	1633 Shake	
MB 240-700122/1-A	Method Blank	Total/NA	Solid	1633 Shake	
LCS 240-700122/3-A	Lab Control Sample	Total/NA	Solid	1633 Shake	
LLCS 240-700122/2-A	Lab Control Sample	Total/NA	Solid	1633 Shake	

Analysis Batch: 700142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-9 - RE	HA-03-1	Total/NA	Solid	1633A	700122
MB 240-700122/1-A	Method Blank	Total/NA	Solid	1633A	700122
LCS 240-700122/3-A	Lab Control Sample	Total/NA	Solid	1633A	700122
LLCS 240-700122/2-A	Lab Control Sample	Total/NA	Solid	1633A	700122

Metals

Prep Batch: 699168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-1	HA-08-1	Total/NA	Solid	3050B	
310-330206-2	HA-08-3	Total/NA	Solid	3050B	
310-330206-3	HA-06-1	Total/NA	Solid	3050B	
310-330206-4	HA-06-3	Total/NA	Solid	3050B	
310-330206-5	HA-05-1	Total/NA	Solid	3050B	
310-330206-6	HA-05-3	Total/NA	Solid	3050B	
310-330206-7	HA-04-1	Total/NA	Solid	3050B	
310-330206-8	HA-04-3	Total/NA	Solid	3050B	
310-330206-9	HA-03-1	Total/NA	Solid	3050B	
310-330206-10	HA-03-3	Total/NA	Solid	3050B	

Metals (Continued)

Prep Batch: 699168 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-11	HA-01-1	Total/NA	Solid	3050B	
310-330206-12	HA-01-3	Total/NA	Solid	3050B	
310-330206-13	HA-02-1	Total/NA	Solid	3050B	
310-330206-14	HA-02-3	Total/NA	Solid	3050B	
310-330206-15	HA-07-1	Total/NA	Solid	3050B	
310-330206-16	HA-07-2.5	Total/NA	Solid	3050B	
310-330206-17	HA-09-1	Total/NA	Solid	3050B	
310-330206-18	HA-09-3	Total/NA	Solid	3050B	
310-330206-20	SS-01	Total/NA	Solid	3050B	
310-330206-21	SS-02	Total/NA	Solid	3050B	
MB 240-699168/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 240-699168/2-A	Lab Control Sample	Total/NA	Solid	3050B	
310-330206-1 MS	HA-08-1	Total/NA	Solid	3050B	
310-330206-1 MSD	HA-08-1	Total/NA	Solid	3050B	

Prep Batch: 699169

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-1	HA-08-1	Total/NA	Solid	7471B	
310-330206-2	HA-08-3	Total/NA	Solid	7471B	
310-330206-3	HA-06-1	Total/NA	Solid	7471B	
310-330206-4	HA-06-3	Total/NA	Solid	7471B	
310-330206-5	HA-05-1	Total/NA	Solid	7471B	
310-330206-6	HA-05-3	Total/NA	Solid	7471B	
310-330206-7	HA-04-1	Total/NA	Solid	7471B	
310-330206-8	HA-04-3	Total/NA	Solid	7471B	
310-330206-9	HA-03-1	Total/NA	Solid	7471B	
310-330206-10	HA-03-3	Total/NA	Solid	7471B	
310-330206-11	HA-01-1	Total/NA	Solid	7471B	
310-330206-12	HA-01-3	Total/NA	Solid	7471B	
310-330206-13	HA-02-1	Total/NA	Solid	7471B	
310-330206-14	HA-02-3	Total/NA	Solid	7471B	
310-330206-15	HA-07-1	Total/NA	Solid	7471B	
310-330206-16	HA-07-2.5	Total/NA	Solid	7471B	
310-330206-17	HA-09-1	Total/NA	Solid	7471B	
310-330206-18	HA-09-3	Total/NA	Solid	7471B	
310-330206-20	SS-01	Total/NA	Solid	7471B	
310-330206-21	SS-02	Total/NA	Solid	7471B	
MB 240-699169/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 240-699169/2-A	Lab Control Sample	Total/NA	Solid	7471B	
310-330206-1 MS	HA-08-1	Total/NA	Solid	7471B	
310-330206-1 MSD	HA-08-1	Total/NA	Solid	7471B	

Prep Batch: 699253

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-19	WS-01	Total Recoverable	Water	3005A	
MB 240-699253/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-699253/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 699257

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-19	WS-01	Total/NA	Water	7470A	

Metals (Continued)

Prep Batch: 699257 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-699257/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-699257/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 699271

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-22	SS-03	Total/NA	Solid	3050B	
310-330206-23	HA-10-1	Total/NA	Solid	3050B	
310-330206-24	HA-10-3	Total/NA	Solid	3050B	
310-330206-25	HA-11-1	Total/NA	Solid	3050B	
310-330206-26	HA-11-3	Total/NA	Solid	3050B	
310-330206-27	HA-12-1	Total/NA	Solid	3050B	
310-330206-28	HA-12-3	Total/NA	Solid	3050B	
310-330206-29	HA-13-1	Total/NA	Solid	3050B	
MB 240-699271/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 240-699271/2-A	Lab Control Sample	Total/NA	Solid	3050B	
310-330206-22 MS	SS-03	Total/NA	Solid	3050B	
310-330206-22 MSD	SS-03	Total/NA	Solid	3050B	

Prep Batch: 699274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-22	SS-03	Total/NA	Solid	7471B	
310-330206-23	HA-10-1	Total/NA	Solid	7471B	
310-330206-24	HA-10-3	Total/NA	Solid	7471B	
310-330206-25	HA-11-1	Total/NA	Solid	7471B	
310-330206-26	HA-11-3	Total/NA	Solid	7471B	
310-330206-27	HA-12-1	Total/NA	Solid	7471B	
310-330206-28	HA-12-3	Total/NA	Solid	7471B	
310-330206-29	HA-13-1	Total/NA	Solid	7471B	
MB 240-699274/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 240-699274/2-A	Lab Control Sample	Total/NA	Solid	7471B	
310-330206-22 MS	SS-03	Total/NA	Solid	7471B	
310-330206-22 MSD	SS-03	Total/NA	Solid	7471B	

Analysis Batch: 699552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-1	HA-08-1	Total/NA	Solid	6020B	699168
310-330206-2	HA-08-3	Total/NA	Solid	6020B	699168
310-330206-3	HA-06-1	Total/NA	Solid	6020B	699168
310-330206-4	HA-06-3	Total/NA	Solid	6020B	699168
310-330206-5	HA-05-1	Total/NA	Solid	6020B	699168
310-330206-6	HA-05-3	Total/NA	Solid	6020B	699168
310-330206-7	HA-04-1	Total/NA	Solid	6020B	699168
310-330206-8	HA-04-3	Total/NA	Solid	6020B	699168
310-330206-9	HA-03-1	Total/NA	Solid	6020B	699168
310-330206-10	HA-03-3	Total/NA	Solid	6020B	699168
310-330206-11	HA-01-1	Total/NA	Solid	6020B	699168
310-330206-12	HA-01-3	Total/NA	Solid	6020B	699168
310-330206-13	HA-02-1	Total/NA	Solid	6020B	699168
310-330206-14	HA-02-3	Total/NA	Solid	6020B	699168
310-330206-15	HA-07-1	Total/NA	Solid	6020B	699168
310-330206-16	HA-07-2.5	Total/NA	Solid	6020B	699168

Metals (Continued)

Analysis Batch: 699552 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-17	HA-09-1	Total/NA	Solid	6020B	699168
310-330206-18	HA-09-3	Total/NA	Solid	6020B	699168
310-330206-20	SS-01	Total/NA	Solid	6020B	699168
310-330206-21	SS-02	Total/NA	Solid	6020B	699168
MB 240-699168/1-A	Method Blank	Total/NA	Solid	6020B	699168
LCS 240-699168/2-A	Lab Control Sample	Total/NA	Solid	6020B	699168
310-330206-1 MS	HA-08-1	Total/NA	Solid	6020B	699168
310-330206-1 MSD	HA-08-1	Total/NA	Solid	6020B	699168

Analysis Batch: 699560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-19	WS-01	Total Recoverable	Water	6020B	699253
MB 240-699253/1-A	Method Blank	Total Recoverable	Water	6020B	699253
MB 240-699271/1-A	Method Blank	Total/NA	Solid	6020B	699271
LCS 240-699253/2-A	Lab Control Sample	Total Recoverable	Water	6020B	699253
LCS 240-699271/2-A	Lab Control Sample	Total/NA	Solid	6020B	699271

Analysis Batch: 699608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-19	WS-01	Total/NA	Water	7470A	699257
MB 240-699257/1-A	Method Blank	Total/NA	Water	7470A	699257
LCS 240-699257/2-A	Lab Control Sample	Total/NA	Water	7470A	699257

Analysis Batch: 699620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-1	HA-08-1	Total/NA	Solid	7471B	699169
310-330206-2	HA-08-3	Total/NA	Solid	7471B	699169
310-330206-3	HA-06-1	Total/NA	Solid	7471B	699169
310-330206-4	HA-06-3	Total/NA	Solid	7471B	699169
310-330206-5	HA-05-1	Total/NA	Solid	7471B	699169
310-330206-6	HA-05-3	Total/NA	Solid	7471B	699169
310-330206-7	HA-04-1	Total/NA	Solid	7471B	699169
310-330206-8	HA-04-3	Total/NA	Solid	7471B	699169
310-330206-9	HA-03-1	Total/NA	Solid	7471B	699169
310-330206-10	HA-03-3	Total/NA	Solid	7471B	699169
310-330206-11	HA-01-1	Total/NA	Solid	7471B	699169
310-330206-12	HA-01-3	Total/NA	Solid	7471B	699169
310-330206-13	HA-02-1	Total/NA	Solid	7471B	699169
310-330206-14	HA-02-3	Total/NA	Solid	7471B	699169
310-330206-15	HA-07-1	Total/NA	Solid	7471B	699169
310-330206-16	HA-07-2.5	Total/NA	Solid	7471B	699169
310-330206-17	HA-09-1	Total/NA	Solid	7471B	699169
310-330206-18	HA-09-3	Total/NA	Solid	7471B	699169
310-330206-20	SS-01	Total/NA	Solid	7471B	699169
310-330206-21	SS-02	Total/NA	Solid	7471B	699169
310-330206-22	SS-03	Total/NA	Solid	7471B	699274
310-330206-23	HA-10-1	Total/NA	Solid	7471B	699274
310-330206-24	HA-10-3	Total/NA	Solid	7471B	699274
310-330206-25	HA-11-1	Total/NA	Solid	7471B	699274
310-330206-26	HA-11-3	Total/NA	Solid	7471B	699274
310-330206-27	HA-12-1	Total/NA	Solid	7471B	699274

Metals (Continued)

Analysis Batch: 699620 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-28	HA-12-3	Total/NA	Solid	7471B	699274
310-330206-29	HA-13-1	Total/NA	Solid	7471B	699274
MB 240-699169/1-A	Method Blank	Total/NA	Solid	7471B	699169
MB 240-699274/1-A	Method Blank	Total/NA	Solid	7471B	699274
LCS 240-699169/2-A	Lab Control Sample	Total/NA	Solid	7471B	699169
LCS 240-699274/2-A	Lab Control Sample	Total/NA	Solid	7471B	699274
310-330206-1 MS	HA-08-1	Total/NA	Solid	7471B	699169
310-330206-1 MSD	HA-08-1	Total/NA	Solid	7471B	699169
310-330206-22 MS	SS-03	Total/NA	Solid	7471B	699274
310-330206-22 MSD	SS-03	Total/NA	Solid	7471B	699274

Analysis Batch: 699658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-22	SS-03	Total/NA	Solid	6020B	699271
310-330206-23	HA-10-1	Total/NA	Solid	6020B	699271
310-330206-24	HA-10-3	Total/NA	Solid	6020B	699271
310-330206-25	HA-11-1	Total/NA	Solid	6020B	699271
310-330206-26	HA-11-3	Total/NA	Solid	6020B	699271
310-330206-27	HA-12-1	Total/NA	Solid	6020B	699271
310-330206-28	HA-12-3	Total/NA	Solid	6020B	699271
310-330206-29	HA-13-1	Total/NA	Solid	6020B	699271
310-330206-22 MS	SS-03	Total/NA	Solid	6020B	699271
310-330206-22 MSD	SS-03	Total/NA	Solid	6020B	699271

General Chemistry

Analysis Batch: 486736

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-1	HA-08-1	Total/NA	Solid	Moisture	
310-330206-2	HA-08-3	Total/NA	Solid	Moisture	
310-330206-3	HA-06-1	Total/NA	Solid	Moisture	
310-330206-4	HA-06-3	Total/NA	Solid	Moisture	
310-330206-5	HA-05-1	Total/NA	Solid	Moisture	
310-330206-6	HA-05-3	Total/NA	Solid	Moisture	
310-330206-7	HA-04-1	Total/NA	Solid	Moisture	
310-330206-8	HA-04-3	Total/NA	Solid	Moisture	
310-330206-9	HA-03-1	Total/NA	Solid	Moisture	
310-330206-10	HA-03-3	Total/NA	Solid	Moisture	
310-330206-11	HA-01-1	Total/NA	Solid	Moisture	
310-330206-12	HA-01-3	Total/NA	Solid	Moisture	
310-330206-13	HA-02-1	Total/NA	Solid	Moisture	
310-330206-14	HA-02-3	Total/NA	Solid	Moisture	
310-330206-15	HA-07-1	Total/NA	Solid	Moisture	
310-330206-16	HA-07-2.5	Total/NA	Solid	Moisture	
310-330206-17	HA-09-1	Total/NA	Solid	Moisture	
310-330206-18	HA-09-3	Total/NA	Solid	Moisture	
310-330206-20	SS-01	Total/NA	Solid	Moisture	
310-330206-21	SS-02	Total/NA	Solid	Moisture	
310-330206-22	SS-03	Total/NA	Solid	Moisture	
310-330206-23	HA-10-1	Total/NA	Solid	Moisture	
310-330206-24	HA-10-3	Total/NA	Solid	Moisture	

General Chemistry (Continued)

Analysis Batch: 486736 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-25	HA-11-1	Total/NA	Solid	Moisture	
310-330206-26	HA-11-3	Total/NA	Solid	Moisture	
310-330206-27	HA-12-1	Total/NA	Solid	Moisture	
310-330206-28	HA-12-3	Total/NA	Solid	Moisture	
310-330206-29	HA-13-1	Total/NA	Solid	Moisture	
310-330206-8 DU	HA-04-3	Total/NA	Solid	Moisture	
310-330206-18 DU	HA-09-3	Total/NA	Solid	Moisture	
310-330206-29 DU	HA-13-1	Total/NA	Solid	Moisture	

Client Sample ID: HA-08-1

Lab Sample ID: 310-330206-1

Date Collected: 04/20/26 10:20

Matrix: Solid

Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-08-1

Lab Sample ID: 310-330206-1

Date Collected: 04/20/26 10:20

Matrix: Solid

Date Received: 04/22/26 13:20

Percent Solids: 75.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487058	MZR8	EET CF	04/27/26 08:51
Total/NA	Analysis	8260D		1	487059	MZR8	EET CF	04/27/26 16:09
Total/NA	Prep	3546			487020	RHL8	EET CF	04/24/26 16:44
Total/NA	Analysis	8270E		1	487054	P5ZC	EET CF	04/27/26 20:25
Total/NA	Prep	WI GRO			486957	GP2V	EET CF	04/24/26 11:30
Total/NA	Analysis	WI-GRO		1	486962	GP2V	EET CF	04/25/26 13:16
Total/NA	Prep	WI DRO PREP			486758	J7XK	EET CF	04/23/26 07:56
Total/NA	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 16:27
Total/NA	Prep	3050B			699168	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 18:55
Total/NA	Prep	7471B			699169	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 12:46

Client Sample ID: HA-08-3

Lab Sample ID: 310-330206-2

Date Collected: 04/20/26 10:25

Matrix: Solid

Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-08-3

Lab Sample ID: 310-330206-2

Date Collected: 04/20/26 10:25

Matrix: Solid

Date Received: 04/22/26 13:20

Percent Solids: 85.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487058	MZR8	EET CF	04/27/26 08:51
Total/NA	Analysis	8260D		1	487059	MZR8	EET CF	04/27/26 16:32
Total/NA	Prep	3546			487020	RHL8	EET CF	04/24/26 16:44
Total/NA	Analysis	8270E		1	487054	P5ZC	EET CF	04/27/26 12:39
Total/NA	Prep	WI GRO			486957	GP2V	EET CF	04/24/26 11:30
Total/NA	Analysis	WI-GRO		1	486962	GP2V	EET CF	04/25/26 13:42
Total/NA	Prep	WI DRO PREP			486758	J7XK	EET CF	04/23/26 07:56
Total/NA	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 12:29
Total/NA	Prep	3050B			699168	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 19:09
Total/NA	Prep	7471B			699169	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 12:54

Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-06-1

Date Collected: 04/20/26 10:56
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-06-1

Date Collected: 04/20/26 10:56
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-3

Matrix: Solid
Percent Solids: 82.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487058	MZR8	EET CF	04/27/26 08:51
Total/NA	Analysis	8260D		1	487059	MZR8	EET CF	04/27/26 16:55
Total/NA	Prep	3546			487020	RHL8	EET CF	04/24/26 16:44
Total/NA	Analysis	8270E		1	487054	P5ZC	EET CF	04/27/26 13:03
Total/NA	Prep	WI GRO			486957	GP2V	EET CF	04/24/26 11:30
Total/NA	Analysis	WI-GRO		1	486962	GP2V	EET CF	04/25/26 14:08
Total/NA	Prep	WI DRO PREP			486758	J7XK	EET CF	04/23/26 07:56
Total/NA	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 16:14
Total/NA	Prep	1633 Shake			699767	DW4U	EET CLE	04/29/26 08:25
Total/NA	Analysis	1633A		1	699825	DSH	EET CLE	04/29/26 18:35
Total/NA	Prep	3050B			699168	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 19:11
Total/NA	Prep	7471B			699169	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 12:56

Client Sample ID: HA-06-3

Date Collected: 04/20/26 10:55
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-06-3

Date Collected: 04/20/26 10:55
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-4

Matrix: Solid
Percent Solids: 87.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487058	MZR8	EET CF	04/27/26 08:51
Total/NA	Analysis	8260D		1	487059	MZR8	EET CF	04/27/26 17:17
Total/NA	Prep	3546			487020	RHL8	EET CF	04/24/26 16:44
Total/NA	Analysis	8270E		1	487054	P5ZC	EET CF	04/27/26 13:28
Total/NA	Prep	WI GRO			486957	GP2V	EET CF	04/24/26 11:30
Total/NA	Analysis	WI-GRO		1	486962	GP2V	EET CF	04/25/26 14:34
Total/NA	Prep	WI DRO PREP			486758	J7XK	EET CF	04/23/26 07:56
Total/NA	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 12:41
Total/NA	Prep	3050B			699168	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 19:14

Client Sample ID: HA-06-3
Lab Sample ID: 310-330206-4
Date Collected: 04/20/26 10:55
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 87.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	7471B			699169	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 12:58

Client Sample ID: HA-05-1
Lab Sample ID: 310-330206-5
Date Collected: 04/20/26 11:15
Matrix: Solid
Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-05-1
Lab Sample ID: 310-330206-5
Date Collected: 04/20/26 11:15
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 76.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487058	MZR8	EET CF	04/27/26 08:51
Total/NA	Analysis	8260D		1	487059	MZR8	EET CF	04/27/26 17:40
Total/NA	Prep	3546			487020	RHL8	EET CF	04/24/26 16:44
Total/NA	Analysis	8270E		1	487054	P5ZC	EET CF	04/27/26 13:53
Total/NA	Prep	WI GRO			486957	GP2V	EET CF	04/24/26 11:30
Total/NA	Analysis	WI-GRO		1	486962	GP2V	EET CF	04/25/26 15:00
Total/NA	Prep	WI DRO PREP			486758	J7XK	EET CF	04/23/26 07:56
Total/NA	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 16:02
Total/NA	Prep	3050B			699168	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 19:22
Total/NA	Prep	7471B			699169	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 12:59

Client Sample ID: HA-05-3
Lab Sample ID: 310-330206-6
Date Collected: 04/20/26 11:20
Matrix: Solid
Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-05-3
Lab Sample ID: 310-330206-6
Date Collected: 04/20/26 11:20
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 88.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487058	MZR8	EET CF	04/27/26 08:51
Total/NA	Analysis	8260D		1	487059	MZR8	EET CF	04/27/26 18:02
Total/NA	Prep	3546			487020	RHL8	EET CF	04/24/26 16:44
Total/NA	Analysis	8270E		1	487054	P5ZC	EET CF	04/27/26 14:17
Total/NA	Prep	WI GRO			486957	GP2V	EET CF	04/24/26 11:30
Total/NA	Analysis	WI-GRO		1	486962	GP2V	EET CF	04/25/26 15:26

Client Sample ID: HA-05-3

Lab Sample ID: 310-330206-6

Date Collected: 04/20/26 11:20

Matrix: Solid

Date Received: 04/22/26 13:20

Percent Solids: 88.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	WI DRO PREP			486758	J7XK	EET CF	04/23/26 07:56
Total/NA	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 12:54
Total/NA	Prep	3050B			699168	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 19:25
Total/NA	Prep	7471B			699169	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 13:01

Client Sample ID: HA-04-1

Lab Sample ID: 310-330206-7

Date Collected: 04/20/26 11:35

Matrix: Solid

Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-04-1

Lab Sample ID: 310-330206-7

Date Collected: 04/20/26 11:35

Matrix: Solid

Date Received: 04/22/26 13:20

Percent Solids: 82.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487058	MZR8	EET CF	04/27/26 08:51
Total/NA	Analysis	8260D		1	487059	MZR8	EET CF	04/27/26 18:25
Total/NA	Prep	3546			487020	RHL8	EET CF	04/24/26 16:44
Total/NA	Analysis	8270E		1	487054	P5ZC	EET CF	04/27/26 14:42
Total/NA	Prep	WI GRO			487246	GP2V	EET CF	04/28/26 11:40
Total/NA	Analysis	WI-GRO		1	487249	GP2V	EET CF	04/28/26 21:42
Total/NA	Prep	WI DRO PREP			486758	J7XK	EET CF	04/23/26 07:56
Total/NA	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 14:34
Total/NA	Prep	3050B			699168	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 19:28
Total/NA	Prep	7471B			699169	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 13:03

Client Sample ID: HA-04-3

Lab Sample ID: 310-330206-8

Date Collected: 04/20/26 11:40

Matrix: Solid

Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-04-3

Lab Sample ID: 310-330206-8

Date Collected: 04/20/26 11:40

Matrix: Solid

Date Received: 04/22/26 13:20

Percent Solids: 92.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487058	MZR8	EET CF	04/27/26 08:51
Total/NA	Analysis	8260D		1	487059	MZR8	EET CF	04/27/26 18:48

Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-1
Project/Site: Duluth Airport Taxiway A

Client Sample ID: HA-04-3
Lab Sample ID: 310-330206-8
Date Collected: 04/20/26 11:40
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 92.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3546			487056	BDJ4	EET CF	04/27/26 08:10
Total/NA	Analysis	8270E		1	487149	P5ZC	EET CF	04/28/26 00:56
Total/NA	Prep	WI GRO			487246	GP2V	EET CF	04/28/26 11:40
Total/NA	Analysis	WI-GRO		1	487249	GP2V	EET CF	04/28/26 22:08
Total/NA	Prep	WI DRO PREP			486758	J7XK	EET CF	04/23/26 07:56
Total/NA	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 13:06
Total/NA	Prep	3050B			699168	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 19:31
Total/NA	Prep	7471B			699169	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 13:04

Client Sample ID: HA-03-1
Lab Sample ID: 310-330206-9
Date Collected: 04/20/26 11:55
Matrix: Solid
Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-03-1
Lab Sample ID: 310-330206-9
Date Collected: 04/20/26 11:55
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 71.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487058	MZR8	EET CF	04/27/26 08:51
Total/NA	Analysis	8260D		1	487059	MZR8	EET CF	04/27/26 19:10
Total/NA	Prep	3546			487056	BDJ4	EET CF	04/27/26 08:10
Total/NA	Analysis	8270E		1	487149	P5ZC	EET CF	04/28/26 01:21
Total/NA	Prep	WI GRO			487246	GP2V	EET CF	04/28/26 11:40
Total/NA	Analysis	WI-GRO		1	487249	GP2V	EET CF	04/28/26 22:35
Total/NA	Prep	WI DRO PREP			486758	J7XK	EET CF	04/23/26 07:56
Total/NA	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 13:19
Total/NA	Prep	1633 Shake	RE		700122	JVB4	EET CLE	05/01/26 08:54
Total/NA	Analysis	1633A	RE	1	700142	MRL	EET CLE	05/01/26 18:35
Total/NA	Prep	1633 Shake			699767	DW4U	EET CLE	04/29/26 08:25
Total/NA	Analysis	1633A		1	699825	DSH	EET CLE	04/29/26 20:48
Total/NA	Prep	3050B			699168	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 19:33
Total/NA	Prep	7471B			699169	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 13:06

Client Sample ID: HA-03-3

Lab Sample ID: 310-330206-10

Date Collected: 04/20/26 12:00

Matrix: Solid

Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-03-3

Lab Sample ID: 310-330206-10

Date Collected: 04/20/26 12:00

Matrix: Solid

Date Received: 04/22/26 13:20

Percent Solids: 79.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487058	MZR8	EET CF	04/27/26 08:51
Total/NA	Analysis	8260D		1	487059	MZR8	EET CF	04/27/26 19:33
Total/NA	Prep	3546			487056	BDJ4	EET CF	04/27/26 08:10
Total/NA	Analysis	8270E		1	487149	P5ZC	EET CF	04/28/26 01:45
Total/NA	Prep	WI GRO			487246	GP2V	EET CF	04/28/26 11:40
Total/NA	Analysis	WI-GRO		1	487249	GP2V	EET CF	04/28/26 23:01
Total/NA	Prep	WI DRO PREP			486758	J7XK	EET CF	04/23/26 07:56
Total/NA	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 13:31
Total/NA	Prep	3050B			699168	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 19:36
Total/NA	Prep	7471B			699169	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 13:08

Client Sample ID: HA-01-1

Lab Sample ID: 310-330206-11

Date Collected: 04/20/26 12:15

Matrix: Solid

Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-01-1

Lab Sample ID: 310-330206-11

Date Collected: 04/20/26 12:15

Matrix: Solid

Date Received: 04/22/26 13:20

Percent Solids: 92.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487058	MZR8	EET CF	04/27/26 08:51
Total/NA	Analysis	8260D		1	487059	MZR8	EET CF	04/27/26 19:56
Total/NA	Prep	3546			487056	BDJ4	EET CF	04/27/26 08:10
Total/NA	Analysis	8270E		1	487149	P5ZC	EET CF	04/28/26 02:10
Total/NA	Prep	WI GRO			487246	GP2V	EET CF	04/28/26 11:40
Total/NA	Analysis	WI-GRO		1	487249	GP2V	EET CF	04/28/26 23:27
Total/NA	Prep	WI DRO PREP			486758	J7XK	EET CF	04/23/26 07:56
Total/NA	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 13:44
Total/NA	Prep	1633 Shake			699767	DW4U	EET CLE	04/29/26 08:25
Total/NA	Analysis	1633A		1	699825	DSH	EET CLE	04/29/26 21:21
Total/NA	Prep	1633 Shake	DL		699767	DW4U	EET CLE	04/29/26 08:25
Total/NA	Analysis	1633A	DL	5	700120	LD	EET CLE	05/01/26 21:16

Client Sample ID: HA-01-1

Lab Sample ID: 310-330206-11

Date Collected: 04/20/26 12:15

Matrix: Solid

Date Received: 04/22/26 13:20

Percent Solids: 92.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			699168	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 19:39
Total/NA	Prep	7471B			699169	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 13:10

Client Sample ID: HA-01-3

Lab Sample ID: 310-330206-12

Date Collected: 04/20/26 12:20

Matrix: Solid

Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-01-3

Lab Sample ID: 310-330206-12

Date Collected: 04/20/26 12:20

Matrix: Solid

Date Received: 04/22/26 13:20

Percent Solids: 83.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487060	MZR8	EET CF	04/27/26 09:01
Total/NA	Analysis	8260D		1	487062	MZR8	EET CF	04/28/26 00:28
Total/NA	Prep	3546			487056	BDJ4	EET CF	04/27/26 08:10
Total/NA	Analysis	8270E		1	487149	P5ZC	EET CF	04/28/26 02:35
Total/NA	Prep	WI GRO			487246	GP2V	EET CF	04/28/26 11:40
Total/NA	Analysis	WI-GRO		1	487249	GP2V	EET CF	04/28/26 23:53
Total/NA	Prep	WI DRO PREP			486758	J7XK	EET CF	04/23/26 07:56
Total/NA	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 13:56
Total/NA	Prep	3050B			699168	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 19:42
Total/NA	Prep	7471B			699169	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 13:15

Client Sample ID: HA-02-1

Lab Sample ID: 310-330206-13

Date Collected: 04/20/26 12:35

Matrix: Solid

Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-02-1

Lab Sample ID: 310-330206-13

Date Collected: 04/20/26 12:35

Matrix: Solid

Date Received: 04/22/26 13:20

Percent Solids: 86.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487060	MZR8	EET CF	04/27/26 09:01
Total/NA	Analysis	8260D		1	487062	MZR8	EET CF	04/28/26 00:51
Total/NA	Prep	3546			487056	BDJ4	EET CF	04/27/26 08:10
Total/NA	Analysis	8270E		1	487149	P5ZC	EET CF	04/28/26 02:59

Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-02-1

Lab Sample ID: 310-330206-13

Date Collected: 04/20/26 12:35
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 86.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	WI GRO			487246	GP2V	EET CF	04/28/26 11:40
Total/NA	Analysis	WI-GRO		1	487249	GP2V	EET CF	04/29/26 00:19
Total/NA	Prep	WI DRO PREP			486758	J7XK	EET CF	04/23/26 07:56
Total/NA	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 15:49
Total/NA	Prep	3050B			699168	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 19:44
Total/NA	Prep	7471B			699169	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 13:16

Client Sample ID: HA-02-3

Lab Sample ID: 310-330206-14

Date Collected: 04/20/26 12:40
Matrix: Solid
Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-02-3

Lab Sample ID: 310-330206-14

Date Collected: 04/20/26 12:40
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 87.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487060	MZR8	EET CF	04/27/26 09:01
Total/NA	Analysis	8260D		1	487062	MZR8	EET CF	04/28/26 01:13
Total/NA	Prep	3546			487056	BDJ4	EET CF	04/27/26 08:10
Total/NA	Analysis	8270E		1	487149	P5ZC	EET CF	04/28/26 03:24
Total/NA	Prep	WI GRO			487246	GP2V	EET CF	04/28/26 11:40
Total/NA	Analysis	WI-GRO		1	487249	GP2V	EET CF	04/29/26 00:45
Total/NA	Prep	WI DRO PREP			486758	J7XK	EET CF	04/23/26 07:56
Total/NA	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 15:37
Total/NA	Prep	3050B			699168	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 19:47
Total/NA	Prep	7471B			699169	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 13:18

Client Sample ID: HA-07-1

Lab Sample ID: 310-330206-15

Date Collected: 04/20/26 12:55
Matrix: Solid
Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-07-1

Lab Sample ID: 310-330206-15

Date Collected: 04/20/26 12:55
Date Received: 04/22/26 13:20

Matrix: Solid
Percent Solids: 90.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487060	MZR8	EET CF	04/27/26 09:01
Total/NA	Analysis	8260D		1	487062	MZR8	EET CF	04/28/26 01:36
Total/NA	Prep	3546			487056	BDJ4	EET CF	04/27/26 08:10
Total/NA	Analysis	8270E		5	487149	P5ZC	EET CF	04/28/26 03:48
Total/NA	Prep	3546			487056	BDJ4	EET CF	04/27/26 08:10
Total/NA	Analysis	8270E		5	487217	P5ZC	EET CF	04/28/26 12:22
Total/NA	Prep	WI GRO			487246	GP2V	EET CF	04/28/26 11:40
Total/NA	Analysis	WI-GRO		1	487249	GP2V	EET CF	04/29/26 01:11
Total/NA	Prep	WI DRO PREP			486758	J7XK	EET CF	04/23/26 07:56
Total/NA	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 15:24
Total/NA	Prep	3050B			699168	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 19:55
Total/NA	Prep	7471B			699169	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 13:20

Client Sample ID: HA-07-2.5

Lab Sample ID: 310-330206-16

Date Collected: 04/20/26 13:00
Date Received: 04/22/26 13:20

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-07-2.5

Lab Sample ID: 310-330206-16

Date Collected: 04/20/26 13:00
Date Received: 04/22/26 13:20

Matrix: Solid
Percent Solids: 89.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487060	MZR8	EET CF	04/27/26 09:01
Total/NA	Analysis	8260D		1	487062	MZR8	EET CF	04/28/26 01:59
Total/NA	Prep	3546			487056	BDJ4	EET CF	04/27/26 08:10
Total/NA	Analysis	8270E		1	487149	P5ZC	EET CF	04/28/26 04:13
Total/NA	Prep	WI GRO			487246	GP2V	EET CF	04/28/26 11:40
Total/NA	Analysis	WI-GRO		1	487249	GP2V	EET CF	04/29/26 01:37
Total/NA	Prep	WI DRO PREP			486758	J7XK	EET CF	04/23/26 07:56
Total/NA	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 15:12
Total/NA	Prep	3050B			699168	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 19:58
Total/NA	Prep	7471B			699169	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 13:21

Client Sample ID: HA-09-1

Lab Sample ID: 310-330206-17

Date Collected: 04/20/26 13:15

Matrix: Solid

Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-09-1

Lab Sample ID: 310-330206-17

Date Collected: 04/20/26 13:15

Matrix: Solid

Date Received: 04/22/26 13:20

Percent Solids: 79.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487060	MZR8	EET CF	04/27/26 09:01
Total/NA	Analysis	8260D		1	487062	MZR8	EET CF	04/28/26 02:22
Total/NA	Prep	3546			487056	BDJ4	EET CF	04/27/26 08:10
Total/NA	Analysis	8270E		1	487149	P5ZC	EET CF	04/28/26 04:38
Total/NA	Prep	3546			487056	BDJ4	EET CF	04/27/26 08:10
Total/NA	Analysis	8270E		1	487217	P5ZC	EET CF	04/28/26 12:47
Total/NA	Prep	WI GRO			487246	GP2V	EET CF	04/28/26 11:40
Total/NA	Analysis	WI-GRO		1	487249	GP2V	EET CF	04/29/26 02:03
Total/NA	Prep	WI DRO PREP			486758	J7XK	EET CF	04/23/26 07:56
Total/NA	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 14:59
Total/NA	Prep	1633 Shake			699578	JVB4	EET CLE	04/28/26 08:24
Total/NA	Analysis	1633A		1	699712	DSH	EET CLE	04/29/26 03:07
Total/NA	Prep	3050B			699168	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 20:01
Total/NA	Prep	7471B			699169	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 13:32

Client Sample ID: HA-09-3

Lab Sample ID: 310-330206-18

Date Collected: 04/20/26 13:20

Matrix: Solid

Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-09-3

Lab Sample ID: 310-330206-18

Date Collected: 04/20/26 13:20

Matrix: Solid

Date Received: 04/22/26 13:20

Percent Solids: 82.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487060	MZR8	EET CF	04/27/26 09:01
Total/NA	Analysis	8260D		1	487062	MZR8	EET CF	04/28/26 02:44
Total/NA	Prep	3546			487056	BDJ4	EET CF	04/27/26 08:10
Total/NA	Analysis	8270E		1	487149	P5ZC	EET CF	04/28/26 05:02
Total/NA	Prep	WI GRO			487246	GP2V	EET CF	04/28/26 11:40
Total/NA	Analysis	WI-GRO		1	487249	GP2V	EET CF	04/29/26 02:29
Total/NA	Prep	WI DRO PREP			486758	J7XK	EET CF	04/23/26 07:56
Total/NA	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 14:47

Client Sample ID: HA-09-3

Lab Sample ID: 310-330206-18

Date Collected: 04/20/26 13:20
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 82.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			699168	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 20:04
Total/NA	Prep	7471B			699169	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 13:34

Client Sample ID: WS-01

Lab Sample ID: 310-330206-19

Date Collected: 04/21/26 09:00
Matrix: Water
Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	487263	MZR8	EET CF	04/29/26 01:33
Total/NA	Prep	3511			487132	P5ZC	EET CF	04/27/26 13:27
Total/NA	Analysis	8270E		1	487299	P5ZC	EET CF	04/29/26 22:09
Total/NA	Analysis	WI-GRO		1	487223	GP2V	EET CF	04/29/26 00:37
Total/NA	Prep	3511			486746	J5BR	EET CF	04/23/26 07:27
Total/NA	Analysis	WI-DRO		1	486756	C3AA	EET CF	04/23/26 13:03
Total/NA	Prep	1633			699234	DW4U	EET CLE	04/24/26 10:05
Total/NA	Analysis	1633A		1	699297	DSH	EET CLE	04/25/26 07:59
Total Recoverable	Prep	3005A			699253	F3PF	EET CLE	04/24/26 14:00
Total Recoverable	Analysis	6020B		1	699560	S4FJ	EET CLE	04/27/26 14:22
Total/NA	Prep	7470A			699257	F3PF	EET CLE	04/24/26 14:00
Total/NA	Analysis	7470A		1	699608	TQ6W	EET CLE	04/27/26 12:56

Client Sample ID: SS-01

Lab Sample ID: 310-330206-20

Date Collected: 04/21/26 10:00
Matrix: Solid
Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: SS-01

Lab Sample ID: 310-330206-20

Date Collected: 04/21/26 10:00
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 81.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487060	MZR8	EET CF	04/27/26 09:01
Total/NA	Analysis	8260D		1	487062	MZR8	EET CF	04/28/26 03:07
Total/NA	Prep	3546			487056	BDJ4	EET CF	04/27/26 08:10
Total/NA	Analysis	8270E		1	487149	P5ZC	EET CF	04/28/26 05:27
Total/NA	Prep	WI GRO			487246	GP2V	EET CF	04/28/26 11:40
Total/NA	Analysis	WI-GRO		1	487249	GP2V	EET CF	04/29/26 02:55
Silica Gel Cleanup	Prep	WI DRO PREP			486758	J7XK	EET CF	04/23/26 07:56
Silica Gel Cleanup	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 14:09
Total/NA	Prep	1633 Shake			699578	JVB4	EET CLE	04/28/26 08:24
Total/NA	Analysis	1633A		1	699712	DSH	EET CLE	04/29/26 03:24

Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: SS-01

Lab Sample ID: 310-330206-20

Date Collected: 04/21/26 10:00
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 81.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			699168	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 20:06
Total/NA	Prep	7471B			699169	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 13:35

Client Sample ID: SS-02

Lab Sample ID: 310-330206-21

Date Collected: 04/21/26 10:10
Matrix: Solid
Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: SS-02

Lab Sample ID: 310-330206-21

Date Collected: 04/21/26 10:10
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 72.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487060	MZR8	EET CF	04/27/26 09:01
Total/NA	Analysis	8260D		1	487062	MZR8	EET CF	04/28/26 03:30
Total/NA	Prep	3546			487056	BDJ4	EET CF	04/27/26 08:10
Total/NA	Analysis	8270E		1	487149	P5ZC	EET CF	04/28/26 05:52
Total/NA	Prep	3546			487056	BDJ4	EET CF	04/27/26 08:10
Total/NA	Analysis	8270E		1	487217	P5ZC	EET CF	04/28/26 13:12
Total/NA	Prep	WI GRO			487246	GP2V	EET CF	04/28/26 11:40
Total/NA	Analysis	WI-GRO		1	487249	GP2V	EET CF	04/29/26 03:21
Silica Gel Cleanup	Prep	WI DRO PREP			486758	J7XK	EET CF	04/23/26 07:56
Silica Gel Cleanup	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 14:21
Total/NA	Prep	1633 Shake			699578	JVB4	EET CLE	04/28/26 08:24
Total/NA	Analysis	1633A		1	699712	DSH	EET CLE	04/29/26 03:41
Total/NA	Prep	3050B			699168	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 20:09
Total/NA	Prep	7471B			699169	MN7X	EET CLE	04/24/26 10:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 13:37

Client Sample ID: SS-03

Lab Sample ID: 310-330206-22

Date Collected: 04/21/26 10:20
Matrix: Solid
Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: SS-03

Lab Sample ID: 310-330206-22

Date Collected: 04/21/26 10:20
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 75.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487060	MZR8	EET CF	04/27/26 09:01
Total/NA	Analysis	8260D		1	487062	MZR8	EET CF	04/28/26 03:53
Total/NA	Prep	3546			487056	BDJ4	EET CF	04/27/26 08:10
Total/NA	Analysis	8270E		1	487149	P5ZC	EET CF	04/28/26 06:16
Total/NA	Prep	WI GRO			487246	GP2V	EET CF	04/28/26 11:40
Total/NA	Analysis	WI-GRO		1	487249	GP2V	EET CF	04/29/26 03:47
Silica Gel Cleanup	Prep	WI DRO PREP			486774	KG6X	EET CF	04/23/26 08:54
Silica Gel Cleanup	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 17:17
Total/NA	Prep	1633 Shake			699578	JVB4	EET CLE	04/28/26 08:24
Total/NA	Analysis	1633A		1	699712	DSH	EET CLE	04/29/26 03:57
Total/NA	Prep	3050B			699271	DEE	EET CLE	04/24/26 14:00
Total/NA	Analysis	6020B		2	699658	S4FJ	EET CLE	04/28/26 16:02
Total/NA	Prep	7471B			699274	DEE	EET CLE	04/24/26 13:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 14:34

Client Sample ID: HA-10-1

Lab Sample ID: 310-330206-23

Date Collected: 04/21/26 11:25
Matrix: Solid
Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-10-1

Lab Sample ID: 310-330206-23

Date Collected: 04/21/26 11:25
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 72.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487060	MZR8	EET CF	04/27/26 09:01
Total/NA	Analysis	8260D		1	487062	MZR8	EET CF	04/28/26 04:15
Total/NA	Prep	3546			487182	BDJ4	EET CF	04/28/26 08:08
Total/NA	Analysis	8270E		1	487291	P5ZC	EET CF	04/29/26 05:27
Total/NA	Prep	WI GRO			487246	GP2V	EET CF	04/28/26 11:40
Total/NA	Analysis	WI-GRO		1	487249	GP2V	EET CF	04/29/26 04:14
Total/NA	Prep	WI DRO PREP			486774	KG6X	EET CF	04/23/26 08:54
Total/NA	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 17:29
Total/NA	Prep	1633 Shake			699578	JVB4	EET CLE	04/28/26 08:24
Total/NA	Analysis	1633A		1	699712	DSH	EET CLE	04/29/26 04:14
Total/NA	Prep	3050B			699271	DEE	EET CLE	04/24/26 14:00
Total/NA	Analysis	6020B		2	699658	S4FJ	EET CLE	04/28/26 16:22
Total/NA	Prep	7471B			699274	DEE	EET CLE	04/24/26 13:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 14:39

Client Sample ID: HA-10-3

Lab Sample ID: 310-330206-24

Date Collected: 04/21/26 11:30

Matrix: Solid

Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-10-3

Lab Sample ID: 310-330206-24

Date Collected: 04/21/26 11:30

Matrix: Solid

Date Received: 04/22/26 13:20

Percent Solids: 81.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487184	MZR8	EET CF	04/28/26 08:11
Total/NA	Analysis	8260D		1	487186	MZR8	EET CF	04/29/26 15:10
Total/NA	Prep	3546			487182	BDJ4	EET CF	04/28/26 08:08
Total/NA	Analysis	8270E		1	487291	P5ZC	EET CF	04/29/26 05:52
Total/NA	Prep	WI GRO			487246	GP2V	EET CF	04/28/26 11:40
Total/NA	Analysis	WI-GRO		1	487249	GP2V	EET CF	04/29/26 04:40
Total/NA	Prep	WI DRO PREP			486774	KG6X	EET CF	04/23/26 08:54
Total/NA	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 17:42
Total/NA	Prep	1633 Shake			699578	JVB4	EET CLE	04/28/26 08:24
Total/NA	Analysis	1633A		1	699712	DSH	EET CLE	04/29/26 04:30
Total/NA	Prep	3050B			699271	DEE	EET CLE	04/24/26 14:00
Total/NA	Analysis	6020B		2	699658	S4FJ	EET CLE	04/28/26 16:25
Total/NA	Prep	7471B			699274	DEE	EET CLE	04/24/26 13:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 14:40

Client Sample ID: HA-11-1

Lab Sample ID: 310-330206-25

Date Collected: 04/21/26 11:45

Matrix: Solid

Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-11-1

Lab Sample ID: 310-330206-25

Date Collected: 04/21/26 11:45

Matrix: Solid

Date Received: 04/22/26 13:20

Percent Solids: 74.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487060	MZR8	EET CF	04/27/26 09:01
Total/NA	Analysis	8260D		1	487062	MZR8	EET CF	04/28/26 05:01
Total/NA	Prep	3546			487182	BDJ4	EET CF	04/28/26 08:08
Total/NA	Analysis	8270E		1	487291	P5ZC	EET CF	04/29/26 06:17
Total/NA	Prep	WI GRO			487246	GP2V	EET CF	04/28/26 11:40
Total/NA	Analysis	WI-GRO		1	487249	GP2V	EET CF	04/29/26 05:06
Total/NA	Prep	WI DRO PREP			486774	KG6X	EET CF	04/23/26 08:54
Total/NA	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 17:54
Total/NA	Prep	1633 Shake			699578	JVB4	EET CLE	04/28/26 08:24
Total/NA	Analysis	1633A		1	699712	DSH	EET CLE	04/29/26 05:20

Client Sample ID: HA-11-1

Lab Sample ID: 310-330206-25

Date Collected: 04/21/26 11:45

Matrix: Solid

Date Received: 04/22/26 13:20

Percent Solids: 74.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			699271	DEE	EET CLE	04/24/26 14:00
Total/NA	Analysis	6020B		2	699658	S4FJ	EET CLE	04/28/26 16:28
Total/NA	Prep	7471B			699274	DEE	EET CLE	04/24/26 13:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 14:46

Client Sample ID: HA-11-3

Lab Sample ID: 310-330206-26

Date Collected: 04/21/26 11:50

Matrix: Solid

Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-11-3

Lab Sample ID: 310-330206-26

Date Collected: 04/21/26 11:50

Matrix: Solid

Date Received: 04/22/26 13:20

Percent Solids: 80.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487060	MZR8	EET CF	04/27/26 09:01
Total/NA	Analysis	8260D		1	487062	MZR8	EET CF	04/28/26 05:24
Total/NA	Prep	3546			487182	BDJ4	EET CF	04/28/26 08:08
Total/NA	Analysis	8270E		1	487291	P5ZC	EET CF	04/29/26 06:42
Total/NA	Prep	WI GRO			487248	GP2V	EET CF	04/28/26 11:48
Total/NA	Analysis	WI-GRO		1	487252	GP2V	EET CF	04/29/26 10:22
Total/NA	Prep	WI DRO PREP			486774	KG6X	EET CF	04/23/26 08:54
Total/NA	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 18:07
Total/NA	Prep	1633 Shake			699578	JVB4	EET CLE	04/28/26 08:24
Total/NA	Analysis	1633A		1	699712	DSH	EET CLE	04/29/26 05:37
Total/NA	Prep	3050B			699271	DEE	EET CLE	04/24/26 14:00
Total/NA	Analysis	6020B		2	699658	S4FJ	EET CLE	04/28/26 16:31
Total/NA	Prep	7471B			699274	DEE	EET CLE	04/24/26 13:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 14:47

Client Sample ID: HA-12-1

Lab Sample ID: 310-330206-27

Date Collected: 04/21/26 12:05

Matrix: Solid

Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-12-1

Lab Sample ID: 310-330206-27

Date Collected: 04/21/26 12:05

Matrix: Solid

Date Received: 04/22/26 13:20

Percent Solids: 77.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487060	MZR8	EET CF	04/27/26 09:01
Total/NA	Analysis	8260D		1	487062	MZR8	EET CF	04/28/26 05:47

Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-1

Client Sample ID: HA-12-1

Lab Sample ID: 310-330206-27

Date Collected: 04/21/26 12:05
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 77.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3546			487182	BDJ4	EET CF	04/28/26 08:08
Total/NA	Analysis	8270E		1	487291	P5ZC	EET CF	04/29/26 07:06
Total/NA	Prep	WI GRO			487248	GP2V	EET CF	04/28/26 11:48
Total/NA	Analysis	WI-GRO		1	487252	GP2V	EET CF	04/29/26 10:48
Total/NA	Prep	WI DRO PREP			486774	KG6X	EET CF	04/23/26 08:54
Total/NA	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 18:19
Total/NA	Prep	1633 Shake			699578	JVB4	EET CLE	04/28/26 08:24
Total/NA	Analysis	1633A		1	699712	DSH	EET CLE	04/29/26 05:53
Total/NA	Prep	3050B			699271	DEE	EET CLE	04/24/26 14:00
Total/NA	Analysis	6020B		2	699658	S4FJ	EET CLE	04/28/26 16:34
Total/NA	Prep	7471B			699274	DEE	EET CLE	04/24/26 13:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 14:49

Client Sample ID: HA-12-3

Lab Sample ID: 310-330206-28

Date Collected: 04/21/26 12:10
Matrix: Solid
Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-12-3

Lab Sample ID: 310-330206-28

Date Collected: 04/21/26 12:10
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 81.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487060	MZR8	EET CF	04/27/26 09:01
Total/NA	Analysis	8260D		1	487062	MZR8	EET CF	04/28/26 06:09
Total/NA	Prep	3546			487182	BDJ4	EET CF	04/28/26 08:08
Total/NA	Analysis	8270E		1	487291	P5ZC	EET CF	04/29/26 07:31
Total/NA	Prep	WI GRO			487248	GP2V	EET CF	04/28/26 11:48
Total/NA	Analysis	WI-GRO		1	487252	GP2V	EET CF	04/29/26 11:14
Total/NA	Prep	WI DRO PREP			486774	KG6X	EET CF	04/23/26 08:54
Total/NA	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 18:32
Total/NA	Prep	1633 Shake			699578	JVB4	EET CLE	04/28/26 08:24
Total/NA	Analysis	1633A		1	699712	DSH	EET CLE	04/29/26 06:10
Total/NA	Prep	3050B			699271	DEE	EET CLE	04/24/26 14:00
Total/NA	Analysis	6020B		2	699658	S4FJ	EET CLE	04/28/26 16:37
Total/NA	Prep	7471B			699274	DEE	EET CLE	04/24/26 13:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 14:51

Client Sample ID: HA-13-1

Lab Sample ID: 310-330206-29

Date Collected: 04/21/26 12:25

Matrix: Solid

Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-13-1

Lab Sample ID: 310-330206-29

Date Collected: 04/21/26 12:25

Matrix: Solid

Date Received: 04/22/26 13:20

Percent Solids: 79.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487060	MZR8	EET CF	04/27/26 09:01
Total/NA	Analysis	8260D		1	487062	MZR8	EET CF	04/28/26 06:32
Total/NA	Prep	3546			487182	BDJ4	EET CF	04/28/26 08:08
Total/NA	Analysis	8270E		1	487291	P5ZC	EET CF	04/29/26 07:56
Total/NA	Prep	WI GRO			487248	GP2V	EET CF	04/28/26 11:48
Total/NA	Analysis	WI-GRO		1	487252	GP2V	EET CF	04/29/26 11:40
Total/NA	Prep	WI DRO PREP			486774	KG6X	EET CF	04/23/26 08:54
Total/NA	Analysis	WI-DRO		1	486753	C3AA	EET CF	04/23/26 18:44
Total/NA	Prep	1633 Shake			699578	JVB4	EET CLE	04/28/26 08:24
Total/NA	Analysis	1633A		1	699712	DSH	EET CLE	04/29/26 06:27
Total/NA	Prep	3050B			699271	DEE	EET CLE	04/24/26 14:00
Total/NA	Analysis	6020B		2	699658	S4FJ	EET CLE	04/28/26 16:40
Total/NA	Prep	7471B			699274	DEE	EET CLE	04/24/26 13:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 14:52

Client Sample ID: Rinsate Blank

Lab Sample ID: 310-330206-31

Date Collected: 04/21/26 13:00

Matrix: Water

Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	1633			699234	DW4U	EET CLE	04/24/26 10:05
Total/NA	Analysis	1633A		1	699297	DSH	EET CLE	04/25/26 08:33

Client Sample ID: Trip Blank - Soil 1

Lab Sample ID: 310-330206-32

Date Collected: 04/21/26 14:00

Matrix: Solid

Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487060	MZR8	EET CF	04/27/26 09:01
Total/NA	Analysis	8260D		1	487062	MZR8	EET CF	04/28/26 06:55
Total/NA	Prep	WI GRO			487248	GP2V	EET CF	04/28/26 11:48
Total/NA	Analysis	WI-GRO		1	487252	GP2V	EET CF	04/29/26 12:32

Client Sample ID: Trip Blank - Water

Lab Sample ID: 310-330206-33

Date Collected: 04/21/26 15:00

Matrix: Water

Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	487263	MZR8	EET CF	04/29/26 00:49

Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-1
Project/Site: Duluth Airport Taxiway A

Client Sample ID: Trip Blank - Water
Lab Sample ID: 310-330206-33

Date Collected: 04/21/26 15:00
Matrix: Water
Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	WI-GRO		1	487223	GP2V	EET CF	04/28/26 23:25

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-1
Project/Site: Duluth Airport Taxiway A

Laboratory: Eurofins Cedar Falls

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Minnesota	NELAP	019-999-319	12-31-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Laboratory: Eurofins Cleveland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Minnesota	NELAP	039-999-348	12-31-26

Method Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-1
Project/Site: Duluth Airport Taxiway A

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CF
8270E	Semivolatile Organic Compounds (GC-MS/MS)	SW846	EET CF
WI-GRO	Wisconsin - Gasoline Range Organics (GC)	WI-GRO	EET CF
WI-DRO	Wisconsin - Diesel Range Organics (GC)	WI-DRO	EET CF
1633A	Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A	EPA	EET CLE
6020B	Metals (ICP/MS)	SW846	EET CLE
7470A	Mercury (CVAA)	SW846	EET CLE
7471B	Mercury (CVAA)	SW846	EET CLE
Moisture	Percent Moisture	EPA	EET CF
1633	Solid-Phase Extraction (SPE)	EPA	EET CLE
1633 Shake	Shake Extraction with SPE	EPA	EET CLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CLE
3050B	Preparation, Metals	SW846	EET CLE
3511	Microextraction of Organic Compounds	SW846	EET CF
3546	Microwave Extraction	SW846	EET CF
5030B	Purge and Trap	SW846	EET CF
5035	Closed System Purge and Trap	SW846	EET CF
7470A	Preparation, Mercury	SW846	EET CLE
7471B	Preparation, Mercury	SW846	EET CLE
WI DRO PREP	Wisconsin Extraction (Diesel Range Organics)	WI-DRO	EET CF
WI GRO	Closed System Purge and Trap	WI-GRO	EET CF

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

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310-330206 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SEH

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 4.22.26 | TIME 1320 | Received By: PH

Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee
☑ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:_____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☑ Yes ☐ No *If yes:* Cooler ID:

Multiple Coolers? ☑ Yes ☐ No *If yes:* Cooler # 1 of 4

Cooler Custody Seals Present? ☐ Yes ☑ No *If yes:* Cooler custody seals intact? ☐ Yes ☐ No

Sample Custody Seals Present? ☐ Yes ☑ No *If yes:* Sample custody seals intact? ☐ Yes ☐ No

Trip Blank Present? ☑ Yes ☐ No *If yes:* Which VOA samples are in cooler? ↓

HA-03-1, 01-3, 02-1,3, 07-1, 2.5, 09-1,3

Temperature Record

Coolant: ☑ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other:_____ ☐ NONE

Thermometer ID: CC | Correction Factor (°C): 0

• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 5.1 | Corrected Temp (°C): 5.1

• Sample Container Temperature

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e g , bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

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Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SEH

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 4.22.26 | TIME 1320 | Received By: PH

Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☑ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:_____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☑ Yes ☐ No *If yes:* Cooler ID:

Multiple Coolers? ☑ Yes ☐ No *If yes:* Cooler # 2 of 4

Cooler Custody Seals Present? ☐ Yes ☑ No *If yes:* Cooler custody seals intact? ☐ Yes ☐ No

Sample Custody Seals Present? ☐ Yes ☑ No *If yes:* Sample custody seals intact? ☐ Yes ☐ No

Trip Blank Present? ☑ Yes ☐ No *If yes:* Which VOA samples are in cooler? ↓

HA-08-1, 3, 06-1, 3, 05-1, 3, 04-1, 3, 03-3, 01-1

Temperature Record

Coolant: ☑ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other:_____ ☐ NONE

Thermometer ID: CC | Correction Factor (°C): 0

• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 4.0 | Corrected Temp (°C): 4.0

• Sample Container Temperature

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE. If yes, contact PM before proceeding If no, proceed with login

Additional Comments

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Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SEH

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 4.22.26 | TIME 1320 | Received By: PH

Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☑ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:_____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☑ Yes ☐ No *If yes:* Cooler ID:

Multiple Coolers? ☑ Yes ☐ No *If yes:* Cooler # 3 of 4

Cooler Custody Seals Present? ☐ Yes ☑ No *If yes:* Cooler custody seals intact? ☐ Yes ☐ No

Sample Custody Seals Present? ☐ Yes ☑ No *If yes:* Sample custody seals intact? ☐ Yes ☐ No

Trip Blank Present? ☑ Yes ☐ No *If yes:* Which VOA samples are in cooler? ↓

HA-10-1, 3, 11-1, 3, 12-1, 3, 13-1, 3

Temperature Record

Coolant: ☑ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other:_____ ☐ NONE

Thermometer ID: CC | Correction Factor (°C): 0

• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 4.3 | Corrected Temp (°C): 4.3

• Sample Container Temperature

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g , bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding If no, proceed with login

Additional Comments

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Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SEH

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 4.22.26 | TIME 1320 | Received By: PH

Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☑ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:_____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☑ Yes ☐ No *If yes:* Cooler ID:

Multiple Coolers? ☑ Yes ☐ No *If yes:* Cooler # 4 of 4

Cooler Custody Seals Present? ☐ Yes ☑ No *If yes:* Cooler custody seals intact? ☐ Yes ☐ No

Sample Custody Seals Present? ☐ Yes ☑ No *If yes:* Sample custody seals intact? ☐ Yes ☐ No

Trip Blank Present? ☑ Yes ☐ No *If yes:* Which VOA samples are in cooler? ↓

The Rest / All HCl

Temperature Record

Coolant: ☑ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other:_____ ☐ NONE

Thermometer ID: CC | Correction Factor (°C): 0

• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 1.9 | Corrected Temp (°C): 1.9

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes.* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g , bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE. If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613
Phone 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

eurofins | Environment Testing

eurofins Duluth SC 269

Client Information	Sampler: Jack Hagley	Lab PM: Bindert, Zach T	Carrier Tracking No(s):	COC No: 310-120319-30763 1
Client Contact: Keri Aufdencamp	Phone: 218-340-4798	E-Mail: Zach.Bindert@et.eurofinsus.com	State of Origin:	Page: Page 1 of 3
Company: Short Elliott Hendrickson Inc. dba SEH	PWSID:	Analysis Requested		Job #:
Address: 3535 Vadnais Center Drive	Due Date Requested			Preservation Codes: N - None; F - MeOH; D - HNO3; A - HCL
City: St. Paul	TAT Requested (days): Standard			
State, Zip: MN 55110	Compliance Project: Δ Yes Δ No			
Phone: 651-318-0354(Tel)	PO #: Purchase Order not required			
Email: kaufdencamp@sehinc.com	WO #:			
Project Name: Duluth Airport Taxiway A	Project #: 31020575			
Site:	SSOW#:			Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air DW=Drinking Water)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B, 7471B	1633A - 1633 Standard List 40	WI_GRO - Wisconsin GRO	8260D - Volatile Minnesota Sublist	8270E_QQQ, Moisture	WI_DRO - Wisconsin DRO	6020B, 7470A	WI_DRO - Wisconsin DRO (C10-C28)	8270E_QQQ - Standard PAH List	8260D, WI_GRO	Total Number of containers	Special Instructions/Note
			Preservation Code:				N	N	F	F	N	N	D	A	N	A		
HA-08-1	4/20/26	1020	6	Solid			X	X	X	X	X	X						Hold PFAS
HA-08-3		1025		Solid			X	X	X	X	X	X						Hold PFAS
HA-06-1		1056		Solid			X	X	X	X	X	X						
HA-06-3		1055		Solid			X	X	X	X	X	X						Hold PFAS
HA-05-1		1115		Solid			X	X	X	X	X	X						Hold PFAS
HA-05-3		1120		Solid			X	X	X	X	X	X						Hold PFAS
HA-04-1		1135		Solid			X	X	X	X	X	X						Hold PFAS
HA-04-3		1140		Solid			X	X	X	X	X	X						Hold PFAS
HA-03-1		1155		Solid			X	X	X	X	X	X						
HA-03-3		1200		Solid			X	X	X	X	X	X						Hold PFAS
HA-01-1		1215		Solid			X	X	X	X	X	X						

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I II III IV Other (specify)

Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
		4/21 1500	SEH		4/21/26 1500	Eurofins
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
		4/21/26 1530	Eurofins		4.22.26 13d	
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks:

Ver: 10/10/2024

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613
Phone. 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

eurofins | Environment Testing

Eurofins Duluth SC 269

Client Information	Sampler	Lab PM: Bindert, Zach T	Carrier Tracking No(s).	COC No: 310-120319-30763 2
Client Contact: Ken Aufdencamp	Phone:	E-Mail: Zach.Bindert@et.eurofinsus.com	State of Origin.	Page: Page 2 of 3
Company: Short Elliott Hendrickson Inc. dba SEH	PWSID:			Job #:
Address: 3535 Vadnais Center Drive	Due Date Requested			
City: St. Paul	TAT Requested (days)			
State, Zip: MN 55110	Compliance Project: Δ Yes Δ No			
Phone: 651-318-0354(Tel)	PO #: Purchase Order not required			
Email: kaufdencamp@sehinc.com	WO #:			
Project Name: Duluth Airport Taxiway A	Project #: 31020575			
Site:	SSOW#:			

Analysis Requested

Preservation Codes: N - None; F - MeOH; D - HNO3; A - HCL

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air DW=Drinking Water)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B, 7471B	1633A - 1633 Standard List 40	WI_GRO - Wisconsin GRO	8260D - Volatile Minnesota Sublist	8270E_QQQ, Moisture	WI_DRO - Wisconsin DRO	6020B, 7470A	WI_DRO - Wisconsin DRO (C10-C28)	8270E_QQQ - Standard PAH List	8260D, WI_GRO	DRO - Silica Gel Cleanup	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	F	F	N	N	D	A	N	A			
HA-01-3	4/20/24	12:20	G	Solid			X	O	X	X	X	X							Hold PFAS
HA-02-1		1235		Solid			X	O	X	X	X	X							Hold PFAS
HA-02-3		1240		Solid			X	O	X	X	X	X							Hold PFAS
HA-07-1		1255		Solid			X	O	X	X	X	X							Hold PFAS
HA-07-2.5		1300		Solid			X	O	X	X	X	X							Hold PFAS
HA-09-1		1315		Solid			X	X	X	X	X	X							
HA-09-3		1320		Solid			X	O	X	X	X	X							Hold PFAS
WS-01	4/21/24	0900		~~Solid~~ W				X		X			X	X	X	X			
SS-01		1000		Solid			X	X	X	X	X						X		
SS-02		1010		Solid			X	X	X	X	X						X		
SS-03		1020		Solid			X	X	X	X	X						X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I II III IV Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date	Time.	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1		4/21 1500	SEH		4/21/24 1500	Eurofins
2		4/21/24 1530	Eurofins		4.22.24 1320	
3		Date/Time:	Company	Received by	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No

Cooler Temperature(s) °C and Other Remarks.

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613
Phone. 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

eurofins

Eurofins Duluth SC 269

Client Information	Sampler	Lab PM	Carrier Tracking No(s)	COC No
		Bindert, Zach T		310-120319-30763 3
Client Contact: Keri Aufdencamp	Phone:	E-Mail: Zach.Bindert@et.eurofinsus.com	State of Origin	Page: Page 3 of 3
Company: Short Elliott Hendrickson Inc. dba SEH	PWSID:			Job #:

Address: 3535 Vadnais Center Drive	Due Date Requested	
City: St. Paul	TAT Requested (days)	
State, Zip: MN 55110	Compliance Project: Δ Yes Δ No	
Phone: 651-318-0354(Tel)	PO #: Purchase Order not required	
Email: kaufdencamp@sehinc.com	WO #:	
Project Name: Duluth Airport Taxiway A	Project #: 31020575	
Site:	SSOW#:	

Analysis Requested

Preservation Codes
N - None
F - MeOH
D HNO3
A - HCL
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air DW=Drinking Water)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B, 7471B	1633A - 1633 Standard List 40	WI_GRO - Wisconsin GRO	8260D - Volatile Minnesota Sublist	8270E_QQQ, Moisture	WI_DRO - Wisconsin DRO	6020B, 7470A	WI_DRO - Wisconsin DRO (C10-C28)	8270E_QQQ - Standard PAH List	8260D, WI_GRO	Total Number of containers	Special Instructions/Note
			Preservation Code:				N	N	F	F	N	N	D	A	N	A		
HA-10-1	4/21/26	1125	G	Solid			X	X	X	X	X	X						
HA-10-3		1130		Solid			X	X	X	X	X	X						
HA-11-1		1145		Solid			X	X	X	X	X	X						
HA-11-3		1150		Solid			X	X	X	X	X	X						
HA-12-1		1205		Solid			X	X	X	X	X	X						
HA-12-3		1210		Solid			X	X	X	X	X	X						
HA-13-1		1225		Solid			X	X	X	X	X	X						
HA-13-3		1230		Solid			0	0	0	0	0	0						Hold all
Rinsate Blank		1300		W ~~Solid~~				X										
Trip Blank-Soil		1400		Solid					X	X								
Trip Blank-Water		1500		Solid						X				X				

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I II III IV Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by:		Date		Time:		Method of Shipment:	
Relinquished by:	Date/Time: 4/21 1500	Company: SEH	Received by:		Date/Time: 4/21/26 1500	Company: Eurofins	
Relinquished by:	Date/Time: 4/21/26 1530	Company: Eurofins	Received by:		Date/Time: 4-22-26 1320	Company	
Relinquished by:	Date/Time:	Company	Received by:		Date/Time:	Company	

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks.

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Phone: 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

eurofins

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Bindert, Zach T	Carrier Tracking No(s): N/A	COC No: 310-93397 1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Zach.Bindert@et.eurofinsus.com	State of Origin: Minnesota	Page: Page 1 of 4
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note): NELAP Minnesota		Job #: 310-330206-1
Address: 180 S. Van Buren Avenue,	Due Date Requested: 5/5/2026			
City: Barberton	TAT Requested (days): N/A			
State, Zip: OH, 44203				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Duluth Airport Taxiway A	Project #: 31020575			
Site: N/A	SSOW#: N/A			

Analysis Requested

Preservation Codes:

Other: N/A

ES2, RBS 32,

Sample Identification Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B/3050BRCRA Metals Analyte List	7471B/7471B_PrepMercury	1633A/1633_Shake1633 Standard List 40	1633A/1633_SPE1633 Standard List 40	6020B/3005ARCRA Metals Analyte List	7470A/7470A_PrepMercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
HA-08-1 (310-330206-1)	4/20/26	10:20 Central	G	Solid			X	X					2	
HA-08-3 (310-330206-2)	4/20/26	10:25 Central	G	Solid			X	X					2	
HA-06-1 (310-330206-3)	4/20/26	10.56 Central	G	Solid			X	X	X				2	
HA-06-3 (310-330206-4)	4/20/26	10:55 Central	G	Solid			X	X					2	
HA-05-1 (310-330206-5)	4/20/26	11:15 Central	G	Solid			X	X					2	
HA-05-3 (310-330206-6)	4/20/26	11:20 Central	G	Solid			X	X					2	
HA-04-1 (310-330206-7)	4/20/26	11:35 Central	G	Solid			X	X					2	
HA-04-3 (310-330206-8)	4/20/26	11:40 Central	G	Solid			X	X					2	
HA-03-1 (310-330206-9)	4/20/26	11.55 Central	G	Solid			X	X	X				2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central LLC.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I II III, IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 4/22/26/1645	Company	Received by: JACK WILLIAMS	Date/Time: 4/23/26 1000	Company EC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks:

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613
Phone: 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

eurofins

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Bindert, Zach T	Carrier Tracking No(s): N/A	COC No: 310-93397.2
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Zach.Bindert@et.eurofinsus.com	State of Origin: Minnesota	Page: Page 2 of 4
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note): NELAP Minnesota		Job #: 310-330206-1
Address: 180 S. Van Buren Avenue,	Due Date Requested: 5/5/2026			
City: Barberton	TAT Requested (days): N/A			
State, Zip: OH, 44203				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Duluth Airport Taxiway A	Project #: 31020575			
Site: N/A	SSOW#: N/A			

Analysis Requested

Preservation Codes:

Other: N/A

Sample Identification Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B/3050BRCRA Metals Analyte List	7471B/7471B_PrepMercury	1633A/1633_Shake1633 Standard List 40	1633A/1633_SPE1633 Standard List 40	6020B/3005ARCRA Metals Analyte List	7470A/7470A_PrepMercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
HA-03-3 (310-330206-10)	4/20/26	12:00 Central	G	Solid			X	X					2	
HA-01 1 (310-330206-11)	4/20/26	12:15 Central	G	Solid			X	X	X				2	
HA-01-3 (310-330206-12)	4/20/26	12:20 Central	G	Solid			X	X					2	
HA-02-1 (310-330206-13)	4/20/26	12:35 Central	G	Solid			X	X					2	
HA-02-3 (310-330206-14)	4/20/26	12:40 Central	G	Solid			X	X					2	
HA-07 1 (310-330206-15)	4/20/26	12:55 Central	G	Solid			X	X					2	
HA-07-2.5 (310-330206-16)	4/20/26	13:00 Central	G	Solid			X	X					2	
HA-09-1 (310-330206-17)	4/20/26	13:15 Central	G	Solid			X	X	X				2	
HA-09-3 (310-330206-18)	4/20/26	13:20 Central	G	Solid			X	X					2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central LLC.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested. I II III IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	4/22/26 1645		JACK WILLIAMS		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks:

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613
Phone: 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

eurofins

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Bindert, Zach T	Carrier Tracking No(s): N/A	COC No: 310-93397.3
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Zach.Bindert@et.eurofinsus.com	State of Origin: Minnesota	Page: Page 3 of 4
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note): NELAP Minnesota		Job #: 310-330206-1
Address: 180 S. Van Buren Avenue,	Due Date Requested: 5/5/2026			Preservation Codes:
City: Barberton	TAT Requested (days): N/A			
State, Zip: OH, 44203				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Duluth Airport Taxiway A	Project #: 31020575			
Site: N/A	SSOW#: N/A			Other: N/A

Sample Identification Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B/3050BRCRA Metals Analyte List	7471B/7471B_PrepMercury	1633A/1633_Shake1633 Standard List 40	1633A/1633_SPE1633 Standard List 40	6020B/3005ARCRA Metals Analyte List	7470A/7470A_PrepMercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
WS-01 (310-330206-19)	4/21/26	09:00 Central	G	Water						X	X	X	3	
SS-01 (310-330206-20)	4/21/26	10:00 Central	G	Solid			X	X	X				2	
SS-02 (310-330206-21)	4/21/26	10:10 Central	G	Solid			X	X	X				2	
SS-03 (310-330206-22)	4/21/26	10:20 Central	G	Solid			X	X	X				2	
HA-10-1 (310-330206-23)	4/21/26	11:25 Central	G	Solid			X	X	X				2	
HA-10-3 (310-330206-24)	4/21/26	11:30 Central	G	Solid			X	X	X				2	
HA-11 1 (310-330206-25)	4/21/26	11:45 Central	G	Solid			X	X	X				2	
HA-11-3 (310-330206-26)	4/21/26	11 50 Central	G	Solid			X	X	X				2	
HA-12-1 (310-330206-27)	4/21/26	12:05 Central	G	Solid			X	X	X				2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions wi be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested. I II III, IV Other (specify) Primary Deliverable Rank. 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 4/22/26 1645	Company	Received by: JACK WILLIAMS	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks.

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Phone: 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

eurofins

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Bindert, Zach T	Carrier Tracking No(s): N/A	COC No: 310-93397.4
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Zach.Bindert@et.eurofinsus.com	State of Origin: Minnesota	Page: Page 4 of 4
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note): NELAP Minnesota		Job #: 310-330206-1
Address: 180 S. Van Buren Avenue,	Due Date Requested: 5/5/2026			
City: Barberton	TAT Requested (days): N/A			
State, Zip: OH, 44203				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Duluth Airport Taxiway A	Project #: 31020575			
Site: N/A	SSOW#: N/A			

Analysis Requested

Preservation Codes.

Other: N/A

Sample Identification Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B/3050BRCRA Metals Analyte List	7471B/7471B_PrepMercury	1633A/1633_Shake1633 Standard List 40	1633A/1633_SPE1633 Standard List 40	6020B/3005ARCRA Metals Analyte List	7470A/7470A_PrepMercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
HA-12-3 (310-330206-28)	4/21/26	12:10 Central	G	Solid			X	X	X				2	
HA-13-1 (310-330206-29)	4/21/26	12:25 Central	G	Solid			X	X	X				2	
Rinsate Blank (310-330206-31)	4/21/26	13:00 Central	G	Water						X			2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II III, IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 4/22/26/1645	Company	Received by: JACK WILLIAMS	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals ntact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks:

Eurofins – Cleveland Sample Receipt Form/Narrative **Login # :** _____
Barberton Facility

Client Eurofins Site Name _____ Cooler unpacked by:

Cooler Received on 4/23/26 Opened on 4/23/26

FedEx: 1st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form

IR GUN # 02 (CF -0.1 °C) Observed Cooler Temp. ____.____ °C Corrected Cooler Temp. ____.____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	Yes	No
11. Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC574455
14. Were VOAs on the COC?	Yes	No
15. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this.	Yes	No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes	No
17. Was a LL Hg or Me Hg trip blank present? _____	Yes	No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Labeled by:
Labels Verified by:

_____
_____
_____
_____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

Login # : _____

Eurofins - Cleveland Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
EC Client Box Other	IR GUN #: _____	2.7	2.6	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____	2.0	1.9	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____	

1 of 2
TRK# 0201 4671 5432 1386
MASTER
NS CAKA
THU - 23 APR 10:30A
PRIORITY OVERNIGHT
44203
OH-US CLE

2 of 2
TRK# 0203 4671 5432 1397
MstrH 4671 5432 1386
NS CAKA
THU - 23 APR 10:30A
PRIORITY OVERNIGHT
0201
44203
OH-US CLE

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Phone: 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

eurofins

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Bindert, Zach T	Carrier Tracking No(s): N/A	COC No: 310-93397 1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Zach.Bindert@et.eurofinsus.com	State of Origin: Minnesota	Page: Page 1 of 4
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note): NELAP Minnesota		Job #: 310-330206-1
Address: 180 S. Van Buren Avenue	Due Date Requested: 5/5/2026			
City: Barberton	TAT Requested (days): N/A			
State, Zip: OH, 44203				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Duluth Airport Taxiway A	Project #: 31020575			
Site: N/A	SSOW#: N/A			

Analysis Requested

Preservation Codes:

Other: N/A

ES2, R85-32,

Sample Identification Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B/3050BRCRA Metals Analyte List	7471B/7471B_PrepMercury	1633A/1633_Shake1633 Standard List 40	1633A/1633_SPE1633 Standard List 40	6020B/3005ARCRA Metals Analyte List	7470A/7470A_PrepMercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
HA-08-1 (310-330206-1)	4/20/26	10:20 Central	G	Solid			X	X					2	
HA-08-3 (310-330206-2)	4/20/26	10:25 Central	G	Solid			X	X					2	
HA-06-1 (310-330206-3)	4/20/26	10:56 Central	G	Solid			X	X	X				2	
HA-06-3 (310-330206-4)	4/20/26	10:55 Central	G	Solid			X	X					2	
HA-05-1 (310-330206-5)	4/20/26	11 15 Central	G	Solid			X	X					2	
HA-05-3 (310-330206-6)	4/20/26	11:20 Central	G	Solid			X	X					2	
HA-04-1 (310-330206-7)	4/20/26	11.35 Central	G	Solid			X	X					2	
HA-04-3 (310-330206-8)	4/20/26	11:40 Central	G	Solid			X	X					2	
HA-03-1 (310-330206-9)	4/20/26	11:55 Central	G	Solid			X	X	X				2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central LLC laboratory or other instructions wi be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central LLC.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I II, III IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 4/22/26/1645	Company	Received by: JACK WILLIAMS	Date/Time: 4/23/26 1000	Company EC
Relinquished by	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks.

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613
Phone: 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

eurofins

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Bindert, Zach T	Carrier Tracking No(s): N/A	COC No: 310-93397.2
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Zach.Bindert@et.eurofinsus.com	State of Origin: Minnesota	Page: Page 2 of 4
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note): NELAP Minnesota		Job #: 310-330206-1
Address: 180 S. Van Buren Avenue,	Due Date Requested: 5/5/2026			
City: Barberton	TAT Requested (days): N/A			
State, Zip: OH 44203				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Duluth Airport Taxiway A	Project #: 31020575			
Site: N/A	SSOW#: N/A			

Analysis Requested

Preservation Codes:

Other: N/A

Sample Identification Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B/3050BRCRA Metals Analyte List	7471B/7471B_PrepMercury	1633A/1633_Shake1633 Standard List 40	1633A/1633_SPE1633 Standard List 40	6020B/3005ARCRA Metals Analyte List	7470A/7470A_PrepMercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
HA-03-3 (310-330206-10)	4/20/26	12:00 Central	G	Solid			X	X					2	
HA-01 1 (310-330206-11)	4/20/26	12:15 Central	G	Solid			X	X	X				2	
HA-01-3 (310-330206-12)	4/20/26	12:20 Central	G	Solid			X	X					2	
HA-02-1 (310-330206-13)	4/20/26	12:35 Central	G	Solid			X	X					2	
HA-02-3 (310-330206-14)	4/20/26	12:40 Central	G	Solid			X	X					2	
HA-07 1 (310-330206-15)	4/20/26	12:55 Central	G	Solid			X	X					2	
HA-07-2.5 (310-330206-16)	4/20/26	13:00 Central	G	Solid			X	X					2	
HA-09-1 (310-330206-17)	4/20/26	13:15 Central	G	Solid			X	X	X				2	
HA-09-3 (310-330206-18)	4/20/26	13:20 Central	G	Solid			X	X					2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested I II, III IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	*Method of Shipment:*

Relinquished by:	Date/Time: 4/22/26 1645	Company	Received by: JACK WILLIAMS	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks:

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Phone: 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

eurofins

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Bindert, Zach T	Carrier Tracking No(s): N/A	COC No: 310-93397.3
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Zach.Bindert@et.eurofinsus.com	State of Origin: Minnesota	Page: Page 3 of 4
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note): NELAP Minnesota		Job #: 310-330206-1
Address: 180 S. Van Buren Avenue,	Due Date Requested: 5/5/2026			
City: Barberton	TAT Requested (days): N/A			
State, Zip: OH 44203				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Duluth Airport Taxiway A	Project #: 31020575			
Site: N/A	SSOW#: N/A			

Analysis Requested

Preservation Codes:

Other: N/A

Sample Identification Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B/3050BRCRA Metals Analyte List	7471B/7471B_PrepMercury	1633A/1633_Shake1633 Standard List 40	1633A/1633_SPE1633 Standard List 40	6020B/3005ARCRA Metals Analyte List	7470A/7470A_PrepMercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
WS-01 (310-330206-19)	4/21/26	09:00 Central	G	Water						X	X	X	3	
SS-01 (310-330206-20)	4/21/26	10:00 Central	G	Solid			X	X	X				2	
SS-02 (310-330206-21)	4/21/26	10:10 Central	G	Solid			X	X	X				2	
SS-03 (310-330206-22)	4/21/26	10:20 Central	G	Solid			X	X	X				2	
HA-10-1 (310-330206-23)	4/21/26	11:25 Central	G	Solid			X	X	X				2	
HA-10-3 (310-330206-24)	4/21/26	11:30 Central	G	Solid			X	X	X				2	
HA-11 1 (310-330206-25)	4/21/26	11:45 Central	G	Solid			X	X	X				2	
HA-11-3 (310-330206-26)	4/21/26	11:50 Central	G	Solid			X	X	X				2	
HA-12-1 (310-330206-27)	4/21/26	12:05 Central	G	Solid			X	X	X				2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I II, III, IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 4/22/26 1645	Company	Received by: JACK WILLIAMS	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks:

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Phone: 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

eurofins

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Bindert, Zach T	Carrier Tracking No(s): N/A	COC No: 310-93397.4
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Zach.Bindert@et.eurofinsus.com	State of Origin: Minnesota	Page: Page 4 of 4
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note): NELAP Minnesota		Job #: 310-330206-1
Address: 180 S. Van Buren Avenue,	Due Date Requested: 5/5/2026			
City: Barberton	TAT Requested (days): N/A			
State, Zip: OH, 44203				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Duluth Airport Taxiway A	Project #: 31020575			
Site: N/A	SSOW#: N/A			

Analysis Requested

Preservation Codes.

Other: N/A

Sample Identification Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oi BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B/3050BRCRA Metals Analyte List	7471B/7471B_PrepMercury	1633A/1633_Shake1633 Standard List 40	1633A/1633_SPE1633 Standard List 40	6020B/3005ARCRA Metals Analyte List	7470A/7470A_PrepMercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
HA-12-3 (310-330206-28)	4/21/26	12.10 Central	G	Solid			X	X	X				2	
HA-13-1 (310-330206-29)	4/21/26	12:25 Central	G	Solid			X	X	X				2	
Rinsate Blank (310-330206-31)	4/21/26	13:00 Central	G	Water						X			2	

Note. Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	4/22/26/1645		JACK WILLIAMS		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks:

Eurofins – Cleveland Sample Receipt Form/Narrative **Login # :** _____
Barberton Facility

Client Eurofins Site Name _____ Cooler unpacked by:

Cooler Received on 4/23/26 Opened on 4/23/26

FedEx: 1st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☑ See Multiple Cooler Form

IR GUN # 02 (CF -0.1 °C) Observed Cooler Temp. ____.____ °C Corrected Cooler Temp. ____.____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	Yes	No
11. Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC574455
14. Were VOAs on the COC?	Yes	No
15. Were air bubbles >6 mm in any VOA vials? ● ← Larger than this.	Yes	No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot# _____	Yes	No
17. Was a LL Hg or Me Hg trip blank present? _____	Yes	No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Labeled by:
Labels Verified by:

_____
_____
_____
_____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

Login # _____

Eurofins - Cleveland Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
EC Client Box Other	IR GUN #: _____	2.7	2.6	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____	2.0	1.9	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____	

1 of 2
TRK# 0201 4671 5432 1386
MM MASTER MM
NS CAKA
THU - 23 APR 10:30A
PRIORITY OVERNIGHT
44203
OH-US CLE
2 of 2
MPS# 0203 4671 5432 1397
Mstr# 4671 5432 1386
NS CAKA
THU - 23 APR 10:30A
PRIORITY OVERNIGHT
0201
44203
OH-US CLE

Login Sample Receipt Checklist

Client: Short Elliott Hendrickson, Inc. dba SEH

Job Number: 310-330206-1

Login Number: 330206

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Homolar, Dana J

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-1
Project/Site: Duluth Airport Taxiway A

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Matrix: Solid **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFOSA	M102FTS	M242FTS	M262FTS	M282FTS	HFPODA	PFBA	C3PFBS
Lab Sample ID	Client Sample ID	(40-130)	(40-275)	(40-165)	(40-215)	(40-275)	(40-130)	(8-130)	(40-135)
310-330206-3	HA-06-1	73.2	50.0	54.9	55.2	50.6	68.1	72.2	67.1
310-330206-9	HA-03-1			52.2			73.0	79.5	68.7
310-330206-9 - RE	HA-03-1	73.6	72.1	60.5	66.6	71.1	59.0	62.1	60.5
310-330206-11	HA-01-1	77.3	41.2	69.4	66.9	44.1	72.9	77.0	73.0
310-330206-11 - DL	HA-01-1	74.4	58.9	70.1	69.7	60.4	76.8	75.9	73.3
310-330206-17	HA-09-1	108	98.5	109	95.1	95.9	57.9	64.9	86.7
310-330206-20	SS-01	64.5	68.5	81.8	68.3	68.2	50.4	54.1	63.9
310-330206-21	SS-02	87.7	88.3	100	87.9	90.3	54.8	60.7	77.6
310-330206-22	SS-03	92.9	90.2	109	93.9	95.7	75.0	73.7	90.1
310-330206-23	HA-10-1	90.7	89.2	99.6	86.9	86.5	62.0	67.1	84.2
310-330206-24	HA-10-3	66.3	67.5	65.4	62.7	66.7	47.4	47.8	58.5
310-330206-25	HA-11-1	115	96.2	104	93.5	96.6	56.3	63.1	81.4
310-330206-26	HA-11-3	77.6	58.8	75.0	69.1	65.5	69.9	66.7	72.4
310-330206-27	HA-12-1	99.4	87.0	88.2	80.8	83.5	47.9	55.7	71.7
310-330206-28	HA-12-3	69.3	50.7	71.1	61.5	57.3	57.2	56.5	65.0
310-330206-29	HA-13-1	71.7	71.4	77.2	64.2	67.3	54.7	52.7	64.2
MB 240-699578/1-A	Method Blank	55.5	54.4	68.8	60.0	58.1	44.5	47.4	54.3
MB 240-699767/1-A	Method Blank	77.0	45.0	70.9	73.8	51.5	75.4	72.2	73.7
MB 240-700122/1-A	Method Blank	81.8	76.1	73.3	78.0	77.5	76.3	77.0	79.4

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		C6PFDA	PFDoDA	C4PFHA	13C5PHA	C3PFHS	C9PFNA	C8PFOA	C8PFOS
Lab Sample ID	Client Sample ID	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)
310-330206-3	HA-06-1	73.8	68.9	66.2	66.5	67.1	72.7	65.6	59.8
310-330206-9	HA-03-1				68.2				
310-330206-9 - RE	HA-03-1	69.2	71.4	61.8	59.9	60.6	66.0	57.7	58.0
310-330206-11	HA-01-1	73.3	64.3	74.7	73.2	70.0	71.5	68.3	61.7
310-330206-11 - DL	HA-01-1	73.7	70.5	73.1	78.9	70.6	72.9	74.1	58.1
310-330206-17	HA-09-1	73.3	71.3	69.3	60.2	85.2	79.2	66.5	91.9
310-330206-20	SS-01	52.9	55.7	57.0	52.2	62.7	57.1	51.0	62.9
310-330206-21	SS-02	66.9	66.1	64.4	58.2	79.5	72.3	59.2	81.5
310-330206-22	SS-03	77.1	72.0	83.9	75.4	91.9	84.4	75.2	92.7
310-330206-23	HA-10-1	75.0	72.3	75.2	68.7	85.6	79.6	70.7	85.8
310-330206-24	HA-10-3	56.9	59.5	57.1	50.1	62.0	59.8	52.8	66.0
310-330206-25	HA-11-1	74.2	74.9	70.6	60.6	84.2	78.4	64.5	88.4
310-330206-26	HA-11-3	66.6	62.6	79.8	74.9	75.3	73.6	64.6	71.4
310-330206-27	HA-12-1	64.5	70.1	60.3	54.6	74.9	69.5	58.3	76.8
310-330206-28	HA-12-3	58.2	49.8	65.7	60.0	66.7	63.6	57.5	64.1
310-330206-29	HA-13-1	60.2	62.2	62.9	58.2	68.4	62.7	53.7	69.0
MB 240-699578/1-A	Method Blank	46.1	47.2	49.4	45.9	58.1	51.6	45.0	57.0
MB 240-699767/1-A	Method Blank	72.6	63.7	76.7	75.4	74.6	75.5	69.4	63.3
MB 240-700122/1-A	Method Blank	81.7	77.5	77.5	80.2	77.4	79.9	74.4	68.1

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFPeA	I3C3-PFPrS	PFTDA	13C7PUA	d5NEFOS	NEFM	d5NPFSA	d3NMFOS
Lab Sample ID	Client Sample ID	(35-130)	(20-150)	(20-130)	(40-130)	(40-150)	(15-130)	(10-130)	(40-135)
310-330206-3	HA-06-1	77.5	61.6	88.5	69.8	52.2	56.0	72.4	54.7
310-330206-9	HA-03-1	90.4	74.1						
310-330206-9 - RE	HA-03-1	69.6	56.5	88.7	69.5	66.6	60.5	68.2	65.3
310-330206-11	HA-01-1	86.7	66.7	81.3	65.5	49.8	51.4	74.9	55.6
310-330206-11 - DL	HA-01-1	77.7	73.8	80.5	75.1	56.9	57.8	67.5	59.5

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-1
Project/Site: Duluth Airport Taxiway A

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFPeA (35-130)	13C3-PFPrS (20-150)	PFTDA (20-130)	13C7PUA (40-130)	d5NEFOS (40-150)	NEFM (15-130)	d5NPFSA (10-130)	d3NMFOS (40-135)
310-330206-17	HA-09-1	71.8	60.3	71.9	64.8	98.9	64.9	79.8	101
310-330206-20	SS-01	61.0	50.3	65.8	49.7	67.0	43.8	53.6	66.7
310-330206-21	SS-02	68.3	57.5	68.2	61.7	80.8	52.0	66.9	84.8
310-330206-22	SS-03	86.1	71.5	80.7	70.9	94.5	82.3	71.3	96.1
310-330206-23	HA-10-1	74.1	61.4	80.4	69.6	89.0	77.7	80.9	90.5
310-330206-24	HA-10-3	54.5	47.3	67.8	55.9	73.1	43.1	65.8	70.8
310-330206-25	HA-11-1	73.5	57.6	79.7	66.8	101	91.0	84.7	103
310-330206-26	HA-11-3	79.6	59.7	52.4	60.0	70.8	54.5	65.1	71.7
310-330206-27	HA-12-1	63.8	52.5	77.1	60.7	84.6	72.7	73.9	87.1
310-330206-28	HA-12-3	66.3	53.2	52.4	52.1	63.0	31.1	55.1	64.7
310-330206-29	HA-13-1	63.8	49.4	69.4	58.8	76.5	52.7	66.2	79.8
MB 240-699578/1-A	Method Blank	50.0	45.5	52.8	42.4	58.7	43.1	50.3	60.1
MB 240-699767/1-A	Method Blank	84.9	66.4	86.2	67.5	53.5	53.7	69.6	54.2
MB 240-700122/1-A	Method Blank	84.5	72.7	93.2	77.7	73.5	73.1	71.0	73.6

		Percent Isotope Dilution Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	NMFM (20-130)	d3NMFSA (10-130)
310-330206-3	HA-06-1	54.1	70.9
310-330206-9	HA-03-1		
310-330206-9 - RE	HA-03-1	65.7	65.7
310-330206-11	HA-01-1	50.9	78.1
310-330206-11 - DL	HA-01-1	53.2	69.3
310-330206-17	HA-09-1	73.8	85.0
310-330206-20	SS-01	47.5	56.3
310-330206-21	SS-02	55.9	64.7
310-330206-22	SS-03	81.3	71.8
310-330206-23	HA-10-1	83.8	80.8
310-330206-24	HA-10-3	45.9	63.7
310-330206-25	HA-11-1	98.0	82.3
310-330206-26	HA-11-3	52.8	68.0
310-330206-27	HA-12-1	81.4	73.9
310-330206-28	HA-12-3	29.5	60.0
310-330206-29	HA-13-1	56.7	64.8
MB 240-699578/1-A	Method Blank	45.8	47.4
MB 240-699767/1-A	Method Blank	47.2	77.7
MB 240-700122/1-A	Method Blank	77.4	69.2

Surrogate Legend

PFOSA = 13C8 FOSA
M102FTS = 13C2 10:2 FTS
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
PFBA = 13C4 PFBA
C3PFBS = 13C3 PFBS
C6PFDA = 13C6 PFDA
PFDoDA = 13C2-PFDoA
C4PFHA = 13C4 PFHpA
13C5PHA = 13C5 PFHxA

Isotope Dilution Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-1
Project/Site: Duluth Airport Taxiway A

C3PFHS = 13C3 PFHxS
C9PFNA = 13C9 PFNA
C8PFOA = 13C8 PFOA
C8PFOS = 13C8 PFOS
PFPeA = 13C5 PFPeA
13C3-PFPrS = 13C3-PFPrS
PFTDA = 13C2 PFTeDA
13C7PUA = 13C7 PFUnA
d5NEFOS = d5-NEtFOSAA
NEFM = d9-N-EtFOSE-M
d5NPFSA = d5-NEtPFOSA
d3NMFOS = d3-NMeFOSAA
NMFM = d7-N-MeFOSE-M
d3NMFSA = d3-NMePFOSA

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Matrix: Solid **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFOSA	M102FTS	M242FTS	M262FTS	M282FTS	HFPODA	PFBA	C3PFBS
Lab Sample ID	Client Sample ID	(40-130)	(10-200)	(40-165)	(40-215)	(40-275)	(40-130)	(8-130)	(40-135)
LCS 240-699578/3-A	Lab Control Sample	86.7	90.3	109	94.9	88.8	65.6	71.0	88.1
LCS 240-699767/3-A	Lab Control Sample	83.9	66.8	80.0	78.0	69.2	79.8	80.1	82.6
LCS 240-700122/3-A	Lab Control Sample	76.1	70.7	68.3	72.8	73.2	69.1	68.0	71.1
LLCS 240-699578/2-A	Lab Control Sample	71.0	74.8	88.0	77.3	73.7	61.0	60.5	74.3
LLCS 240-699767/2-A	Lab Control Sample	104	60.9	91.9	94.0	72.6	95.6	95.5	97.9
LLCS 240-700122/2-A	Lab Control Sample	77.8	77.5	72.1	78.1	79.2	74.6	74.0	77.0

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		C6PFDA	PFDoDA	C4PFHA	13C5PHA	C3PFHS	C9PFNA	C8PFOA	C8PFOS
Lab Sample ID	Client Sample ID	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)
LCS 240-699578/3-A	Lab Control Sample	74.6	73.4	81.5	72.6	94.0	82.1	71.5	89.2
LCS 240-699767/3-A	Lab Control Sample	78.5	75.0	76.9	83.4	79.2	78.7	76.5	65.3
LCS 240-700122/3-A	Lab Control Sample	75.1	73.7	73.5	71.5	72.4	74.1	68.0	64.6
LLCS 240-699578/2-A	Lab Control Sample	64.4	62.2	70.6	65.0	76.4	66.7	58.3	72.9
LLCS 240-699767/2-A	Lab Control Sample	95.3	85.6	98.1	98.4	97.8	99.4	91.5	84.6
LLCS 240-700122/2-A	Lab Control Sample	76.4	77.7	75.2	77.2	76.6	77.4	71.0	66.9

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFPeA	13C3-PFPrS	PFTDA	13C7PUA	d5NEFOS	NEFM	d5NPFSA	d3NMFOS
Lab Sample ID	Client Sample ID	(35-130)	(20-150)	(20-130)	(40-130)	(40-150)	(15-130)	(10-130)	(40-135)
LCS 240-699578/3-A	Lab Control Sample	82.8	71.2	72.6	73.5	93.1	54.5	71.5	98.0
LCS 240-699767/3-A	Lab Control Sample	85.9	74.3	91.5	74.8	69.8	68.4	68.0	71.6
LCS 240-700122/3-A	Lab Control Sample	78.4	65.9	81.6	72.7	72.3	48.9	76.4	71.6
LLCS 240-699578/2-A	Lab Control Sample	72.4	60.6	73.4	58.6	78.7	59.7	59.4	80.4
LLCS 240-699767/2-A	Lab Control Sample	110	87.4	103	86.4	72.4	58.8	97.2	77.1
LLCS 240-700122/2-A	Lab Control Sample	83.7	72.0	96.4	76.5	75.2	73.8	72.4	73.4

		Percent Isotope Dilution Recovery (Acceptance Limits)	
		NMFM	d3NMFSA
Lab Sample ID	Client Sample ID	(20-130)	(10-130)
LCS 240-699578/3-A	Lab Control Sample	58.9	71.0
LCS 240-699767/3-A	Lab Control Sample	67.0	70.1
LCS 240-700122/3-A	Lab Control Sample	48.8	74.0
LLCS 240-699578/2-A	Lab Control Sample	59.2	58.6
LLCS 240-699767/2-A	Lab Control Sample	57.5	103
LLCS 240-700122/2-A	Lab Control Sample	70.2	70.0

Surrogate Legend

Isotope Dilution Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-1
Project/Site: Duluth Airport Taxiway A

PFOSA = 13C8 FOSA
M102FTS = 13C2 10:2 FTS
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
PFBA = 13C4 PFBA
C3PFBS = 13C3 PFBS
C6PFDA = 13C6 PFDA
PFDoDA = 13C2-PFDoA
C4PFHA = 13C4 PFHpA
13C5PHA = 13C5 PFHxA
C3PFHS = 13C3 PFHxS
C9PFNA = 13C9 PFNA
C8PFOA = 13C8 PFOA
C8PFOS = 13C8 PFOS
PFPeA = 13C5 PFPeA
13C3-PFPrS = 13C3-PFPrS
PFTDA = 13C2 PFTeDA
13C7PUA = 13C7 PFUnA
d5NEFOS = d5-NEtFOSAA
NEFM = d9-N-EtFOSE-M
d5NPFSA = d5-NEtPFOSA
d3NMFOS = d3-NMeFOSAA
NMFM = d7-N-MeFOSE-M
d3NMFSA = d3-NMePFOSA

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFOSA	M102FTS	M242FTS	M262FTS	M282FTS	HFPODA	PFBA	C3PFBS
Lab Sample ID	Client Sample ID	(40-130)	(40-200)	(40-200)	(40-200)	(40-300)	(40-130)	(5-130)	(40-135)
310-330206-19	WS-01	78.0	67.2	113	96.1	84.1	80.7	78.4	77.8
310-330206-31	Rinsate Blank	89.7	88.7	111	95.2	95.4	96.2	87.9	89.1
MB 240-699234/1-A	Method Blank	51.2	62.1	56.3	51.0	53.1	54.9	47.4	48.3

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		C6PFDA	PFDoDA	C4PFHA	13C5PHA	C3PFHS	C9PFNA	C8PFOA	C8PFOS
Lab Sample ID	Client Sample ID	(40-130)	(10-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)
310-330206-19	WS-01	74.4	60.1	85.1	87.2	84.4	83.5	91.8	84.9
310-330206-31	Rinsate Blank	86.4	69.8	97.2	105	92.4	90.1	102	91.4
MB 240-699234/1-A	Method Blank	52.3	57.3	53.4	58.9	49.5	50.4	52.6	54.3

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFPeA	13C3-PFPrS	PFTDA	13C7PUA	d5NEFOS	NEFM	d5NPFSA	d3NMFOS
Lab Sample ID	Client Sample ID	(40-130)	(20-150)	(10-130)	(30-130)	(25-135)	(10-130)	(10-130)	(40-170)
310-330206-19	WS-01	89.9	84.1	55.4	69.6	71.4	26.7	61.9	75.0
310-330206-31	Rinsate Blank	98.4	80.8	74.0	77.7	91.3	38.7	66.6	59.8
MB 240-699234/1-A	Method Blank	56.0	39.9	61.7	59.3	64.5	45.3	46.1	62.9

		Percent Isotope Dilution Recovery (Acceptance Limits)	
		NMFM	d3NMFSA
Lab Sample ID	Client Sample ID	(10-130)	(10-130)
310-330206-19	WS-01	28.6	66.9
310-330206-31	Rinsate Blank	41.4	75.0
MB 240-699234/1-A	Method Blank	44.5	49.3

Surrogate Legend

PFOSA = 13C8 FOSA
M102FTS = 13C2 10:2 FTS
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
PFBA = 13C4 PFBA
C3PFBS = 13C3 PFBS
C6PFDA = 13C6 PFDA
PFDoDA = 13C2-PFDoA
C4PFHA = 13C4 PFHpA
13C5PHA = 13C5 PFHxA
C3PFHS = 13C3 PFHxS
C9PFNA = 13C9 PFNA
C8PFOA = 13C8 PFOA
C8PFOS = 13C8 PFOS
PFPeA = 13C5 PFPeA
13C3-PFPrS = 13C3-PFPrS
PFTDA = 13C2 PFTeDA
13C7PUA = 13C7 PFUnA
d5NEFOS = d5-NEtFOSAA
NEFM = d9-N-EtFOSE-M
d5NPFSA = d5-NEtPFOSA
d3NMFOS = d3-NMeFOSAA
NMFM = d7-N-MeFOSE-M
d3NMFSA = d3-NMePFOSA

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFOSA	M102FTS	M242FTS	M262FTS	M282FTS	HFPODA	PFBA	C3PFBS
Lab Sample ID	Client Sample ID	(40-130)	(10-200)	(40-200)	(40-200)	(40-300)	(40-130)	(5-130)	(40-135)
LCS 240-699234/3-A	Lab Control Sample	96.3	96.1	118	105	98.4	102	99.7	103
LLCS 240-699234/2-A	Lab Control Sample	74.8	76.0	95.2	82.7	77.7	87.0	82.0	80.1

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		C6PFDA	PFDoDA	C4PFHA	13C5PHA	C3PFHS	C9PFNA	C8PFOA	C8PFOS
Lab Sample ID	Client Sample ID	(40-130)	(10-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)
LCS 240-699234/3-A	Lab Control Sample	98.7	86.7	104	105	104	101	110	108
LLCS 240-699234/2-A	Lab Control Sample	76.0	68.5	89.6	99.8	81.6	81.4	89.4	83.9

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFPeA	13C3-PFPrS	PFTDA	13C7PUA	d5NEFOS	NEFM	d5NPFSA	d3NMFOS
Lab Sample ID	Client Sample ID	(40-130)	(20-150)	(10-130)	(30-130)	(25-135)	(10-130)	(10-130)	(40-170)
LCS 240-699234/3-A	Lab Control Sample	110	94.9	91.5	95.8	94.5	55.5	75.7	99.9
LLCS 240-699234/2-A	Lab Control Sample	96.5	72.8	71.2	73.9	73.1	43.4	55.7	76.2

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		NMFM	d3NMFSA						
Lab Sample ID	Client Sample ID	(10-130)	(10-130)						
LCS 240-699234/3-A	Lab Control Sample	56.0	87.0						
LLCS 240-699234/2-A	Lab Control Sample	46.6	59.4						

Surrogate Legend

PFOSA = 13C8 FOSA
M102FTS = 13C2 10:2 FTS
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS

Isotope Dilution Summary

Client: Short Elliott Hendrickson, Inc. dba SEH

Job ID: 310-330206-1

Project/Site: Duluth Airport Taxiway A

M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
PFBA = 13C4 PFBA
C3PFBS = 13C3 PFBS
C6PFDA = 13C6 PFDA
PFDoDA = 13C2-PFDoA
C4PFHA = 13C4 PFHpA
13C5PHA = 13C5 PFHxA
C3PFHS = 13C3 PFHxS
C9PFNA = 13C9 PFNA
C8PFOA = 13C8 PFOA
C8PFOS = 13C8 PFOS
PFPeA = 13C5 PFPeA
13C3-PFPrS = 13C3-PFPrS
PFTDA = 13C2 PFTeDA
13C7PUA = 13C7 PFUnA
d5NEFOS = d5-NEtFOSAA
NEFM = d9-N-EtFOSE-M
d5NPFSA = d5-NEtPFOSA
d3NMFOS = d3-NMeFOSAA
NMFM = d7-N-MeFOSE-M
d3NMFSA = d3-NMePFOSA

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ANALYTICAL REPORT

PREPARED FOR

Attn: Keri Aufdencamp
Short Elliott Hendrickson, Inc. dba SEH
3535 Vadnais Center Drive
St. Paul, Minnesota 55110

Generated 5/11/2026 7:09:34 AM

JOB DESCRIPTION

Duluth Airport Taxiway A

JOB NUMBER

310-330206-2

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613

See page two for job notes and contact information.

my EOL

Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization

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Authorized for release by
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Job Narrative
310-330206-2

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The samples were received on 4/22/2026 1:20 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.9°C, 4.0°C, 4.3°C and 5.1°C.

PFAS
Method 1633A: The continuing calibration verification (CCV) recovered outside of control limits for IDA compound(s) (flagged). Section 14.3.3 of the finalized EPA 1633 states that the recovery of target analytes for the CCV(s) must be within 70 - 130%, unless the analyte is not of concern for a given project. Since target analyte(s) associated with this IDA are within spec, data is reported. The following sample is impacted: HA-07-2.5 (310-330206-16).

Method 1633A: The continuing calibration verification (CCV) recovered outside of control limits for IDA compound(s) (flagged). Section 14.3.3 of the finalized EPA 1633 states that the recovery of target analytes for the CCV(s) must be within 70 - 130%, unless the analyte is not of concern for a given project. Since target analytes associated with this IDA are within spec, data is reported. The following sample is impacted: HA-07-1 (310-330206-15).

Method 1633A: Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the Continuing Calibration Blank (CCB). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries. The CCB is non- detect for associated target analyte(s), therefore, the associated samples are reported. The following sample is affected: HA-07-1 (310-330206-15).

Method 1633A: The continuing calibration verification (CCV) associated with batch 240-699825 recovered above the upper control limit for Nonafluoro-3,6-dioxaheptanoic acid (NFDHA). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are:HA-08-1 (310-330206-1), HA-08-3 (310-330206-2), HA-01-3 (310-330206-12), HA-02-1 (310-330206-13) and HA-02-3 (310-330206-14).

Method 1633A: The continuing calibration verification (CCV) recovered outside of control limits for IDA compound(s) (flagged). Section 14.3.3 of the finalized EPA 1633 states that the recovery of target analytes for the CCV must be within 70 - 130%, unless the analyte is not of concern for a given project. Since target analyte(s) associated with this IDA are within spec, data is reported. The following samples are impacted: HA-08-1 (310-330206-1), HA-08-3 (310-330206-2), HA-01-3 (310-330206-12), HA-02-1 (310-330206-13) and HA-02-3 (310-330206-14).

Method 1633A: The low level continuing calibration verification (CCVL) associated with batch 240-699827 recovered outside of control limits for IDA compound(s) (flagged). Section 14.3.3 of the finalized EPA 1633 states that the recovery of target analytes for the CCV(s) must be within 70 - 130%, unless the analyte is not of concern for a given project. Since target analytes associated with this IDA are within spec, data is reported.

Method 1633A: The continuing calibration verification (CCV) associated with batch 240-700756 recovered above the upper control limit for 3-Perfluoropropylpropanoic acid (3:3 FTCA). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Sample Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-2
Project/Site: Duluth Airport Taxiway A

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
310-330206-1	HA-08-1	Solid	04/20/26 10:20	04/22/26 13:20	Minnesota
310-330206-2	HA-08-3	Solid	04/20/26 10:25	04/22/26 13:20	Minnesota
310-330206-12	HA-01-3	Solid	04/20/26 12:20	04/22/26 13:20	Minnesota
310-330206-13	HA-02-1	Solid	04/20/26 12:35	04/22/26 13:20	Minnesota
310-330206-14	HA-02-3	Solid	04/20/26 12:40	04/22/26 13:20	Minnesota
310-330206-15	HA-07-1	Solid	04/20/26 12:55	04/22/26 13:20	Minnesota
310-330206-16	HA-07-2.5	Solid	04/20/26 13:00	04/22/26 13:20	Minnesota
310-330206-18	HA-09-3	Solid	04/20/26 13:20	04/22/26 13:20	Minnesota

Detection Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-2
Project/Site: Duluth Airport Taxiway A

Client Sample ID: HA-08-1 — Lab Sample ID: 310-330206-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	1.46		0.262		ng/g	1	☼	1633A	Total/NA

Client Sample ID: HA-08-3 — Lab Sample ID: 310-330206-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.581		0.227		ng/g	1	☼	1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.18		0.227		ng/g	1	☼	1633A	Total/NA

Client Sample ID: HA-01-3 — Lab Sample ID: 310-330206-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorodecanesulfonic acid (PFDS)	0.301		0.232		ng/g	1	☼	1633A	Total/NA
Perfluorodecanoic acid (PFDA)	4.98		0.232		ng/g	1	☼	1633A	Total/NA
Perfluorododecanoic acid (PFDoA)	2.07		0.232		ng/g	1	☼	1633A	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	3.14		0.232		ng/g	1	☼	1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.317		0.232		ng/g	1	☼	1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	10.9		0.232		ng/g	1	☼	1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	0.430		0.232		ng/g	1	☼	1633A	Total/NA
Perfluorononanesulfonic acid (PFNS)	0.312		0.232		ng/g	1	☼	1633A	Total/NA
Perfluorononanoic acid (PFNA)	1.46		0.232		ng/g	1	☼	1633A	Total/NA
Perfluorooctanoic acid (PFOA)	4.34		0.232		ng/g	1	☼	1633A	Total/NA
Perfluoropentanoic acid (PFPeA)	0.260		0.232		ng/g	1	☼	1633A	Total/NA
Perfluorotetradecanoic acid (PFTeDA)	0.437		0.232		ng/g	1	☼	1633A	Total/NA
Perfluoroundecanoic acid (PFUnA)	0.637		0.232		ng/g	1	☼	1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	180		1.16		ng/g	5	☼	1633A	Total/NA

Client Sample ID: HA-02-1 — Lab Sample ID: 310-330206-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.872		0.223		ng/g	1	☼	1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.35		0.223		ng/g	1	☼	1633A	Total/NA
Perfluorooctanoic acid (PFOA)	0.366		0.223		ng/g	1	☼	1633A	Total/NA

Client Sample ID: HA-02-3 — Lab Sample ID: 310-330206-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.292		0.218		ng/g	1	☼	1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.81		0.218		ng/g	1	☼	1633A	Total/NA

Client Sample ID: HA-07-1 — Lab Sample ID: 310-330206-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	2.73		0.215		ng/g	1	☼	1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	0.372		0.215		ng/g	1	☼	1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	27.4		0.215		ng/g	1	☼	1633A	Total/NA
Perfluorooctanoic acid (PFOA)	0.372		0.215		ng/g	1	☼	1633A	Total/NA

Client Sample ID: HA-07-2.5 — Lab Sample ID: 310-330206-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	5.42		0.219		ng/g	1	☼	1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	0.492		0.219		ng/g	1	☼	1633A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: HA-07-2.5 (Continued)
Lab Sample ID: 310-330206-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	11.3		0.219		ng/g	1	☼	1633A	Total/NA
Perfluorooctanoic acid (PFOA)	1.24		0.219		ng/g	1	☼	1633A	Total/NA

Client Sample ID: HA-09-3
Lab Sample ID: 310-330206-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanesulfonic acid (PFHpS)	0.358		0.240		ng/g	1	☼	1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	14.6		0.240		ng/g	1	☼	1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	0.611		0.240		ng/g	1	☼	1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	11.4		0.240		ng/g	1	☼	1633A	Total/NA
Perfluorooctanoic acid (PFOA)	0.892		0.240		ng/g	1	☼	1633A	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-2

Client Sample ID: HA-08-1
Date Collected: 04/20/26 10:20
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-1
Matrix: Solid
Percent Solids: 75.2

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.524		0.524		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.524		0.524		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.524		0.524		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.31		1.31		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.31		1.31		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
Perfluorobutanesulfonic acid (PFBS)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
Perfluorobutanoic acid (PFBA)	<0.524		0.524		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
Perfluorodecanesulfonic acid (PFDS)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
Perfluorodecanoic acid (PFDA)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
Perfluorododecanesulfonic acid (PFDoS)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
Perfluorododecanoic acid (PFDoA)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
Perfluoroheptanoic acid (PFHpA)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.31		1.31		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
Perfluorohexanesulfonic acid (PFHxS)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
Perfluorohexanoic acid (PFHxA)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
Perfluorononanesulfonic acid (PFNS)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
Perfluorononanoic acid (PFNA)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
Perfluorooctanesulfonamide (PFOSA)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
Perfluorooctanesulfonic acid (PFOS)	**1.46**		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
Perfluorooctanoic acid (PFOA)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1

Client Sample ID: HA-08-1
Lab Sample ID: 310-330206-1
Date Collected: 04/20/26 10:20
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 75.2

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
Perfluoropentanoic acid (PFPeA)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.31		1.31		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.524		0.524		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
Perfluorotetradecanoic acid (PFTeDA)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
Perfluorotridecanoic acid (PFTrDA)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1
Perfluoroundecanoic acid (PFUnA)	<0.262		0.262		ng/g	☼	04/29/26 08:25	04/29/26 18:02	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*86.3*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:02*	*1*
13C2 10:2 FTS	*69.0*		*40 - 275*	*04/29/26 08:25*	*04/29/26 18:02*	*1*
13C2 4:2 FTS	*68.8*		*40 - 165*	*04/29/26 08:25*	*04/29/26 18:02*	*1*
13C2 6:2 FTS	*72.7*		*40 - 215*	*04/29/26 08:25*	*04/29/26 18:02*	*1*
13C2 8:2 FTS	*67.8*		*40 - 275*	*04/29/26 08:25*	*04/29/26 18:02*	*1*
13C3 HFPO-DA	*71.0*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:02*	*1*
13C4 PFBA	*75.2*		*8 - 130*	*04/29/26 08:25*	*04/29/26 18:02*	*1*
13C3 PFBS	*75.0*		*40 - 135*	*04/29/26 08:25*	*04/29/26 18:02*	*1*
13C6 PFDA	*82.1*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:02*	*1*
13C2-PFDoA	*75.8*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:02*	*1*
13C4 PFHpA	*73.7*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:02*	*1*
13C5 PFHxA	*72.7*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:02*	*1*
13C3 PFHxS	*74.8*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:02*	*1*
13C9 PFNA	*79.0*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:02*	*1*
13C8 PFOA	*71.3*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:02*	*1*
13C8 PFOS	*65.8*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:02*	*1*
13C5 PFPeA	*83.1*		*35 - 130*	*04/29/26 08:25*	*04/29/26 18:02*	*1*
13C3-PFPrS	*67.4*		*20 - 150*	*04/29/26 08:25*	*04/29/26 18:02*	*1*
13C2 PFTeDA	*76.8*		*20 - 130*	*04/29/26 08:25*	*04/29/26 18:02*	*1*
13C7 PFUnA	*74.8*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:02*	*1*
d5-NEtFOSAA	*69.2*		*40 - 150*	*04/29/26 08:25*	*04/29/26 18:02*	*1*
d9-N-EtFOSE-M	*56.1*		*15 - 130*	*04/29/26 08:25*	*04/29/26 18:02*	*1*
d5-NEtPFOSA	*74.2*		*10 - 130*	*04/29/26 08:25*	*04/29/26 18:02*	*1*
d3-NMeFOSAA	*71.2*		*40 - 135*	*04/29/26 08:25*	*04/29/26 18:02*	*1*
d7-N-MeFOSE-M	*52.9*		*20 - 130*	*04/29/26 08:25*	*04/29/26 18:02*	*1*
d3-NMePFOSA	*70.9*		*10 - 130*	*04/29/26 08:25*	*04/29/26 18:02*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-2

Client Sample ID: HA-08-3
Date Collected: 04/20/26 10:25
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-2
Matrix: Solid
Percent Solids: 85.8

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.455		0.455		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.455		0.455		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.455		0.455		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.14		1.14		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.14		1.14		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
Perfluorobutanesulfonic acid (PFBS)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
Perfluorobutanoic acid (PFBA)	<0.455		0.455		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
Perfluorodecanesulfonic acid (PFDS)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
Perfluorodecanoic acid (PFDA)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
Perfluorododecanesulfonic acid (PFDoS)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
Perfluorododecanoic acid (PFDoA)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
Perfluoroheptanoic acid (PFHpA)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.14		1.14		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
Perfluorohexanesulfonic acid (PFHxS)	**0.581**		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
Perfluorohexanoic acid (PFHxA)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
Perfluorononanesulfonic acid (PFNS)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
Perfluorononanoic acid (PFNA)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
Perfluorooctanesulfonamide (PFOSA)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
Perfluorooctanesulfonic acid (PFOS)	**1.18**		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
Perfluorooctanoic acid (PFOA)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1

Client Sample ID: HA-08-3
Lab Sample ID: 310-330206-2
Date Collected: 04/20/26 10:25
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 85.8

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
Perfluoropentanoic acid (PFPeA)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.14		1.14		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.455		0.455		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
Perfluorotetradecanoic acid (PFTeDA)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
Perfluorotridecanoic acid (PFTrDA)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1
Perfluoroundecanoic acid (PFUnA)	<0.227		0.227		ng/g	☼	04/29/26 08:25	04/29/26 18:19	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*86.0*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:19*	*1*
13C2 10:2 FTS	*58.6*		*40 - 275*	*04/29/26 08:25*	*04/29/26 18:19*	*1*
13C2 4:2 FTS	*66.0*		*40 - 165*	*04/29/26 08:25*	*04/29/26 18:19*	*1*
13C2 6:2 FTS	*65.2*		*40 - 215*	*04/29/26 08:25*	*04/29/26 18:19*	*1*
13C2 8:2 FTS	*60.2*		*40 - 275*	*04/29/26 08:25*	*04/29/26 18:19*	*1*
13C3 HFPO-DA	*83.6*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:19*	*1*
13C4 PFBA	*85.9*		*8 - 130*	*04/29/26 08:25*	*04/29/26 18:19*	*1*
13C3 PFBS	*77.8*		*40 - 135*	*04/29/26 08:25*	*04/29/26 18:19*	*1*
13C6 PFDA	*84.6*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:19*	*1*
13C2-PFDoA	*80.2*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:19*	*1*
13C4 PFHpA	*81.1*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:19*	*1*
13C5 PFHxA	*81.1*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:19*	*1*
13C3 PFHxS	*79.2*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:19*	*1*
13C9 PFNA	*83.5*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:19*	*1*
13C8 PFOA	*75.8*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:19*	*1*
13C8 PFOS	*68.6*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:19*	*1*
13C5 PFPeA	*98.1*		*35 - 130*	*04/29/26 08:25*	*04/29/26 18:19*	*1*
13C3-PFPrS	*74.2*		*20 - 150*	*04/29/26 08:25*	*04/29/26 18:19*	*1*
13C2 PFTeDA	*107*		*20 - 130*	*04/29/26 08:25*	*04/29/26 18:19*	*1*
13C7 PFUnA	*77.5*		*40 - 130*	*04/29/26 08:25*	*04/29/26 18:19*	*1*
d5-NEtFOSAA	*60.3*		*40 - 150*	*04/29/26 08:25*	*04/29/26 18:19*	*1*
d9-N-EtFOSE-M	*61.5*		*15 - 130*	*04/29/26 08:25*	*04/29/26 18:19*	*1*
d5-NEtPFOSA	*87.6*		*10 - 130*	*04/29/26 08:25*	*04/29/26 18:19*	*1*
d3-NMeFOSAA	*62.0*		*40 - 135*	*04/29/26 08:25*	*04/29/26 18:19*	*1*
d7-N-MeFOSE-M	*60.0*		*20 - 130*	*04/29/26 08:25*	*04/29/26 18:19*	*1*
d3-NMePFOSA	*84.4*		*10 - 130*	*04/29/26 08:25*	*04/29/26 18:19*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-2

Client Sample ID: HA-01-3
Date Collected: 04/20/26 12:20
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-12
Matrix: Solid
Percent Solids: 83.0

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.232		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.232		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.232		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.232		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.463		0.463		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.463		0.463		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.463		0.463		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.232		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.232		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.16		1.16		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.232		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.232		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.16		1.16		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.232		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
Perfluorobutanesulfonic acid (PFBS)	<0.232		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
Perfluorobutanoic acid (PFBA)	<0.463		0.463		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
Perfluorodecanesulfonic acid (PFDS)	**0.301**		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
Perfluorodecanoic acid (PFDA)	**4.98**		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
Perfluorododecanesulfonic acid (PFDoS)	<0.232		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
Perfluorododecanoic acid (PFDoA)	**2.07**		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.232		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
Perfluoroheptanesulfonic acid (PFHpS)	**3.14**		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
Perfluoroheptanoic acid (PFHpA)	**0.317**		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.16		1.16		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
Perfluorohexanesulfonic acid (PFHxS)	**10.9**		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
Perfluorohexanoic acid (PFHxA)	**0.430**		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.232		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.232		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
Perfluorononanesulfonic acid (PFNS)	**0.312**		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
Perfluorononanoic acid (PFNA)	**1.46**		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
Perfluorooctanesulfonamide (PFOSA)	<0.232		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-2

Client Sample ID: HA-01-3
Date Collected: 04/20/26 12:20
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-12
Matrix: Solid
Percent Solids: 83.0

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	**4.34**		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
Perfluoropentanesulfonic acid (PFPeS)	<0.232		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
Perfluoropentanoic acid (PFPeA)	**0.260**		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.16		1.16		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.463		0.463		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
Perfluorotetradecanoic acid (PFTeDA)	**0.437**		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
Perfluorotridecanoic acid (PFTrDA)	<0.232		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1
Perfluoroundecanoic acid (PFUnA)	**0.637**		0.232		ng/g	☼	04/29/26 08:25	04/29/26 21:38	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*85.7*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:38*	*1*
13C2 10:2 FTS	*52.3*		*40 - 275*	*04/29/26 08:25*	*04/29/26 21:38*	*1*
13C2 4:2 FTS	*57.1*		*40 - 165*	*04/29/26 08:25*	*04/29/26 21:38*	*1*
13C2 6:2 FTS	*61.6*		*40 - 215*	*04/29/26 08:25*	*04/29/26 21:38*	*1*
13C2 8:2 FTS	*53.6*		*40 - 275*	*04/29/26 08:25*	*04/29/26 21:38*	*1*
13C3 HFPO-DA	*80.6*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:38*	*1*
13C4 PFBA	*79.2*		*8 - 130*	*04/29/26 08:25*	*04/29/26 21:38*	*1*
13C3 PFBS	*71.6*		*40 - 135*	*04/29/26 08:25*	*04/29/26 21:38*	*1*
13C6 PFDA	*83.7*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:38*	*1*
13C2-PFDoA	*78.7*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:38*	*1*
13C4 PFHpA	*77.9*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:38*	*1*
13C5 PFHxA	*77.7*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:38*	*1*
13C3 PFHxS	*74.9*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:38*	*1*
13C9 PFNA	*80.5*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:38*	*1*
13C8 PFOA	*72.5*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:38*	*1*
13C8 PFOS	*68.0*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:38*	*1*
13C5 PFPeA	*86.8*		*35 - 130*	*04/29/26 08:25*	*04/29/26 21:38*	*1*
13C3-PFPrS	*68.9*		*20 - 150*	*04/29/26 08:25*	*04/29/26 21:38*	*1*
13C2 PFTeDA	*109*		*20 - 130*	*04/29/26 08:25*	*04/29/26 21:38*	*1*
13C7 PFUnA	*77.1*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:38*	*1*
d5-NEtFOSAA	*58.3*		*40 - 150*	*04/29/26 08:25*	*04/29/26 21:38*	*1*
d9-N-EtFOSE-M	*62.6*		*15 - 130*	*04/29/26 08:25*	*04/29/26 21:38*	*1*
d5-NEtPFOSA	*83.8*		*10 - 130*	*04/29/26 08:25*	*04/29/26 21:38*	*1*
d3-NMeFOSAA	*65.5*		*40 - 135*	*04/29/26 08:25*	*04/29/26 21:38*	*1*
d7-N-MeFOSE-M	*67.5*		*20 - 130*	*04/29/26 08:25*	*04/29/26 21:38*	*1*
d3-NMePFOSA	*79.4*		*10 - 130*	*04/29/26 08:25*	*04/29/26 21:38*	*1*

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	**180**		1.16		ng/g	☼	04/29/26 08:25	05/01/26 21:33	5

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*82.4*		*40 - 130*	*04/29/26 08:25*	*05/01/26 21:33*	*5*
13C2 10:2 FTS	*68.5*		*40 - 275*	*04/29/26 08:25*	*05/01/26 21:33*	*5*
13C2 4:2 FTS	*71.7*		*40 - 165*	*04/29/26 08:25*	*05/01/26 21:33*	*5*
13C2 6:2 FTS	*72.1*		*40 - 215*	*04/29/26 08:25*	*05/01/26 21:33*	*5*
13C2 8:2 FTS	*66.1*		*40 - 275*	*04/29/26 08:25*	*05/01/26 21:33*	*5*

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-2
Project/Site: Duluth Airport Taxiway A

Client Sample ID: HA-01-3
Lab Sample ID: 310-330206-12
Date Collected: 04/20/26 12:20
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 83.0

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A - DL (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	86.0		40 - 130	04/29/26 08:25	05/01/26 21:33	5
13C4 PFBA	79.1		8 - 130	04/29/26 08:25	05/01/26 21:33	5
13C3 PFBS	77.1		40 - 135	04/29/26 08:25	05/01/26 21:33	5
13C6 PFDA	83.7		40 - 130	04/29/26 08:25	05/01/26 21:33	5
13C2-PFDoA	81.1		40 - 130	04/29/26 08:25	05/01/26 21:33	5
13C4 PFHpA	83.3		40 - 130	04/29/26 08:25	05/01/26 21:33	5
13C5 PFHxA	86.6		40 - 130	04/29/26 08:25	05/01/26 21:33	5
13C3 PFHxS	76.4		40 - 130	04/29/26 08:25	05/01/26 21:33	5
13C9 PFNA	81.0		40 - 130	04/29/26 08:25	05/01/26 21:33	5
13C8 PFOA	81.1		40 - 130	04/29/26 08:25	05/01/26 21:33	5
13C8 PFOS	65.5		40 - 130	04/29/26 08:25	05/01/26 21:33	5
13C5 PFPeA	84.9		35 - 130	04/29/26 08:25	05/01/26 21:33	5
13C3-PFPrS	78.6		20 - 150	04/29/26 08:25	05/01/26 21:33	5
13C2 PFTeDA	100		20 - 130	04/29/26 08:25	05/01/26 21:33	5
13C7 PFUnA	85.9		40 - 130	04/29/26 08:25	05/01/26 21:33	5
d5-NEtFOSAA	67.5		40 - 150	04/29/26 08:25	05/01/26 21:33	5
d9-N-EtFOSE-M	70.1		15 - 130	04/29/26 08:25	05/01/26 21:33	5
d5-NEtPFOSA	73.2		10 - 130	04/29/26 08:25	05/01/26 21:33	5
d3-NMeFOSAA	69.9		40 - 135	04/29/26 08:25	05/01/26 21:33	5
d7-N-MeFOSE-M	68.7		20 - 130	04/29/26 08:25	05/01/26 21:33	5
d3-NMePFOSA	71.5		10 - 130	04/29/26 08:25	05/01/26 21:33	5

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-2

Client Sample ID: HA-02-1
Date Collected: 04/20/26 12:35
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-13
Matrix: Solid
Percent Solids: 86.6

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.446		0.446		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.446		0.446		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.446		0.446		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.12		1.12		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.12		1.12		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
Perfluorobutanesulfonic acid (PFBS)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
Perfluorobutanoic acid (PFBA)	<0.446		0.446		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
Perfluorodecanesulfonic acid (PFDS)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
Perfluorodecanoic acid (PFDA)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
Perfluorododecanesulfonic acid (PFDoS)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
Perfluorododecanoic acid (PFDoA)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
Perfluoroheptanoic acid (PFHpA)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.12		1.12		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
Perfluorohexanesulfonic acid (PFHxS)	**0.872**		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
Perfluorohexanoic acid (PFHxA)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
Perfluorononanesulfonic acid (PFNS)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
Perfluorononanoic acid (PFNA)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
Perfluorooctanesulfonamide (PFOSA)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
Perfluorooctanesulfonic acid (PFOS)	**5.35**		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
Perfluorooctanoic acid (PFOA)	**0.366**		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1

Client Sample ID: HA-02-1
Lab Sample ID: 310-330206-13
Date Collected: 04/20/26 12:35
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 86.6

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
Perfluoropentanoic acid (PFPeA)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.12		1.12		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.446		0.446		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
Perfluorotetradecanoic acid (PFTeDA)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
Perfluorotridecanoic acid (PFTrDA)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1
Perfluoroundecanoic acid (PFUnA)	<0.223		0.223		ng/g	☼	04/29/26 08:25	04/29/26 21:54	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*81.6*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:54*	*1*
13C2 10:2 FTS	*56.8*		*40 - 275*	*04/29/26 08:25*	*04/29/26 21:54*	*1*
13C2 4:2 FTS	*81.6*		*40 - 165*	*04/29/26 08:25*	*04/29/26 21:54*	*1*
13C2 6:2 FTS	*62.7*		*40 - 215*	*04/29/26 08:25*	*04/29/26 21:54*	*1*
13C2 8:2 FTS	*60.6*		*40 - 275*	*04/29/26 08:25*	*04/29/26 21:54*	*1*
13C3 HFPO-DA	*77.1*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:54*	*1*
13C4 PFBA	*80.5*		*8 - 130*	*04/29/26 08:25*	*04/29/26 21:54*	*1*
13C3 PFBS	*87.4*		*40 - 135*	*04/29/26 08:25*	*04/29/26 21:54*	*1*
13C6 PFDA	*87.3*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:54*	*1*
13C2-PFDoA	*83.1*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:54*	*1*
13C4 PFHpA	*80.2*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:54*	*1*
13C5 PFHxA	*79.0*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:54*	*1*
13C3 PFHxS	*78.8*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:54*	*1*
13C9 PFNA	*83.2*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:54*	*1*
13C8 PFOA	*75.5*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:54*	*1*
13C8 PFOS	*69.0*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:54*	*1*
13C5 PFPeA	*93.5*		*35 - 130*	*04/29/26 08:25*	*04/29/26 21:54*	*1*
13C3-PFPrS	*69.0*		*20 - 150*	*04/29/26 08:25*	*04/29/26 21:54*	*1*
13C2 PFTeDA	*113*		*20 - 130*	*04/29/26 08:25*	*04/29/26 21:54*	*1*
13C7 PFUnA	*78.2*		*40 - 130*	*04/29/26 08:25*	*04/29/26 21:54*	*1*
d5-NEtFOSAA	*57.5*		*40 - 150*	*04/29/26 08:25*	*04/29/26 21:54*	*1*
d9-N-EtFOSE-M	*70.7*		*15 - 130*	*04/29/26 08:25*	*04/29/26 21:54*	*1*
d5-NEtPFOSA	*81.3*		*10 - 130*	*04/29/26 08:25*	*04/29/26 21:54*	*1*
d3-NMeFOSAA	*59.7*		*40 - 135*	*04/29/26 08:25*	*04/29/26 21:54*	*1*
d7-N-MeFOSE-M	*75.4*		*20 - 130*	*04/29/26 08:25*	*04/29/26 21:54*	*1*
d3-NMePFOSA	*81.2*		*10 - 130*	*04/29/26 08:25*	*04/29/26 21:54*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-2

Client Sample ID: HA-02-3
Date Collected: 04/20/26 12:40
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-14
Matrix: Solid
Percent Solids: 87.2

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.437		0.437		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.437		0.437		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.437		0.437		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.09		1.09		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.09		1.09		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
Perfluorobutanesulfonic acid (PFBS)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
Perfluorobutanoic acid (PFBA)	<0.437		0.437		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
Perfluorodecanesulfonic acid (PFDS)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
Perfluorodecanoic acid (PFDA)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
Perfluorododecanesulfonic acid (PFDoS)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
Perfluorododecanoic acid (PFDoA)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
Perfluoroheptanoic acid (PFHpA)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.09		1.09		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
Perfluorohexanesulfonic acid (PFHxS)	**0.292**		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
Perfluorohexanoic acid (PFHxA)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
Perfluorononanesulfonic acid (PFNS)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
Perfluorononanoic acid (PFNA)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
Perfluorooctanesulfonamide (PFOSA)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
Perfluorooctanesulfonic acid (PFOS)	**1.81**		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
Perfluorooctanoic acid (PFOA)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1

Client Sample ID: HA-02-3
Lab Sample ID: 310-330206-14
Date Collected: 04/20/26 12:40
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 87.2

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
Perfluoropentanoic acid (PFPeA)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.09		1.09		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.437		0.437		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
Perfluorotetradecanoic acid (PFTeDA)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
Perfluorotridecanoic acid (PFTrDA)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1
Perfluoroundecanoic acid (PFUnA)	<0.218		0.218		ng/g	☼	04/29/26 08:25	04/29/26 22:11	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*77.7*		*40 - 130*	*04/29/26 08:25*	*04/29/26 22:11*	*1*
13C2 10:2 FTS	*57.7*		*40 - 275*	*04/29/26 08:25*	*04/29/26 22:11*	*1*
13C2 4:2 FTS	*62.7*		*40 - 165*	*04/29/26 08:25*	*04/29/26 22:11*	*1*
13C2 6:2 FTS	*61.7*		*40 - 215*	*04/29/26 08:25*	*04/29/26 22:11*	*1*
13C2 8:2 FTS	*59.6*		*40 - 275*	*04/29/26 08:25*	*04/29/26 22:11*	*1*
13C3 HFPO-DA	*76.5*		*40 - 130*	*04/29/26 08:25*	*04/29/26 22:11*	*1*
13C4 PFBA	*70.6*		*8 - 130*	*04/29/26 08:25*	*04/29/26 22:11*	*1*
13C3 PFBS	*71.4*		*40 - 135*	*04/29/26 08:25*	*04/29/26 22:11*	*1*
13C6 PFDA	*80.7*		*40 - 130*	*04/29/26 08:25*	*04/29/26 22:11*	*1*
13C2-PFDoA	*77.5*		*40 - 130*	*04/29/26 08:25*	*04/29/26 22:11*	*1*
13C4 PFHpA	*72.8*		*40 - 130*	*04/29/26 08:25*	*04/29/26 22:11*	*1*
13C5 PFHxA	*73.1*		*40 - 130*	*04/29/26 08:25*	*04/29/26 22:11*	*1*
13C3 PFHxS	*72.4*		*40 - 130*	*04/29/26 08:25*	*04/29/26 22:11*	*1*
13C9 PFNA	*76.3*		*40 - 130*	*04/29/26 08:25*	*04/29/26 22:11*	*1*
13C8 PFOA	*68.8*		*40 - 130*	*04/29/26 08:25*	*04/29/26 22:11*	*1*
13C8 PFOS	*63.1*		*40 - 130*	*04/29/26 08:25*	*04/29/26 22:11*	*1*
13C5 PFPeA	*82.0*		*35 - 130*	*04/29/26 08:25*	*04/29/26 22:11*	*1*
13C3-PFPrS	*66.2*		*20 - 150*	*04/29/26 08:25*	*04/29/26 22:11*	*1*
13C2 PFTeDA	*101*		*20 - 130*	*04/29/26 08:25*	*04/29/26 22:11*	*1*
13C7 PFUnA	*76.3*		*40 - 130*	*04/29/26 08:25*	*04/29/26 22:11*	*1*
d5-NEtFOSAA	*57.1*		*40 - 150*	*04/29/26 08:25*	*04/29/26 22:11*	*1*
d9-N-EtFOSE-M	*53.2*		*15 - 130*	*04/29/26 08:25*	*04/29/26 22:11*	*1*
d5-NEtPFOSA	*81.2*		*10 - 130*	*04/29/26 08:25*	*04/29/26 22:11*	*1*
d3-NMeFOSAA	*59.7*		*40 - 135*	*04/29/26 08:25*	*04/29/26 22:11*	*1*
d7-N-MeFOSE-M	*58.2*		*20 - 130*	*04/29/26 08:25*	*04/29/26 22:11*	*1*
d3-NMePFOSA	*79.4*		*10 - 130*	*04/29/26 08:25*	*04/29/26 22:11*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-2

Client Sample ID: HA-07-1
Date Collected: 04/20/26 12:55
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-15
Matrix: Solid
Percent Solids: 90.2

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.215		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.215		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.215		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.215		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.431		0.431		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.431		0.431		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.431		0.431		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.215		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.215		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.08		1.08		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.215		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.215		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.08		1.08		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.215		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
Perfluorobutanesulfonic acid (PFBS)	<0.215		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
Perfluorobutanoic acid (PFBA)	<0.431		0.431		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
Perfluorodecanesulfonic acid (PFDS)	<0.215		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
Perfluorodecanoic acid (PFDA)	<0.215		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
Perfluorododecanesulfonic acid (PFDoS)	<0.215		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
Perfluorododecanoic acid (PFDoA)	<0.215		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.215		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.215		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
Perfluoroheptanoic acid (PFHpA)	<0.215		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.08		1.08		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
Perfluorohexanesulfonic acid (PFHxS)	**2.73**		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
Perfluorohexanoic acid (PFHxA)	**0.372**		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.215		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.215		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
Perfluorononanesulfonic acid (PFNS)	<0.215		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
Perfluorononanoic acid (PFNA)	<0.215		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
Perfluorooctanesulfonamide (PFOSA)	<0.215		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
Perfluorooctanesulfonic acid (PFOS)	**27.4**		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
Perfluorooctanoic acid (PFOA)	**0.372**		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1

Client Sample ID: HA-07-1
Lab Sample ID: 310-330206-15
Date Collected: 04/20/26 12:55
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 90.2

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	<0.215		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
Perfluoropentanoic acid (PFPeA)	<0.215		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.08		1.08		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.431		0.431		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
Perfluorotetradecanoic acid (PFTeDA)	<0.215		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
Perfluorotridecanoic acid (PFTrDA)	<0.215		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1
Perfluoroundecanoic acid (PFUnA)	<0.215		0.215		ng/g	☼	04/29/26 08:11	04/29/26 17:58	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*68.1*		*40 - 130*	*04/29/26 08:11*	*04/29/26 17:58*	*1*
13C2 10:2 FTS	*61.8*		*40 - 275*	*04/29/26 08:11*	*04/29/26 17:58*	*1*
13C2 4:2 FTS	*59.7*		*40 - 165*	*04/29/26 08:11*	*04/29/26 17:58*	*1*
13C2 6:2 FTS	*55.4*		*40 - 215*	*04/29/26 08:11*	*04/29/26 17:58*	*1*
13C2 8:2 FTS	*56.5*		*40 - 275*	*04/29/26 08:11*	*04/29/26 17:58*	*1*
13C3 HFPO-DA	*59.8*		*40 - 130*	*04/29/26 08:11*	*04/29/26 17:58*	*1*
13C4 PFBA	*54.8*		*8 - 130*	*04/29/26 08:11*	*04/29/26 17:58*	*1*
13C3 PFBS	*57.9*		*40 - 135*	*04/29/26 08:11*	*04/29/26 17:58*	*1*
13C6 PFDA	*66.9*		*40 - 130*	*04/29/26 08:11*	*04/29/26 17:58*	*1*
13C2-PFDoA	*71.2*		*40 - 130*	*04/29/26 08:11*	*04/29/26 17:58*	*1*
13C4 PFHpA	*60.7*		*40 - 130*	*04/29/26 08:11*	*04/29/26 17:58*	*1*
13C5 PFHxA	*62.2*		*40 - 130*	*04/29/26 08:11*	*04/29/26 17:58*	*1*
13C3 PFHxS	*60.0*		*40 - 130*	*04/29/26 08:11*	*04/29/26 17:58*	*1*
13C9 PFNA	*63.0*		*40 - 130*	*04/29/26 08:11*	*04/29/26 17:58*	*1*
13C8 PFOA	*57.2*		*40 - 130*	*04/29/26 08:11*	*04/29/26 17:58*	*1*
13C8 PFOS	*61.1*		*40 - 130*	*04/29/26 08:11*	*04/29/26 17:58*	*1*
13C5 PFPeA	*61.6*		*35 - 130*	*04/29/26 08:11*	*04/29/26 17:58*	*1*
13C3-PFPrS	*51.2*		*20 - 150*	*04/29/26 08:11*	*04/29/26 17:58*	*1*
13C2 PFTeDA	*88.3*		*20 - 130*	*04/29/26 08:11*	*04/29/26 17:58*	*1*
13C7 PFUnA	*70.5*		*40 - 130*	*04/29/26 08:11*	*04/29/26 17:58*	*1*
d5-NEtFOSAA	*58.3*		*40 - 150*	*04/29/26 08:11*	*04/29/26 17:58*	*1*
d9-N-EtFOSE-M	*77.3*		*15 - 130*	*04/29/26 08:11*	*04/29/26 17:58*	*1*
d5-NEtPFOSA	*74.0*		*10 - 130*	*04/29/26 08:11*	*04/29/26 17:58*	*1*
d3-NMeFOSAA	*61.6*		*40 - 135*	*04/29/26 08:11*	*04/29/26 17:58*	*1*
d7-N-MeFOSE-M	*74.7*		*20 - 130*	*04/29/26 08:11*	*04/29/26 17:58*	*1*
d3-NMePFOSA	*70.9*		*10 - 130*	*04/29/26 08:11*	*04/29/26 17:58*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-2

Client Sample ID: HA-07-2.5
Date Collected: 04/20/26 13:00
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-16
Matrix: Solid
Percent Solids: 89.1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.438		0.438		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.438		0.438		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.438		0.438		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.09		1.09		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.09		1.09		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
Perfluorobutanesulfonic acid (PFBS)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
Perfluorobutanoic acid (PFBA)	<0.438		0.438		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
Perfluorodecanesulfonic acid (PFDS)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
Perfluorodecanoic acid (PFDA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
Perfluorododecanesulfonic acid (PFDoS)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
Perfluorododecanoic acid (PFDoA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
Perfluoroheptanoic acid (PFHpA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.09		1.09		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
Perfluorohexanesulfonic acid (PFHxS)	**5.42**		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
Perfluorohexanoic acid (PFHxA)	**0.492**		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
Perfluorononanesulfonic acid (PFNS)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
Perfluorononanoic acid (PFNA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
Perfluorooctanesulfonamide (PFOSA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
Perfluorooctanesulfonic acid (PFOS)	**11.3**		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
Perfluorooctanoic acid (PFOA)	**1.24**		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1

Client Sample ID: HA-07-2.5
Lab Sample ID: 310-330206-16
Date Collected: 04/20/26 13:00
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 89.1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
Perfluoropentanoic acid (PFPeA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.09		1.09		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.438		0.438		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
Perfluorotetradecanoic acid (PFTeDA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
Perfluorotridecanoic acid (PFTrDA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1
Perfluoroundecanoic acid (PFUnA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/27/26 22:30	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*84.1*		*40 - 130*	*04/27/26 07:31*	*04/27/26 22:30*	*1*
13C2 10:2 FTS	*81.4*		*40 - 275*	*04/27/26 07:31*	*04/27/26 22:30*	*1*
13C2 4:2 FTS	*96.0*		*40 - 165*	*04/27/26 07:31*	*04/27/26 22:30*	*1*
13C2 6:2 FTS	*81.0*		*40 - 215*	*04/27/26 07:31*	*04/27/26 22:30*	*1*
13C2 8:2 FTS	*82.0*		*40 - 275*	*04/27/26 07:31*	*04/27/26 22:30*	*1*
13C3 HFPO-DA	*71.7*		*40 - 130*	*04/27/26 07:31*	*04/27/26 22:30*	*1*
13C4 PFBA	*72.2*		*8 - 130*	*04/27/26 07:31*	*04/27/26 22:30*	*1*
13C3 PFBS	*87.0*		*40 - 135*	*04/27/26 07:31*	*04/27/26 22:30*	*1*
13C6 PFDA	*75.8*		*40 - 130*	*04/27/26 07:31*	*04/27/26 22:30*	*1*
13C2-PFDoA	*73.9*		*40 - 130*	*04/27/26 07:31*	*04/27/26 22:30*	*1*
13C4 PFHpA	*74.4*		*40 - 130*	*04/27/26 07:31*	*04/27/26 22:30*	*1*
13C5 PFHxA	*74.7*		*40 - 130*	*04/27/26 07:31*	*04/27/26 22:30*	*1*
13C3 PFHxS	*83.6*		*40 - 130*	*04/27/26 07:31*	*04/27/26 22:30*	*1*
13C9 PFNA	*75.4*		*40 - 130*	*04/27/26 07:31*	*04/27/26 22:30*	*1*
13C8 PFOA	*69.8*		*40 - 130*	*04/27/26 07:31*	*04/27/26 22:30*	*1*
13C8 PFOS	*75.0*		*40 - 130*	*04/27/26 07:31*	*04/27/26 22:30*	*1*
13C5 PFPeA	*79.8*		*35 - 130*	*04/27/26 07:31*	*04/27/26 22:30*	*1*
13C3-PFPrS	*64.9*		*20 - 150*	*04/27/26 07:31*	*04/27/26 22:30*	*1*
13C2 PFTeDA	*75.3*		*20 - 130*	*04/27/26 07:31*	*04/27/26 22:30*	*1*
13C7 PFUnA	*70.5*		*40 - 130*	*04/27/26 07:31*	*04/27/26 22:30*	*1*
d5-NEtFOSAA	*71.0*		*40 - 150*	*04/27/26 07:31*	*04/27/26 22:30*	*1*
d9-N-EtFOSE-M	*76.9*		*15 - 130*	*04/27/26 07:31*	*04/27/26 22:30*	*1*
d5-NEtPFOSA	*84.0*		*10 - 130*	*04/27/26 07:31*	*04/27/26 22:30*	*1*
d3-NMeFOSAA	*74.1*		*40 - 135*	*04/27/26 07:31*	*04/27/26 22:30*	*1*
d7-N-MeFOSE-M	*74.9*		*20 - 130*	*04/27/26 07:31*	*04/27/26 22:30*	*1*
d3-NMePFOSA	*76.1*		*10 - 130*	*04/27/26 07:31*	*04/27/26 22:30*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-2

Client Sample ID: HA-09-3
Date Collected: 04/20/26 13:20
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330206-18
Matrix: Solid
Percent Solids: 82.7

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.240		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.240		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.240		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.240		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.479		0.479		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.479		0.479		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.479		0.479		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.240		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.240		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.20		1.20		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.240		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.240		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.20		1.20		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.240		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
Perfluorobutanesulfonic acid (PFBS)	<0.240		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
Perfluorobutanoic acid (PFBA)	<0.479		0.479		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
Perfluorodecanesulfonic acid (PFDS)	<0.240		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
Perfluorodecanoic acid (PFDA)	<0.240		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
Perfluorododecanesulfonic acid (PFDoS)	<0.240		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
Perfluorododecanoic acid (PFDoA)	<0.240		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.240		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
Perfluoroheptanesulfonic acid (PFHpS)	**0.358**		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
Perfluoroheptanoic acid (PFHpA)	<0.240		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.20		1.20		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
Perfluorohexanesulfonic acid (PFHxS)	**14.6**		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
Perfluorohexanoic acid (PFHxA)	**0.611**		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.240		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.240		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
Perfluorononanesulfonic acid (PFNS)	<0.240		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
Perfluorononanoic acid (PFNA)	<0.240		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
Perfluorooctanesulfonamide (PFOSA)	<0.240		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
Perfluorooctanesulfonic acid (PFOS)	**11.4**		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
Perfluorooctanoic acid (PFOA)	**0.892**		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1

Client Sample ID: HA-09-3
Lab Sample ID: 310-330206-18
Date Collected: 04/20/26 13:20
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 82.7

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	<0.240		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
Perfluoropentanoic acid (PFPeA)	<0.240		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.20		1.20		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.479		0.479		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
Perfluorotetradecanoic acid (PFTeDA)	<0.240		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
Perfluorotridecanoic acid (PFTrDA)	<0.240		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1
Perfluoroundecanoic acid (PFUnA)	<0.240		0.240		ng/g	☼	05/06/26 10:22	05/06/26 22:08	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*67.7*		*40 - 130*	*05/06/26 10:22*	*05/06/26 22:08*	*1*
13C2 10:2 FTS	*67.0*		*40 - 275*	*05/06/26 10:22*	*05/06/26 22:08*	*1*
13C2 4:2 FTS	*52.9*		*40 - 165*	*05/06/26 10:22*	*05/06/26 22:08*	*1*
13C2 6:2 FTS	*59.4*		*40 - 215*	*05/06/26 10:22*	*05/06/26 22:08*	*1*
13C2 8:2 FTS	*64.4*		*40 - 275*	*05/06/26 10:22*	*05/06/26 22:08*	*1*
13C3 HFPO-DA	*57.2*		*40 - 130*	*05/06/26 10:22*	*05/06/26 22:08*	*1*
13C4 PFBA	*57.1*		*8 - 130*	*05/06/26 10:22*	*05/06/26 22:08*	*1*
13C3 PFBS	*59.2*		*40 - 135*	*05/06/26 10:22*	*05/06/26 22:08*	*1*
13C6 PFDA	*64.0*		*40 - 130*	*05/06/26 10:22*	*05/06/26 22:08*	*1*
13C2-PFDoA	*61.5*		*40 - 130*	*05/06/26 10:22*	*05/06/26 22:08*	*1*
13C4 PFHpA	*54.4*		*40 - 130*	*05/06/26 10:22*	*05/06/26 22:08*	*1*
13C5 PFHxA	*52.1*		*40 - 130*	*05/06/26 10:22*	*05/06/26 22:08*	*1*
13C3 PFHxS	*54.5*		*40 - 130*	*05/06/26 10:22*	*05/06/26 22:08*	*1*
13C9 PFNA	*61.9*		*40 - 130*	*05/06/26 10:22*	*05/06/26 22:08*	*1*
13C8 PFOA	*55.2*		*40 - 130*	*05/06/26 10:22*	*05/06/26 22:08*	*1*
13C8 PFOS	*50.8*		*40 - 130*	*05/06/26 10:22*	*05/06/26 22:08*	*1*
13C5 PFPeA	*61.0*		*35 - 130*	*05/06/26 10:22*	*05/06/26 22:08*	*1*
13C3-PFPrS	*57.0*		*20 - 150*	*05/06/26 10:22*	*05/06/26 22:08*	*1*
13C2 PFTeDA	*72.2*		*20 - 130*	*05/06/26 10:22*	*05/06/26 22:08*	*1*
13C7 PFUnA	*70.4*		*40 - 130*	*05/06/26 10:22*	*05/06/26 22:08*	*1*
d5-NEtFOSAA	*54.7*		*40 - 150*	*05/06/26 10:22*	*05/06/26 22:08*	*1*
d9-N-EtFOSE-M	*48.2*		*15 - 130*	*05/06/26 10:22*	*05/06/26 22:08*	*1*
d5-NEtPFOSA	*52.8*		*10 - 130*	*05/06/26 10:22*	*05/06/26 22:08*	*1*
d3-NMeFOSAA	*52.1*		*40 - 135*	*05/06/26 10:22*	*05/06/26 22:08*	*1*
d7-N-MeFOSE-M	*53.4*		*20 - 130*	*05/06/26 10:22*	*05/06/26 22:08*	*1*
d3-NMePFOSA	*53.8*		*10 - 130*	*05/06/26 10:22*	*05/06/26 22:08*	*1*

Definitions/Glossary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-2
Project/Site: Duluth Airport Taxiway A

Qualifiers

LCMS

Qualifier	Qualifier Description
I	Ion ratio outside limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Lab Sample ID: MB 240-699386/1-A
Matrix: Solid
Analysis Batch: 699448

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699386

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.400		0.400		ng/g		04/27/26 07:31	04/27/26 20:34	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.400		0.400		ng/g		04/27/26 07:31	04/27/26 20:34	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.400		0.400		ng/g		04/27/26 07:31	04/27/26 20:34	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.00		1.00		ng/g		04/27/26 07:31	04/27/26 20:34	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.00		1.00		ng/g		04/27/26 07:31	04/27/26 20:34	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorobutanesulfonic acid (PFBS)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorobutanoic acid (PFBA)	<0.400		0.400		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorodecanesulfonic acid (PFDS)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorodecanoic acid (PFDA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorododecanesulfonic acid (PFDoS)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorododecanoic acid (PFDoA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluoroheptanoic acid (PFHpA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.00		1.00		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorohexanesulfonic acid (PFHxS)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorohexanoic acid (PFHxA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorononanesulfonic acid (PFNS)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorononanoic acid (PFNA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorooctanesulfonamide (PFOSA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorooctanesulfonic acid (PFOS)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorooctanoic acid (PFOA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: MB 240-699386/1-A
Matrix: Solid
Analysis Batch: 699448

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699386

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluoropentanoic acid (PFPeA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.00		1.00		ng/g		04/27/26 07:31	04/27/26 20:34	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.400		0.400		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorotetradecanoic acid (PFTeDA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorotridecanoic acid (PFTrDA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluoroundecanoic acid (PFUnA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*97.2*		*40 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C2 10:2 FTS	*95.6*		*40 - 275*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C2 4:2 FTS	*118*		*40 - 165*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C2 6:2 FTS	*106*		*40 - 215*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C2 8:2 FTS	*96.4*		*40 - 275*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C3 HFPO-DA	*95.4*		*40 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C4 PFBA	*92.7*		*8 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C3 PFBS	*111*		*40 - 135*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C6 PFDA	*89.2*		*40 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C2-PFDoA	*84.4*		*40 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C4 PFHpA	*98.6*		*40 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C5 PFHxA	*102*		*40 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C3 PFHxS	*109*		*40 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C9 PFNA	*93.5*		*40 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C8 PFOA	*87.0*		*40 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C8 PFOS	*89.9*		*40 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C5 PFPeA	*103*		*35 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C3-PFPrS	*87.6*		*20 - 150*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C2 PFTeDA	*103*		*20 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C7 PFUnA	*85.6*		*40 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
d5-NEtFOSAA	*82.8*		*40 - 150*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
d9-N-EtFOSE-M	*62.3*		*15 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
d5-NEtPFOSA	*96.3*		*10 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
d3-NMeFOSAA	*86.5*		*40 - 135*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
d7-N-MeFOSE-M	*61.2*		*20 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
d3-NMePFOSA	*95.0*		*10 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*

Lab Sample ID: LCS 240-699386/3-A
Matrix: Solid
Analysis Batch: 699448

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699386

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.36	3.009		ng/g		128	45 - 160
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.34	2.710		ng/g		116	70 - 150

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LCS 240-699386/3-A
Matrix: Solid
Analysis Batch: 699448

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699386

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.37	2.541		ng/g		107	70 - 160
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1.88	2.102		ng/g		112	70 - 145
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	4.80	5.623		ng/g		117	70 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	4.69	5.085		ng/g		108	60 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	4.76	5.302		ng/g		111	55 - 200
N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.50	2.760		ng/g		110	70 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.50	2.848		ng/g		114	65 - 165
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	12.5	13.49		ng/g		108	70 - 135
N-methylperfluorooctane sulfonamide (NMeFOSA)	2.50	2.944		ng/g		118	70 - 155
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.50	2.727		ng/g		109	65 - 155
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.5	14.23		ng/g		114	70 - 140
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.50	2.808		ng/g		112	60 - 155
Perfluorobutanesulfonic acid (PFBS)	2.22	2.526		ng/g		114	65 - 145
Perfluorobutanoic acid (PFBA)	5.00	5.692		ng/g		114	70 - 140
Perfluorodecanesulfonic acid (PFDS)	2.41	2.844		ng/g		118	40 - 155
Perfluorodecanoic acid (PFDA)	2.50	2.726		ng/g		109	70 - 155
Perfluorododecanesulfonic acid (PFDoS)	2.43	3.141		ng/g		130	25 - 160
Perfluorododecanoic acid (PFDoA)	2.50	2.698		ng/g		108	70 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.23	2.453		ng/g		110	70 - 140
Perfluoroheptanesulfonic acid (PFHpS)	2.39	2.865		ng/g		120	65 - 155
Perfluoroheptanoic acid (PFHpA)	2.50	2.803		ng/g		112	65 - 145
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	12.5	12.34		ng/g		99	60 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.28	2.472		ng/g		108	60 - 150
Perfluorohexanoic acid (PFHxA)	2.50	2.714		ng/g		109	65 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.50	2.710		ng/g		108	60 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.50	2.984		ng/g		119	30 - 140
Perfluorononanesulfonic acid (PFNS)	2.41	2.676		ng/g		111	55 - 140
Perfluorononanoic acid (PFNA)	2.50	2.660		ng/g		106	70 - 155
Perfluorooctanesulfonamide (PFOSA)	2.50	2.908		ng/g		116	70 - 140
Perfluorooctanesulfonic acid (PFOS)	2.33	2.646		ng/g		114	65 - 160

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LCS 240-699386/3-A
Matrix: Solid
Analysis Batch: 699448

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699386

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanoic acid (PFOA)	2.50	2.888		ng/g		116	70 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.35	2.860		ng/g		122	55 - 160
Perfluoropentanoic acid (PFPeA)	2.50	2.699		ng/g		108	60 - 150
3-Perfluoropentylpropanoic acid (5:3 FTCA)	12.5	13.86		ng/g		111	60 - 130
3-Perfluoropropylpropanoic acid (3:3 FTCA)	5.00	5.806		ng/g		116	45 - 130
Perfluorotetradecanoic acid (PFTeDA)	2.50	2.496		ng/g		100	65 - 150
Perfluorotridecanoic acid (PFTrDA)	2.50	2.588		ng/g		104	65 - 150
Perfluoroundecanoic acid (PFUnA)	2.50	2.949		ng/g		118	70 - 155

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C8 FOSA	*70.3*		*40 - 130*
13C2 10:2 FTS	*68.7*		*10 - 200*
13C2 4:2 FTS	*92.5*		*40 - 165*
13C2 6:2 FTS	*77.8*		*40 - 215*
13C2 8:2 FTS	*67.7*		*40 - 275*
13C3 HFPO-DA	*76.5*		*40 - 130*
13C4 PFBA	*73.7*		*8 - 130*
13C3 PFBS	*89.2*		*40 - 135*
13C6 PFDA	*64.4*		*40 - 130*
13C2-PFDoA	*63.0*		*40 - 130*
13C4 PFHpA	*73.4*		*40 - 130*
13C5 PFHxA	*75.9*		*40 - 130*
13C3 PFHxS	*81.6*		*40 - 130*
13C9 PFNA	*68.4*		*40 - 130*
13C8 PFOA	*66.1*		*40 - 130*
13C8 PFOS	*63.5*		*40 - 130*
13C5 PFPeA	*81.0*		*35 - 130*
13C3-PFPrS	*67.6*		*20 - 150*
13C2 PFTeDA	*83.1*		*20 - 130*
13C7 PFUnA	*60.4*		*40 - 130*
d5-NEtFOSAA	*57.7*		*40 - 150*
d9-N-EtFOSE-M	*51.1*		*15 - 130*
d5-NEtPFOSA	*66.8*		*10 - 130*
d3-NMeFOSAA	*62.4*		*40 - 135*
d7-N-MeFOSE-M	*47.0*		*20 - 130*
d3-NMePFOSA	*65.3*		*10 - 130*

Lab Sample ID: LLCS 240-699386/2-A
Matrix: Solid
Analysis Batch: 699448

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699386

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.236	0.2161		ng/g		92	45 - 160

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LLCS 240-699386/2-A
Matrix: Solid
Analysis Batch: 699448

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699386

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.234	0.2146		ng/g		92	70 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.237	0.2228		ng/g		94	70 - 160
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.188	0.1635	J	ng/g		87	70 - 145
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.480	0.4293		ng/g		89	70 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.469	0.4145		ng/g		88	60 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.476	0.4271		ng/g		90	55 - 200
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.250	0.2189		ng/g		88	70 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.250	0.2167		ng/g		87	65 - 165
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1.25	1.073		ng/g		86	70 - 135
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.250	0.2385		ng/g		95	70 - 155
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.250	0.2416		ng/g		97	65 - 155
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1.25	1.310		ng/g		105	70 - 140
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.250	0.2544		ng/g		102	60 - 155
Perfluorobutanesulfonic acid (PFBS)	0.222	0.1945	J	ng/g		88	65 - 145
Perfluorobutanoic acid (PFBA)	0.500	0.4600		ng/g		92	70 - 140
Perfluorodecanesulfonic acid (PFDS)	0.241	0.2093		ng/g		87	40 - 155
Perfluorodecanoic acid (PFDA)	0.250	0.2161		ng/g		86	70 - 155
Perfluorododecanesulfonic acid (PFDoS)	0.243	0.2088		ng/g		86	25 - 160
Perfluorododecanoic acid (PFDoA)	0.250	0.2173		ng/g		87	70 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.223	0.2062		ng/g		92	70 - 140
Perfluoroheptanesulfonic acid (PFHpS)	0.239	0.2177		ng/g		91	65 - 155
Perfluoroheptanoic acid (PFHpA)	0.250	0.2228		ng/g		89	65 - 145
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1.25	1.073		ng/g		86	60 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.228	0.2347		ng/g		103	60 - 150
Perfluorohexanoic acid (PFHxA)	0.250	0.2434		ng/g		97	65 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.250	0.2131		ng/g		85	60 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.250	0.2298		ng/g		92	30 - 140
Perfluorononanesulfonic acid (PFNS)	0.241	0.2169		ng/g		90	55 - 140
Perfluorononanoic acid (PFNA)	0.250	0.2186		ng/g		87	70 - 155

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LLCS 240-699386/2-A
Matrix: Solid
Analysis Batch: 699448

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699386

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluorooctanesulfonamide (PFOSA)			0.250	0.2332		ng/g		93	70 - 140		
Perfluorooctanesulfonic acid (PFOS)			0.233	0.2323		ng/g		100	65 - 160		
Perfluorooctanoic acid (PFOA)			0.250	0.2423		ng/g		97	70 - 150		
Perfluoropentanesulfonic acid (PFPeS)			0.235	0.2045		ng/g		87	55 - 160		
Perfluoropentanoic acid (PFPeA)			0.250	0.2281		ng/g		91	60 - 150		
3-Perfluoropentylpropanoic acid (5:3 FTCA)			1.25	1.134		ng/g		91	60 - 130		
3-Perfluoropropylpropanoic acid (3:3 FTCA)			0.500	0.4225		ng/g		84	45 - 130		
Perfluorotetradecanoic acid (PFTeDA)			0.250	0.2065		ng/g		83	65 - 150		
Perfluorotridecanoic acid (PFTrDA)			0.250	0.2040		ng/g		82	65 - 150		
Perfluoroundecanoic acid (PFUnA)			0.250	0.2160		ng/g		86	70 - 155		

Isotope Dilution	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C8 FOSA	*76.2*		*40 - 130*
13C2 10:2 FTS	*71.5*		*10 - 200*
13C2 4:2 FTS	*86.7*		*40 - 165*
13C2 6:2 FTS	*78.2*		*40 - 215*
13C2 8:2 FTS	*74.8*		*40 - 275*
13C3 HFPO-DA	*69.8*		*40 - 130*
13C4 PFBA	*68.4*		*8 - 130*
13C3 PFBS	*83.1*		*40 - 135*
13C6 PFDA	*69.6*		*40 - 130*
13C2-PFDoA	*65.5*		*40 - 130*
13C4 PFHpA	*74.3*		*40 - 130*
13C5 PFHxA	*71.4*		*40 - 130*
13C3 PFHxS	*84.5*		*40 - 130*
13C9 PFNA	*71.3*		*40 - 130*
13C8 PFOA	*67.6*		*40 - 130*
13C8 PFOS	*70.1*		*40 - 130*
13C5 PFPeA	*77.4*		*35 - 130*
13C3-PFPrS	*62.9*		*20 - 150*
13C2 PFTeDA	*80.6*		*20 - 130*
13C7 PFUnA	*65.2*		*40 - 130*
d5-NEtFOSAA	*64.9*		*40 - 150*
d9-N-EtFOSE-M	*52.7*		*15 - 130*
d5-NEtPFOSA	*76.7*		*10 - 130*
d3-NMeFOSAA	*69.0*		*40 - 135*
d7-N-MeFOSE-M	*48.3*		*20 - 130*
d3-NMePFOSA	*76.6*		*10 - 130*

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: MB 240-699760/1-A
Matrix: Solid
Analysis Batch: 699827

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699760

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.400		0.400		ng/g		04/29/26 08:11	04/29/26 17:08	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.400		0.400		ng/g		04/29/26 08:11	04/29/26 17:08	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.400		0.400		ng/g		04/29/26 08:11	04/29/26 17:08	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.00		1.00		ng/g		04/29/26 08:11	04/29/26 17:08	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.00		1.00		ng/g		04/29/26 08:11	04/29/26 17:08	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
Perfluorobutanesulfonic acid (PFBS)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
Perfluorobutanoic acid (PFBA)	<0.400		0.400		ng/g		04/29/26 08:11	04/29/26 17:08	1
Perfluorodecanesulfonic acid (PFDS)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
Perfluorodecanoic acid (PFDA)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
Perfluorododecanesulfonic acid (PFDoS)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
Perfluorododecanoic acid (PFDoA)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
Perfluoroheptanoic acid (PFHpA)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.00		1.00		ng/g		04/29/26 08:11	04/29/26 17:08	1
Perfluorohexanesulfonic acid (PFHxS)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
Perfluorohexanoic acid (PFHxA)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
Perfluorononanesulfonic acid (PFNS)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
Perfluorononanoic acid (PFNA)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
Perfluorooctanesulfonamide (PFOSA)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
Perfluorooctanesulfonic acid (PFOS)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
Perfluorooctanoic acid (PFOA)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: MB 240-699760/1-A
Matrix: Solid
Analysis Batch: 699827

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699760

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
Perfluoropentanoic acid (PFPeA)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.00		1.00		ng/g		04/29/26 08:11	04/29/26 17:08	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.400		0.400		ng/g		04/29/26 08:11	04/29/26 17:08	1
Perfluorotetradecanoic acid (PFTeDA)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
Perfluorotridecanoic acid (PFTrDA)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1
Perfluoroundecanoic acid (PFUnA)	<0.200		0.200		ng/g		04/29/26 08:11	04/29/26 17:08	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*85.0*		*40 - 130*	*04/29/26 08:11*	*04/29/26 17:08*	*1*
13C2 10:2 FTS	*73.2*		*40 - 275*	*04/29/26 08:11*	*04/29/26 17:08*	*1*
13C2 4:2 FTS	*91.8*		*40 - 165*	*04/29/26 08:11*	*04/29/26 17:08*	*1*
13C2 6:2 FTS	*76.6*		*40 - 215*	*04/29/26 08:11*	*04/29/26 17:08*	*1*
13C2 8:2 FTS	*71.0*		*40 - 275*	*04/29/26 08:11*	*04/29/26 17:08*	*1*
13C3 HFPO-DA	*83.8*		*40 - 130*	*04/29/26 08:11*	*04/29/26 17:08*	*1*
13C4 PFBA	*81.7*		*8 - 130*	*04/29/26 08:11*	*04/29/26 17:08*	*1*
13C3 PFBS	*83.5*		*40 - 135*	*04/29/26 08:11*	*04/29/26 17:08*	*1*
13C6 PFDA	*84.2*		*40 - 130*	*04/29/26 08:11*	*04/29/26 17:08*	*1*
13C2-PFDoA	*86.2*		*40 - 130*	*04/29/26 08:11*	*04/29/26 17:08*	*1*
13C4 PFHpA	*84.7*		*40 - 130*	*04/29/26 08:11*	*04/29/26 17:08*	*1*
13C5 PFHxA	*92.0*		*40 - 130*	*04/29/26 08:11*	*04/29/26 17:08*	*1*
13C3 PFHxS	*84.7*		*40 - 130*	*04/29/26 08:11*	*04/29/26 17:08*	*1*
13C9 PFNA	*81.9*		*40 - 130*	*04/29/26 08:11*	*04/29/26 17:08*	*1*
13C8 PFOA	*77.9*		*40 - 130*	*04/29/26 08:11*	*04/29/26 17:08*	*1*
13C8 PFOS	*78.6*		*40 - 130*	*04/29/26 08:11*	*04/29/26 17:08*	*1*
13C5 PFPeA	*85.2*		*35 - 130*	*04/29/26 08:11*	*04/29/26 17:08*	*1*
13C3-PFPrS	*80.4*		*20 - 150*	*04/29/26 08:11*	*04/29/26 17:08*	*1*
13C2 PFTeDA	*97.2*		*20 - 130*	*04/29/26 08:11*	*04/29/26 17:08*	*1*
13C7 PFUnA	*84.9*		*40 - 130*	*04/29/26 08:11*	*04/29/26 17:08*	*1*
d5-NEtFOSAA	*71.2*		*40 - 150*	*04/29/26 08:11*	*04/29/26 17:08*	*1*
d9-N-EtFOSE-M	*73.5*		*15 - 130*	*04/29/26 08:11*	*04/29/26 17:08*	*1*
d5-NEtPFOSA	*78.3*		*10 - 130*	*04/29/26 08:11*	*04/29/26 17:08*	*1*
d3-NMeFOSAA	*74.9*		*40 - 135*	*04/29/26 08:11*	*04/29/26 17:08*	*1*
d7-N-MeFOSE-M	*74.9*		*20 - 130*	*04/29/26 08:11*	*04/29/26 17:08*	*1*
d3-NMePFOSA	*82.6*		*10 - 130*	*04/29/26 08:11*	*04/29/26 17:08*	*1*

Lab Sample ID: LCS 240-699760/3-A
Matrix: Solid
Analysis Batch: 699827

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699760

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.36	2.780		ng/g		118	45 - 160
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.34	2.811		ng/g		120	70 - 150

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LCS 240-699760/3-A
Matrix: Solid
Analysis Batch: 699827

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699760

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.37	2.644		ng/g		112	70 - 160
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1.88	2.277		ng/g		121	70 - 145
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	4.80	5.895		ng/g		123	70 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	4.69	5.134		ng/g		109	60 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	4.76	5.029		ng/g		106	55 - 200
N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.50	2.886		ng/g		115	70 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.50	3.003		ng/g		120	65 - 165
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	12.5	14.56		ng/g		116	70 - 135
N-methylperfluorooctane sulfonamide (NMeFOSA)	2.50	3.076		ng/g		123	70 - 155
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.50	2.904		ng/g		116	65 - 155
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.5	14.33		ng/g		115	70 - 140
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.50	2.925		ng/g		117	60 - 155
Perfluorobutanesulfonic acid (PFBS)	2.22	2.573		ng/g		116	65 - 145
Perfluorobutanoic acid (PFBA)	5.00	6.044		ng/g		121	70 - 140
Perfluorodecanesulfonic acid (PFDS)	2.41	2.896		ng/g		120	40 - 155
Perfluorodecanoic acid (PFDA)	2.50	2.952		ng/g		118	70 - 155
Perfluorododecanesulfonic acid (PFDoS)	2.43	2.759		ng/g		114	25 - 160
Perfluorododecanoic acid (PFDoA)	2.50	2.881		ng/g		115	70 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.23	2.567		ng/g		115	70 - 140
Perfluoroheptanesulfonic acid (PFHpS)	2.39	2.977		ng/g		125	65 - 155
Perfluoroheptanoic acid (PFHpA)	2.50	2.908		ng/g		116	65 - 145
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	12.5	13.56		ng/g		108	60 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.28	2.541		ng/g		111	60 - 150
Perfluorohexanoic acid (PFHxA)	2.50	2.850		ng/g		114	65 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.50	3.030		ng/g		121	60 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.50	2.744		ng/g		110	30 - 140
Perfluorononanesulfonic acid (PFNS)	2.41	3.131		ng/g		130	55 - 140
Perfluorononanoic acid (PFNA)	2.50	2.948		ng/g		118	70 - 155
Perfluorooctanesulfonamide (PFOSA)	2.50	3.017		ng/g		121	70 - 140
Perfluorooctanesulfonic acid (PFOS)	2.33	2.671		ng/g		115	65 - 160

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LCS 240-699760/3-A
Matrix: Solid
Analysis Batch: 699827

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699760

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanoic acid (PFOA)	2.50	2.889		ng/g		116	70 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.35	2.738		ng/g		116	55 - 160
Perfluoropentanoic acid (PFPeA)	2.50	2.808		ng/g		112	60 - 150
3-Perfluoropentylpropanoic acid (5:3 FTCA)	12.5	13.67		ng/g		109	60 - 130
3-Perfluoropropylpropanoic acid (3:3 FTCA)	5.00	5.360		ng/g		107	45 - 130
Perfluorotetradecanoic acid (PFTeDA)	2.50	2.593		ng/g		104	65 - 150
Perfluorotridecanoic acid (PFTrDA)	2.50	2.506		ng/g		100	65 - 150
Perfluoroundecanoic acid (PFUnA)	2.50	2.925		ng/g		117	70 - 155

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C8 FOSA	*113*		*40 - 130*
13C2 10:2 FTS	*93.6*		*10 - 200*
13C2 4:2 FTS	*117*		*40 - 165*
13C2 6:2 FTS	*101*		*40 - 215*
13C2 8:2 FTS	*90.2*		*40 - 275*
13C3 HFPO-DA	*112*		*40 - 130*
13C4 PFBA	*108*		*8 - 130*
13C3 PFBS	*113*		*40 - 135*
13C6 PFDA	*109*		*40 - 130*
13C2-PFDoA	*110*		*40 - 130*
13C4 PFHpA	*110*		*40 - 130*
13C5 PFHxA	*115*		*40 - 130*
13C3 PFHxS	*112*		*40 - 130*
13C9 PFNA	*107*		*40 - 130*
13C8 PFOA	*105*		*40 - 130*
13C8 PFOS	*104*		*40 - 130*
13C5 PFPeA	*117*		*35 - 130*
13C3-PFPrS	*111*		*20 - 150*
13C2 PFTeDA	*126*		*20 - 130*
13C7 PFUnA	*109*		*40 - 130*
d5-NEtFOSAA	*92.0*		*40 - 150*
d9-N-EtFOSE-M	*124*		*15 - 130*
d5-NEtPFOSA	*115*		*10 - 130*
d3-NMeFOSAA	*99.5*		*40 - 135*
d7-N-MeFOSE-M	*123*		*20 - 130*
d3-NMePFOSA	*113*		*10 - 130*

Lab Sample ID: LLCS 240-699760/2-A
Matrix: Solid
Analysis Batch: 699827

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699760

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.236	0.2579		ng/g		109	45 - 160

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LLCS 240-699760/2-A
Matrix: Solid
Analysis Batch: 699827

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699760

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.234	0.2815		ng/g		121	70 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.237	0.2807		ng/g		119	70 - 160
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.188	0.2467		ng/g		132	70 - 145
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.480	0.5949		ng/g		124	70 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.469	0.5205		ng/g		111	60 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.476	0.5165		ng/g		108	55 - 200
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.250	0.2880		ng/g		115	70 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.250	0.2914		ng/g		117	65 - 165
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1.25	1.457		ng/g		117	70 - 135
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.250	0.2909		ng/g		116	70 - 155
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.250	0.3028		ng/g		121	65 - 155
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1.25	1.499		ng/g		120	70 - 140
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.250	0.3207		ng/g		128	60 - 155
Perfluorobutanesulfonic acid (PFBS)	0.222	0.2599		ng/g		117	65 - 145
Perfluorobutanoic acid (PFBA)	0.500	0.6354		ng/g		127	70 - 140
Perfluorodecanesulfonic acid (PFDS)	0.241	0.2855		ng/g		118	40 - 155
Perfluorodecanoic acid (PFDA)	0.250	0.2933		ng/g		117	70 - 155
Perfluorododecanesulfonic acid (PFDoS)	0.243	0.2668		ng/g		110	25 - 160
Perfluorododecanoic acid (PFDoA)	0.250	0.2919		ng/g		117	70 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.223	0.2630		ng/g		118	70 - 140
Perfluoroheptanesulfonic acid (PFHpS)	0.239	0.3074		ng/g		129	65 - 155
Perfluoroheptanoic acid (PFHpA)	0.250	0.2919		ng/g		117	65 - 145
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1.25	1.347		ng/g		108	60 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.228	0.2683		ng/g		118	60 - 150
Perfluorohexanoic acid (PFHxA)	0.250	0.2978		ng/g		119	65 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.250	0.3197		ng/g		128	60 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.250	0.2778		ng/g		111	30 - 140
Perfluorononanesulfonic acid (PFNS)	0.241	0.3099		ng/g		129	55 - 140
Perfluorononanoic acid (PFNA)	0.250	0.3014		ng/g		121	70 - 155

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LLCS 240-699760/2-A
Matrix: Solid
Analysis Batch: 699827

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699760

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluorooctanesulfonamide (PFOSA)			0.250	0.3148		ng/g		126	70 - 140		
Perfluorooctanesulfonic acid (PFOS)			0.233	0.2777		ng/g		119	65 - 160		
Perfluorooctanoic acid (PFOA)			0.250	0.3086		ng/g		123	70 - 150		
Perfluoropentanesulfonic acid (PFPeS)			0.235	0.2611		ng/g		111	55 - 160		
Perfluoropentanoic acid (PFPeA)			0.250	0.3037		ng/g		121	60 - 150		
3-Perfluoropentylpropanoic acid (5:3 FTCA)			1.25	1.372		ng/g		110	60 - 130		
3-Perfluoropropylpropanoic acid (3:3 FTCA)			0.500	0.5307		ng/g		106	45 - 130		
Perfluorotetradecanoic acid (PFTeDA)			0.250	0.2624		ng/g		105	65 - 150		
Perfluorotridecanoic acid (PFTrDA)			0.250	0.2552		ng/g		102	65 - 150		
Perfluoroundecanoic acid (PFUnA)			0.250	0.2951		ng/g		118	70 - 155		

Isotope Dilution	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C8 FOSA	*82.5*		*40 - 130*
13C2 10:2 FTS	*65.3*		*10 - 200*
13C2 4:2 FTS	*86.3*		*40 - 165*
13C2 6:2 FTS	*73.9*		*40 - 215*
13C2 8:2 FTS	*64.9*		*40 - 275*
13C3 HFPO-DA	*82.7*		*40 - 130*
13C4 PFBA	*80.0*		*8 - 130*
13C3 PFBS	*80.9*		*40 - 135*
13C6 PFDA	*83.0*		*40 - 130*
13C2-PFDoA	*79.8*		*40 - 130*
13C4 PFHpA	*83.2*		*40 - 130*
13C5 PFHxA	*85.1*		*40 - 130*
13C3 PFHxS	*81.9*		*40 - 130*
13C9 PFNA	*79.1*		*40 - 130*
13C8 PFOA	*76.5*		*40 - 130*
13C8 PFOS	*77.1*		*40 - 130*
13C5 PFPeA	*86.4*		*35 - 130*
13C3-PFPrS	*80.4*		*20 - 150*
13C2 PFTeDA	*90.1*		*20 - 130*
13C7 PFUnA	*80.7*		*40 - 130*
d5-NEtFOSAA	*67.5*		*40 - 150*
d9-N-EtFOSE-M	*65.6*		*15 - 130*
d5-NEtPFOSA	*70.4*		*10 - 130*
d3-NMeFOSAA	*72.6*		*40 - 135*
d7-N-MeFOSE-M	*64.6*		*20 - 130*
d3-NMePFOSA	*75.0*		*10 - 130*

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: MB 240-699767/1-A
Matrix: Solid
Analysis Batch: 699825

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699767

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.400		0.400		ng/g		04/29/26 08:25	04/29/26 14:26	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.400		0.400		ng/g		04/29/26 08:25	04/29/26 14:26	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.400		0.400		ng/g		04/29/26 08:25	04/29/26 14:26	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.00		1.00		ng/g		04/29/26 08:25	04/29/26 14:26	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.00		1.00		ng/g		04/29/26 08:25	04/29/26 14:26	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorobutanesulfonic acid (PFBS)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorobutanoic acid (PFBA)	<0.400		0.400		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorodecanesulfonic acid (PFDS)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorodecanoic acid (PFDA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorododecanesulfonic acid (PFDoS)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorododecanoic acid (PFDoA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluoroheptanoic acid (PFHpA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.00		1.00		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorohexanesulfonic acid (PFHxS)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorohexanoic acid (PFHxA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorononanesulfonic acid (PFNS)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorononanoic acid (PFNA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorooctanesulfonamide (PFOSA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorooctanesulfonic acid (PFOS)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorooctanoic acid (PFOA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: MB 240-699767/1-A
Matrix: Solid
Analysis Batch: 699825

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699767

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluoropentanoic acid (PFPeA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.00		1.00		ng/g		04/29/26 08:25	04/29/26 14:26	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.400		0.400		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorotetradecanoic acid (PFTeDA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluorotridecanoic acid (PFTrDA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1
Perfluoroundecanoic acid (PFUnA)	<0.200		0.200		ng/g		04/29/26 08:25	04/29/26 14:26	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*77.0*		*40 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C2 10:2 FTS	*45.0*		*40 - 275*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C2 4:2 FTS	*70.9*		*40 - 165*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C2 6:2 FTS	*73.8*		*40 - 215*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C2 8:2 FTS	*51.5*		*40 - 275*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C3 HFPO-DA	*75.4*		*40 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C4 PFBA	*72.2*		*8 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C3 PFBS	*73.7*		*40 - 135*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C6 PFDA	*72.6*		*40 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C2-PFDoA	*63.7*		*40 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C4 PFHpA	*76.7*		*40 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C5 PFHxA	*75.4*		*40 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C3 PFHxS	*74.6*		*40 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C9 PFNA	*75.5*		*40 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C8 PFOA	*69.4*		*40 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C8 PFOS	*63.3*		*40 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C5 PFPeA	*84.9*		*35 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C3-PFPrS	*66.4*		*20 - 150*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C2 PFTeDA	*86.2*		*20 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
13C7 PFUnA	*67.5*		*40 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
d5-NEtFOSAA	*53.5*		*40 - 150*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
d9-N-EtFOSE-M	*53.7*		*15 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
d5-NEtPFOSA	*69.6*		*10 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
d3-NMeFOSAA	*54.2*		*40 - 135*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
d7-N-MeFOSE-M	*47.2*		*20 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*
d3-NMePFOSA	*77.7*		*10 - 130*	*04/29/26 08:25*	*04/29/26 14:26*	*1*

Lab Sample ID: LCS 240-699767/3-A
Matrix: Solid
Analysis Batch: 699827

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699767

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.30	2.794		ng/g		121	45 - 160
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.28	2.918		ng/g		128	70 - 150

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LCS 240-699767/3-A
Matrix: Solid
Analysis Batch: 699827

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699767

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.31	2.546		ng/g		110	70 - 160
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1.83	2.223		ng/g		122	70 - 145
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	4.68	5.622		ng/g		120	70 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	4.58	5.258		ng/g		115	60 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	4.64	4.990		ng/g		107	55 - 200
N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.44	2.826		ng/g		116	70 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.44	2.845		ng/g		117	65 - 165
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	12.2	12.12		ng/g		99	70 - 135
N-methylperfluorooctane sulfonamide (NMeFOSA)	2.44	2.879		ng/g		118	70 - 155
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.44	2.844		ng/g		117	65 - 155
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.2	13.50		ng/g		111	70 - 140
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.44	2.873		ng/g		118	60 - 155
Perfluorobutanesulfonic acid (PFBS)	2.17	2.450		ng/g		113	65 - 145
Perfluorobutanoic acid (PFBA)	4.88	5.721		ng/g		117	70 - 140
Perfluorodecanesulfonic acid (PFDS)	2.35	3.063		ng/g		130	40 - 155
Perfluorodecanoic acid (PFDA)	2.44	2.745		ng/g		113	70 - 155
Perfluorododecanesulfonic acid (PFDoS)	2.37	2.865		ng/g		121	25 - 160
Perfluorododecanoic acid (PFDoA)	2.44	2.750		ng/g		113	70 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.18	2.369		ng/g		109	70 - 140
Perfluoroheptanesulfonic acid (PFHpS)	2.33	3.169		ng/g		136	65 - 155
Perfluoroheptanoic acid (PFHpA)	2.44	2.809		ng/g		115	65 - 145
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	12.2	12.80		ng/g		105	60 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.22	2.437		ng/g		110	60 - 150
Perfluorohexanoic acid (PFHxA)	2.44	2.689		ng/g		110	65 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.44	2.785		ng/g		114	60 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.44	2.750		ng/g		113	30 - 140
Perfluorononanesulfonic acid (PFNS)	2.35	3.277		ng/g		140	55 - 140
Perfluorononanoic acid (PFNA)	2.44	2.675		ng/g		110	70 - 155
Perfluorooctanesulfonamide (PFOSA)	2.44	2.668		ng/g		109	70 - 140
Perfluorooctanesulfonic acid (PFOS)	2.27	2.788		ng/g		123	65 - 160

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LCS 240-699767/3-A
Matrix: Solid
Analysis Batch: 699827

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699767

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanoic acid (PFOA)	2.44	2.722		ng/g		112	70 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.29	2.642		ng/g		115	55 - 160
Perfluoropentanoic acid (PFPeA)	2.44	2.571		ng/g		105	60 - 150
3-Perfluoropentylpropanoic acid (5:3 FTCA)	12.2	13.14		ng/g		108	60 - 130
3-Perfluoropropylpropanoic acid (3:3 FTCA)	4.88	5.566		ng/g		114	45 - 130
Perfluorotetradecanoic acid (PFTeDA)	2.44	2.267		ng/g		93	65 - 150
Perfluorotridecanoic acid (PFTrDA)	2.44	2.297		ng/g		94	65 - 150
Perfluoroundecanoic acid (PFUnA)	2.44	2.822		ng/g		116	70 - 155

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C8 FOSA	*83.9*		*40 - 130*
13C2 10:2 FTS	*66.8*		*10 - 200*
13C2 4:2 FTS	*80.0*		*40 - 165*
13C2 6:2 FTS	*78.0*		*40 - 215*
13C2 8:2 FTS	*69.2*		*40 - 275*
13C3 HFPO-DA	*79.8*		*40 - 130*
13C4 PFBA	*80.1*		*8 - 130*
13C3 PFBS	*82.6*		*40 - 135*
13C6 PFDA	*78.5*		*40 - 130*
13C2-PFDoA	*75.0*		*40 - 130*
13C4 PFHpA	*76.9*		*40 - 130*
13C5 PFHxA	*83.4*		*40 - 130*
13C3 PFHxS	*79.2*		*40 - 130*
13C9 PFNA	*78.7*		*40 - 130*
13C8 PFOA	*76.5*		*40 - 130*
13C8 PFOS	*65.3*		*40 - 130*
13C5 PFPeA	*85.9*		*35 - 130*
13C3-PFPrS	*74.3*		*20 - 150*
13C2 PFTeDA	*91.5*		*20 - 130*
13C7 PFUnA	*74.8*		*40 - 130*
d5-NEtFOSAA	*69.8*		*40 - 150*
d9-N-EtFOSE-M	*68.4*		*15 - 130*
d5-NEtPFOSA	*68.0*		*10 - 130*
d3-NMeFOSAA	*71.6*		*40 - 135*
d7-N-MeFOSE-M	*67.0*		*20 - 130*
d3-NMePFOSA	*70.1*		*10 - 130*

Lab Sample ID: LLCS 240-699767/2-A
Matrix: Solid
Analysis Batch: 699825

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699767

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.230	0.2666		ng/g		116	45 - 160

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LLCS 240-699767/2-A
Matrix: Solid
Analysis Batch: 699825

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699767

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.228	0.2618		ng/g		115	70 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.231	0.2525		ng/g		109	70 - 160
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.183	0.2035		ng/g		111	70 - 145
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.468	0.5079		ng/g		108	70 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.458	0.5306		ng/g		116	60 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.464	0.4921		ng/g		106	55 - 200
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.244	0.2498		ng/g		102	70 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.244	0.2841		ng/g		116	65 - 165
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1.22	1.399		ng/g		115	70 - 135
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.244	0.2287		ng/g		94	70 - 155
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.244	0.2431		ng/g		100	65 - 155
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1.22	1.204		ng/g		99	70 - 140
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.244	0.3192		ng/g		131	60 - 155
Perfluorobutanesulfonic acid (PFBS)	0.217	0.2145		ng/g		99	65 - 145
Perfluorobutanoic acid (PFBA)	0.488	0.5326		ng/g		109	70 - 140
Perfluorodecanesulfonic acid (PFDS)	0.235	0.2612		ng/g		111	40 - 155
Perfluorodecanoic acid (PFDA)	0.244	0.2413		ng/g		99	70 - 155
Perfluorododecanesulfonic acid (PFDoS)	0.237	0.2582		ng/g		109	25 - 160
Perfluorododecanoic acid (PFDoA)	0.244	0.2552		ng/g		105	70 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.218	0.2196		ng/g		101	70 - 140
Perfluoroheptanesulfonic acid (PFHpS)	0.233	0.2886		ng/g		124	65 - 155
Perfluoroheptanoic acid (PFHpA)	0.244	0.2577		ng/g		106	65 - 145
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1.22	1.204		ng/g		99	60 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.222	0.2158		ng/g		97	60 - 150
Perfluorohexanoic acid (PFHxA)	0.244	0.2743		ng/g		112	65 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.244	0.2474		ng/g		101	60 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.244	0.2519		ng/g		103	30 - 140
Perfluorononanesulfonic acid (PFNS)	0.235	0.2491		ng/g		106	55 - 140
Perfluorononanoic acid (PFNA)	0.244	0.2383		ng/g		98	70 - 155

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LLCS 240-699767/2-A
Matrix: Solid
Analysis Batch: 699825

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699767

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluorooctanesulfonamide (PFOSA)			0.244	0.2583		ng/g		106	70 - 140		
Perfluorooctanesulfonic acid (PFOS)			0.227	0.2817		ng/g		124	65 - 160		
Perfluorooctanoic acid (PFOA)			0.244	0.2681		ng/g		110	70 - 150		
Perfluoropentanesulfonic acid (PFPeS)			0.229	0.2387		ng/g		104	55 - 160		
Perfluoropentanoic acid (PFPeA)			0.244	0.2558		ng/g		105	60 - 150		
3-Perfluoropentylpropanoic acid (5:3 FTCA)			1.22	1.398		ng/g		115	60 - 130		
3-Perfluoropropylpropanoic acid (3:3 FTCA)			0.488	0.5507		ng/g		113	45 - 130		
Perfluorotetradecanoic acid (PFTeDA)			0.244	0.2149		ng/g		88	65 - 150		
Perfluorotridecanoic acid (PFTrDA)			0.244	0.2177		ng/g		89	65 - 150		
Perfluoroundecanoic acid (PFUnA)			0.244	0.2647		ng/g		109	70 - 155		

Isotope Dilution	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C8 FOSA	*104*		*40 - 130*
13C2 10:2 FTS	*60.9*		*10 - 200*
13C2 4:2 FTS	*91.9*		*40 - 165*
13C2 6:2 FTS	*94.0*		*40 - 215*
13C2 8:2 FTS	*72.6*		*40 - 275*
13C3 HFPO-DA	*95.6*		*40 - 130*
13C4 PFBA	*95.5*		*8 - 130*
13C3 PFBS	*97.9*		*40 - 135*
13C6 PFDA	*95.3*		*40 - 130*
13C2-PFDoA	*85.6*		*40 - 130*
13C4 PFHpA	*98.1*		*40 - 130*
13C5 PFHxA	*98.4*		*40 - 130*
13C3 PFHxS	*97.8*		*40 - 130*
13C9 PFNA	*99.4*		*40 - 130*
13C8 PFOA	*91.5*		*40 - 130*
13C8 PFOS	*84.6*		*40 - 130*
13C5 PFPeA	*110*		*35 - 130*
13C3-PFPrS	*87.4*		*20 - 150*
13C2 PFTeDA	*103*		*20 - 130*
13C7 PFUnA	*86.4*		*40 - 130*
d5-NEtFOSAA	*72.4*		*40 - 150*
d9-N-EtFOSE-M	*58.8*		*15 - 130*
d5-NEtPFOSA	*97.2*		*10 - 130*
d3-NMeFOSAA	*77.1*		*40 - 135*
d7-N-MeFOSE-M	*57.5*		*20 - 130*
d3-NMePFOSA	*103*		*10 - 130*

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: MB 240-700702/1-A
Matrix: Solid
Analysis Batch: 700756

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 700702

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.388		0.388		ng/g		05/06/26 10:22	05/06/26 17:26	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.388		0.388		ng/g		05/06/26 10:22	05/06/26 17:26	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.388		0.388		ng/g		05/06/26 10:22	05/06/26 17:26	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<0.971		0.971		ng/g		05/06/26 10:22	05/06/26 17:26	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<0.971		0.971		ng/g		05/06/26 10:22	05/06/26 17:26	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
Perfluorobutanesulfonic acid (PFBS)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
Perfluorobutanoic acid (PFBA)	<0.388		0.388		ng/g		05/06/26 10:22	05/06/26 17:26	1
Perfluorodecanesulfonic acid (PFDS)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
Perfluorodecanoic acid (PFDA)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
Perfluorododecanesulfonic acid (PFDoS)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
Perfluorododecanoic acid (PFDoA)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
Perfluoroheptanoic acid (PFHpA)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<0.971		0.971		ng/g		05/06/26 10:22	05/06/26 17:26	1
Perfluorohexanesulfonic acid (PFHxS)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
Perfluorohexanoic acid (PFHxA)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
Perfluorononanesulfonic acid (PFNS)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
Perfluorononanoic acid (PFNA)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
Perfluorooctanesulfonamide (PFOSA)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
Perfluorooctanesulfonic acid (PFOS)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
Perfluorooctanoic acid (PFOA)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: MB 240-700702/1-A
Matrix: Solid
Analysis Batch: 700756

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 700702

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
Perfluoropentanoic acid (PFPeA)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<0.971		0.971		ng/g		05/06/26 10:22	05/06/26 17:26	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.388		0.388		ng/g		05/06/26 10:22	05/06/26 17:26	1
Perfluorotetradecanoic acid (PFTeDA)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
Perfluorotridecanoic acid (PFTrDA)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1
Perfluoroundecanoic acid (PFUnA)	<0.194		0.194		ng/g		05/06/26 10:22	05/06/26 17:26	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*69.1*		*40 - 130*	*05/06/26 10:22*	*05/06/26 17:26*	*1*
13C2 10:2 FTS	*53.3*		*40 - 275*	*05/06/26 10:22*	*05/06/26 17:26*	*1*
13C2 4:2 FTS	*73.7*		*40 - 165*	*05/06/26 10:22*	*05/06/26 17:26*	*1*
13C2 6:2 FTS	*72.7*		*40 - 215*	*05/06/26 10:22*	*05/06/26 17:26*	*1*
13C2 8:2 FTS	*61.2*		*40 - 275*	*05/06/26 10:22*	*05/06/26 17:26*	*1*
13C3 HFPO-DA	*78.9*		*40 - 130*	*05/06/26 10:22*	*05/06/26 17:26*	*1*
13C4 PFBA	*74.6*		*8 - 130*	*05/06/26 10:22*	*05/06/26 17:26*	*1*
13C3 PFBS	*75.9*		*40 - 135*	*05/06/26 10:22*	*05/06/26 17:26*	*1*
13C6 PFDA	*66.7*		*40 - 130*	*05/06/26 10:22*	*05/06/26 17:26*	*1*
13C2-PFDoA	*54.6*		*40 - 130*	*05/06/26 10:22*	*05/06/26 17:26*	*1*
13C4 PFHpA	*78.4*		*40 - 130*	*05/06/26 10:22*	*05/06/26 17:26*	*1*
13C5 PFHxA	*76.7*		*40 - 130*	*05/06/26 10:22*	*05/06/26 17:26*	*1*
13C3 PFHxS	*71.3*		*40 - 130*	*05/06/26 10:22*	*05/06/26 17:26*	*1*
13C9 PFNA	*71.6*		*40 - 130*	*05/06/26 10:22*	*05/06/26 17:26*	*1*
13C8 PFOA	*70.8*		*40 - 130*	*05/06/26 10:22*	*05/06/26 17:26*	*1*
13C8 PFOS	*53.4*		*40 - 130*	*05/06/26 10:22*	*05/06/26 17:26*	*1*
13C5 PFPeA	*85.6*		*35 - 130*	*05/06/26 10:22*	*05/06/26 17:26*	*1*
13C3-PFPrS	*74.9*		*20 - 150*	*05/06/26 10:22*	*05/06/26 17:26*	*1*
13C2 PFTeDA	*71.4*		*20 - 130*	*05/06/26 10:22*	*05/06/26 17:26*	*1*
13C7 PFUnA	*62.4*		*40 - 130*	*05/06/26 10:22*	*05/06/26 17:26*	*1*
d5-NEtFOSAA	*51.7*		*40 - 150*	*05/06/26 10:22*	*05/06/26 17:26*	*1*
d9-N-EtFOSE-M	*29.1*		*15 - 130*	*05/06/26 10:22*	*05/06/26 17:26*	*1*
d5-NEtPFOSA	*48.3*		*10 - 130*	*05/06/26 10:22*	*05/06/26 17:26*	*1*
d3-NMeFOSAA	*54.0*		*40 - 135*	*05/06/26 10:22*	*05/06/26 17:26*	*1*
d7-N-MeFOSE-M	*29.0*		*20 - 130*	*05/06/26 10:22*	*05/06/26 17:26*	*1*
d3-NMePFOSA	*57.3*		*10 - 130*	*05/06/26 10:22*	*05/06/26 17:26*	*1*

Lab Sample ID: LCS 240-700702/3-A
Matrix: Solid
Analysis Batch: 700756

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 700702

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.31	2.226		ng/g		96	45 - 160
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.29	2.519		ng/g		110	70 - 150

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LCS 240-700702/3-A
Matrix: Solid
Analysis Batch: 700756

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 700702

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.32	2.219		ng/g		96	70 - 160
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1.84	1.849		ng/g		101	70 - 145
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	4.71	4.644		ng/g		99	70 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	4.60	4.846		ng/g		105	60 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	4.67	4.713		ng/g		101	55 - 200
N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.45	2.539		ng/g		104	70 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.45	2.522		ng/g		103	65 - 165
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	12.3	12.47		ng/g		102	70 - 135
N-methylperfluorooctane sulfonamide (NMeFOSA)	2.45	2.408		ng/g		98	70 - 155
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.45	2.510		ng/g		102	65 - 155
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.3	12.92		ng/g		105	70 - 140
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.45	2.553		ng/g		104	60 - 155
Perfluorobutanesulfonic acid (PFBS)	2.18	2.225		ng/g		102	65 - 145
Perfluorobutanoic acid (PFBA)	4.90	5.030		ng/g		103	70 - 140
Perfluorodecanesulfonic acid (PFDS)	2.36	2.393		ng/g		101	40 - 155
Perfluorodecanoic acid (PFDA)	2.45	2.409		ng/g		98	70 - 155
Perfluorododecanesulfonic acid (PFDoS)	2.38	2.166		ng/g		91	25 - 160
Perfluorododecanoic acid (PFDoA)	2.45	2.453		ng/g		100	70 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.19	2.304		ng/g		105	70 - 140
Perfluoroheptanesulfonic acid (PFHpS)	2.34	2.997		ng/g		128	65 - 155
Perfluoroheptanoic acid (PFHpA)	2.45	2.489		ng/g		102	65 - 145
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	12.3	10.88		ng/g		89	60 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.24	2.210		ng/g		99	60 - 150
Perfluorohexanoic acid (PFHxA)	2.45	2.475		ng/g		101	65 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.45	2.340		ng/g		95	60 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.45	2.420		ng/g		99	30 - 140
Perfluorononanesulfonic acid (PFNS)	2.36	2.455		ng/g		104	55 - 140
Perfluorononanoic acid (PFNA)	2.45	2.306		ng/g		94	70 - 155
Perfluorooctanesulfonamide (PFOSA)	2.45	2.334		ng/g		95	70 - 140
Perfluorooctanesulfonic acid (PFOS)	2.28	2.559		ng/g		112	65 - 160

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LCS 240-700702/3-A
Matrix: Solid
Analysis Batch: 700756

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 700702

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanoic acid (PFOA)	2.45	2.452		ng/g		100	70 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.30	2.499		ng/g		108	55 - 160
Perfluoropentanoic acid (PFPeA)	2.45	2.350		ng/g		96	60 - 150
3-Perfluoropentylpropanoic acid (5:3 FTCA)	12.3	11.92		ng/g		97	60 - 130
3-Perfluoropropylpropanoic acid (3:3 FTCA)	4.90	4.872		ng/g		99	45 - 130
Perfluorotetradecanoic acid (PFTeDA)	2.45	1.854		ng/g		76	65 - 150
Perfluorotridecanoic acid (PFTrDA)	2.45	2.022		ng/g		83	65 - 150
Perfluoroundecanoic acid (PFUnA)	2.45	2.403		ng/g		98	70 - 155

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C8 FOSA	*72.0*		*40 - 130*
13C2 10:2 FTS	*53.9*		*10 - 200*
13C2 4:2 FTS	*80.4*		*40 - 165*
13C2 6:2 FTS	*75.7*		*40 - 215*
13C2 8:2 FTS	*61.5*		*40 - 275*
13C3 HFPO-DA	*91.6*		*40 - 130*
13C4 PFBA	*90.5*		*8 - 130*
13C3 PFBS	*88.0*		*40 - 135*
13C6 PFDA	*72.8*		*40 - 130*
13C2-PFDoA	*61.5*		*40 - 130*
13C4 PFHpA	*86.7*		*40 - 130*
13C5 PFHxA	*88.1*		*40 - 130*
13C3 PFHxS	*79.4*		*40 - 130*
13C9 PFNA	*77.1*		*40 - 130*
13C8 PFOA	*76.5*		*40 - 130*
13C8 PFOS	*56.8*		*40 - 130*
13C5 PFPeA	*96.8*		*35 - 130*
13C3-PFPrS	*92.6*		*20 - 150*
13C2 PFTeDA	*79.4*		*20 - 130*
13C7 PFUnA	*70.3*		*40 - 130*
d5-NEtFOSAA	*51.7*		*40 - 150*
d9-N-EtFOSE-M	*31.4*		*15 - 130*
d5-NEtPFOSA	*54.2*		*10 - 130*
d3-NMeFOSAA	*52.1*		*40 - 135*
d7-N-MeFOSE-M	*31.1*		*20 - 130*
d3-NMePFOSA	*61.1*		*10 - 130*

Lab Sample ID: LLCS 240-700702/2-A
Matrix: Solid
Analysis Batch: 700756

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 700702

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.227	0.2536		ng/g		112	45 - 160

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LLCS 240-700702/2-A
Matrix: Solid
Analysis Batch: 700756

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 700702

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.225	0.2627		ng/g		117	70 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.227	0.2385		ng/g		105	70 - 160
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.180	0.2036		ng/g		113	70 - 145
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.462	0.4726		ng/g		102	70 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.451	0.5045		ng/g		112	60 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.458	0.5055		ng/g		110	55 - 200
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.240	0.2506		ng/g		104	70 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.240	0.2559		ng/g		106	65 - 165
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1.20	1.417		ng/g		118	70 - 135
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.240	0.2104		ng/g		88	70 - 155
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.240	0.2604		ng/g		108	65 - 155
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1.20	1.374		ng/g		114	70 - 140
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.240	0.2832		ng/g		118	60 - 155
Perfluorobutanesulfonic acid (PFBS)	0.213	0.2226		ng/g		104	65 - 145
Perfluorobutanoic acid (PFBA)	0.481	0.5295		ng/g		110	70 - 140
Perfluorodecanesulfonic acid (PFDS)	0.232	0.2689		ng/g		116	40 - 155
Perfluorodecanoic acid (PFDA)	0.240	0.2516		ng/g		105	70 - 155
Perfluorododecanesulfonic acid (PFDoS)	0.233	0.2462		ng/g		106	25 - 160
Perfluorododecanoic acid (PFDoA)	0.240	0.2488	I	ng/g		103	70 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.214	0.2381		ng/g		111	70 - 140
Perfluoroheptanesulfonic acid (PFHpS)	0.229	0.2905		ng/g		127	65 - 155
Perfluoroheptanoic acid (PFHpA)	0.240	0.2612		ng/g		109	65 - 145
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1.20	1.357		ng/g		113	60 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.219	0.2602		ng/g		119	60 - 150
Perfluorohexanoic acid (PFHxA)	0.240	0.2737		ng/g		114	65 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.240	0.2307		ng/g		96	60 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.240	0.2359		ng/g		98	30 - 140
Perfluorononanesulfonic acid (PFNS)	0.231	0.2570		ng/g		111	55 - 140
Perfluorononanoic acid (PFNA)	0.240	0.2442		ng/g		102	70 - 155

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LLCS 240-700702/2-A
Matrix: Solid
Analysis Batch: 700756

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 700702

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonamide (PFOSA)	0.240	0.2455		ng/g		102	70 - 140
Perfluorooctanesulfonic acid (PFOS)	0.224	0.2683		ng/g		120	65 - 160
Perfluorooctanoic acid (PFOA)	0.240	0.2613		ng/g		109	70 - 150
Perfluoropentanesulfonic acid (PFPeS)	0.226	0.2450		ng/g		108	55 - 160
Perfluoropentanoic acid (PFPeA)	0.240	0.2506		ng/g		104	60 - 150
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.20	1.317		ng/g		110	60 - 130
3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.481	0.4846		ng/g		101	45 - 130
Perfluorotetradecanoic acid (PFTeDA)	0.240	0.2024		ng/g		84	65 - 150
Perfluorotridecanoic acid (PFTrDA)	0.240	0.2128		ng/g		89	65 - 150
Perfluoroundecanoic acid (PFUnA)	0.240	0.2441		ng/g		102	70 - 155

Isotope Dilution	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C8 FOSA	*68.8*		*40 - 130*
13C2 10:2 FTS	*59.9*		*10 - 200*
13C2 4:2 FTS	*65.1*		*40 - 165*
13C2 6:2 FTS	*68.0*		*40 - 215*
13C2 8:2 FTS	*65.3*		*40 - 275*
13C3 HFPO-DA	*70.6*		*40 - 130*
13C4 PFBA	*62.0*		*8 - 130*
13C3 PFBS	*64.6*		*40 - 135*
13C6 PFDA	*70.6*		*40 - 130*
13C2-PFDoA	*63.5*		*40 - 130*
13C4 PFHpA	*70.8*		*40 - 130*
13C5 PFHxA	*67.0*		*40 - 130*
13C3 PFHxS	*65.8*		*40 - 130*
13C9 PFNA	*69.7*		*40 - 130*
13C8 PFOA	*64.5*		*40 - 130*
13C8 PFOS	*55.4*		*40 - 130*
13C5 PFPeA	*74.3*		*35 - 130*
13C3-PFPrS	*61.3*		*20 - 150*
13C2 PFTeDA	*80.7*		*20 - 130*
13C7 PFUnA	*71.0*		*40 - 130*
d5-NEtFOSAA	*58.9*		*40 - 150*
d9-N-EtFOSE-M	*33.4*		*15 - 130*
d5-NEtPFOSA	*56.6*		*10 - 130*
d3-NMeFOSAA	*59.9*		*40 - 135*
d7-N-MeFOSE-M	*32.4*		*20 - 130*
d3-NMePFOSA	*62.9*		*10 - 130*

LCMS

Prep Batch: 699386

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-16	HA-07-2.5	Total/NA	Solid	1633 Shake	
MB 240-699386/1-A	Method Blank	Total/NA	Solid	1633 Shake	
LCS 240-699386/3-A	Lab Control Sample	Total/NA	Solid	1633 Shake	
LLCS 240-699386/2-A	Lab Control Sample	Total/NA	Solid	1633 Shake	

Analysis Batch: 699448

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-16	HA-07-2.5	Total/NA	Solid	1633A	699386
MB 240-699386/1-A	Method Blank	Total/NA	Solid	1633A	699386
LCS 240-699386/3-A	Lab Control Sample	Total/NA	Solid	1633A	699386
LLCS 240-699386/2-A	Lab Control Sample	Total/NA	Solid	1633A	699386

Prep Batch: 699760

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-15	HA-07-1	Total/NA	Solid	1633 Shake	
MB 240-699760/1-A	Method Blank	Total/NA	Solid	1633 Shake	
LCS 240-699760/3-A	Lab Control Sample	Total/NA	Solid	1633 Shake	
LLCS 240-699760/2-A	Lab Control Sample	Total/NA	Solid	1633 Shake	

Prep Batch: 699767

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-1	HA-08-1	Total/NA	Solid	1633 Shake	
310-330206-2	HA-08-3	Total/NA	Solid	1633 Shake	
310-330206-12	HA-01-3	Total/NA	Solid	1633 Shake	
310-330206-12 - DL	HA-01-3	Total/NA	Solid	1633 Shake	
310-330206-13	HA-02-1	Total/NA	Solid	1633 Shake	
310-330206-14	HA-02-3	Total/NA	Solid	1633 Shake	
MB 240-699767/1-A	Method Blank	Total/NA	Solid	1633 Shake	
LCS 240-699767/3-A	Lab Control Sample	Total/NA	Solid	1633 Shake	
LLCS 240-699767/2-A	Lab Control Sample	Total/NA	Solid	1633 Shake	

Analysis Batch: 699825

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-1	HA-08-1	Total/NA	Solid	1633A	699767
310-330206-2	HA-08-3	Total/NA	Solid	1633A	699767
310-330206-12	HA-01-3	Total/NA	Solid	1633A	699767
310-330206-13	HA-02-1	Total/NA	Solid	1633A	699767
310-330206-14	HA-02-3	Total/NA	Solid	1633A	699767
MB 240-699767/1-A	Method Blank	Total/NA	Solid	1633A	699767
LLCS 240-699767/2-A	Lab Control Sample	Total/NA	Solid	1633A	699767

Analysis Batch: 699827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-15	HA-07-1	Total/NA	Solid	1633A	699760
MB 240-699760/1-A	Method Blank	Total/NA	Solid	1633A	699760
LCS 240-699760/3-A	Lab Control Sample	Total/NA	Solid	1633A	699760
LCS 240-699767/3-A	Lab Control Sample	Total/NA	Solid	1633A	699767
LLCS 240-699760/2-A	Lab Control Sample	Total/NA	Solid	1633A	699760

QC Association Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-2
Project/Site: Duluth Airport Taxiway A

LCMS

Analysis Batch: 700120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-12 - DL	HA-01-3	Total/NA	Solid	1633A	699767

Prep Batch: 700702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-18	HA-09-3	Total/NA	Solid	1633 Shake	
MB 240-700702/1-A	Method Blank	Total/NA	Solid	1633 Shake	
LCS 240-700702/3-A	Lab Control Sample	Total/NA	Solid	1633 Shake	
LLCS 240-700702/2-A	Lab Control Sample	Total/NA	Solid	1633 Shake	

Analysis Batch: 700756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330206-18	HA-09-3	Total/NA	Solid	1633A	700702
MB 240-700702/1-A	Method Blank	Total/NA	Solid	1633A	700702
LCS 240-700702/3-A	Lab Control Sample	Total/NA	Solid	1633A	700702
LLCS 240-700702/2-A	Lab Control Sample	Total/NA	Solid	1633A	700702

Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Taxiway A

Job ID: 310-330206-2

Client Sample ID: HA-08-1

Lab Sample ID: 310-330206-1

Date Collected: 04/20/26 10:20
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 75.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	1633 Shake			699767	DW4U	EET CLE	04/29/26 08:25
Total/NA	Analysis	1633A		1	699825	DSH	EET CLE	04/29/26 18:02

Client Sample ID: HA-08-3

Lab Sample ID: 310-330206-2

Date Collected: 04/20/26 10:25
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 85.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	1633 Shake			699767	DW4U	EET CLE	04/29/26 08:25
Total/NA	Analysis	1633A		1	699825	DSH	EET CLE	04/29/26 18:19

Client Sample ID: HA-01-3

Lab Sample ID: 310-330206-12

Date Collected: 04/20/26 12:20
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 83.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	1633 Shake			699767	DW4U	EET CLE	04/29/26 08:25
Total/NA	Analysis	1633A		1	699825	DSH	EET CLE	04/29/26 21:38
Total/NA	Prep	1633 Shake	DL		699767	DW4U	EET CLE	04/29/26 08:25
Total/NA	Analysis	1633A	DL	5	700120	LD	EET CLE	05/01/26 21:33

Client Sample ID: HA-02-1

Lab Sample ID: 310-330206-13

Date Collected: 04/20/26 12:35
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 86.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	1633 Shake			699767	DW4U	EET CLE	04/29/26 08:25
Total/NA	Analysis	1633A		1	699825	DSH	EET CLE	04/29/26 21:54

Client Sample ID: HA-02-3

Lab Sample ID: 310-330206-14

Date Collected: 04/20/26 12:40
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 87.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	1633 Shake			699767	DW4U	EET CLE	04/29/26 08:25
Total/NA	Analysis	1633A		1	699825	DSH	EET CLE	04/29/26 22:11

Client Sample ID: HA-07-1

Lab Sample ID: 310-330206-15

Date Collected: 04/20/26 12:55
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 90.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	1633 Shake			699760	JVB4	EET CLE	04/29/26 08:11
Total/NA	Analysis	1633A		1	699827	LD	EET CLE	04/29/26 17:58

Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-2
Project/Site: Duluth Airport Taxiway A

Client Sample ID: HA-07-2.5
Lab Sample ID: 310-330206-16

Date Collected: 04/20/26 13:00
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 89.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	1633 Shake			699386	DW4U	EET CLE	04/27/26 07:31
Total/NA	Analysis	1633A		1	699448	MRL	EET CLE	04/27/26 22:30

Client Sample ID: HA-09-3
Lab Sample ID: 310-330206-18

Date Collected: 04/20/26 13:20
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 82.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	1633 Shake			700702	DW4U	EET CLE	05/06/26 10:22
Total/NA	Analysis	1633A		1	700756	LD	EET CLE	05/06/26 22:08

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-2
Project/Site: Duluth Airport Taxiway A

Laboratory: Eurofins Cleveland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Minnesota	NELAP	039-999-348	12-31-26

Method Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-2
Project/Site: Duluth Airport Taxiway A

Method	Method Description	Protocol	Laboratory
1633A	Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A	EPA	EET CLE
1633 Shake	Shake Extraction with SPE	EPA	EET CLE

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

eurofins | Environment Testing America

310-330206 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SEH

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 4.22.26 | TIME 1320 | Received By: PH

Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee
☑ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:_____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☑ Yes ☐ No *If yes:* Cooler ID:

Multiple Coolers? ☑ Yes ☐ No *If yes:* Cooler # 1 of 4

Cooler Custody Seals Present? ☐ Yes ☑ No *If yes:* Cooler custody seals intact? ☐ Yes ☐ No

Sample Custody Seals Present? ☐ Yes ☑ No *If yes:* Sample custody seals intact? ☐ Yes ☐ No

Trip Blank Present? ☑ Yes ☐ No *If yes:* Which VOA samples are in cooler? ↓

HA-03-1, 01-3, 02-1,3, 07-1, 2.5, 09-1,3

Temperature Record

Coolant: ☑ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other:_____ ☐ NONE

Thermometer ID: CC | Correction Factor (°C): 0

• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 5.1 | Corrected Temp (°C): 5.1

• Sample Container Temperature

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e g , bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

eurofins | Environment Testing America

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SEH

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 4.22.26 | TIME 1320 | Received By: PH

Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee
☑ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:_____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☑ Yes ☐ No *If yes:* Cooler ID:

Multiple Coolers? ☑ Yes ☐ No *If yes:* Cooler # 2 of 4

Cooler Custody Seals Present? ☐ Yes ☑ No *If yes:* Cooler custody seals intact? ☐ Yes ☐ No

Sample Custody Seals Present? ☐ Yes ☑ No *If yes:* Sample custody seals intact? ☐ Yes ☐ No

Trip Blank Present? ☑ Yes ☐ No *If yes:* Which VOA samples are in cooler? ↓

HA-08-1, 3, 06-1, 3, 05-1, 3, 04-1, 3, 03-3, 01-1

Temperature Record

Coolant: ☑ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other:_____ ☐ NONE

Thermometer ID: CC | Correction Factor (°C): 0

• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 4.0 | Corrected Temp (°C): 4.0

• Sample Container Temperature

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE. If yes, contact PM before proceeding If no, proceed with login

Additional Comments

eurofins | Environment Testing America

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SEH

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 4.22.26 | TIME 1320 | Received By: PH

Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☑ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:_____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☑ Yes ☐ No *If yes:* Cooler ID:

Multiple Coolers? ☑ Yes ☐ No *If yes:* Cooler # 3 of 4

Cooler Custody Seals Present? ☐ Yes ☑ No *If yes:* Cooler custody seals intact? ☐ Yes ☐ No

Sample Custody Seals Present? ☐ Yes ☑ No *If yes:* Sample custody seals intact? ☐ Yes ☐ No

Trip Blank Present? ☑ Yes ☐ No *If yes:* Which VOA samples are in cooler? ↓

HA-10-1, 3, 11-1, 3, 12-1, 3, 13-1, 3

Temperature Record

Coolant: ☑ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other:_____ ☐ NONE

Thermometer ID: CC | Correction Factor (°C): 0

• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 4.3 | Corrected Temp (°C): 4.3

• Sample Container Temperature

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g , bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding If no, proceed with login

Additional Comments

eurofins | Environment Testing America

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SEH

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 4.22.26 | TIME 1320 | Received By: PH

Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☑ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:_____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☑ Yes ☐ No *If yes:* Cooler ID:

Multiple Coolers? ☑ Yes ☐ No *If yes:* Cooler # 4 of 4

Cooler Custody Seals Present? ☐ Yes ☑ No *If yes:* Cooler custody seals intact? ☐ Yes ☐ No

Sample Custody Seals Present? ☐ Yes ☑ No *If yes:* Sample custody seals intact? ☐ Yes ☐ No

Trip Blank Present? ☑ Yes ☐ No *If yes:* Which VOA samples are in cooler? ↓

The Rest / All HCl

Temperature Record

Coolant: ☑ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other:_____ ☐ NONE

Thermometer ID: CC | Correction Factor (°C): 0

• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 1.9 | Corrected Temp (°C): 1.9

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes.* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g , bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE. If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613
Phone 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

eurofins | Environment Testing

eurofins Duluth SC 269

Client Information	Sampler: Jack Hagley	Lab PM: Bindert, Zach T	Carrier Tracking No(s):	COC No: 310-120319-30763 1
Client Contact: Keri Aufdencamp	Phone: 218-340-4798	E-Mail: Zach.Bindert@et.eurofinsus.com	State of Origin:	Page: Page 1 of 3
Company: Short Elliott Hendrickson Inc. dba SEH	PWSID:			Job #:
Address: 3535 Vadnais Center Drive	Due Date Requested			
City: St. Paul	TAT Requested (days): Standard			
State, Zip: MN 55110	Compliance Project: Δ Yes Δ No			
Phone: 651-318-0354(Tel)	PO #: Purchase Order not required			
Email: kaufdencamp@sehinc.com	WO #:			
Project Name: Duluth Airport Taxiway A	Project #: 31020575			
Site:	SSOW#:			

Analysis Requested

Preservation Codes: N - None; F - MeOH; D - HNO3; A - HCL; Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air DW=Drinking Water)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B, 7471B	1633A - 1633 Standard List 40	WI_GRO - Wisconsin GRO	8260D - Volatile Minnesota Sublist	8270E_QQQ, Moisture	WI_DRO - Wisconsin DRO	6020B, 7470A	WI_DRO - Wisconsin DRO (C10-C28)	8270E_QQQ - Standard PAH List	8260D, WI_GRO	Total Number of containers	Special Instructions/Note
			Preservation Code:				N	N	F	F	N	N	D	A	N	A		
HA-08-1	4/20/26	1020	6	Solid			X	X	X	X	X	X						Hold PFAS
HA-08-3		1025		Solid			X	X	X	X	X	X						Hold PFAS
HA-06-1		1056		Solid			X	X	X	X	X	X						
HA-06-3		1055		Solid			X	X	X	X	X	X						Hold PFAS
HA-05-1		1115		Solid			X	X	X	X	X	X						Hold PFAS
HA-05-3		1120		Solid			X	X	X	X	X	X						Hold PFAS
HA-04-1		1135		Solid			X	X	X	X	X	X						Hold PFAS
HA-04-3		1140		Solid			X	X	X	X	X	X						Hold PFAS
HA-03-1		1155		Solid			X	X	X	X	X	X						
HA-03-3		1200		Solid			X	X	X	X	X	X						Hold PFAS
HA-01-1		1215		Solid			X	X	X	X	X	X						

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I II III IV Other (specify)

Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		4/21 1500	SEH		4/21/26 1500	Eurofins
2		4/21/26 1530	Eurofins		4-22-26 13:0	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No

Cooler Temperature(s) °C and Other Remarks:

Ver: 10/10/2024

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613
Phone. 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

eurofins | Environment Testing

Eurofins Duluth SC 269

Client Information	Sampler	Lab PM	Carrier Tracking No(s).	COC No
		Bindert, Zach T		310-120319-30763 2
Client Contact: Ken Aufdencamp	Phone:	E-Mail: Zach.Bindert@et.eurofinsus.com	State of Origin.	Page: Page 2 of 3
Company: Short Elliott Hendrickson Inc. dba SEH	PWSID:			Job #:

Address: 3535 Vadnais Center Drive	Due Date Requested	
City: St. Paul	TAT Requested (days)	
State, Zip: MN 55110	Compliance Project: Δ Yes Δ No	
Phone: 651-318-0354(Tel)	PO #: Purchase Order not required	
Email: kaufdencamp@sehinc.com	WO #:	
Project Name: Duluth Airport Taxiway A	Project #: 31020575	
Site:	SSOW#:	

Analysis Requested

Preservation Codes
N - None
F MeOH
D - HNO3
A - HCL

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air DW=Drinking Water)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B, 7471B	1633A - 1633 Standard List 40	WI_GRO - Wisconsin GRO	8260D - Volatile Minnesota Sublist	8270E_QQQ, Moisture	WI_DRO - Wisconsin DRO	6020B, 7470A	WI_DRO - Wisconsin DRO (C10-C28)	8270E_QQQ - Standard PAH List	8260D, WI_GRO	DRO-Silica Gel Cleanup	Total Number of containers	Special Instructions/Note:
Preservation Code:							N	N	F	F	N	N	D	A	N	A			
HA-01-3	4/20/24	12:20	G	Solid			X	O	X	X	X	X							Hold PFAS
HA-02-1		1235		Solid			X	O	X	X	X	X							Hold PFAS
HA-02-3		1240		Solid			X	O	X	X	X	X							Hold PFAS
HA-07-1		1255		Solid			X	O	X	X	X	X							Hold PFAS
HA-07-2.5		1300		Solid			X	O	X	X	X	X							Hold PFAS
HA-09-1		1315		Solid			X	X	X	X	X	X							
HA-09-3		1320		Solid			X	O	X	X	X	X							Hold PFAS
WS-01	4/21/24	0900		~~Solid~~ W				X		X			X	X	X	X			
SS-01		1000		Solid			X	X	X	X	X						X		
SS-02		1010		Solid			X	X	X	X	X						X		
SS-03		1020		Solid			X	X	X	X	X						X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I II III IV Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date	Time.	Method of Shipment:

	Date/Time:	Company	Received by	Date/Time:	Company
Relinquished by:	4/21 1500	SEH		4/21/24 1500	Eurofins
Relinquished by:	4/21/24 1530	Eurofins		4.22.24 1320	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks.

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613
Phone. 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

eurofins

Eurofins Duluth SC 269

Environment Testing

Client Information	Sampler	Lab PM	Carrier Tracking No(s)	COC No
Client Contact: Keri Aufdencamp	Phone:	Bindert, Zach T E-Mail: Zach.Bindert@et.eurofinsus.com	State of Origin	310-120319-30763 3
Company: Short Elliott Hendrickson Inc. dba SEH	PWSID:			Page: Page 3 of 3
Address: 3535 Vadnais Center Drive	Due Date Requested			Job #:
City: St. Paul	TAT Requested (days)			
State, Zip: MN 55110	Compliance Project: Δ Yes Δ No			
Phone: 651-318-0354(Tel)	PO #: Purchase Order not required			
Email: kaufdencamp@sehinc.com	WO #:			
Project Name: Duluth Airport Taxiway A	Project #: 31020575			
Site:	SSOW#:			

Analysis Requested

Preservation Codes
N - None
F - MeOH
D HNO3
A - HCL
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air DW=Drinking Water)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B, 7471B	1633A - 1633 Standard List 40	WI_GRO - Wisconsin GRO	8260D - Volatile Minnesota Sublist	8270E_QQQ, Moisture	WI_DRO - Wisconsin DRO	6020B, 7470A	WI_DRO - Wisconsin DRO (C10-C28)	8270E_QQQ - Standard PAH List	8260D, WI_GRO	Total Number of containers	Special Instructions/Note
Preservation Code:							N	N	F	F	N	N	D	A	N	A		
HA-10-1	4/21/26	1125	G	Solid			X	X	X	X	X	X						
HA-10-3		1130		Solid			X	X	X	X	X	X						
HA-11-1		1145		Solid			X	X	X	X	X	X						
HA-11-3		1150		Solid			X	X	X	X	X	X						
HA-12-1		1205		Solid			X	X	X	X	X	X						
HA-12-3		1210		Solid			X	X	X	X	X	X						
HA-13-1		1225		Solid			X	X	X	X	X	X						
HA-13-3		1230		Solid			0	0	0	0	0	0						Hold all
Rinsate Blank		1300		W ~~Solid~~				X										
Trip Blank-Soil		1400		Solid					X	X								
Trip Blank-Water		1500		Solid						X				X				

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I II III IV Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1		4/21 1500	SEH		4/21/26 1500	Eurofins
2		4/21/26 1530	Eurofins		4-22-26 1320	
3		Date/Time.	Company	Received by	Date/Time.	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks.

Ver: 10/10/2024

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5/11/2026

Login Sample Receipt Checklist

Client: Short Elliott Hendrickson, Inc. dba SEH

Job Number: 310-330206-2

Login Number: 330206

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Homolar, Dana J

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

Isotope Dilution Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-2
Project/Site: Duluth Airport Taxiway A

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Matrix: Solid **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFOSA	M102FTS	M242FTS	M262FTS	M282FTS	HFPODA	PFBA	C3PFBS
Lab Sample ID	Client Sample ID	(40-130)	(40-275)	(40-165)	(40-215)	(40-275)	(40-130)	(8-130)	(40-135)
310-330206-1	HA-08-1	86.3	69.0	68.8	72.7	67.8	71.0	75.2	75.0
310-330206-2	HA-08-3	86.0	58.6	66.0	65.2	60.2	83.6	85.9	77.8
310-330206-12	HA-01-3	85.7	52.3	57.1	61.6	53.6	80.6	79.2	71.6
310-330206-12 - DL	HA-01-3	82.4	68.5	71.7	72.1	66.1	86.0	79.1	77.1
310-330206-13	HA-02-1	81.6	56.8	81.6	62.7	60.6	77.1	80.5	87.4
310-330206-14	HA-02-3	77.7	57.7	62.7	61.7	59.6	76.5	70.6	71.4
310-330206-15	HA-07-1	68.1	61.8	59.7	55.4	56.5	59.8	54.8	57.9
310-330206-16	HA-07-2.5	84.1	81.4	96.0	81.0	82.0	71.7	72.2	87.0
310-330206-18	HA-09-3	67.7	67.0	52.9	59.4	64.4	57.2	57.1	59.2
MB 240-699386/1-A	Method Blank	97.2	95.6	118	106	96.4	95.4	92.7	111
MB 240-699760/1-A	Method Blank	85.0	73.2	91.8	76.6	71.0	83.8	81.7	83.5
MB 240-699767/1-A	Method Blank	77.0	45.0	70.9	73.8	51.5	75.4	72.2	73.7
MB 240-700702/1-A	Method Blank	69.1	53.3	73.7	72.7	61.2	78.9	74.6	75.9

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		C6PFDA	PFDoDA	C4PFHA	13C5PHA	C3PFHS	C9PFNA	C8PFOA	C8PFOS
Lab Sample ID	Client Sample ID	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)
310-330206-1	HA-08-1	82.1	75.8	73.7	72.7	74.8	79.0	71.3	65.8
310-330206-2	HA-08-3	84.6	80.2	81.1	81.1	79.2	83.5	75.8	68.6
310-330206-12	HA-01-3	83.7	78.7	77.9	77.7	74.9	80.5	72.5	68.0
310-330206-12 - DL	HA-01-3	83.7	81.1	83.3	86.6	76.4	81.0	81.1	65.5
310-330206-13	HA-02-1	87.3	83.1	80.2	79.0	78.8	83.2	75.5	69.0
310-330206-14	HA-02-3	80.7	77.5	72.8	73.1	72.4	76.3	68.8	63.1
310-330206-15	HA-07-1	66.9	71.2	60.7	62.2	60.0	63.0	57.2	61.1
310-330206-16	HA-07-2.5	75.8	73.9	74.4	74.7	83.6	75.4	69.8	75.0
310-330206-18	HA-09-3	64.0	61.5	54.4	52.1	54.5	61.9	55.2	50.8
MB 240-699386/1-A	Method Blank	89.2	84.4	98.6	102	109	93.5	87.0	89.9
MB 240-699760/1-A	Method Blank	84.2	86.2	84.7	92.0	84.7	81.9	77.9	78.6
MB 240-699767/1-A	Method Blank	72.6	63.7	76.7	75.4	74.6	75.5	69.4	63.3
MB 240-700702/1-A	Method Blank	66.7	54.6	78.4	76.7	71.3	71.6	70.8	53.4

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFPeA	13C3-PFPrS	PFTDA	13C7PUA	d5NEFOS	NEFM	d5NPFSA	d3NMFOS
Lab Sample ID	Client Sample ID	(35-130)	(20-150)	(20-130)	(40-130)	(40-150)	(15-130)	(10-130)	(40-135)
310-330206-1	HA-08-1	83.1	67.4	76.8	74.8	69.2	56.1	74.2	71.2
310-330206-2	HA-08-3	98.1	74.2	107	77.5	60.3	61.5	87.6	62.0
310-330206-12	HA-01-3	86.8	68.9	109	77.1	58.3	62.6	83.8	65.5
310-330206-12 - DL	HA-01-3	84.9	78.6	100	85.9	67.5	70.1	73.2	69.9
310-330206-13	HA-02-1	93.5	69.0	113	78.2	57.5	70.7	81.3	59.7
310-330206-14	HA-02-3	82.0	66.2	101	76.3	57.1	53.2	81.2	59.7
310-330206-15	HA-07-1	61.6	51.2	88.3	70.5	58.3	77.3	74.0	61.6
310-330206-16	HA-07-2.5	79.8	64.9	75.3	70.5	71.0	76.9	84.0	74.1
310-330206-18	HA-09-3	61.0	57.0	72.2	70.4	54.7	48.2	52.8	52.1
MB 240-699386/1-A	Method Blank	103	87.6	103	85.6	82.8	62.3	96.3	86.5
MB 240-699760/1-A	Method Blank	85.2	80.4	97.2	84.9	71.2	73.5	78.3	74.9
MB 240-699767/1-A	Method Blank	84.9	66.4	86.2	67.5	53.5	53.7	69.6	54.2
MB 240-700702/1-A	Method Blank	85.6	74.9	71.4	62.4	51.7	29.1	48.3	54.0

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		NMFM	d3NMFSA						
Lab Sample ID	Client Sample ID	(20-130)	(10-130)						
310-330206-1	HA-08-1	52.9	70.9						

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-2
Project/Site: Duluth Airport Taxiway A

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)									
		NMFM	d3NMFSA								
Lab Sample ID	Client Sample ID	(20-130)	(10-130)								
310-330206-2	HA-08-3	60.0	84.4								
310-330206-12	HA-01-3	67.5	79.4								
310-330206-12 - DL	HA-01-3	68.7	71.5								
310-330206-13	HA-02-1	75.4	81.2								
310-330206-14	HA-02-3	58.2	79.4								
310-330206-15	HA-07-1	74.7	70.9								
310-330206-16	HA-07-2.5	74.9	76.1								
310-330206-18	HA-09-3	53.4	53.8								
MB 240-699386/1-A	Method Blank	61.2	95.0								
MB 240-699760/1-A	Method Blank	74.9	82.6								
MB 240-699767/1-A	Method Blank	47.2	77.7								
MB 240-700702/1-A	Method Blank	29.0	57.3								

Surrogate Legend

PFOSA = 13C8 FOSA
M102FTS = 13C2 10:2 FTS
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
PFBA = 13C4 PFBA
C3PFBS = 13C3 PFBS
C6PFDA = 13C6 PFDA
PFDoDA = 13C2-PFDoA
C4PFHA = 13C4 PFHpA
13C5PHA = 13C5 PFHxA
C3PFHS = 13C3 PFHxS
C9PFNA = 13C9 PFNA
C8PFOA = 13C8 PFOA
C8PFOS = 13C8 PFOS
PFPeA = 13C5 PFPeA
13C3-PFPrS = 13C3-PFPrS
PFTDA = 13C2 PFTeDA
13C7PUA = 13C7 PFUnA
d5NEFOS = d5-NEtFOSAA
NEFM = d9-N-EtFOSE-M
d5NPFSA = d5-NEtPFOSA
d3NMFOS = d3-NMeFOSAA
NMFM = d7-N-MeFOSE-M
d3NMFSA = d3-NMePFOSA

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Matrix: Solid **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFOSA	M102FTS	M242FTS	M262FTS	M282FTS	HFPODA	PFBA	C3PFBS
Lab Sample ID	Client Sample ID	(40-130)	(10-200)	(40-165)	(40-215)	(40-275)	(40-130)	(8-130)	(40-135)
LCS 240-699386/3-A	Lab Control Sample	70.3	68.7	92.5	77.8	67.7	76.5	73.7	89.2
LCS 240-699760/3-A	Lab Control Sample	113	93.6	117	101	90.2	112	108	113
LCS 240-699767/3-A	Lab Control Sample	83.9	66.8	80.0	78.0	69.2	79.8	80.1	82.6
LCS 240-700702/3-A	Lab Control Sample	72.0	53.9	80.4	75.7	61.5	91.6	90.5	88.0

Isotope Dilution Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330206-2
Project/Site: Duluth Airport Taxiway A

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFOSA	M102FTS	M242FTS	M262FTS	M282FTS	HFPODA	PFBA	C3PFBS
Lab Sample ID	Client Sample ID	(40-130)	(10-200)	(40-165)	(40-215)	(40-275)	(40-130)	(8-130)	(40-135)
LLCS 240-699386/2-A	Lab Control Sample	76.2	71.5	86.7	78.2	74.8	69.8	68.4	83.1
LLCS 240-699760/2-A	Lab Control Sample	82.5	65.3	86.3	73.9	64.9	82.7	80.0	80.9
LLCS 240-699767/2-A	Lab Control Sample	104	60.9	91.9	94.0	72.6	95.6	95.5	97.9
LLCS 240-700702/2-A	Lab Control Sample	68.8	59.9	65.1	68.0	65.3	70.6	62.0	64.6

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		C6PFDA	PFDoDA	C4PFHA	13C5PHA	C3PFHS	C9PFNA	C8PFOA	C8PFOS
Lab Sample ID	Client Sample ID	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)
LCS 240-699386/3-A	Lab Control Sample	64.4	63.0	73.4	75.9	81.6	68.4	66.1	63.5
LCS 240-699760/3-A	Lab Control Sample	109	110	110	115	112	107	105	104
LCS 240-699767/3-A	Lab Control Sample	78.5	75.0	76.9	83.4	79.2	78.7	76.5	65.3
LCS 240-700702/3-A	Lab Control Sample	72.8	61.5	86.7	88.1	79.4	77.1	76.5	56.8
LLCS 240-699386/2-A	Lab Control Sample	69.6	65.5	74.3	71.4	84.5	71.3	67.6	70.1
LLCS 240-699760/2-A	Lab Control Sample	83.0	79.8	83.2	85.1	81.9	79.1	76.5	77.1
LLCS 240-699767/2-A	Lab Control Sample	95.3	85.6	98.1	98.4	97.8	99.4	91.5	84.6
LLCS 240-700702/2-A	Lab Control Sample	70.6	63.5	70.8	67.0	65.8	69.7	64.5	55.4

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFPeA	13C3-PFPrS	PFTDA	13C7PUA	d5NEFOS	NEFM	d5NPFSA	d3NMFOS
Lab Sample ID	Client Sample ID	(35-130)	(20-150)	(20-130)	(40-130)	(40-150)	(15-130)	(10-130)	(40-135)
LCS 240-699386/3-A	Lab Control Sample	81.0	67.6	83.1	60.4	57.7	51.1	66.8	62.4
LCS 240-699760/3-A	Lab Control Sample	117	111	126	109	92.0	124	115	99.5
LCS 240-699767/3-A	Lab Control Sample	85.9	74.3	91.5	74.8	69.8	68.4	68.0	71.6
LCS 240-700702/3-A	Lab Control Sample	96.8	92.6	79.4	70.3	51.7	31.4	54.2	52.1
LLCS 240-699386/2-A	Lab Control Sample	77.4	62.9	80.6	65.2	64.9	52.7	76.7	69.0
LLCS 240-699760/2-A	Lab Control Sample	86.4	80.4	90.1	80.7	67.5	65.6	70.4	72.6
LLCS 240-699767/2-A	Lab Control Sample	110	87.4	103	86.4	72.4	58.8	97.2	77.1
LLCS 240-700702/2-A	Lab Control Sample	74.3	61.3	80.7	71.0	58.9	33.4	56.6	59.9

		Percent Isotope Dilution Recovery (Acceptance Limits)	
		NMFM	d3NMFSA
Lab Sample ID	Client Sample ID	(20-130)	(10-130)
LCS 240-699386/3-A	Lab Control Sample	47.0	65.3
LCS 240-699760/3-A	Lab Control Sample	123	113
LCS 240-699767/3-A	Lab Control Sample	67.0	70.1
LCS 240-700702/3-A	Lab Control Sample	31.1	61.1
LLCS 240-699386/2-A	Lab Control Sample	48.3	76.6
LLCS 240-699760/2-A	Lab Control Sample	64.6	75.0
LLCS 240-699767/2-A	Lab Control Sample	57.5	103
LLCS 240-700702/2-A	Lab Control Sample	32.4	62.9

Surrogate Legend

PFOSA = 13C8 FOSA
M102FTS = 13C2 10:2 FTS
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
PFBA = 13C4 PFBA
C3PFBS = 13C3 PFBS
C6PFDA = 13C6 PFDA
PFDoDA = 13C2-PFDoA
C4PFHA = 13C4 PFHpA

Isotope Dilution Summary

Client: Short Elliott Hendrickson, Inc. dba SEH

Job ID: 310-330206-2

Project/Site: Duluth Airport Taxiway A

13C5PHA = 13C5 PFHxA

C3PFHS = 13C3 PFHxS

C9PFNA = 13C9 PFNA

C8PFOA = 13C8 PFOA

C8PFOS = 13C8 PFOS

PFPeA = 13C5 PFPeA

13C3-PFPrS = 13C3-PFPrS

PFTDA = 13C2 PFTeDA

13C7PUA = 13C7 PFUnA

d5NEFOS = d5-NEtFOSAA

NEFM = d9-N-EtFOSE-M

d5NPFSA = d5-NEtPFOSA

d3NMFOS = d3-NMeFOSAA

NMFM = d7-N-MeFOSE-M

d3NMFSA = d3-NMePFOSA

Appendix C

Boring Logs

BOREHOLE NUMBER HA-01

CLIENT Duluth Airport Authority
PROJECT NAME Taxiway A Reconstruction Phase 7 - Phase II ESA
PROJECT NUMBER DULAI 186683
PROJECT LOCATION Duluth, MN
DATE STARTED 04-20-2026 **COMPLETED** 04-20-2026
POSITION
DRILLING CONTRACTOR
GROUND ELEVATION **FINAL DEPTH** 5.00 ft
DRILLING METHOD Hand Auger
GROUNDWATER LEVELS: Not Encountered
EQUIPMENT Hand Auger
▽ **AT TIME OF DRILLING**
HOLE SIZE 4.0 in.
▼ **AT END OF DRILLING**
LOGGED BY J. Hagley **CHECKED BY** R. Hawkins
▽ **AFTER DRILLING**

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	ANALYTICAL LAB SAMPLE (s=soil, w=water)	PID (ppm)
			SW-SM		Brown topsoil, soft, moist		
					0.50		
			SC		Dark brown clayey sand with minimal angular gravel, moist	s	0.1
						s	0.1
					4.50		0.1
			SW-SM		Buried dark topsoil, soft, moist		
5					5.00		
					Terminated at 5.00 ft.		

NOTES

BOREHOLE NUMBER HA-02

CLIENT Duluth Airport Authority
PROJECT NAME Taxiway A Reconstruction Phase 7 - Phase II ESA
PROJECT NUMBER DULAI 186683
PROJECT LOCATION Duluth, MN
DATE STARTED 04-20-2026 **COMPLETED** 04-20-2026
POSITION
DRILLING CONTRACTOR
GROUND ELEVATION **FINAL DEPTH** 5.00 ft
DRILLING METHOD Hand Auger
GROUNDWATER LEVELS: Not Encountered
EQUIPMENT Hand Auger
▽ **AT TIME OF DRILLING**
HOLE SIZE 4.0 in.
▼ **AT END OF DRILLING**
LOGGED BY J. Hagley **CHECKED BY** R. Hawkins
▽ **AFTER DRILLING**

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	ANALYTICAL LAB SAMPLE (s=soil, w=water)	PID (ppm)
			SW-SM		Brown topsoil, soft, moist		
					0.50		
			SC		Dark brown clayey sand with gravel and angular cobble, moist	s	0.1
						s	0.0
							0.0
5					5.00		
					Terminated at 5.00 ft.		

NOTES

BOREHOLE NUMBER HA-03

CLIENT Duluth Airport Authority
PROJECT NAME Taxiway A Reconstruction Phase 7 - Phase II ESA
PROJECT NUMBER DULAI 186683
PROJECT LOCATION Duluth, MN
DATE STARTED 04-20-2026 **COMPLETED** 04-20-2026
POSITION
DRILLING CONTRACTOR
GROUND ELEVATION **FINAL DEPTH** 5.00 ft
DRILLING METHOD Hand Auger
GROUNDWATER LEVELS: Not Encountered
EQUIPMENT Hand Auger
▽ **AT TIME OF DRILLING**
HOLE SIZE 4.0 in.
▼ **AT END OF DRILLING**
LOGGED BY J. Hagley **CHECKED BY** R. Hawkins
▽ **AFTER DRILLING**

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	ANALYTICAL LAB SAMPLE (s=soil, w=water)	PID (ppm)
			SW-SM		0.25 Brown topsoil, soft, moist		
			SC		Brownish-red clayey sand with trace gravel, moist	s	0.2
					3.00		
			SC		Brown clayey sand with trace gravel, trace wood chips at 3.5 feet bgs, moist	s	0.1
							0.1
5					5.00 Terminated at 5.00 ft.		

NOTES

BOREHOLE NUMBER HA-04

CLIENT Duluth Airport Authority
PROJECT NAME Taxiway A Reconstruction Phase 7 - Phase II ESA
PROJECT NUMBER DULAI 186683
PROJECT LOCATION Duluth, MN
DATE STARTED 04-20-2026 **COMPLETED** 04-20-2026
POSITION
DRILLING CONTRACTOR
GROUND ELEVATION **FINAL DEPTH** 5.00 ft
DRILLING METHOD Hand Auger
GROUNDWATER LEVELS: Not Encountered
EQUIPMENT Hand Auger
▽ **AT TIME OF DRILLING**
HOLE SIZE 4.0 in.
▼ **AT END OF DRILLING**
LOGGED BY J. Hagley **CHECKED BY** R. Hawkins
▽ **AFTER DRILLING**

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	ANALYTICAL LAB SAMPLE (s=soil, w=water)	PID (ppm)
			SW-SM		Brown topsoil, soft, moist		
					0.50		
			SC		Dark brown clayey sand with gravel and angular cobble, moist	s	0.1
						s	0.0
							0.1
5					5.00		
					Terminated at 5.00 ft.		

NOTES

BOREHOLE NUMBER HA-05

CLIENT Duluth Airport Authority
PROJECT NAME Taxiway A Reconstruction Phase 7 - Phase II ESA
PROJECT NUMBER DULAI 186683
PROJECT LOCATION Duluth, MN
DATE STARTED 04-20-2026 **COMPLETED** 04-20-2026
POSITION
DRILLING CONTRACTOR
GROUND ELEVATION **FINAL DEPTH** 5.00 ft
DRILLING METHOD Hand Auger
GROUNDWATER LEVELS: Not Encountered
EQUIPMENT Hand Auger
AT TIME OF DRILLING
HOLE SIZE 4.0 in.
AT END OF DRILLING
LOGGED BY J. Hagley **CHECKED BY** R. Hawkins
AFTER DRILLING

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	ANALYTICAL LAB SAMPLE (s=soil, w=water)	PID (ppm)
			SW-SM		Brown topsoil, soft, moist		
					1.00		
					Dark brown clayey sand with gravel and angular cobble, moist	s	0.1
			SC			s	0.0
							0.2
5					5.00		
					Terminated at 5.00 ft.		

NOTES

BOREHOLE NUMBER HA-06

CLIENT Duluth Airport Authority
PROJECT NAME Taxiway A Reconstruction Phase 7 - Phase II ESA
PROJECT NUMBER DULAI 186683
PROJECT LOCATION Duluth, MN
DATE STARTED 04-20-2026 **COMPLETED** 04-20-2026
POSITION
DRILLING CONTRACTOR
GROUND ELEVATION **FINAL DEPTH** 5.00 ft
DRILLING METHOD Hand Auger
GROUNDWATER LEVELS: Not Encountered
EQUIPMENT Hand Auger
▽ **AT TIME OF DRILLING**
HOLE SIZE 4.0 in.
▼ **AT END OF DRILLING**
LOGGED BY J. Hagley **CHECKED BY** R. Hawkins
▽ **AFTER DRILLING**

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	ANALYTICAL LAB SAMPLE (s=soil, w=water)	PID (ppm)
			SW-SM		Brown topsoil, soft, moist		
					0.50		
			SC		Dark brown clayey sand with fine to coarse gravel, moist	s	0.2
						s	0.2
							0.1
5					5.00		
					Terminated at 5.00 ft.		

NOTES

BOREHOLE NUMBER HA-07

CLIENT Duluth Airport Authority
PROJECT NAME Taxiway A Reconstruction Phase 7 - Phase II ESA
PROJECT NUMBER DULAI 186683
PROJECT LOCATION Duluth, MN
DATE STARTED 04-20-2026 **COMPLETED** 04-20-2026
POSITION
DRILLING CONTRACTOR
GROUND ELEVATION **FINAL DEPTH** 3.00 ft
DRILLING METHOD Hand Auger
GROUNDWATER LEVELS: Not Encountered
EQUIPMENT Hand Auger
▽ **AT TIME OF DRILLING**
HOLE SIZE 4.0 in.
▼ **AT END OF DRILLING**
LOGGED BY J. Hagley **CHECKED BY** R. Hawkins
▽ **AFTER DRILLING**

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	ANALYTICAL LAB SAMPLE (s=soil, w=water)	PID (ppm)
			SW-SM		Brown topsoil, soft, moist		
					1.00	s	0.1
			SC		Dark brown clayey sand gravel and angular cobble, moist	s	0.0
					3.00		
5					Terminated at 3.00 ft. Frozen ground at 3 feet bgs due to large snow pile adjacent to area. 5 locations attempted in area, all met refusal at 3 feet bgs..		

NOTES

BOREHOLE NUMBER HA-08

CLIENT Duluth Airport Authority
PROJECT NAME Taxiway A Reconstruction Phase 7 - Phase II ESA
PROJECT NUMBER DULAI 186683
PROJECT LOCATION Duluth, MN
DATE STARTED 04-20-2026 **COMPLETED** 04-20-2026
POSITION
DRILLING CONTRACTOR
GROUND ELEVATION **FINAL DEPTH** 5.00 ft
DRILLING METHOD Hand Auger
GROUNDWATER LEVELS: Not Encountered
EQUIPMENT Hand Auger
▽ **AT TIME OF DRILLING**
HOLE SIZE 4.0 in.
▼ **AT END OF DRILLING**
LOGGED BY J. Hagley **CHECKED BY** R. Hawkins
▽ **AFTER DRILLING**

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	ANALYTICAL LAB SAMPLE (s=soil, w=water)	PID (ppm)
			SW-SM		Brown topsoil, soft, moist		
					1.00		
			SC		Light brown clayey sand with trace gravel, moist	s	0.5
						s	0.3
					4.00		
			SM		Dark brown silty sand with minimal cobbles, moist		0.1
5					5.00		
					Terminated at 5.00 ft.		

NOTES

BOREHOLE NUMBER HA-09

CLIENT Duluth Airport Authority
PROJECT NAME Taxiway A Reconstruction Phase 7 - Phase II ESA
PROJECT NUMBER DULAI 186683
PROJECT LOCATION Duluth, MN
DATE STARTED 04-20-2026 **COMPLETED** 04-20-2026
POSITION
DRILLING CONTRACTOR
GROUND ELEVATION **FINAL DEPTH** 5.00 ft
DRILLING METHOD Hand Auger
GROUNDWATER LEVELS: Not Encountered
EQUIPMENT Hand Auger
▽ **AT TIME OF DRILLING**
HOLE SIZE 4.0 in.
▼ **AT END OF DRILLING**
LOGGED BY J. Hagley **CHECKED BY** R. Hawkins
▽ **AFTER DRILLING**

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	ANALYTICAL LAB SAMPLE (s=soil, w=water)	PID (ppm)
			SW-SM		Brown topsoil, soft, moist		
					1.00	s	0.0
			SM		Dark brown silty sand with minimal gravel, moist	s	0.1
							0.1
5					5.00		
					Terminated at 5.00 ft.		

NOTES

BOREHOLE NUMBER HA-10

CLIENT Duluth Airport Authority
PROJECT NAME Taxiway A Reconstruction Phase 7 - Phase II ESA
PROJECT NUMBER DULAI 186683
PROJECT LOCATION Duluth, MN
DATE STARTED 04-21-2026 **COMPLETED** 04-21-2026
POSITION
DRILLING CONTRACTOR
GROUND ELEVATION **FINAL DEPTH** 5.00 ft
DRILLING METHOD Hand Auger
GROUNDWATER LEVELS: Not Encountered
EQUIPMENT Hand Auger
▽ **AT TIME OF DRILLING**
HOLE SIZE 4.0 in.
▼ **AT END OF DRILLING**
LOGGED BY J. Hagley **CHECKED BY** R. Hawkins
▽ **AFTER DRILLING**

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	ANALYTICAL LAB SAMPLE (s=soil, w=water)	PID (ppm)
			SW-SM		Brown topsoil, soft, moist		
					0.50		
			CL		Light brown sandy clay, soft, moist	s	0.0
					2.00		
			CL		Red sandy clay, stiff, moist	s	2.1
							0.2
5					5.00		
					Terminated at 5.00 ft.		

NOTES

BOREHOLE NUMBER HA-11

CLIENT Duluth Airport Authority
PROJECT NAME Taxiway A Reconstruction Phase 7 - Phase II ESA
PROJECT NUMBER DULAI 186683
PROJECT LOCATION Duluth, MN
DATE STARTED 04-21-2026 **COMPLETED** 04-21-2026
POSITION
DRILLING CONTRACTOR
GROUND ELEVATION **FINAL DEPTH** 5.00 ft
DRILLING METHOD Hand Auger
GROUNDWATER LEVELS: Not Encountered
EQUIPMENT Hand Auger
▽ **AT TIME OF DRILLING**
HOLE SIZE 4.0 in.
▼ **AT END OF DRILLING**
LOGGED BY J. Hagley **CHECKED BY** R. Hawkins
▽ **AFTER DRILLING**

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	ANALYTICAL LAB SAMPLE (s=soil, w=water)	PID (ppm)
			SW-SM		Brown topsoil, soft, moist		
					0.50		
			CL		Light brown sandy clay, soft, moist	s	0.2
					2.00		
			CL		Red sandy clay, mottled at 3.5 to 5 feet bgs, stiff, moist	s	0.3
							0.1
5					5.00		
					Terminated at 5.00 ft.		

NOTES

BOREHOLE NUMBER HA-12

CLIENT Duluth Airport Authority
PROJECT NAME Taxiway A Reconstruction Phase 7 - Phase II ESA
PROJECT NUMBER DULAI 186683
PROJECT LOCATION Duluth, MN
DATE STARTED 04-21-2026 **COMPLETED** 04-21-2026
POSITION
DRILLING CONTRACTOR
GROUND ELEVATION **FINAL DEPTH** 5.00 ft
DRILLING METHOD Hand Auger
GROUNDWATER LEVELS: Not Encountered
EQUIPMENT Hand Auger
▽ **AT TIME OF DRILLING**
HOLE SIZE 4.0 in.
▼ **AT END OF DRILLING**
LOGGED BY J. Hagley **CHECKED BY** R. Hawkins
▽ **AFTER DRILLING**

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	ANALYTICAL LAB SAMPLE (s=soil, w=water)	PID (ppm)
			SW-SM		Brown topsoil, soft, moist		
					0.50		
			CL		Light brown sandy clay, soft, moist	s	0.8
					2.00		
			CL		Red sandy clay with cobbles at 4 feet bgs, stiff, moist	s	0.2
							0.6
5					5.00		
					Terminated at 5.00 ft.		

NOTES

BOREHOLE NUMBER HA-13

CLIENT Duluth Airport Authority
PROJECT NAME Taxiway A Reconstruction Phase 7 - Phase II ESA
PROJECT NUMBER DULAI 186683
PROJECT LOCATION Duluth, MN
DATE STARTED 04-21-2026 **COMPLETED** 04-21-2026
POSITION
DRILLING CONTRACTOR
GROUND ELEVATION **FINAL DEPTH** 5.00 ft
DRILLING METHOD Hand Auger
GROUNDWATER LEVELS: Not Encountered
EQUIPMENT Hand Auger
▽ **AT TIME OF DRILLING**
HOLE SIZE 4.0 in.
▼ **AT END OF DRILLING**
LOGGED BY J. Hagley **CHECKED BY** R. Hawkins
▽ **AFTER DRILLING**

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	ANALYTICAL LAB SAMPLE (s=soil, w=water)	PID (ppm)
			SW-SM		Brown topsoil, soft, moist		
					0.50		
			CL		Light brown sandy clay, soft, moist	s	0.3
					2.50		
			CL		Red sandy clay with gravel, stiff, moist	s	0.1
							0.1
5					5.00		
					Terminated at 5.00 ft.		

NOTES

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Appendix I

RAP Rwy A

Response Action Plan/Construction Contingency Plan - Taxiway A Reconstruction - Phase 7

Duluth International Airport

Duluth, St. Louis County, Minnesota

DULAI 186683 | May 18, 2026

SEH

Building a Better World for All of Us®

Engineers | Architects | Planners | Scientists

Building a Better World for All of Us®

May 18, 2026

RE: Response Action Plan/Construction Contingency Plan – Taxiway A Reconstruction - Phase 7
Duluth International Airport
Portions of Parcel IDs 010-2747-00180, 280-0031-00425, 280-0031-00450, 280-0031-00455, and 280-0031-00456
Duluth, St. Louis County, Minnesota
SEH No. DULAI 186683

Ryan Welch
Duluth Airport Authority
4701 Grinden Drive
Duluth, MN 55811

Dear Mr. Welch:

Please find enclosed the Response Action Plan/Construction Contingency Plan for the Taxiway A Reconstruction – Phase 7 project in Duluth, St. Louis County, Minnesota. Please feel free to contact me directly at 651.318.0354 or kaufdencamp@sehinc.com if you have any questions or comments.

Sincerely,

Keri B. Aufdencamp

Keri Aufdencamp
Project Manager

Certification

Response Action Plan/Construction Contingency Plan
Taxiway A Reconstruction - Phase 7
Duluth International Airport
Portions of Parcel IDs 010-2747-00180, 280-0031-00425, 280-0031-00450, 280-0031-00455, and 280-0031-00456
Duluth, St. Louis County, Minnesota

SEH No. DULAI 186683

May 18, 2026

Keri Aufdencamp
Project Manager

Jack Hagley, PG (MN)
Environmental Scientist

Robert Hawkins, PG (MN, WI)
Environmental Scientist

Short Elliott Hendrickson Inc.
3535 Vadnais Center Drive
St. Paul, MN 55110-5196
651.490.2000

Distribution

No. of Copies	Sent to
1	Ryan Welch Director of Operations Duluth Airport Authority 4701 Grinden Drive Duluth, MN 55811

List of Abbreviations

Abbreviation	Meaning
ACM	Asbestos Containing Material
ACWM	Asbestos Containing Waste Material
AFFF	Aqueous Film Forming Foam
amsl	Above Mean Sea Level
ANG	Air National Guard
AST	Aboveground Storage Tank
bgs	Below ground surface
BMP	Best Management Practices
CCP	Construction Contingency Plan
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
DAA	Duluth Airport Authority
DLH	Duluth International Airport
DOT	Department of Transportation
DRO	Diesel Range Organics
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FW	Fighter Wing
GRO	Gasoline Range Organics
GPL	General Permit Limit
HAZWOPER	Hazardous Waste Operations and Emergency Response
HBG	Health Based Guidance
HRL	Health Risk Limit
IRP	Installation Restoration Program
ISRV	Commercial/Industrial Soil Reference Value
MCL	Maximum Contaminant Level
MDH	Minnesota Department of Health
mg/kg	Milligrams per Kilogram
MPCA	Minnesota Pollution Control Agency
ng/g	Nanogram per Gram
ng/L	Nanograms per Liter
NPDES	National Pollutant Discharge Elimination System
OSHA	Occupational Safety and Health Administration
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyl
PFAS	Per- and Polyfluoroalkyl Substances
PFDA	Perfluorodecanoic Acid
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctanesulfonic acid
PID	Photoionization Detector
PIN	Parcel Identification Number
PPE	Personal Protective Equipment
ppm	Parts per Million
RAA	Risk Assessment Advice

List of Abbreviations (continued)

RAP	Response Action Plan
RI	Remedial Investigation
RCRA	Resource Conservation and Recovery Act
RL	Reporting Limit
RSRV	Recreational/Residential Soil Reference Value
SBUD	Standing Beneficial Use Determination
SEH	Short Elliott Hendrickson Inc.
SHSP	Site Health and Safety Plan
SLV	Soil Leaching Value
SOP	Standard Operating Procedure
SWPPP	Storm Water Pollution Prevention Plan
UFC	Unregulated Fill Criteria
UST	Underground Storage Tank
VOC	Volatile Organic Compound

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Response Action Plan/Construction Contingency Plan - Taxiway A Reconstruction - Phase 7

Duluth International Airport

Prepared for the Duluth Airport Authority

1 Introduction

Short Elliott Hendrickson Inc. (SEH®) was retained by the Duluth Airport Authority (DAA) to develop a Response Action Plan (RAP)/Construction Contingency Plan (CCP) that will be implemented during the Taxiway A Reconstruction – Phase 7 project located at the Duluth International Airport (DLH) in Duluth, St. Louis County, Minnesota (herein referred to as the "Site"). The Site location is presented on **Figure 1.**

Taxiway A is the parallel taxiway for the main runway (Runway 9/27) serving the DLH. The existing Taxiway A is approximately 10,700 feet in length and the reconstruction is proposed to be completed in nine phases.

Phase 7 of the Taxiway A Reconstruction project will include the reconstruction and realignment of Taxiway A1 and A2, which joins Runway 9/27 with Taxiway A. Phase 7 of the project will also include the dredging of an existing sedimentation stormwater pond north of the airport, and the expansion of an existing stormwater pond southeast of the DLH terminal building. The project areas are shown on **Figure 2**.

An environmental investigation was completed in preparation for the Taxiway A Reconstruction - Phase 7 project (SEH, 2026) and is discussed in **Section 2**.

1.1 Response Action Plan Scope and Objectives

The RAP/CCP addresses contamination issues that are anticipated to be encountered during the project. Following reconstruction, the Site will continue to be used for commercial air traffic use.

The objective of the RAP is to manage contaminated materials at the Site in a manner that protects human health, welfare and the environment from releases or threatened releases of hazardous substances, pollutants, or contaminants. The RAP provides a description of the actions that will be taken to handle and dispose of contaminated materials so that contamination is not exacerbated by the project construction activities.

Any unanticipated/unidentified contaminated materials encountered during construction will be evaluated using the Minnesota Pollution Control Agency's (MPCA's) risk-based approach and will be managed in accordance with the CCP.

The scope of the RAP is limited to construction-related actions. Response actions are not intended to remediate the entirety of the Site (although, as with any construction project, beneficial remediation will occur through the excavation and disposal of contaminated materials as part of the construction process). Contaminated materials that are not disturbed by the project because they are outside project excavation areas will remain in-place.

1.2 Limitations

Design for the Taxiway A Reconstruction – Phase 7 project are currently at 95% of the design phase. Select plan sheets are included as **Appendix A**.

The scope of the RAP is limited, in that anticipated contaminated materials may change during construction; however, the RAP can still meet its main objective which is to provide a description of the actions that will be taken to complete the project in a manner that protects human health, welfare and the environment from releases or threatened releases of hazardous substances, pollutants, or contaminants.

1.3 Responsibilities

The following parties and their representatives are those currently involved in development of the Project:

Project Owner and Occupant:
DAA
4701 Grinden Drive
Duluth, MN 55811
Contact: Ryan Welch
(218) 625-7767
rwelch@duluthairport.com

Environmental Consultant:
Short Elliott Hendrickson, Inc.
3535 Vadnais Center Drive
Vadnais Heights, Minnesota 55110
Contact: Keri Aufdencamp
(651) 318-0354
kaufdencamp@sehinc.com

General Contractor
To be determined

Disposal Facility
To be determined

2 Project Site Background

2.1 Project Site Location and Description

The Site is located in Duluth, St. Louis County, Minnesota and includes portions of the following parcel identification numbers (PINs):

- 010-2747-00160

- 010-2747-00210
- 010-2747-00220
- 280-0031-00455
- 280-0031-00456
- 395-0010-00330
- 395-0010-00348
- 395-0010-00349
- 395-0010-00350
- 395-0010-00550

The Site is developed with an air traffic taxiway and stormwater ponds. The remainder of the Site is undeveloped and consists of maintained greenspace (see **Figure 2**). The airport land use is considered industrial.

Taxiway A Reconstruction Area, the Terminal Stormwater Pond Expansion Area, and the Northern Stormwater Pond Dredge project areas are generally located in the western, southeastern, and northern parts of the DLH respectively (The extent of the project areas are depicted on **Figure 2**).The Site is bordered to the north by Runway 9/27, to the east by extensions of the existing Taxiway A, and to the west and south by maintained greenspace and the airport perimeter roads.

2.2 Findings of the Taxiway A Reconstruction - Phase 7 Environmental Investigation

The DLH includes the base of the Minnesota Air National Guards (ANG's) 148th Fighter Wing (FW). The 148th FW facilities are located on leased properties at several locations in the vicinity of the main east-west runway at the DLH and the main base is located on the eastern side of the DLH. The 148th FW base houses aircraft, vehicles, and equipment. Current and past operations at the base have involved the use of products such as fuels, oils, lubricants, paints, paint thinners, solvents, and aqueous film forming foam (AFFF).

A base-wide per- and polyfluoroalkyl substances (PFAS) Remedial Investigation (RI) is currently on-going at the DLH as the Minnesota ANG is evaluating PFAS impacts through a similar process used under the Installation Restoration Program (IRP) and consistent with the provisions of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended. Based on a review of the interim results provided by the Minnesota ANG, several detections of perfluorooctanoic acid (PFOA) and perfluorodecanoic acid (PFDA) exceeding their respective MPCA Soil Leaching Values (SLVs), Commercial/Industrial Soil Reference Values (ISRVs) and/or Residential/Recreational SRVs (RSRVs) were located either within or adjacent to the Taxiway A Reconstruction and Northern Stormwater Pond Dredge portions of the project Site.

This investigation was performed to investigate the Site for the presence of contaminated soil that may be encountered during project construction-related activities and to provide necessary data for the development of a RAP/CCP, as needed. Drilling and sampling was completed on April 20 and 21, 2026.

The Environmental Investigation included thirteen hand auger soil borings (HA-01 through HA-13) completed to depths ranging between 3 to 5 feet below ground surface (bgs). Three sediment

samples were collected of the dredge material in the Northern Stormwater Pond as well as a surface water sample. The borings were completed along the existing Taxiway A, which will be reconstructed, in areas where the taxiway will be extended or where taxiway connector pavements will be constructed within the Phase 7 construction area, as well as around the footprint of the proposed stormwater pond expansion southeast of the DLH terminal building. Fill material was encountered throughout the borings extending to 5 feet bgs. No debris was observed. PID headspace readings were recorded between 0.0 to 2.1 parts per million (ppm), within background levels. No visual or olfactory indications of contamination were noted during the investigation.

Groundwater was not encountered while drilling. However, surface water located in the Northern Stormwater Pond contains PFAS contaminants above regulatory levels that will require proper management.

On the western extent of the Taxiway A area, PFDA (up to 9.24 nanograms per gram [ng/g]) and PFOA (4.34 ng/g) exceeded the MPCA ISRVs in boring HA-01 at depths ranging from 1 to 3 feet bgs. Perfluorooctanesulfonic acid (PFOS - up to 180 ng/g) and PFOA (0.366 ng/g) exceeded the MPCA RSRVs in borings HA-01 (at 1 and 3 feet bgs) and HA-02 (at 1 foot bgs). However, no exceedances were identified at 3 feet bgs in HA-02. All other PFAS analytes in HA-01, HA-02, and HA-03 were below their respective laboratory reporting limits (RLs). On the eastern extent of the Taxiway A area, PFOS (up to 27.4 ng/g) and PFOA (up to 1.24 ng/g) exceeded the MPCA RSRVs in borings HA-09 (at 1 and 3 feet bgs) and HA-07 (at 1 and 3 feet bgs). All other PFAS analytes in HA-06, HA-07, HA-08, and HA-09 were below their respective RLs.

Soil encountered elsewhere during this Phase II Environmental Investigation met MPCA Unregulated Fill Criteria (UFC), SRVs, and Soil Leaching Value (SLVs). The results from the 2026 Phase II Environmental Investigation are included as **Figure 3**.

3 Proposed Project

Taxiway A is the parallel taxiway for the main runway (Runway 9/27) serving the DLH. The existing Taxiway A is approximately 10,700 feet in length and the reconstruction is proposed to be completed in nine phases, based on the result of the 2021 DLH Airport Master Plan and discussions with the DAA and Federal Aviation Administration (FAA). The overall reconstruction project includes realignment of the taxiway in the same general area as the existing Taxiway A. The Phase 7 project will also include the reconstruction and realignment of Taxiway A1 and Taxiway A2, which join Runway 9/27 with Taxiway A to meet current FAA design standards, which include having a right-angle intersection with the runway. The project also includes the expansion of the existing stormwater pond southeast of the DLH Terminal, and the dredging of the existing Northern Stormwater Pond to expand capacity.

The project work will include removal of existing airfield pavements, concrete taxiway pavement installation, asphalt shoulder pavement construction, and storm sewer infrastructure and drainage improvements. Taxiway edge lighting, airfield signage, and related airfield electrical circuits will be reconstructed with this project. Project work will also include turf establishment and installation of airfield pavement markings.

This RAP/CCP pertains to the excavation and construction activities associated with the reconstruction of Taxiway A and the dredging of the existing Northern Stormwater Pond.

The extent of the Phase 7 project this RAP/CCP covers is depicted on **Figure 2**. Select plan sheets are included as **Appendix A**.

4 Site Conceptual Model and Cleanup Objectives

4.1.1 Soil Regulatory Limits and Cleanup Criteria

Soil results are compared to MPCA 2026 RSRVs, ISRVs, the MPCA 2013 SLVs, and the MPCA UFC.

4.1.1.1 Soil Reference Values

Revised Residential/Recreational and Commercial/Industrial SRVs were published by the MPCA in May 2026 (MPCA, May 2026) and are incorporated into this report. The MPCA intends to complete annual updates to the SRVs. The MPCA SRVs are intended to be risk-based screening values and were derived using methodology from the Environmental Protection Agency's (EPA's) Superfund Program, exposure parameters based on land use categories, contaminants toxicity values, and a contaminant's chemical-specific parameters.

4.1.1.2 Screening Soil Leaching Values

The MPCA has established SLVs that provide a conservative estimate of whether groundwater contaminant concentrations could result from leaching to groundwater from contaminated soils in direct contact with groundwater. The current Screening SLVs were established in 2013 (as discussed in MPCA Guidance Document c-r1-04 [MPCA, May 2013]) and are referenced in the MPCA Guidance Document c-rem1-01, Best Management Practices for the Off-Site Reuse of Unregulated Fill (MPCA, March 2024).

4.1.1.3 MPCA Unregulated Fill Criteria

The MPCA has defined limits for diesel range organics (DRO) and gasoline range organics (GRO) of 100 milligrams per kilogram (mg/kg) in soil in MPCA Guidance Document c-rem1-01, Best Management Practices for the Off-Site Reuse of Unregulated Fill (MPCA, March 2024). The guidance document defines soil that meets these limits, is free from solid waste, debris, asbestos-containing material (ACM), visual staining and odors, and has organic vapors less than 10 ppm (measured using a photoionization detector [PID]) is considered unregulated fill. ACM is material containing greater than 1% asbestos, as defined in Minnesota Statutes, Section 326.71, Subdivision 3. To assess the potential for unregulated off-site use of excess excavated material from the project, Phase II Environmental Investigation results are evaluated using this guidance.

The project Site land use is considered to be industrial and the cleanup objectives for the project include implementation of response actions to allow for site use that is consistent with the existing site use (Taxiway A Reconstruction Area will continue to be used for aircraft transportation/staging, the Northern Stormwater Pond Dredge Area will continue being used as a stormwater pond, etc.). Therefore, the MPCA 2026 ISRVs, UFC and 2013 SLVs (for volatile organic compounds [VOCs]) will be used to guide decisions regarding soil cleanup.

The cleanup objectives also include proper management of soil to be exported from the Site to accommodate the proposed development in accordance with MPCA Best Management Practices. Decisions regarding offsite re-use will be made using the MPCA's Best Management Practices for the Off-Site Reuse of Unregulated Fill (MPCA, March 2024).

4.1.2 Water Regulatory Limits and Cleanup Criteria

During the Phase II Environmental Investigation (SEH, 2026), surface water was sampled within the proposed Northern Stormwater Pond Dredge area.

The Phase II Environmental Investigation compared surface water analytical results to Minnesota Department of Health (MDH) Health Based Guidance (HBGs) that have been established to evaluate drinking water. The HBGs include Health Risk Limits (HRLs), Health Based Values (HBVs), and Risk Assessment Advice (RAAs) levels. The HBGs also reference to the EPA Maximum Contaminant Levels (MCLs) where State HRLs, HBVs, and RAAs are not established. Surface water results are also compared to the National Pollutant Discharge Elimination System (NPDES) Groundwater Pump-Out General Permit (MNG790000) which identifies limits for discharge of contaminated groundwater. The general permit regulates the discharge of groundwater extracted at cleanup and redevelopment sites. This includes discharges which have been contaminated by past or present activities, from both known and previously undiscovered sources of contamination. The Phase II Environmental Investigation also used NPDES General Permit Limits (GPLs) for general comparative purposes for surface water contaminant concentrations.

4.2 Physical Setting

The Taxiway A – Phase 7 alignment is the furthest west portion of the existing Taxiway A, which sits directly south of Runway 9/27. The high spot at the project Site, at an approximate elevation of 1420 feet above mean sea level (amsl). The taxiway gently slopes to the southeast and a low area is located east of the taxiway at an approximate elevation of 1410 feet above mean sea level (amsl).

The Northern Stormwater Pond is located approximately 0.7 miles north of Runway 9/27, directly north of Warhawk Drive. The area currently consists of a 200 foot by 135 foot stormwater pond with a gravel access road running north from the gate at the end of Warhawk Drive. Stormwater is carried to the existing pond via a drainage channel that runs south to north from the airport.

4.3 Occurrence of Regulated Soil/Material

Based on the 2026 Environmental Investigation (SEH, 2026), the occurrence of regulated soil is limited at the Taxiway A Reconstruction – Phase 7 Site. The investigation identified PFAS impacts to soils exceeding MPCA ISRVs in portions of the Site on the western side of the existing Taxiway A1. The soils were encountered above the ISRVs up to 5 feet bgs directly west of the existing Taxiway A1. Soil excavated from this area is classified as Industrial SRV Exceedance Soil (see **Section 5.1**) and will be handled as described in **Section 5.3.3**.

Soils exceeding the MPCA RSRVs, but below MPCA ISRVs, were identified on the western and eastern extent of the Taxiway A Reconstruction Area. Soil samples taken directly east of Taxiway A1 up to 2 feet bgs contain concentrations of PFAS that exceed MPCA RSRVs. Soil samples taken from soils up to 5 feet bgs on the eastern side of the site (directly west and east of Taxiway A2) contain concentrations of PFAS that exceed MPCA RSRVs. Soil excavated from these areas are classified as Regulated Soil (see **Section 5.1**) and will be handled as described in **Section 5.3.2**.

If chemical impacts to soil other than those associated with the known PFAS impacts are encountered during project excavations, the CCP presented in **Section 7.0** will be implemented.

4.4 Occurrence of Groundwater Impacts

Based on the excavation depths and results of previous environmental investigations, there is potential that groundwater will be encountered within the Taxiway A Reconstruction Area. Groundwater was not encountered during the 2026 Phase II Environmental Investigation and if dewatering is necessary, the CCP presented in **Section 7.0** will be implemented.

4.5 Occurrence of Surface Water Impacts

Based on the 2026 Environmental Investigation, surface water in the existing Northern Stormwater Pond has PFAS impacts exceeding both the MDH HBGs and EPA MCLs. Dredging activities that occur at the Northern Stormwater Pond will need to be properly managed. If dewatering is necessary, the CCP presented in **Section 7.0** will be implemented.

5 Response Actions

5.1 Soil Management Categories

Based on the Phase II Environmental Investigation, soil within the project Site can be grouped into the following three general categories 1) Unregulated Soil, 2) Regulated Soil, and 3) ISRV Exceedance Soil as defined below:

- Unregulated Soil – meets the MPCA definition of unregulated fill discussed (also includes non-impacted, naturally occurring native soil).
- Regulated Soil – exceeds the MPCA definition of unregulated fill but is also characterized by the following:
  - Soil analytical concentrations less than SLV
  - Soil analytical concentrations exceeding 2026 residential SRVs, but less than the 2026 Commercial/Industrial SRVs.
  - PID soil headspace results less than 200 ppm.
  - Debris less than 5% of total volume of soil. For reuse, debris > 5% must be geotechnically suitable for reuse and meet a MPCA Standing Beneficial Use Determination (SBUD). No regulated materials (i.e., asbestos) are allowed.
- Industrial SRV Exceedance Soil – exceeds the following criteria:
  - Soil analytical concentrations exceed the 2026 Commercial/Industrial SRVs.
  - PID soil headspace results exceed 200 ppm.
  - Debris greater than 5% of total volume of soil. Uncontaminated concrete, brick or bituminous may be segregated for reuse in accordance with MPCA SBUD.

5.1.1 Phase II Investigation Results and RAP Management Areas

5.1.1.1 Unregulated Soil

Unregulated soil encountered during the Phase II Environmental Investigation (SEH, 2026) are depicted by green shading on **Figure 3**.

5.1.1.2 Regulated Soil

Regulated soil areas were identified in the Phase II Investigations with soil analytical results above unregulated soil criteria. The types or levels of contamination in these areas cannot readily

be detected by field screening methods; therefore, the fate of the soil is determined from the results of the Phase II Investigation. All excavated soil from these areas are classified as regulated soil.

Regulated soil was identified at the following locations:

- HA-02 – PFAS related compounds (specifically PFOA) from 0 to 3 feet bgs.
- HA-07 – PFAS related compounds (specifically PFOS and PFOA) from 0 to 5 feet bgs.
- HA-09 – PFAS related compounds (specifically PFOS and PFOA) from 0 to 5 feet bgs.

Regulated soil areas are depicted with yellow shading on the attached **Figure 3**. The extent of impacts in this area have not yet been fully defined and the area will be delineated by an additional test pit investigation (see **Section 5.2**).

5.1.1.3 Industrial Exceedance Soil

During the Phase II Investigation, only one sample location (HA-01), located adjacent to the southwest of Taxiway A1, identified soil that exceeded the MPCA ISRVs. The extent of impacts in this area have not yet been fully defined and the area will be delineated by an additional test pit investigation (see **Section 5.2**).

Soils with PID headspace results greater than 200 ppm were not encountered during the Phase II investigation and are not anticipated to be encountered during the project construction activities.

Areas with debris at quantities > than 5% were also not encountered during the Phase II investigation and are not anticipated to be encountered during the project construction activities.

For areas with debris at quantities > than 5%, uncontaminated concrete, brick or bituminous may be segregated for reuse in accordance with MPCA SBUD

The industrial exceedance soil area is depicted with red shading on the attached **Figure 3**.

5.2 Test Pit Investigation

Prior to the start of the project grading activities within the Taxiway A Reconstruction Area, delineation test pit excavations will be excavated at a radius of 25 feet, 50 feet, and 75 feet from previously completed sample locations HA-01, HA-02, HA-07, HA-09 to the north, south, east, and west.

Because sample location BGSL-11 was completed to the south of the proposed Taxiway A Reconstruction Area. Delineation test pit excavations will be excavated at a radius of 25 feet, 50 feet, and 75 feet from the southern project boundary to the northeast and northwest.

The following table depicts the location of the previously completed sample locations that the test pit investigation will be completed from:

BORING ID	UTM Zone 15 N (meters)		NAD 1983 HARN Adj MN St. Louis South (US Feet)	
	Easting	Northing	Easting	Northing
HA-01	559423.173905	5187790.815921	557390.920042	169754.930666
HA-02	559525.524249	5187854.395694	557728.306591	169961.25678
HA-07	560058.614975	5187829.496995	559477.403271	169867.293716
HA-09	560157.635038	5187807.270878	559801.888574	169792.070967
BGSL-11	559633.23123	5187724.405659	558078.828856	169532.140058

Depth delineated samples will be collected at 1 and 3 feet bgs for locations HA-01, HA-07, and HA-09, as impacts exceeding either the ISRV and/or the RSRV were identified at both 1 and 3 feet bgs. Samples will be collected 1 foot bgs for location HA-02, as impacted exceeding the RSRV were only identified at 1 foot bgs. Similarly, samples will be collected 0.5 feet bgs for location BGSL-11, as impacts exceeding the RSRV were only identified at 0.5 feet bgs. The following table describes the proposed test pit investigation sampling methodology:

Location	Test Pit Radii	Sample Depth Per Test Pit Excavation	Test Pit Directions
HA-01	25 feet, 50 feet, and 75 feet	1 and 3 feet bgs	North, South, East, and West
HA-02		1 and 3 feet bgs	North, South, East, and West
HA-07		1 and 3 feet bgs	North, South, East, and West
HA-09		1 foot bgs	North, South, East, and West
BGSL-11		0.5 feet bgs	Northeast and Northwest

Additional samples will be held by the analytical laboratory pending the results from the initial locations. Samples will be analyzed until test results indicate the material is indicative of an unregulated fill in that sample direction.

The test pit excavations will be completed to collect soil samples for field screening and chemical analyses for PFAS by EPA method 1633A. Results received will be compared to the UFC and decisions regarding re-use or disposal will be made using the criteria in **Section 5.2**.

A discussion on sampling methods, results, and implantation changes will be provided in the RAP Implementation Report.

5.3 Soil Disposition

The following sections describe response action details for each soil category.

5.3.1 Unregulated Soil – Unrestricted Reuse On- or Off-Site

Unregulated Soil (including naturally-occurring native soil) will be managed as unrestricted reuse material both within the project Site, and potentially as excess material off-site at the discretion of the contractor.

Any soil that meets Unregulated Soil Criteria but is not geotechnically suitable for the project design requirements will become the property of the contractor for unrestricted use off-site.

5.3.2 Regulated Soil – Restricted Reuse On-site

Regulated soil will be managed as restricted reuse on-site within the project area from which it originated.

- Soil should be reused within the project area in a nearby location with a similar analytical signature.
- Soil with elevated PID headspace readings (greater than 10 ppm but less than 200 ppm) should be thin spread under pavement or placed below four feet of clean cover in green space areas. Soil with PID headspace readings exceeding 10 ppm are not anticipated to be encountered during the project construction activities. Soil with PID headspace readings exceeding 10 ppm will not be utilized within a utility corridor

Any regulated soil that cannot be reused on-site or is geotechnically unsuitable for Project design requirements (or contains regulated materials) will be designated as contaminated material for landfill disposal and will be disposed of at a Minnesota-permitted landfill.

5.3.3 Industrial Exceedance Soil – Landfill Disposal

Industrial exceedance soil will be managed as contaminated material and will be disposed of at a Minnesota-permitted landfill. Industrial exceedance soil is prohibited from reuse on or off the project Site.

5.4 Surface Water Response Actions

The proposed project includes dredging a portion of the Northern Stormwater Pond. The proposed dredging area is depicted on **Figure 3**. Based on the results of the Phase II Investigation, surface water generated during dredging is contaminated with various PFAS compounds.

Prior to the start of dredging activities, the contractor shall implement best management practices sufficient to restrict excess surface water generated from the dredging activities to prevent an unauthorized release. All surface water generated during dredging shall be managed in an appropriate manner that prevents infiltration to the ground surface or discharge to infrastructure. Standard Operating Procedures and Methods

The following sections outline the Standard Operation Procedures (SOPs) and methods that will be instituted during the project.

5.5 Project Coordination

SEH environmental staff assigned to the project will coordinate with the owner's representative, the project team, general contractor, and excavation contractor regarding the construction schedule and logistics related to implementing this RAP. The SEH environmental staff will also communicate with the owner's representative, the project team, site contractors, the MPCA, and other interested parties as necessary regarding the environmental monitoring results and any necessary environmental actions.

5.6 Site Health and Safety

The environmental staff involved in monitoring and sampling activities will be required to meet the training requirements of 29 Code of Federal Regulations (CFR) 1920.120. Specifically, each person will have completed an Occupational Safety & Health Administration (OSHA) certified 40 Hour Hazardous Waste Operations and Emergency Response (HAZWOPER) safety course. In addition, they will have experience in directing contaminated material excavation and be competent in proper screening and sampling procedures.

Prior to the start of the project, the environmental consultant will prepare a Site Health and Safety Plan (SHSP) for use by their personnel. The SHSP will assign responsibilities, establish personal protection standards and safety practices and procedures, and provide for contingencies that may arise during site operations. The SHSP procedures will be based on the site conditions and chemical hazards known or expected to be present at the site using site data available at the time it is written. The SHSP is subject to revision when deemed necessary by actual site conditions encountered during field activities.

The contractor(s) selected for the project will be provided with the environmental reports completed for the project. The contractor(s) will be required to complete a SHSP and comply with all applicable safety regulations imposed by federal and state law for handling pollutants, contaminants, hazardous substances, wastes or materials. Contractor personnel involved with contaminated materials will be expected to be familiar with and to meet applicable Minnesota OSHA requirements.

If encountered, asbestos-related work will be conducted by MDH certified personnel operating under State and Federal regulations. When asbestos-related work is being conducted, environmental consultants will be required to have their valid MDH Asbestos Inspector certification (or higher-level credentials) on-site and available when completing monitoring and sampling activities.

5.7 Excavation, Hauling and Disposal

At a minimum, requirements for excavation, hauling, and disposal will be as follows:

The contractor will be responsible for controlling fugitive dust and minimizing noise, odors, and off-site tracking to the extent possible.

- When applicable, excess impacted soil or waste materials will be removed from trucks prior to leaving the site. If necessary, trucks used to transport contaminated soil may require decontamination prior to leaving the site, in order to minimize the tracking of contaminants off-site. If so, a decontamination pad will be constructed at a designated location, just prior to exiting the project area. Prior to demobilization from the project area, all on-site equipment used for excavation will be decontaminated.
- Designated truck routes will be used, so as to minimize the disruption of the site and limit exposure to the public.
- The contractor will be responsible for properly manifesting all waste or impacted soil which leaves the project.
- The contractor will be responsible for taking the appropriate measure to ensure excavations are appropriately secured at the end of work each day.
- All activities will be conducted in compliance with Local, State and/or Federal Laws.

In the event that ACM or asbestos containing waste material (ACWM) is identified, those materials will be segregated, placed on and covered with plastic sheeting. While general procedures will be conducted as described above, the following is required for areas with ACM/ACWM:

- A designated exclusion zone will be established, and all personnel will be required to wear Level C personal protective equipment (PPE), including Tyvek suits and respiratory protection.
- Excavation, loading and transport of ACM/ACWM must be completed under the direction of a Minnesota MDH certified asbestos supervisor, after the appropriate MDH notifications have been filed with the MDH.
- The excavation contractor will be required to use a fire hose to spray dry material with water as it is removed to prevent visible emissions.
- Trucks or roll off boxes must be lined with plastic sheeting, before wrapping and sealing them, prior to transport to the Minnesota-permitted landfill for disposal.

5.7.1 Field Screening of Excavated Material

During excavation activities in areas with identified soil impacts, an environmental consultant will be on-site to conduct environmental monitoring. An environmental consultant will also be on-call to travel to the site to conduct screening should unexpected suspect contaminated materials be encountered. A certified asbestos inspector will be on call for sampling of suspect ACM, if observed.

Soils will be observed for the presence of visual and olfactory indications of contamination. Soil from excavations will be field screened with a PID as well as visual inspections for potential ACM, debris, staining, petroleum odors, etc. As the soil is excavated, it will be placed at the surface adjacent to the excavation for screening. The environmental technician will screen excavated soil for contaminants using a combination of techniques:

- Headspace monitoring will be completed in accordance with MPCA methodology using a PID equipped with a 10.6 electron-volt lamp to monitor soil for the presence of organic vapors. The frequency of samples collected for headspace analysis will be based on the type of soil being excavated. The environmental consultant will determine the frequency of PID headspace sampling throughout the project area based on the homogeneity of the material being excavated, the volume and type of debris encountered and knowledge of previous investigations for the area. A minimum of one sample for headspace analysis will be collected for approximately every 10 cubic yards of soil removed. Samples may be collected with less frequency (approximately one sample for every 25 or 50 cubic yards of soil removed) in homogenous material with no visual and olfactory evidence of impacts.
- Visual observation for suspect ACM and debris during excavation tasks and screening of graded surface soil. If soil or free product is visually observed, the soil will be considered contaminated and treated as regulated fill.
- Screening results will be documented.

5.7.2 Soil Staging

To the extent possible and when applicable, soil designated for disposal will be direct loaded and hauled to a Minnesota permitted landfill. Soil that cannot be immediately hauled to the landfill will be stockpiled as detailed below.

Soil designated for reuse that cannot be immediately reused will be segregated and stockpiled on-site.

Excess unregulated fill that cannot be immediately reused will be stockpiled on or off-site for unrestricted reuse on or off-site.

5.7.3 Laboratory Testing

Additional laboratory testing may be required in the following scenarios:

If additional characterization is required by the landfill for disposal approval, samples will be collected and analyzed for the parameters required by the receiving landfill.

In the event that excavated soils are materially different from what has been observed and tested during previous evaluations (based on visual, olfactory and/or PID measurements), samples will be collected and analyzed for characterization.

Sampling procedures will follow MPCA guidelines. The samples will be analyzed for contaminants of concern as determined by the environmental consultant utilizing field observations and data from the previous investigations, potentially including, but not limited to the following parameters:

- PFAS (United States Environmental Protection Agency [EPA] Method 1633)
- DRO (Wisconsin Method DRO)
- GRO (Wisconsin Method GRO)
- DRO silica gel cleanup (Wisconsin Method DRO)
- VOCs (EPA Method 8260D)
- Polycyclic aromatic hydrocarbons (PAHs - EPA Method 8270)
- Priority Pollutant Metals or 8 Resource Conservation and Recovery Act (RCRA) Metals (EPA 6010D/7471)
- Polychlorinated biphenyls (PCBs - EPA Method 8082A)

5.7.4 Soil Stockpile Management

Excavated material that is determined to have potential chemical impacts based on field screening results will be placed in a temporary stockpile on the property. Soils with suspected different contaminants, soils exhibiting different visual or olfactory characteristics, or soils with substantially different PID readings will be placed in separate stockpiles. Contaminated materials will be covered with minimum 10-mil reinforced poly plastic sheeting as soon as work on the stockpile has been completed during the day or at a minimum at the end of each working day. The poly will be adequately secured in place. If the contaminated material is not stockpiled on an impervious surface, the stockpiles will be constructed on a minimum 10-mil reinforced poly plastic placed over smooth debris free ground. The stockpile(s) will be bermed, if necessary, to prevent storm water run-on and/or runoff.

Stockpiles will be managed either immediately adjacent to the excavation or within the project site.

If the contractor excavates wet Regulated Soil (soil with free draining liquids), the material will be placed within the excavation to drain (for example benching within the excavation) or will be placed on a single sheet of minimum 10-mil reinforced plastic (or sealed seams of plastic) with the plastic overlapping containment berms so that liquids are contained. All free liquids draining from wet Regulated Soil will either be contained by stockpiling or will remain within the excavation. If laboratory analysis of stockpiled soil is required, sample frequency will be determined based on the homogeneity of the stockpile and MPCA guidance (MPCA Guidance Document c-brwnfld4- 05, February 2025):

Cubic yards of soil in pile	Number of samples
0-500	1 per 100 cubic yards
501-1000	1 per 250 cubic yards
1001 or more	1 per 500 cubic yards

If the soil is not reasonably homogeneous, the number of samples will be adjusted to sufficiently represent the material and/or meet additional disposal requirements of the landfill.

5.7.5 Imported Fill Material

Any imported fill material must meet the MPCA qualifications for unrestricted reuse material. Material sourced from a pit or undisturbed native deposit with no indications of past sources of contamination is considered unrestricted reuse material. Material from any other source must be evaluated for potential impacts prior to import to the site. The contractor must provide sufficient evidence that material meets the unrestricted reuse criteria. Sufficient evidence includes at least one of the following, but may not be limited to the following:

- Evidence that the property is not suspect for impacts based on sufficient knowledge of past use of the property and surrounding properties.
- Analytical results that indicate that soil meets unrestricted reuse criteria established by the MPCA.
- Analytical results that indicate that soil meets restricted reuse criteria established by the MPCA and that reuse has been site-specifically and formally approved by MPCA and local authorities.

5.7.6 Site Controls

5.7.6.1 Street Sweepings

The streets will be swept as directed by the Engineer and whenever necessary to prevent the production of dust in amounts damaging to property, vegetation, animals, or persons in the vicinity of construction activity. Street sweepings will be managed appropriately: contaminated street sweepings will be disposed at a Minnesota-permitted landfill, and non-contaminated street sweepings will be reused on or off-site as determined by the Project contractor. If water is employed for equipment decontamination, it will be collected, tested and properly disposed.

5.7.6.2 Site Security

The contractor will be responsible for securing the site as described in the project specifications.

5.7.6.3 Dust Control

Methods will be employed to prevent fugitive dust emissions. Methods will include keeping exposed working areas as small as practicable during excavation and grading. Watering will be employed, as necessary, to control emissions from exposed work areas, access roads and working stockpiles. A balance will be maintained between effective dust control and making the area muddy, causing off-site tracking of contaminants.

5.7.6.4 Air Criteria

Air monitoring criteria will be outlined in the SHSP prepared for the project..

5.7.6.5 Storm Water Pollution Prevention Plan and National Pollutant Discharge Elimination System Permits

The construction contractor selected for project construction will be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit and follow the Storm Water Pollution Prevention Plan (SWPPP) for management of storm water. The contractor is required to follow the Best Management Practices (BMPs) required by the permit.

6 Construction Contingency Plan

The project environmental professional/consultant will be prepared to respond if contaminated or regulated materials are unexpectedly encountered during excavation. In the event that unforeseen contaminated or regulated materials are encountered during construction, appropriate notifications will be made, and regulations followed. Previously unidentified releases to the environment will be reported to the State Duty Officer. This procedure will be used unless conditions under which there is an immediate threat to human health in which case 911 will be called and then the State Duty Officer.

The following sections outline the CCP procedures and methods that will be instituted throughout the Project.

6.1 Contamination Indicators

Indicators of potentially contaminated soil, groundwater or surface water include, but are not limited to the following:

- Odor including gasoline, diesel, creosote (odor of railroad ties), mothballs, or other chemical-like odors in soil excavation areas.
- Soil with unusual staining (such as black or green staining not associated with organic content), or with an oily appearance, or any unusual soil texture or color.
- A rainbow sheen on the surface of water (groundwater or ponded rainwater) or soil.
- Indications of a release through the use of a PID or another field screening instrument.
- Indicators of regulated wastes include, but are not limited to the following:

  - Unexpected presence of buried cans, bottles, scrap metal, wood, glass (indicates dumping/burial of solid waste and a possible dump with associated chemical contamination).
  - Unexpected presence of asphalt and concrete rubble (indicates dumping/burial of demolition waste with associated chemical contamination).
  - Shingles, roofing materials, vermiculite, transite siding, floor tiles, insulation, or any fibrous material (demolition debris that could be associated with ACM or associated contamination).
  - In-place intact active or inactive transite pipes (steam or water pipes) or conduit (contains ACM).
  - Culverts or other pipes with tar-like coating (potentially contains ACM).
  - Wood Ash (potentially contains lead, asbestos, or other chemicals) or coal ash or slag (potentially contains metals).
  - Sandblast or foundry sand residue (potentially contains lead or other metals).
  - Treated wood, including, but not limited to products referred to as brown-or green-treat, and creosote (potentially contains arsenic, chromium, copper, or PAHs).
- Chemical containers such as drums and other containers (potential source of chemical contaminants within intact containers, or surrounding damaged containers)
- Underground storage tanks (USTs)/aboveground storage tanks (ASTs) (potential source of petroleum or other chemical contaminants within intact USTs/ASTs or surrounding damaged USTs/ASTs).
- Intact filled-in basement or buried concrete slab from demolished building with insulation or intact floor tiles (potential ACM), waste traps (potentially contains oily waste), cesspools (potentially contains chemical or oil wastes) and sumps (potentially contains chemical waste).

6.2 Notification

The contractor will proceed with the following notifications in the order listed:

Contact #1: 911 (if the incident/release represents an immediate danger to life or health)

Contact #2: Project owner and environmental professional/consultant (to conduct and document a detailed inspection and evaluation of the unexpected material)

If unexpected contamination is encountered, the project owner or environmental professional/consultant will report the release to the Minnesota State Duty Officer (1.800.422.0798 or 651.649.5451).

6.3 Incident Response

If unexpected contaminated soil, water, debris, or potentially contaminated waste materials are encountered during construction, the contractor will immediately stop work in the vicinity and notify the project owner.

The contractor will not resume work in the suspect area until approved by the environmental professional/consultant. Work outside the vicinity of the suspect area may continue if the

environmental professional/consultant determines that the extent of the contamination has been defined.

The environmental professional/consultant will investigate and characterize all unexpected, contaminated soil, water, or regulated waste materials. Field screening activities will not proceed until the situation is analyzed, and health and safety considerations resolved in accordance with the SHSP. Visual and olfactory indications of contamination will be documented. Samples of the potentially impacted soil or regulated materials will be collected from excavation base and sidewalls (if accessible) or stockpiles for PID screening and laboratory analysis. Potential impacted water will be collected from excavations. Soil and/or regulated material sample analytical parameters will be determined based on field observations, site history, and MPCA guidelines. Laboratory analytical results typically take 10 working days to obtain.

The results of the preliminary screening will be evaluated by the environmental professional/consultant. The contractor will not be allowed to continue work in the area until the type and magnitude of contamination is documented, and an appropriate response action is determined.

6.4 Potential Contaminated/Regulated Materials

6.4.1 Stained Soils or Soils Exhibiting Strong or Unusual Odors

In the event that stained soils or soils exhibiting strong or unusual odors are encountered, they will be segregated, stockpiled, and properly characterized for disposal. Water, including rainwater, shall be considered contaminated if it is in contact with contaminated soil. Excavations in contaminated areas will be bermed, if necessary, to prevent rainwater from entering the excavation so that rainwater management requirements are minimized.

6.4.2 Field Screening of Stained Soils or Soils Exhibiting Strong or Unusual Odors

Soils will be observed for the presence of visual and olfactory indications of contamination. Headspace monitoring will be completed in accordance with MPCA methodology using a PID equipped with a 10.6 or 11.7-electron-volt lamp to monitor soil for the presence of organic vapors. The frequency of samples collected for headspace analysis will be based on the type of soil being excavated. The environmental professional/consultant will determine the frequency of PID headspace sampling throughout the Project area based on the homogeneity of the material being excavated, the volume, and type of debris encountered. A minimum of one sample for headspace analysis will be collected for approximately every 10 cubic yards of soil removed. The environmental professional/consultant will have asbestos inspection credentials and will monitor for potential ACM/ACWM. All screening results will be documented.

6.4.3 Asbestos

Asbestos may be encountered in three different forms:

Isolated ACM - The ACM occurs as isolated fragments that can be segregated by hand and containerized (such as a fragment of roofing paper),

ACWM - The ACM occurs in larger quantities that cannot be segregated by hand (such as numerous fragments of transite buried with other demolition material), and

Inactive Intact ACM - The ACM is still intact as part of an inactive utility (such as asbestos-wrapped steam pipe, an asbestos water pipe or asbestos conduit).

All ACM/ACWM will be abated by a licensed asbestos contractor who will complete all required notifications and obtain all required approvals from the MPCA and/or MDH prior to completing ACM/ACWM abatement. The asbestos abatement contractor will manage removal (excavation/disposal/abatement) of all ACM and ACWM such that all removal activities will result in no visible dust emissions. Excavation, containerization, loading and hauling of ACM/ACWM will be completed in accordance with all applicable laws, rules, and regulations. Prior to abatement, an Emission Control Plan will be prepared.

6.4.4 Underground Storage Tanks

In the event an unknown UST is encountered, the following actions will be taken:

An MPCA-certified UST supervisor that is also a certified contractor or in the employ of a certified contractor will oversee the removal of the tank.

The MPCA tank 10-day tank notification and removal forms will be submitted as required.

The tank removal will be completed in accordance with all safety and environmental protection precautions as required by law including, but not limited to: drain all connecting pipes, remove fuel and fuel/water mixture from the tank to the extent practicable, purge all explosive vapors from the tank, inspect the removed tank for evidence of leaks, and document the condition of the tank.

Soil samples in the tank excavation cavity will be screened with a PID, and soil samples (and water samples if encountered) collected for laboratory analysis in accordance with the MPCA requirements.

Metal tanks dismantled and cleaned on-site will be disposed by recycling them as metal scrap; fiberglass tanks will be disposed in a Minnesota-landfill.

Removed petroleum product will be recycled at a permitted facility and removed tank bottom/sludge will be managed as a hazardous waste for disposal/recycling at a permitted fuel recycling facility.

6.4.5 Free Product

In the event that free product is encountered, work will stop in the area until appropriate collection measures can be brought to the site and the State Duty Officer notified. The environmental professional/consultant, in consultation with the MCPA as necessary, will determine appropriate handing, testing, and disposal requirements.

6.4.6 Buried Containers

In the event that drums, or other storage containers are unearthed during excavation activities, they will be removed, and their condition evaluated by appropriately trained personnel. If the containers are established to be in poor condition, the contents will be transferred to Department of Transportation (DOT) approved overpack drums. The drums will be placed in a secure location. The contents of the containers will be sampled and characterized for disposal in accordance with appropriate state and federal requirements.

Soil from the area around the container will be screened for indications of contamination and potentially impacted soil will be properly managed.

6.4.7 Creosote Timbers/Railroad Ties

In the event that materials such as treated wood are encountered, the treated wood will be segregated and properly disposed.

6.4.8 Waste Tires

In the event that waste tires are encountered, the tires will be segregated. When a sufficient number of tires are accumulated, they will be collected by an approved vendor and hauled off-site for recycling. Documentation regarding the recycling will be obtained by the contractor and provided to the environmental professional/consultant.

6.4.9 Batteries

In the event that batteries are encountered, the batteries will be segregated and placed in a labeled corrosion-resistant box. Any recovered batteries will be collected by an approved vendor and hauled off-site for recycling. Documentation regarding the recycling will be obtained by the contractor and provided to the environmental professional/consultant.

6.4.10 Oil Filters

In the event that oil filters are encountered, the oil filters will be segregated and placed into a labeled steel drum. When a sufficient number of filters are accumulated, they will be collected by an approved vendor and hauled off-site for recycling. Documentation regarding the recycling will be obtained by the contractor and provided to the environmental professional/consultant.

6.4.11 Dewatering

If dewatering of potentially contaminated water needs to occur, the environmental professional/consultant will observe and document the dewatering activities in the contaminated area. Contractor will be prepared to containerize the water if required.

The environmental professional/consultant will collect all water samples necessary to apply for the appropriate permit(s) to coordinate with the City of Duluth and Western Lake Superior Sanitary District to identify an appropriate discharge location. The contractor will be responsible for obtaining all necessary permits and completing all required documentation reports for discharge of contaminated water.

If analytical samples indicate that pre-treatment is necessary due to contamination concentrations prior to discharge of water, then the contractor shall supply a portable water treatment system. The system will need to be designed by a registered Professional Engineer licensed in the State of Minnesota and include components that will treat and discharge water that meets permit requirements. Components may include, but not be limited to: flow equalizer, suspended solids removal, oil/water separator, and activated carbon filtration. The portable water treatment system shall have a treatment capacity equal to or greater than the rate of temporary construction dewatering.

Uncontaminated water will be managed in accordance with the project's SWPPP.

6.4.12 Spills

If a spill occurs, the spill and impacted materials will be cleaned up immediately if safe to do so. If the spill is not safe to clean up or too large for the contractor to handle, an emergency spill responder will be contacted immediately, and the spill addressed upon their arrival. State Duty Officer reporting will be completed as required by Minnesota Statute §115.061.

State Duty Officer phone number: 1.800.422.0798 or 651.649.5451

Impacted materials will be stockpiled and/or containerized, labeled, and sampled as required by the landfill for disposal.

6.5 Disposal

In the event that contaminated and/or regulated materials need to be disposed, the contractor will propose the Minnesota permitted landfill that is permitted to accept the materials that need to be properly disposed. The contractor will provide a waste profile from the landfill and the environmental professional/consultant will review it prior to it being submitted to the landfill. No material can be hauled to the landfill without an approval (email is acceptable) from the landfill.

The generator for the contaminated and/or regulated materials encountered during excavation will be the DAA. The DAA's authorized representative or designee will sign as the Generator. Copies of the final signed manifests and weigh tickets will be provided to the Project Engineer daily, or as approved by the Project Engineer.

6.6 Reporting

Any incidents managed in accordance with the CCP will be documented as part of the RAP Implementation Report.

7 RAP Implementation Reporting

Upon completion of the response actions for the demolition project, a RAP Implementation Report will be completed documenting the following:

- Documentation of field activities;
- Site plan showing pertinent site features;
- Illustration showing sample locations, if applicable;
- Analytical laboratory results;
- Data evaluation and presentation of findings; and,
- Recommendations concerning further action, if necessary.

8 Schedule

The project is scheduled to begin in Summer 2027.

9 References

MPCA, June 2013, Remediation Division Soil Leaching Pathway Spreadsheet, c-r1-03.xls (live.com)

MPCA, May 2026, Soil Reference Value Spreadsheet, Guidance Document c-r1-06, https://www.pca.state.mn.us/document/c-r1-06xlsx

MPCA, March 2024, *Best Management Practices for the Off-Site Reuse of Unregulated Fill*, Guidance Document c-rem1-01, https://www.pca.state.mn.us/sites/default/files/c-rem1-01.pdf

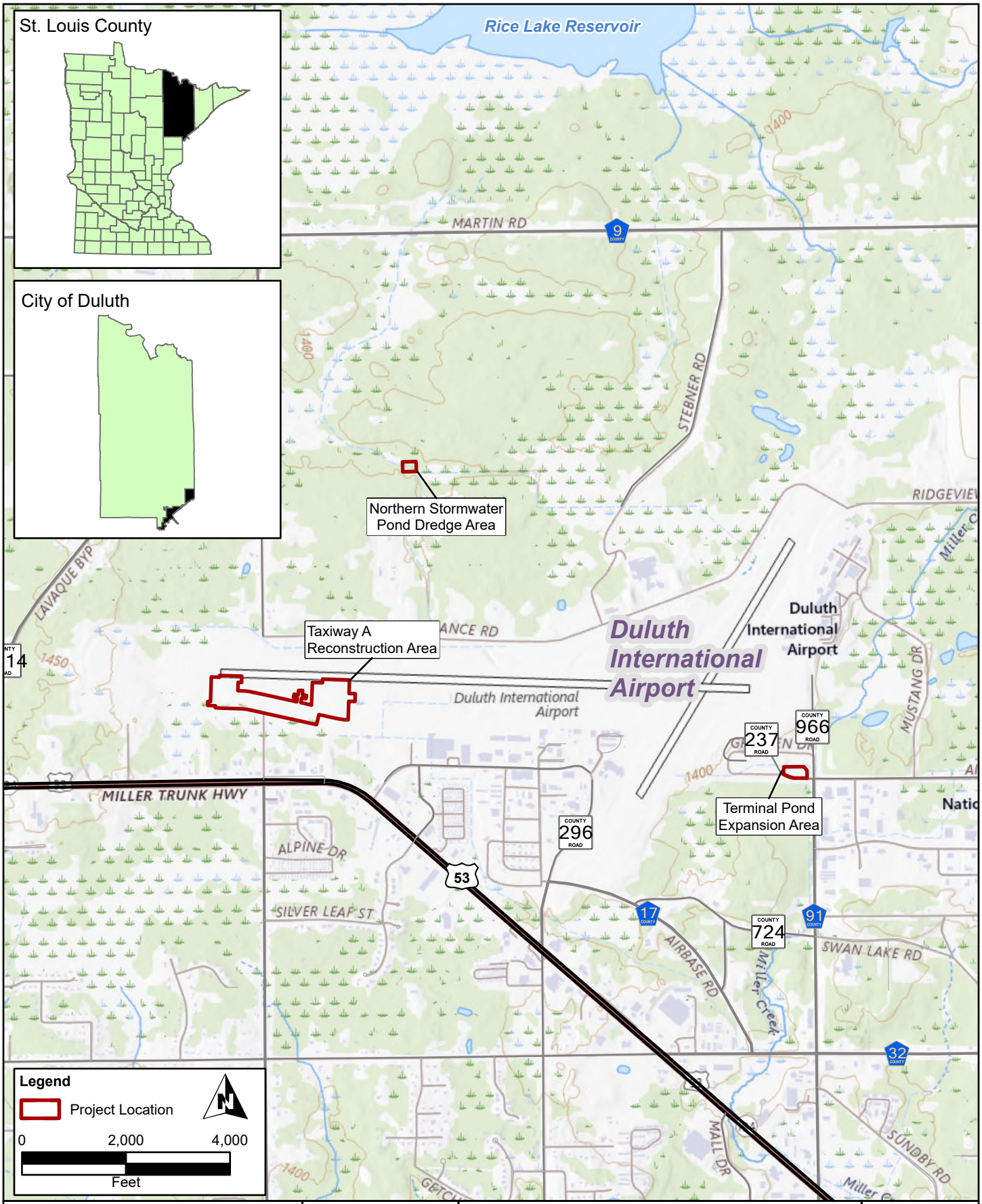
MPCA, April 2024, *Brownfield Program Response Action Plans*, Guidance Document c-rem4-43, Brownfield Program Response Action Plans (state.mn.us)

Short Elliot Hendrickson, Inc. (SEH). May 2026, Phase I Environmental Site Assessment, Taxiway A Reconstruction – Phase 7, Duluth, St. Louis County, Minnesota

Short Elliot Hendrickson, Inc. (SEH). May 2026, Phase II Environmental Investigation, Taxiway A Reconstruction – Phase 7, Duluth, St. Louis County, Minnesota

Figures

Figure 1 – Project Site Location
Figure 2 – Phase 7 Extent and Project Areas
Figure 3 – Summary of Response Actions



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Project: DULAI 186683
Print Date: 5/17/2026

User Name: rhawkins
Projection: UTM NAD 83 Zone 15N
Source: ESRI, MnDOT, SEH Digi, St. Louis County

Project Site Location

Response Action Plan/Construction Contingency Plan
Taxiway A Reconstruction - Phase 7
Duluth, St. Louis County, Minnesota

Figure 1

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources listed on this map and is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.

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Project: DULAI 186683
Print Date: 5/18/2026

User Name: rhawkins
Projection: NAD 1983 HARN Adj MN St. Louis (US Feet)
Source: ESRI, SEH Digi, St. Louis County

Phase 7 Extent and Project Areas

Response Action Plan/Construction Contingency Plan
Taxiway A Reconstruction - Phase 7
Duluth, St. Louis County, Minnesota

Figure 2

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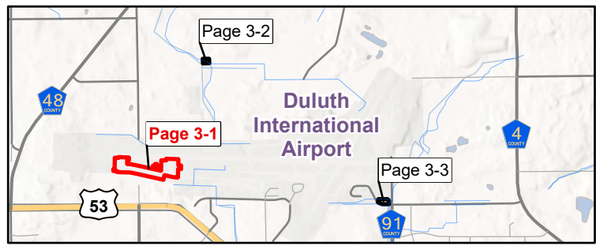

Legend

- County Parcel Boundaries
- Project Area
- Sample Location (SEH, 2026)

Proposed Design Features (SEH, 2026)

- Proposed Dredging Area
- Proposed Riprap Drainage Structure
- Proposed Stormwater Pond Expansion

RAP Soil Management Categories

- Unregulated Soil
- Regulated Soil Area
- Industrial Exceedance Soil Area

MN ANG PFAS Sampling Locations (ANG, 2024)

- Detections below 2026 MPCA SLVs, RSRVs, and ISRVs
- Detections exceeding 2026 MPCA RSRVs
- Detections exceeding 2026 MPCA ISRVs

Hand Auger Boring (HA), Sediment Sample (SS), Water Sample (WS)

Termination Depth (ft) → **HA-01** EOB = 10 (1, 15) ← Sample Depths

Soil Analytical Results

(3) Diesel Range Organics - 108 ← Analytical Results (ng/g)

Sample Depth (ft) → Groundwater Observation Summary

PFOS - 0.01 ← Analytical Results (ng/L)

Soil Observation Summary

Maximum PID Measurement → 0.5 ppm Fill to EOB ← Soil Description

- **Unregulated Soil** meets the MPCA definition of unregulated fill (also includes non-impacted, naturally occurring native soil
- **Regulated Soil** will be managed as restricted reuse on-site. Regulated Soil contains low level contamination [exceeding MPCA Residential/Recreational Soil Reference Value (RSRV) and Soil Leaching Value (SLV) but less than all Commercial/Industrial SRVs (ISRV)]. Regulated soil can also contain debris.
- **Industrial Exceedance Soil** will be managed as contaminated material and will be disposed of at a Minnesota-permitted solid waste facility. Industrial exceedance soil contains contamination exceeding Commercial/Industrial SRVs.
- Soil parameter concentrations shown exceed MPCA SLVs, RSRVs, and ISRVs.
- **Bold** soil detections indicate and exceedance of the ISRV.
- Water parameter concentrations shown exceed Minnesota Department of Health (MDH) Health Based Guidance (HBGs), Environmental Protection Agency (EPA) Maximum Contaminant Levels (MCLs), and National Pollutant Discharge Elimination System (NPDES) General Permit Limits (GPLs).
- Depth = Sample depth in feet below ground surface (bgs).
- EOB = End of Boring (Termination Depth of Hand Auger Boring).
- Per- and polyflouroalkyl substances (PFAS)
- ppm = parts per million
- Soil detections shown are in nanograms per gram (ng/g).
- Water detections shown are in nanograms per liter (ng/L).
- Air National Guard (ANG)
- Photoionization Detector (PID)
- See 2026 Phase II Environmental Investigation (SEH, 2026) for individual PFAS compound abbreviations.

HA-02 (0 to 3 feet bgs)
During the 2026 Phase II Environmental Investigation HA-02 identified soil that exceeded the MPCA RSRVs. The extent of impacts will be delinated by additional sampling during project construction.

HA-02
EOB=5 (1s and 3s)
Soil Analytical Results
(1) PFOA - 0.366
Groundwater Analytical Results
Groundwater not encountered.
Soil Observation Summary
0.1 ppm
Clayey sand fill to EOB.

HA-03
EOB=5 (1s and 3s)
Soil Analytical Results
All below MPCA SLVs, SRVs, and UFC.
Groundwater Analytical Results
Groundwater not encountered.
Soil Observation Summary
0.2 ppm
Clayey sand fill to EOB. Trace wood chips at 3.5 feet bgs.

HA-04
EOB=5 (1s and 3s)
Soil Analytical Results
All below MPCA SLVs, SRVs, and UFC.
Groundwater Analytical Results
Groundwater not encountered.
Soil Observation Summary
0.1 ppm
Clayey sand fill to EOB.

HA-05
EOB=5 (1s and 3s)
Soil Analytical Results
All below MPCA SLVs, SRVs, and UFC.
Groundwater Analytical Results
Groundwater not encountered.
Soil Observation Summary
0.2 ppm
Clayey sand fill to EOB.

HA-07
EOB=3 (1s and 2.5s)
Soil Analytical Results
(1) PFOS - 27.4
(1) PFOA - 0.372
(3) PFOA - 1.24
Groundwater Analytical Results
Groundwater not encountered.
Soil Observation Summary
0.1 ppm
Clayey sand fill to EOB.

HA-09
EOB=5 (1s and 3s)
Soil Analytical Results
(1) PFOS - 16.0
(3) PFOA - 0.892
Groundwater Analytical Results
Groundwater not encountered.
Soil Observation Summary
0.1 ppm
Silty sand fill to EOB.

HA-07 and HA-09 (0 to 5 feet bgs)
During the 2026 Phase II Environmental Investigation HA-07 and HA-09 identified soil that exceeded the MPCA RSRVs.The extent of impacts will be delinated by additional sampling during project construction.

HA-01 (0-5 feet bgs)
During the 2026 Phase II Environmental Investigation HA-01 identified soil that exceeded the MPCA ISRVs. The extent of impacts will be delinated by additional sampling during project construction.

HA-01
EOB=5 (1s and 3s)
Soil Analytical Results
(1) PFDA - 9.24
(1) PFOS - 176
(1) PFOA - 0.669
(3) PFDA - 4.98
(3) PFOS - 180
(3) PFOA - 4.34
Groundwater Analytical Results
Groundwater not encountered.
Soil Observation Summary
0.1 ppm
Clayey sand fill to EOB. Buried topsoil at 4.5 to 5 feet bgs.

BGSL-11 (0 to 0.5 feet bgs)
The MN ANG completed BGSL-11 in May 2024 and identified soil that exceeded the MPCA RSRVs. The extent of impacts will be delinated by additional sampling during project construction.

HA-06
EOB=5 (1s and 3s)
Soil Analytical Results
All below MPCA SLVs, SRVs, and UFC.
Groundwater Analytical Results
Groundwater not encountered.
Soil Observation Summary
0.2 ppm
Clayey sand fill to EOB.

HA-08
EOB=5 (1s and 3s)
Soil Analytical Results
All below MPCA SLVs, SRVs, and UFC.
Groundwater Analytical Results
Groundwater not encountered.
Soil Observation Summary
0.5 ppm
Clayey sand and silty sand fill to EOB.

HA-01 HA-02 HA-03 HA-04 HA-05 HA-06 HA-07 HA-08 HA-09
BGSL-09 BGSL-10 BGSL-11 BGSL-12
Lavaque Rd

0 150 300 Feet

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User Name: rhawkins
Projection: NAD 1983 HARN Adj MN St. Louis (US Feet)
Source: ESRI, SEH Digi, St. Louis County

Summary of Response Actions - Taxiway A Reconstruction Area

Response Action Plan/Construction Contingency Plan
Taxiway A Reconstruction - Phase 7
Duluth, St. Louis County, Minnesota

Figure 3-1

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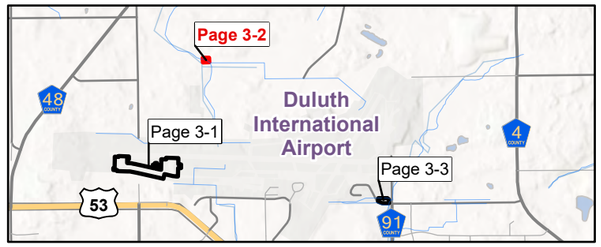


Legend

- County Parcel Boundaries
- Project Area
- Sample Location (SEH, 2026)

Proposed Design Features (SEH, 2026)

- Proposed Dredging Area
- Proposed Riprap Drainage Structure
- Proposed Stormwater Pond Expansion

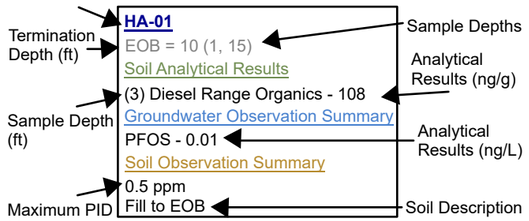
RAP Soil Management Categories

- Unregulated Soil
- Regulated Soil Area
- Industrial Exceedance Soil Area

MN ANG PFAS Sampling Locations (ANG, 2024)

- Detections below 2026 MPCA SLVs, RSRVs, and ISRVs
- Detections exceeding 2026 MPCA RSRVs
- Detections exceeding 2026 MPCA ISRVs

Hand Auger Boring (HA), Sediment Sample (SS), Water Sample (WS)



- **Unregulated Soil** meets the MPCA definition of unregulated fill (also includes non-impacted, naturally occurring native soil
- **Regulated Soil** will be managed as restricted reuse on-site. Regulated Soil contains low level contamination [exceeding MPCA Residential/Recreational Soil Reference Value (RSRV) and Soil Leaching Value (SLV) but less than all Commercial/Industrial SRVs (ISRV)]. Regulated soil can also contain debris.
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- Soil parameter concentrations shown exceed MPCA SLVs, RSRVs, and ISRVs.
- **Bold** soil detections indicate and exceedance of the ISRV.
- Water parameter concentrations shown exceed Minnesota Department of Health (MDH) Health Based Guidance (HBGs), Environmental Protection Agency (EPA) Maximum Contaminant Levels (MCLs), and National Pollutant Discharge Elimination System (NPDES) General Permit Limits (GPLs).
- Depth = Sample depth in feet below ground surface (bgs).
- EOB = End of Boring (Termination Depth of Hand Auger Boring).
- Per- and polyflouroalkyl substances (PFAS)
- ppm = parts per million
- Soil detections shown are in nanograms per gram (ng/g).
- Water detections shown are in nanograms per liter (ng/L).
- Air National Guard (ANG)
- Photoionization Detector (PID)
- See 2026 Phase II Environmental Investigation (SEH, 2026) for individual PFAS compound abbreviations.

WS-01 *(Surface Water)*
During the Phase II Investigation WS-01 identified surface water with detections of various PFAS compounds exceeding several Environmental Protection Agency (EPA) Maximum Contaminant Levels (MCLs), Minnesota Department of Health (MDH) Health Risk Limits (HRLs), and National Pollutant Discharge Elimination System (NPDES) General Permit Limits (GPLS).

WS-01
Surface Water Sample
Soil Analytical Results
No soil sample collected.
Surface Water Analytical Results
6:2 FTS - 3.74
PFBS - 48.0
PFBA - 15.9
PFHpS - 4.68
PFHpA - 17.9
PFHxS - 246
PFHxA - 54.3
PFNA - 2.04
PFOS - 165
PFOA - 41.0
PFPeS - 40.9
PFPeA - 40.0

SS-03
Sediment Sample
Soil Analytical Results
All below MPCA SLVs, SRVs, and UFC.
Surface Water Analytical Results
Surface water sample not collected.
Soil Observation Summary
Silty sand.

SS-01
Sediment Sample
Soil Analytical Results
All below MPCA SLVs, SRVs, and UFC.
Surface Water Analytical Results
Surface water sample not collected.
Soil Observation Summary
Silty sand.

SS-02
Sediment Sample
Soil Analytical Results
All below MPCA SLVs, SRVs, and UFC.
Surface Water Analytical Results
Surface water sample not collected.
Soil Observation Summary
Silty sand.

SWSD-01
WS-01
SS-01
SS-02
SS-03
SWSD-02

0 50 100
Feet

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Print Date: 5/18/2026

User Name: rhawkins
Projection: NAD 1983 HARN Adj MN St. Louis (US Feet)
Source: ESRI, SEH Digi, St. Louis County

Summary of Response Actions - Northern Stormwater Pond Dredge Area

Response Action Plan/Construction Contingency Plan
Taxiway A Reconstruction - Phase 7
Duluth, St. Louis County, Minnesota

Figure 3-2

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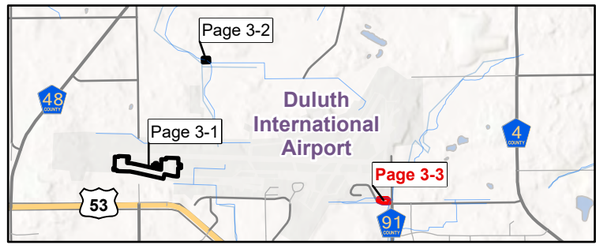

Legend

- County Parcel Boundaries
- Project Area
- Sample Location (SEH, 2026)

Proposed Design Features (SEH, 2026)

- Proposed Dredging Area
- Proposed Riprap Drainage Structure
- Proposed Stormwater Pond Expansion

RAP Soil Management Categories

- Unregulated Soil
- Regulated Soil Area
- Industrial Exceedance Soil Area

MN ANG PFAS Sampling Locations (ANG, 2024)

- Detections below 2026 MPCA SLVs, RSRVs, and ISRVs
- Detections exceeding 2026 MPCA RSRVs
- Detections exceeding 2026 MPCA ISRVs

Hand Auger Boring (HA), Sediment Sample (SS), Water Sample (WS)

Termination Depth (ft) → **HA-01**
EOB = 10 (1, 15) ← Sample Depths
Soil Analytical Results
(3) Diesel Range Organics - 108 ← Analytical Results (ng/g)
Sample Depth (ft) → Groundwater Observation Summary
PFOS - 0.01 ← Analytical Results (ng/L)
Soil Observation Summary
Maximum PID Measurement → 0.5 ppm
Fill to EOB ← Soil Description

- **Unregulated Soil** meets the MPCA definition of unregulated fill (also includes non-impacted, naturally occurring native soil
- **Regulated Soil** will be managed as restricted reuse on-site. Regulated Soil contains low level contamination [exceeding MPCA Residential/Recreational Soil Reference Value (RSRV) and Soil Leaching Value (SLV) but less than all Commercial/Industrial SRVs (ISRV)]. Regulated soil can also contain debris.
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- Soil detections shown are in nanograms per gram (ng/g).
- Water detections shown are in nanograms per liter (ng/L).
- Air National Guard (ANG)
- Photoionization Detector (PID)
- See 2026 Phase II Environmental Investigation (SEH, 2026) for individual PFAS compound abbreviations.

HA-10
EOB=5 (1s and 3s)
Soil Analytical Results
All below MPCA SLVs, SRVs, and UFC.
Groundwater Analytical Results
Groundwater not encountered.
Soil Observation Summary
2.1 ppm
Sandy clay fill to EOB.

HA-11
EOB=5 (1s and 3s)
Soil Analytical Results
All below MPCA SLVs, SRVs, and UFC.
Groundwater Analytical Results
Groundwater not encountered.
Soil Observation Summary
0.3 ppm
Sandy clay fill to EOB.

HA-13
EOB=5 (1s)
Soil Analytical Results
All below MPCA SLVs, SRVs, and UFC.
Groundwater Analytical Results
Groundwater not encountered.
Soil Observation Summary
0.3 ppm
Sandy clay fill to EOB.

HA-12
EOB=5 (1s and 3s)
Soil Analytical Results
All below MPCA SLVs, SRVs, and UFC.
Groundwater Analytical Results
Groundwater not encountered.
Soil Observation Summary
0.8 ppm
Sandy clay fill to EOB.

BBW-MW08
HA-11
HA-10
HA-13
HA-12
COUNTY 237 ROAD
COUNTY 966 ROAD
Airport Rd
91
0 50 100
Feet

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Projection: NAD 1983 HARN Adj MN St. Louis (US Feet)
Source: ESRI, SEH Digi, St. Louis County

Summary of Response Actions - Terminal Stormwater Pond Expansion Area

Response Action Plan/Construction Contingency Plan
Taxiway A Reconstruction - Phase 7
Duluth, St. Louis County, Minnesota

Figure 3-3

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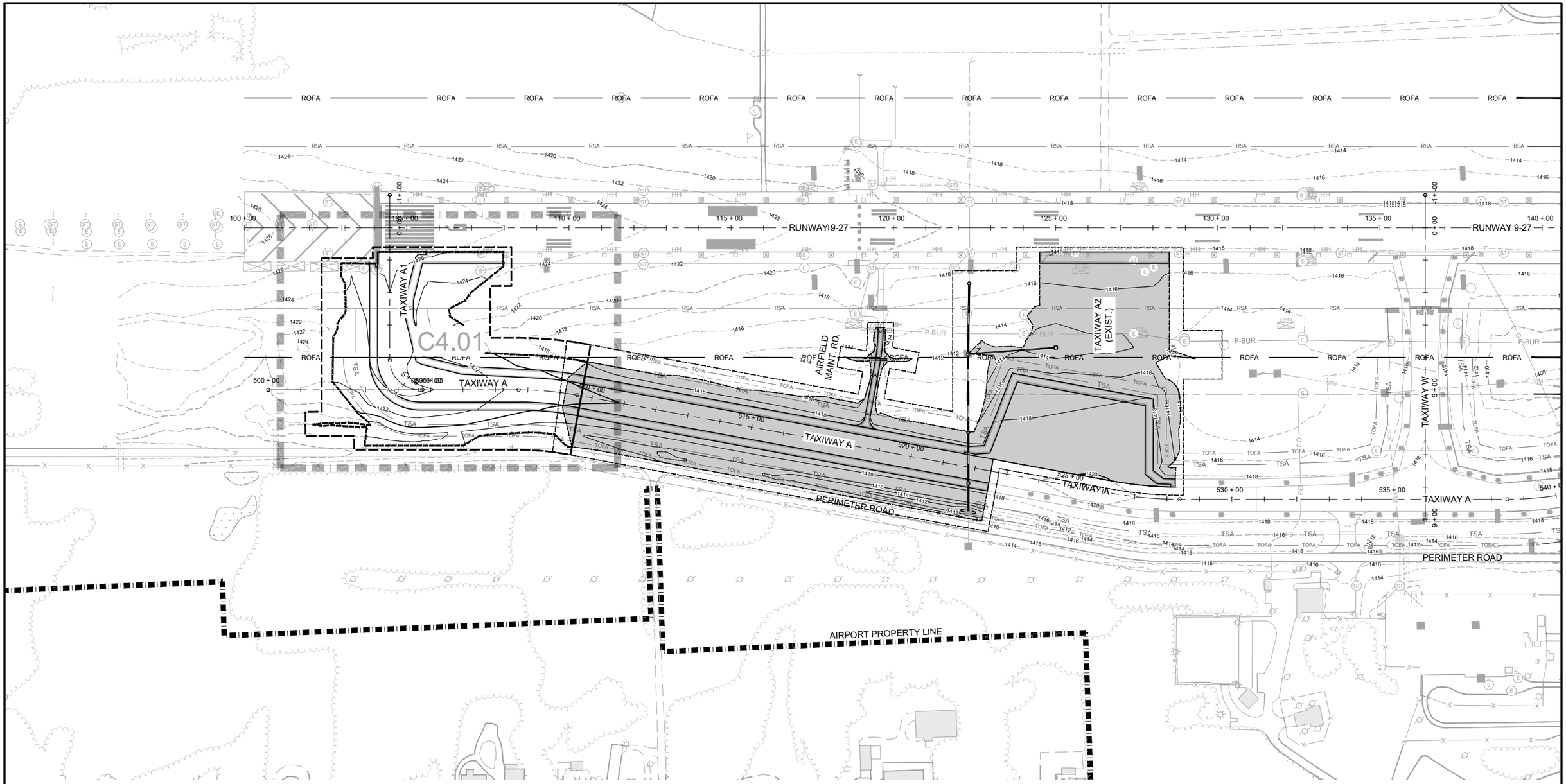
Appendix A

Select Plan Sheets



LEGEND

RSA	RUNWAY SAFETY AREA
TSA	TAXIWAY SAFETY AREA
	PROPOSED GRADING LIMIT
	PROPOSED CONSTRUCTION LIMIT
P-BUR	EXISTING BURIED POWER
COM COM	EXISTING BURIED PHONE
	PROPOSED STORM PIPE
CB	PROPOSED STORM CATCH BASIN
ST	PROPOSED STORM MANHOLE
	EXISTING PAVEMENT EDGE
STM	EXISTING STORM PIPE
FM	EXISTING SANITARY PIPE
	EXISTING STORM CATCH BASIN
ST	EXISTING STORM MANHOLE
	EXISTING TAXIWAY LIGHT
	EXISTING RUNWAY LIGHT
	EXISTING BORING
E	EXISTING ELECTRICAL MANHOLE
	EXISTING LIGHTED SIGN
	EXISTING INSPECTION PIT

PROJECT GRADING PLAN (OVERALL) (ALT BID)

GRADING AREA (BASE BID)

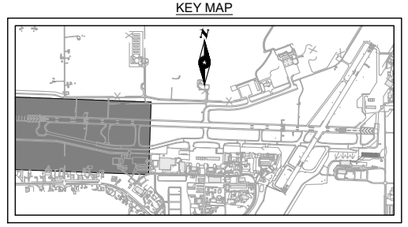
NOTES:

1) NOT ALL UTILITIES HAVE BEEN SHOWN FOR CLARITY. SEE ELECTRICAL PLANS FOR ADDITIONAL UTILITIES NOT SHOWN.

N

0 150' 300'

KEY MAP



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SEH Project	DLH 186683
Drawn By	SWB
Designed By	JRN
Checked By	AVE

Rev.#	Plan Revision Issue Description	Date

Rev.#	Sheet Revision Issue Description	Date

SEH

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LICENSE PROFESSIONAL UNDER THE LAWS OF THE STATE OF STATE.

Jarrod R Nelson

JARROD R NELSON, PE

DATE 05-08-26 LICENSE NO. 26794

TAXIWAY A RECONSTRUCTION - PHASE 7

DULUTH, MINNESOTA

PROJECT GRADING PLAN (OVERALL) (ALT BID)

C4.00

RUNWAY 9-27

TAXIWAY A1

TAXIWAY A

EXISTING GROUND LINE CONTOUR (TYP.)

HORIZONTAL CONTROL LINE AND CENTERLINE OF TAXIWAY A1

PROPOSED GROUND LINE CONTOUR (TYP.)

PROVIDE 1.5" DROP AT EDGE OF PAVEMENT AND GRADE AT 5% FOR 10' AWAY FROM PAVEMENT EDGE (TYP.)

PROPOSED TAXIWAY SHLDR. (TYP.)

HORIZONTAL CONTROL LINE AND CENTERLINE OF TAXIWAY A

PROVIDE 1.5" DROP AT EDGE OF PAVEMENT AND GRADE AT 5% FOR 10' AWAY FROM PAVEMENT EDGE (TYP.)

GRADE 2' WIDE DITCH TO DRAIN AS SHOWN (TYP.)

GRADE 5' WIDE DITCH TO DRAIN AS SHOWN (TYP.)

PROPOSED EDGE OF TAXIWAY (TYP.)

ALT. BID WORK

BASE BID WORK

PERIMETER ROAD

PERIMETER ROAD

PERIMETER ROAD

LEGEND

- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- PROPOSED GRADING LIMIT
- PROPOSED CONSTRUCTION LIMIT
- P-BUR — EXISTING BURIED POWER
- COM — COM — EXISTING BURIED PHONE
- PROPOSED STORM PIPE
- CB — PROPOSED STORM CATCH BASIN
- ST — PROPOSED STORM MANHOLE
- EXISTING PAVEMENT EDGE
- STM — EXISTING STORM PIPE
- FM — EXISTING SANITARY PIPE
- EXISTING STORM CATCH BASIN
- ST — EXISTING STORM MANHOLE
- EXISTING TAXIWAY LIGHT
- EXISTING RUNWAY LIGHT
- EXISTING BORING
- E — EXISTING ELECTRICAL MANHOLE
- EXISTING LIGHTED SIGN
- EXISTING INSPECTION PIT

NOTES:

1. CONTRACTOR SHALL VERIFY ALL EXISTING PIPES, INLETS MANHOLE INVERTS AND ALL OTHER ELEVATIONS FOR TIE IN TO PROPOSED PAVEMENT TO EXISTING PAVEMENT.
2. GRADING SPOT ELEVATION SHOWN HAVE OMITTED FIRST SIGNIFICANT FIGURE FOR CLARITY - ADD 1400 FOR TRUE ELEVATION.
3. WORK WITHIN OBJECT FREE AREAS AND SAFETY AREAS SHALL BE COORDINATED WITH AIRPORT AUTHORITY FOR APPROPRIATE CLOSURE LIMITS AND DATES TO OPTIMIZE AIRPORT OPERATIONS.
4. STRIPPING, ON SITE STOCKPILING AND PLACING OF ALL SALVAGED TOPSOIL WILL BE PAID FOR UNDER COMMON EXCAVATION.
5. ELECTRICAL STRUCTURES SHOWN ARE TO IDENTIFY THE LOCATION / RIM ELEVATIONS. SEE THE ELECTRICAL PLANS FOR ADDITIONAL INFORMATION.

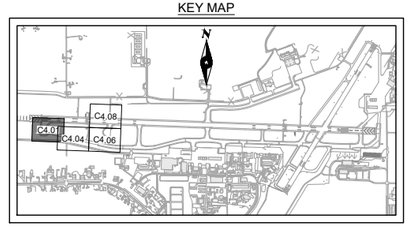
GEOMETRIC CONTROL NOTES:

1. COORDINATES SHOWN ARE BASED ON THE ST. LOUIS COUNTY SOUTH COORDINATE SYSTEM. PACS/SACS CONTROL INFORMATION AT THE AIRPORT WILL BE PROVIDED TO THE CONTRACTOR TO SET PROJECT CONTROL SHOWN ON SHEETS C0.30.
2. CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS FOR TIE IN OF PROPOSED PAVEMENT TO EXISTING PAVEMENT.

N

0 40' 80'

KEY MAP



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SEH Project	DLH 186683
Drawn By	SWB
Designed By	JRN
Checked By	AVE

Rev.#	Plan Revision Issue Description	Date

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SEH

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LICENSE PROFESSIONAL UNDER THE LAWS OF THE STATE OF STATE.

Jarrod R Nelson

JARROD R NELSON, PE

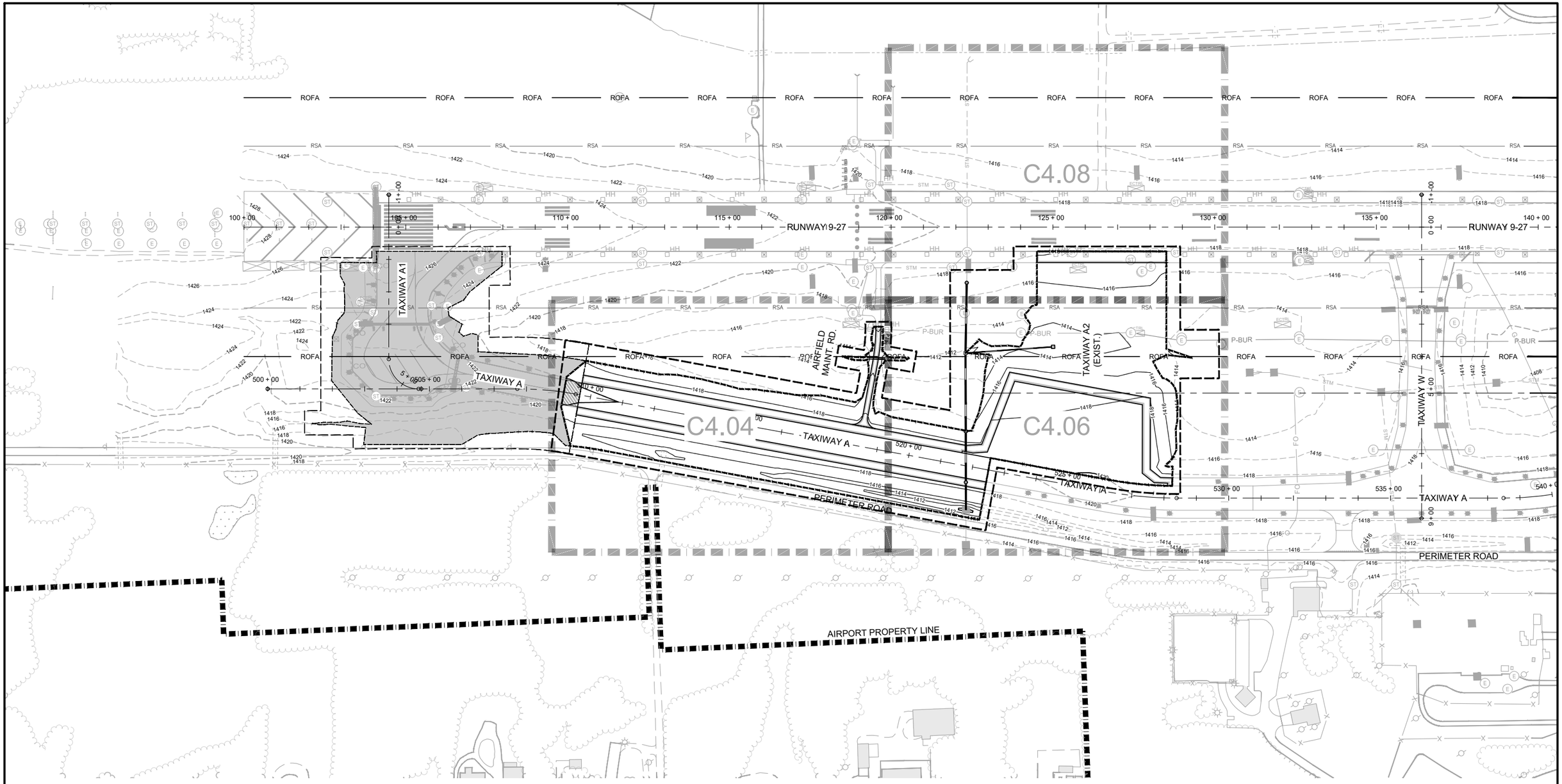
DATE 05-08-26 LICENSE NO. 26794

TAXIWAY A RECONSTRUCTION - PHASE 7

DULUTH, MINNESOTA

GRADING PLAN (ALT BID)

C4.01



LEGEND

- RSA — RUNWAY SAFETY AREA
- TSA — TAXIWAY SAFETY AREA
- PROPOSED GRADING LIMIT
- PROPOSED CONSTRUCTION LIMIT
- P-BUR — EXISTING BURIED POWER
- COM — COM — EXISTING BURIED PHONE
- PROPOSED STORM PIPE
- CB — PROPOSED STORM CATCH BASIN
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- EXISTING PAVEMENT EDGE
- STM — EXISTING STORM PIPE
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- ST — EXISTING STORM MANHOLE
- EXISTING TAXIWAY LIGHT
- EXISTING RUNWAY LIGHT
- EXISTING BORING
- E — EXISTING ELECTRICAL MANHOLE
- EXISTING LIGHTED SIGN
- EXISTING INSPECTION PIT

GRADING AREA (ALT BID)

PROJECT GRADING PLAN (OVERALL)

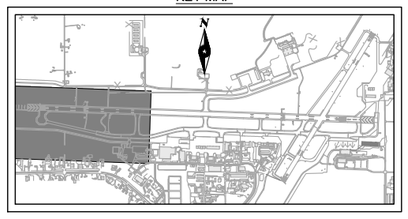
NOTES:

1) NOT ALL UTILITIES HAVE BEEN SHOWN FOR CLARITY. SEE ELECTRICAL PLANS FOR ADDITIONAL UTILITIES NOT SHOWN.

N

0 150' 300'

KEY MAP



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DATE 05-08-26 LICENSE NO. 26794

TAXIWAY A RECONSTRUCTION - PHASE 7

DULUTH, MINNESOTA

PROJECT GRADING PLAN (OVERALL)

C4.03

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EXISTING GROUND LINE CONTOUR (TYP.)

GRADE 2' WIDE DITCH TO DRAIN AS SHOWN (TYP.)

PROPOSED TAXIWAY SHLDR. (TYP.)

PROVIDE 1.5" DROP AT EDGE OF PAVEMENT AND GRADE AT 5% FOR 10' AWAY FROM PAVEMENT EDGE (TYP.)

HORIZONTAL CONTROL LINE AND CENTERLINE OF TAXIWAY A

TAXIWAY A

AIRFIELD MAINT. RD.

PERIMETER ROAD

PROVIDE 1.5" DROP AT EDGE OF PAVEMENT AND GRADE AT 5% FOR 10' AWAY FROM PAVEMENT EDGE (TYP.)

PROPOSED EDGE OF TAXIWAY (TYP.)

PROPOSED GROUND LINE CONTOUR (TYP.)

GRADE 5' WIDE DITCH TO DRAIN AS SHOWN (TYP.)

TRANSITION GRADING TO MATCH EXISTING (TYP.)

LEGEND

- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- PROPOSED GRADING LIMIT
- PROPOSED CONSTRUCTION LIMIT
- P-BUR — EXISTING BURIED POWER
- COM — EXISTING BURIED PHONE
- PROPOSED STORM PIPE
- C8 — PROPOSED STORM CATCH BASIN
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- EXISTING TAXIWAY LIGHT
- EXISTING RUNWAY LIGHT
- EXISTING BORING
- E — EXISTING ELECTRICAL MANHOLE
- EXISTING LIGHTED SIGN
- EXISTING INSPECTION PIT
- EXISTING VARIABLE ASPHALT MILLING / 2" BIT. OVERLAY AREA

NOTES:

1. CONTRACTOR SHALL VERIFY ALL EXISTING PIPES, INLETS MANHOLE INVERTS AND ALL OTHER ELEVATIONS FOR TIE IN TO PROPOSED PAVEMENT TO EXISTING PAVEMENT.
2. GRADING SPOT ELEVATION SHOWN HAVE OMITTED FIRST SIGNIFICANT FIGURE FOR CLARITY - ADD 1400 FOR TRUE ELEVATION.
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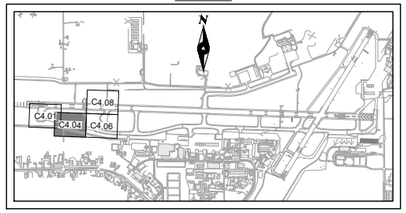
N

0 40' 80'

KEY MAP



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JARROD R NELSON, PE

DATE 05-08-26 LICENSE NO. 26794

TAXIWAY A RECONSTRUCTION - PHASE 7

DULUTH, MINNESOTA

GRADING PLAN

C4.04

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GRADE DRAINAGE SWALE FLOW TO EXISTING CATCH BASIN (TYP.)

GRADE 2' WIDE DITCH TO DRAIN AS SHOWN (TYP.)

EXISTING GROUND LINE CONTOUR (TYP.)

PROPOSED HOLDING SHLDR. BAY (TYP.)

PROPOSED EDGE OF HOLDING BAY (TYP.)

PROVIDE 1.5" DROP AT EDGE OF PAVEMENT AND GRADE AT 5% FOR 10' AWAY FROM PAVEMENT EDGE (TYP.)

EDGE OF PROPOSED TAXIWAY (TYP.)

EXIST. TAXIWAY A2

MATCH EXISTING DRAINAGE SWALE FLOW LINE THAT DRAINS TO EXISTING CATCH BASIN (TYP.)

PROVIDE 1.5" DROP AT EDGE OF PAVEMENT AND GRADE AT 5% FOR 10' AWAY FROM PAVEMENT EDGE (TYP.)

PROPOSED GROUND LINE CONTOUR (TYP.)

HORIZONTAL CONTROL LINE AND CENTERLINE OF TAXIWAY A

TAXIWAY A

PERIMETER ROAD

EDGE OF EXISTING TAXIWAY CONCRETE (TYP.)

GRADE 5' WIDE DITCH TO DRAIN AS SHOWN (TYP.)

TRANSITION GRADING TO MATCH EXISTING (TYP.)

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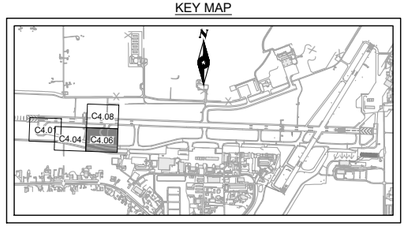
N

0 40' 80'

KEY MAP



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SEH Project	DLH 186683	Rev.#	Plan Revision Issue Description	Date	Rev.#	Sheet Revision Issue Description	Date
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Designed By	JRN						
Checked By	AVE						

SEH

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JARROD R NELSON, PE

DATE 05-08-26 LICENSE NO. 26794

TAXIWAY A RECONSTRUCTION - PHASE 7

DULUTH, MINNESOTA

GRADING PLAN

C4.06

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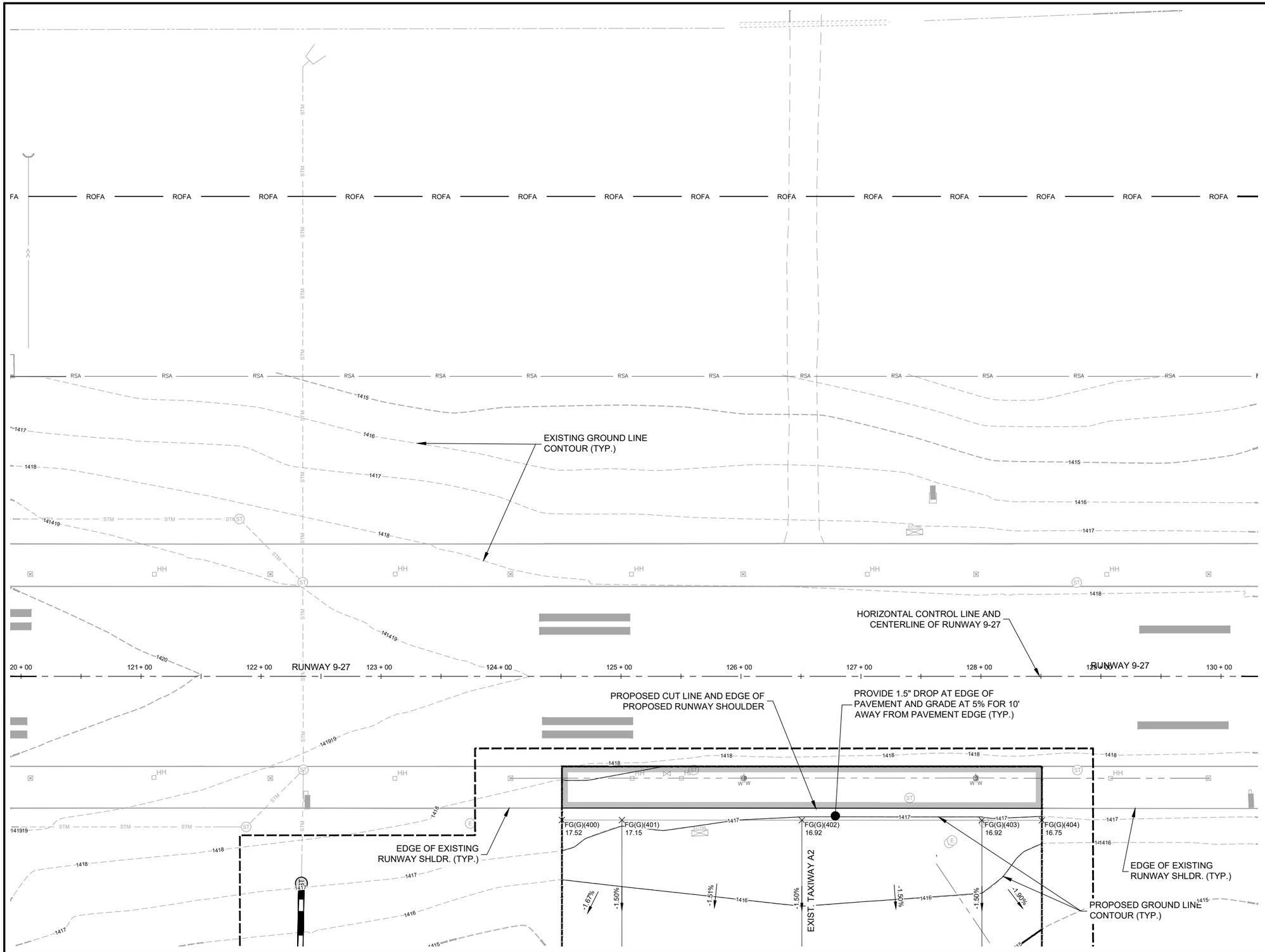

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- PROPOSED GRADING LIMIT
- PROPOSED CONSTRUCTION LIMIT
- P-BUR — EXISTING BURIED POWER
- COM — COM — EXISTING BURIED PHONE
- PROPOSED STORM PIPE
- CB — PROPOSED STORM CATCH BASIN
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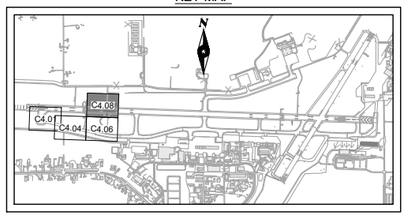

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Jarrod R Nelson

JARROD R NELSON, PE DATE 05-08-26 LICENSE NO. 26794

TAXIWAY A RECONSTRUCTION - PHASE 7

DULUTH, MINNESOTA

GRADING PLAN

C4.08

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EXISTING STORM WATER POND ACCESS ROAD

EXISTING DRAINAGE CULVERT

EXISTING STRUCTURE GATE VALVE

EXISTING WATER TAP

EXISTING STORM WATER POND OUTLET STRUCTURE

200 L.F. FLOATING SILT CURTAIN

CONTRACTOR HAUL ROUTE - PHASE 7C (STORM WATER POND)

ESTIMATED LIMITS OF STORM WATER POND DREDGING

POST-CONSTRUCTION AREA OF TURF ESTABLISHMENT

300 LF FILTER LOG, TYPE WOOD FIBER BIOROLL

SURVEYED POND WATER SURFACE

EXISTING STORM WATER POND

EXISTING DRAINAGE DITCH

EXISTING DRAINAGE DITCHES (TYP.)

EXISTING STORM WATER POND - DREDGING PLAN VIEW

NOTES:

1) NOT ALL UTILITIES HAVE BEEN SHOWN FOR CLARITY.
2) NO DREDGING / EXCAVATION SHALL BE PERFORMED DURING OVERLY WET CONDITIONS OR WITHIN 24 HOURS IN ADVANCE OF A RAINFALL EVENT.
3) EXCAVATION, HAULING AWAY, AND DISPOSING OF DREDGE POND MATERIALS OFF SITE SHALL BE PAID FOR WITH BID ITEM P-152 STORM WATER POND DREDGING.
4) FLOATING SILT CURTAIN AND EROSION CONTROL FILTER LOGS SHALL BE INSTALLED PRIOR TO ANY DREDGING/EXCAVATION OPERATIONS.
5) SURVEYED POND WATER SURFACE ELEVATION IS APPROXIMATELY 1394.0. TYPICAL SURVEYED POND BOTTOM ELEVATION IS 1390.5.
6) EXISTING POND SEDIMENT IS TO BE EXCAVATED AND REMOVED TO AN APPROXIMATE ELEVATION OF 1388.0, OR APPROXIMATELY 6' BELOW TYPICAL POND WATER SURFACE.
7) PRIOR TO HAULING AWAY OF EXCAVATED POND SEDIMENT, THE SATURATED POND SEDIMENT SHALL BE STOCKPILED ON BANK ADJACENT TO POND AND BE ALLOWED TO DRAIN INTO POND.
8) ESTIMATED QUANTITY FOR BID ITEM P-152 STORM WATER POND DREDGING IS 1,500 CY.

LEGEND

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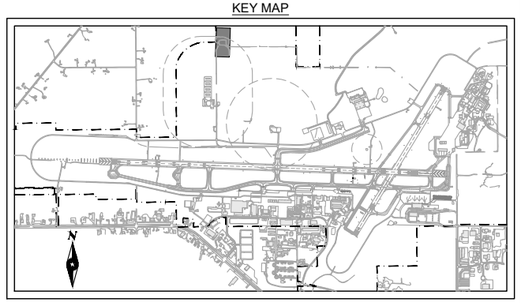
- TSA — TAXIWAY SAFETY AREA
- PROPOSED GRADING LIMIT
- PROPOSED CONSTRUCTION LIMIT
- P-BUR — EXISTING BURIED POWER
- COM — COM — EXISTING BURIED PHONE
- PROPOSED STORM PIPE
- CB — PROPOSED STORM CATCH BASIN
- ST — PROPOSED STORM MANHOLE
- X — X — EXISTING FENCE
- EXISTING EDGE OF VEGETATION
- STM — EXISTING STORM PIPE
- FM — EXISTING SANITARY PIPE
- EXISTING STORM CATCH BASIN
- ST — EXISTING STORM MANHOLE
- EXISTING TAXIWAY LIGHT
- EXISTING RUNWAY LIGHT
- EXISTING BORING
- E — EXISTING ELECTRICAL MANHOLE
- EXISTING LIGHTED SIGN
- EXISTING INSPECTION PIT
- EXISTING STRUCTURE GATE VALVE
- W — EXISTING WATER TAP
- EXISTING LIGHT POLE
- STORM WATER POND DREDGING LIMITS
- TURF ESTABLISHMENT AREA
- SILTC — FLOATING SILT CURTAIN
- FILTER LOG, TYPE WOOD FIBER BIOROLL
- SURVEYED POND WATER SURFACE

0 30' 60'

KEY MAP



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JARROD R NELSON, PE

DATE 05-08-26 LICENSE NO. 26794

TAXIWAY A RECONSTRUCTION - PHASE 7

DULUTH, MINNESOTA

EXISTING NORTH STORM WATER POND DREDGING PLAN

C4.10

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STORM WATER POND LEGEND

- FILTER TOPSOIL BORROW
- EXISTING RIPRAP TO BE REMOVED AND RESET AS NOTED
- EXISTING STORM PIPE REMOVAL
- ORANGE CONSTRUCTION FENCE
- FILTER LOG, TYPE WOOD FIBER BIOROLL
- BASIN BOUNDARY GRADING LIMITS
- PROPOSED BASIN PROJECT LIMITS
- 6" PERFORATED PVC BASIN DRAINTILE
- 10" NON- PERFORATED PVC BASIN DRAINTILE OUTLET PIPE
- 4" PERFORATED CORRUGATED DRAIN PIPE
- SYNTHETIC POND LINER
- DRAINTILE CLEANOUT (CO)
- GAS VENT (G)

EARTHWORK SUMMARY (SE STORM WATER POND)

TOTAL COMMON EXCAVATION 3,600 CY (EV)
- TOPSOIL (STRIPPING) (TO BE STOCKPILED ON SITE FOR FUTURE PLACEMENT) 850 CY (EV)
- GENERAL EXCAVATED MATERIAL 2,750 CY (EV)

TOTAL EMBANKMENT 1,550 CY (CV)
- TOPSOIL (SALVAGED) (FROM EXCAVATED TOPSOIL ON SITE STOCKPILE) 850 CY (CV)
- SUITABLE EXCAVATED MATERIAL 700 CY (CV)

REMOVE APPROX. 86 L.F. OF EXIST. 30" RCP, (1) FLARED END SECTION AND EXIST. RIPRAP (RESET EXISTING FES / RIPRAP AT LOCATION SHOWN)

REMOVE AND REPLACE EXISTING RIPRAP

PROPOSED BASIN BOUNDARY / GRADING LIMITS

PROPOSED WEIR (BOTTOM EL. 1375.0)

POND OVERFLOW OUTLET PIPE 42 LF 12" RCP @ 0.5% (WITH 2 FLARED END SECTIONS, LENGTH INCLUDES END SECTIONS)

12" RCP OUTLET
N=168368.46
E=568648.57
INV. EL. 1373.89

12" RCP INLET
N=168339.86
E=568617.81
INV. EL. 1374.10

CLEANOUT (TYP.) (14 TOTAL)

10" NON-PERFORATED PVC BASIN DRAINTILE. SLOPE PIPE @ 0.16% AND MATCH INVERTS SHOWN

675 LF ORANGE CONSTRUCTION FENCE

NEW EXIST. 30" RCP PIPE OUTLET (RELOCATED FLARED END SECTION)
N=168308.99
E=568390.59
INV. EL. 1374.9

EXISTING TREES SHALL BE PROTECTED FROM CONSTRUCTION OPERATIONS

GAS VENT (TYP.) (6 TOTAL)

SYNTHETIC POND LINER (SEE DETAIL SHT. C4.12)

6" PERFORATED PVC BASIN DRAINTILE (SPA. @ 10' O.C.) (TYP.) PIPE SLOPES TO MATCH INVERTS SHOWN AND 10" PVC SLOPE ELEVATIONS (0.15% MIN.) (SEE DETAIL SHT. C4.12)

4" PERFORATED CORRUGATED DRAIN PIPE (SPA. 5' FROM 6" BASIN DRAINTILE) (TYP. AS SHOWN) SLOPE PIPES @ 0.15% AND MATCH INVERTS SHOWN (SEE DETAIL SHT. C4.12)

4" PERFORATED CORRUGATED OUTLET DRAIN PIPE (SPA. 5' FROM 10" BASIN DRAINTILE) SLOPE PIPES @ 0.15% AND MATCH INVERTS SHOWN (SEE DETAIL SHT. C4.12)

POND DRAINTILE OUTLET PIPE 140 LF 12" RCP @ 0.43% (WITH 1 FLARED END SECTION, LENGTH INCLUDES END SECTIONS)

12" RCP OUTLET
N=168193.88
E=568754.89
INV. EL. 1367.4
(FIELD ADJUST AS REQD. TO MATCH EXIST. CONDITIONS)

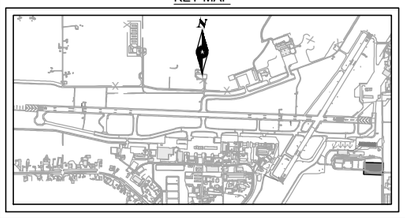
STORM WATER POND MANHOLE
N=168244.42
E=568624.33
RIM EL. 1375.00
DEPTH = 7.50'
10" PVC DT INV. 1368.83 (W)
4" PERF. DT INV. 1368.00 (NW)
12" RCP INV. 1368.00 (E)

PROPOSED BASIN PROJECT LIMITS

GRINDEN DR.

HAINES RD.

KEY MAP



0 20' 40'

NOTES:

1) EXISTING POND FACILITY (SEE EXISTING POND CONTOURS IN BACKGROUND) IS BEING IMPROVED AND EXPANDED TO BETTER FACILITATE AIRPORT DRAINAGE AND RESPECT ADJACENT DESIGNATED WETLAND AND FLOODWAY AREAS. ORANGE CONSTRUCTION FENCE SHALL BE INSTALLED ALONG EASTERN AND NORTHERN BOUNDARIES OF THE POND SITE PRIOR TO CONSTRUCTION OPERATIONS TO MINIMIZE IMPACTS TO ADJACENT WETLAND AND FLOODWAY AREAS.

2) SEE SHEET C4.13 FOR SOUTHEAST POND EARTHWORK SUMMARY NOTES.

SEH Project	DLH 186683
Drawn By	SWB
Designed By	JRN
Checked By	AVE

Plan Revision Issue Description | Rev.# | Date

Sheet Revision Issue Description | Rev.# | Date

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LICENSE PROFESSIONAL UNDER THE LAWS OF THE STATE OF STATE.

JARROD R NELSON, PE
DATE 05-08-26 LICENSE NO. 26794

TAXIWAY A RECONSTRUCTION - PHASE 7
DULUTH, MINNESOTA

EXISTING SOUTHEAST STORM WATER POND EXPANSION & IMPROVEMENTS

C4.11
80 of 172

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Appendix J

Phase II ESA Midfield

Phase II Environmental Investigation

Midfield Ramp Repair - Phase 4

Duluth, St. Louis County, Minnesota

DULAI 188850 | May 18, 2026

SEH

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May 18, 2026

RE: Midfield Ramp Repair - Phase 4
Phase II Environmental Investigation
Duluth, St. Louis County, Minnesota
SEH No. DULAI 188850

Mr. Ryan Welch
Duluth Airport Authority
4701 Grinden Drive
Duluth, Minnesota 55811

Dear Mr. Welch:

Please find enclosed the Phase II Environmental Investigation for the Midfield Ramp Repair - Phase 4 project located at the Duluth International Airport in Duluth, St. Louis County, Minnesota. Please feel free to contact me directly at 651.318.0354 or kaufdencamp@sehinc.com if you have any questions or comments.

Sincerely,

Keri B. Aufdencamp

Keri Aufdencamp
Project Manager

x:\ae\d\dulai\186683\3-env-stdy-regs\30-env-doc\16-phase2\phase ii esa.docx

Certification

Phase II Environmental Investigation
Midfield Ramp Repair - Phase 4
Duluth, St. Louis County, Minnesota

SEH No. DULAI 188850

May 18, 2026

Keri Aufdencamp
Project Manager

Jack Hagley, PG (MN)
Environmental Scientist

Robert Hawkins, PG (MN, WI)
Environmental Scientist

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Distribution

No. of Copies	Sent to
1	Ryan Welch Duluth Airport Authority 4701 Grinden Drive Duluth, Minnesota 55811

Executive Summary

Phase II Environmental Investigation

Short Elliott Hendrickson Inc. (SEH®) was retained by the Duluth Airport Authority (DAA) to conduct a Phase II Environmental Investigation for the Midfield Ramp Repair - Phase 4 project located at the Duluth International Airport (DLH) in Duluth, St. Louis County, Minnesota (herein referred to as the project "Site"). The Site location is depicted on **Figure 1**.

The Midfield Ramp is located adjacent to the south of Taxiway A (the parallel taxiway for the main runway (Runway 9/27) serving the DLH). The Midfield Ramp is an approximately 324,900 square foot ramp and serves as parking for large transient aircraft. The Phase 4 project area is approximately 31,700 square feet in size and is located in the southeastern portion of the overall Midfield Ramp. The proposed Midfield Ramp Repair project area is shown on **Figure 2**.

The overall project consists of reconstructing the concrete pavement and replacement of stormwater piping and drain tile. The typical section currently consists of approximately 10 to 11.5 inches of concrete pavement overlying approximately 6 to 12 inches of aggregate base material. The proposed section will include 12 inches of concrete pavement overlying 11 inches of a crushed aggregate base course overlying 12 inches of a granular subbase course with a geotextile fabric. The existing stormwater piping to be replaced is located between 6 and 9 feet below ground surface (bgs).

This investigation was performed to investigate the project Site for the presence of contaminated soil and groundwater that may be encountered during project construction-related activities. Drilling and sampling was completed on April 20, 2026.

The Phase II Environmental Investigation included four hand auger borings (HA-01 through HA-04) completed to a depth of 5 feet bgs. The borings were completed under the existing Midfield Ramp concrete paving in areas of proposed pavement repair and subbase corrections, as well as stormwater drainage improvements. Fill material was encountered extending to the termination depth of the hand auger borings (5 feet bgs). No debris was observed in fill soil. Native deposits underlying the fill were not encountered and photoionization detector (PID) headspace readings were recorded between 0.0 to 1.1 parts per million (ppm), within background levels. No visual or olfactory indications of contamination were noted during the investigation.

No contaminants were detected in soil samples at concentrations exceeding the MPCA Unregulated Fill Criteria (UFC) indicating excess soil, if generated by the project, could be re-used on or offsite.

A groundwater sample was collected from the nearby MW-12 on April 30, 2026. Depth to groundwater was measured to be 5.95 feet bgs at the time of the sample and the monitoring well was sealed. Various per- and polyfluoroalkyl substances (PFAS) compounds were detected above their respective laboratory reporting limits but below their respective Environmental Protection Agency (EPA) Maximum Contaminant Levels (MCLs) and Minnesota Department of Health (MDH) Health Based Guidance (HBGs). However, National Pollutant Discharge Elimination System (NPDES) General Permit Limits (GPLs) prohibit the discharge of pollutants associated with emerging contaminants such as PFAS.

Based on the current design for the Midfield Ramp Repair – Phase 4 project, SEH understands approximately 3 feet of soil below the proposed pavements will be corrected. Considering that no contaminants were detected in soil at concentrations exceeding the MPCA UFC, excess soil if

generated by the project, could be re-used on or offsite. The proposed storm sewer construction is anticipated to be between 6 and 9 feet bgs across the site. Given that the identified groundwater impacts exceed the current NPDES GPLs, if groundwater will be discharged as part of the project, SEH recommends that it be handled in accordance with all regulations prior to its discharge.

Unknown contamination, if encountered during the project, should be handled in accordance with all applicable local, state, and federal regulations. If encountered, work in the area should be temporarily halted and reported to the project engineer.

List of Abbreviations

Abbreviation	Meaning
ACM	Asbestos containing material
AOC	Area of Concern
amsl	Above Mean Sea Level
bgs	Below Ground Surface
Braun	Braun Intertec Corporation
C	Celsius
DAA	Duluth Airport Authority
DLH	Duluth International Airport
DRO	Diesel Range Organics
EMR	EMR, Inc.
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
eV	Electron Volt
FUDS	Formerly Used Defense Sites
GPL	General Permit Limits
GRO	Gasoline Range Organics
HBG	Health Based Guidance
HBV	Health Based Values
HRL	Health Risk Limits
IRP	Installation Restoration Program
ISRV	Commercial/Industrial Soil Reference Value
LC-MS/MS	Liquid Chromatography/Mass Spectrometry
MCL	Maximum Contaminant Level
MDH	Minnesota Department of Health
MGS	Minnesota Geological Survey
mg/kg	Milligrams per Kilogram
MPCA	Minnesota Pollution Control Agency
ng/g	Nanograms per Gram
ng/L	Nanograms per Liter
NPDES	National Pollutant Discharge Elimination System
NPDWR	National Primary Drinking Water Regulations
PAH	Polycyclic Aromatic Hydrocarbons
PFAS	Per- and polyfluoroalkyl substance
PID	Photoionization Detector
ppm	Parts per Million
QA/QC	Quality Assurance/Quality Control
RAA	Risk Assessment Advice
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
RSRV	Residential/Recreational Soil Reference Value
SEH	Short Elliott Hendrickson Inc.
SIM	Selective Ion Monitoring
SLV	Soil Leaching Value
SRV	Soil Reference Value
TPH	Total Petroleum Hydrocarbons
ug/L	Microgram per Liter
USACE	United States Army Corps of Engineers
UFC	Unregulated Fill Criteria

List of Abbreviations (continued)

Abbreviation	Meaning
UST	Underground Storage Tank
VOC	Volatile Organic Compound

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Phase II Environmental Investigation

Midfield Ramp Repair - Phase 4

Prepared for the Duluth Airport Authority

1 Introduction

Short Elliott Hendrickson Inc. (SEH®) was retained by the Duluth Airport Authority (DAA) to conduct a Phase II Environmental Investigation for the proposed improvements for the Midfield Ramp Repair - Phase 4 project located at the Duluth International Airport (DLH) in Duluth, St. Louis County, Minnesota (herein referred to as the "Site"). The Site location is depicted on **Figure 1**. The Site is described in further detail in **Section 1.1**.

1.1 Site Description

The Midfield Ramp is located adjacent to the south of Taxiway A (the parallel taxiway for the main runway (Runway 9/27) serving the DLH). The Midfield Ramp is an approximately 324,900 square foot ramp and serves as parking for large transient aircraft. The Phase 4 project area is approximately 31,700 square feet in size and is located in the southeastern portion of the overall Midfield Ramp. The proposed Midfield Ramp Repair project area is shown on **Figure 2** and **Figure 3**.

The overall project consists of reconstructing the concrete pavement and replacement of stormwater piping and drain tile. The typical section currently consists of approximately 10 to 11.5 inches of concrete pavement overlying approximately 6 to 12 inches of aggregate base material. The proposed section will include 12 inches of concrete pavement overlying 11 inches of a crushed aggregate base course overlying 12 inches of a granular subbase course with a geotextile fabric. The existing stormwater piping to be replaced is located between 6 and 9 feet below ground surface (bgs).

1.2 Purpose of Investigation

This investigation was performed for the following purpose:

- To investigate the project area for the presence of contaminated soil and groundwater that may be encountered during project construction-related activities.

1.3 Scope of Work and Limitations

The investigation Work Plan was developed using information gathered from previously completed environmental investigations within the area of the Midfield Ramp (See **Section 2.2**). The work plan documents are included as **Appendix A**. The proposed work was based on the design information available at the time. Therefore, the Phase II Environmental Investigation addressed general assumptions regarding anticipated construction considerations available at the time of the work plan development. Hand auger borings were completed adjacent to proposed construction areas identified from the design.

Modifications to the work plans were made based on field observations, accessibility, and other considerations. Photoionization detector (PID) soil headspace readings are summarized on **Table 1.** Detected soil and water sample analytical results are summarized on **Table 2** and **Table 3**, respectively.

SEH advanced a total of four hand auger borings (HA-01 through HA-04) for the project on April 20, 2026. One groundwater sample (MW-12-5.95) was also collected from an existing monitoring well (MW-12) prior to the sealing of the well on April 30, 2026. The investigation included field screening, geological logging, PID soil and groundwater headspace screening, and soil and water collection and analysis. Results of the Phase II Environmental Investigation are summarized on attached tables and figures and discussed in **Section 4** of this report.

1.4 User Reliance

This Phase II Environmental Investigation report and all reports, verbal and written, are solely for the use of DAA. Any third party may have different interests, purposes, and motives than DAA with regard to this assessment and report. Any reliance on the Phase II Environmental Investigation report by any other party shall be at such party's sole risk, unless that party has written authorization from SEH and DAA, and is a party to the Agreement between SEH and DAA.

2 Site and Surrounding Area Background

2.1 Site Location

Figure 1 illustrates the location of the Site. The Site is located at the DLH in Duluth, St. Louis County, Minnesota. The Site occupies portions of the following parcel identification numbers (PINs):

- 010-2747-00260
- 010-0148-00280

2.2 Findings of the Midfield Ramp Repair - Phase I Environmental Site Assessment

SEH completed a Phase I Environmental Site Assessment (ESA) of the Taxiway A - Phase 5 and Midfield Ramp – Phase 3 project areas (herein referred to as the "2025 project areas") in April 2025 (SEH, 2025). The 2025 project areas are located adjacent to the northwest of the Midfield Ramp Repair – Phase 4 project area. The Phase I ESA indicated that prior to development of the DLH, the project areas were undeveloped and generally occupied by agricultural land. Several small structures of unknown use, likely agricultural/farmsteads, were present within the 2025 project area and surrounding area from at least the late 1930s through the 1940s. By the late 1940s, construction of the existing airport infrastructure (Taxiway A, Runway 9/27, and the Midfield Ramp) were visible in aerial photographs. By the early 1980s, the existing airport taxiway and runway alignment were developed, and minimal changes occurred through the present day.

The 2025 Phase I ESA identified the 2025 project areas in numerous regulatory databases related to historic and current uses including Leak sites, spills, Resource Conservation and Recovery Act (RCRA) hazardous waste generators, construction stormwater permits, air emissions permits, and per and poly-fluoroalkyl substances (PFAS) industry classifications.

Although the database report identified these listings for the 2025 project areas, a majority of the listings were located at the main DLH terminal facility located over 3,500 feet southeast of the Subject Property.

The 2025 Phase I ESA identified a total of eight unplottable spills for the DLH property. Although the exact location of the spills were unknown, the releases ranged in size between 20 and 200 gallons. While it is not likely that all of the unplottable releases affected the 2025 project areas, given the use of the 2025 project areas and surrounding area, it is likely that some spills related to fueling activities have occurred on or adjacent to the 2025 project areas.

The DLH was also identified in several area wide listings through the Formerly Used Defense Sites (FUDs) Program (Property Number E05MN0033) and the Minnesota Pollution Control Agency (MPCA) Superfund Program (Site ID SR0000095). Both the MPCA Superfund listing and the FUDs Program listing encompass a number of sites located throughout the DLH. A Site Research Report (EMR, Inc. [EMR], 2004) completed under the FUDs program for the United States Army Corps of Engineers (USACE) identified the following Areas of Concern (AOCs) located either on and/or adjacent to the 2025 project areas (**Figure 2**):

- Former Underground Storage Tank (UST) Basin AOC - located adjacent to the southwest of the 2025 project areas and formerly contained two 50,000-gallon aviation fuel USTs, a pump house identified as former Building 112, underground fuel transfer pipes, and former Building 113, which stored solvents and housed an oil/water separator.
- Aircraft Washrack AOC - located adjacent to the southwest of the 2025 project areas and contained underground solvent piping from Building 113 and a former aircraft washrack where solvents were used.
- Fuel Transfer AOC - Encompasses a majority of the western half of the 2025 project areas. The Fuel Transfer AOC included two fueling vaults, six fueling dispensers, and associated underground piping and valves. The Fuel Transfer AOC intersects the western half of the project Site.

One Installation Restoration Program (IRP) site was identified under the MPCA Superfund listing adjacent to the southwest of the Subject Property. This IRP site is associated with the Former UST Basin AOC. Remedial activities in association with the AOCs have taken place and include removal of the two 50,000-gallon USTs and 40 linear feet of fuel piping associated with the Former UST Basin in 1993, and removal of the fuel vaults associated with the fuel Transfer AOC between 1998 and 2002. A reported 1,900 feet of fuel piping was reported to remain in place after the 2002 removals.

Investigations completed in 2007 (EMR, 2007), identified petroleum impacted soils and groundwater in association with the Former UST Basin/Aircraft Washrack AOCs and Fuel Transfer AOC. The depth to groundwater ranged from 8 to 10 feet bgs and flow was generally northwesterly. Additionally, stormwater and shallow groundwater at the Former Fuel Transfer Area and Former UST/Aircraft Washrack AOCs are managed by a series of sub-grade open joint subdrains that tie into the storm sewer network that discharges to the Beaver River.

SEH completed a Phase I Environmental Technical Memo on behalf of the DAA (SEH, May 2022) for the proposed Midfield Ramp Repair project, which encompasses a portion of the Subject Property (Midfield Ramp Repair – Phase 4 project area). The memo included a review of the previous FUDS program work and review of a Geotechnical Evaluation and Limited Environmental Evaluation of the Midfield Ramp (Braun Intertec Corporation [Braun], 2021).

The Braun evaluation was completed in July 2021 and included twelve soil borings advanced to a depth of 10 feet bgs. Soil samples were screened in the field and select samples were analyzed for volatile organic compounds (VOCs), gasoline range organics (GRO), diesel range organics (DRO), polycyclic aromatic hydrocarbons (PAHs), and lead. Elevated PID readings (greater than 5,000 parts per million [ppm]) were identified during the investigation; the highest PID readings were encountered in soil borings B-7 and B-10 advanced near former dispensers, located in the northern portion of the Midfield Ramp. Groundwater was not encountered during the limited investigation. Soil analytical results identified detections of DRO, GRO, and various petroleum-related VOCs exceeding their respective Unregulated Fill Criteria (UFC) and Soil Leaching Values (SLVs) in boring B-10 at a depth of 8 to 10 feet bgs. Petroleum impacted soil as identified during the Geotechnical Evaluation and Limited Environmental Evaluation of the Midfield Ramp is associated with the impacts identified in connection with the Fuel Transfer AOC.

A DLH FUDS Program Management Action Plan prepared by USACE states that the program does not plan to complete any additional Remedial Investigations (RIs) until 2024, and additional remedial actions are not planned until after 2025 (USACE, 2019).

Previous sampling locations and summary of groundwater results are depicted on **Figure 2**.

2.3 Regional Physical Setting

The Site topography is generally flat with an approximate elevation of 1420 feet above mean sea level (amsl) (MnTOPO, 2026).

2.3.1 Regional Geology

Based on previously completed investigations in the area of the Site (**Section 2.2**), native glacial till deposits consisting of silty sand and clayey sand were observed extending to the termination depth of the borings (10 feet bgs) (Braun, 2021). Published geology indicates native deposits in this area are glacial lake deposits of the Cromwell Formation of the Wrenshall Member of the Michigan Sub-episode and consist of brown silt and clay with minor sand (Minnesota Geological Survey [MGS], 2009).

The uppermost bedrock unit is the Gabbroic zone of the Duluth Complex at approximately 1320 to 1370 feet above amsl or around 50 to 100 feet bgs. The Gabbroic zone of the Duluth Complex is described as medium-grained, intergranular, foliated and locally layered olivine oxide gabbro. The Gabbroic zone of the Duluth Complex ranges from 2,300 to 5,000 feet thick (MGS, 2008).

2.3.2 Regional Hydrogeology

Based on previously completed investigations in the area of the project Site (see **Section 2.2**), depth to groundwater ranged from 6 to 10 feet bgs and groundwater flow was generally to the northwest (EMR, 2007).

3 Overview of the Phase II Investigation

The following sections describe the scope and goals of the Phase II Environmental Investigation. Also included is methodology, quality assurance/quality control (QA/QC) information and regulatory/guidance levels. The Phase II Environmental Investigation areas are depicted on **Figure 2** and **Figure 3**. Results of the Phase II Environmental Investigation are discussed in **Section 4**. Completed borings, field screening results, and soil sample locations and results are captured on attached figures and tables.

3.1 Field Investigation and Sampling Methods

Hand auger borings were completed by SEH using both powered and non-powered hand augers following the removal of the existing concrete pavement via a coring machine. Lubricants or solvents with petroleum products or hazardous substances were not used for downhole drilling or on sampling equipment. Each hand auger boring was properly abandoned in accordance with regulations. The location of each hand auger boring is depicted on **Figure 3**.

The investigation included the collection of a groundwater sample from an existing monitoring well (MW-12) located northwest of the project Site.

3.1.1 Soil Field Screening

Soil samples were collected for field screening from each boring by placing soil into a new, clean, quart-size, labeled, resealable bag. The bags used for field screening were used for one sample only. Soil clumps were manually agitated and the bags were shaken vigorously at the beginning and end of the headspace development period. The bags were placed in a sunny location. Weather conditions at the time of the investigation included moderate temperatures with occasional high wind speeds.

PID headspace readings were collected in general accordance with MPCA guidelines. A MiniRae PID with a 10.6 electron volt (eV) bulb calibrated to isobutylene was inserted through a small opening in the bag and the highest reading was recorded. Empty bag readings were recorded periodically throughout the investigation and are considered “background.” Empty bags had readings ranging from 0.0 to 0.3 ppm. The results of the headspace readings are summarized on **Table 1**.

3.1.2 Soil Sampling

Soil samples were collected using the hand auger for field screening and placed into the appropriate jars for laboratory analysis.

The SEH scientist wore a new clean pair of disposable Nitrile® gloves while collecting each sample. All remaining soil from each sample and borehole cuttings were thin spread on-site. Sample containers were placed in coolers with ice and were protected from sunlight. Samples were transported to Eurofins within 48 hours of their collection with proper chain-of-custody documentation. Specific information on samples collected (e.g. total number of samples collected, sample depths, etc.) is included within **Section 4**.

Analytical samples collected were labeled corresponding to the boring number from which they were collected (for example HA-01). Additionally, soil samples were labeled for the depth from which they were collected. For example, a sample collected from a three foot depth in HA-01 is

labeled HA-01-3. Samples were collected from the interval ± 0.5 foot on either side of the noted sample depth. For example: a sample with a noted depth of 3 feet bgs contains material from 2.5 to 3.5 feet bgs.

3.1.3 Groundwater Sampling

The groundwater sample was collected through using a high density polyethylene (HDPE) tubing and a peristaltic pump. The SEH scientist wore a new clean pair of disposable Nitrile® gloves while collecting each water sample. The groundwater sample was placed in the appropriate laboratory containers in accordance with the laboratory's specifications. The sample containers were placed in a cooler with ice and protected from sunlight. The samples were then transported to Eurofins within 48 hours of their collection with proper chain-of-custody documentation.

A total of three well volumes was purged from the well and containerized prior to the sample collection.

Specific information on the sample collected (e.g. samples depth, etc.) is included within **Section 4**.

Groundwater sampling was completed in an existing well (MW-12) located to the northwest of the Phase 4 work area. The purpose of groundwater sampling was to investigate groundwater most likely to be encountered during construction and dewatering activities.

3.1.4 Chemical Analytical Methodologies

Soil sample analytes included:

- DRO (Wisconsin Method DRO)
- GRO (Wisconsin Method GRO)
- VOCs (Environmental Protection Agency [EPA] Method 8260D)
- PAHs (EPA Method 8270E by selective ion monitoring (SIM))
- RCRA 8 Metals (EPA Method 7471B/6020B)
- Moisture (SW3550C)
- PFAS (EPA 1633, Revision A, by liquid chromatography/mass spectrometry [LC-MS/MS])

Water sample analytes included:

- DRO (Wisconsin Method DRO)
- GRO (Wisconsin Method GRO)
- VOCs (EPA Method 8260D)
- PAHs (EPA Method 8270E by SIM)
- RCRA 8 Metals (EPA Method 7471B/6020B)
- PFAS (EPA 1633, Revision A, by LC-MS/MS)

3.2 Notes on Analytical Methods

The following descriptions provide background information and terminology for DRO, Silica Gel Clean-Up, GRO, and PFAS.

3.2.1 DRO

The Wisconsin DRO Method is designed to measure mid-range petroleum products such as diesel or fuel oil. This method provides gas chromatographic conditions for the detection of semi-volatile petroleum fractions such as diesel, fuel oil #2, or kerosene. DRO analysis includes hydrocarbons within the range of C10 - C28 and a boiling point range between approximately 170 degrees Celsius (º C) and 430°C. Quantitation is based on a direct comparison of the total area within this range to the total area of the Diesel Component Standard. As defined in the method, other organic compounds, including chlorinated hydrocarbons, phenols, phthalate esters, PAHs, kerosene, fuel oils and heavier oils are measurable within the range of C10 - C28. DRO results include these compounds/products. Components greater than C28 present in products such as motor oils or lubricating oils are detectable under the conditions of the method (Wisconsin Department of Natural Resources [DNR]a, 1995).

3.2.2 GRO

The Wisconsin GRO Method is designed to measure the concentration of GRO in water and soil. GRO analysis includes hydrocarbon within the range of C6 - C10 and a boiling point range between approximately 60°C and 220°C. All the chromatographic response falling between the onset of the methyl-tertiary-butyl ether peak and the conclusion of the naphthalene peak. Quantitation is based on a direct comparison of the total area within this range to the total area of the Gasoline Component Standard.

As defined in the method, other organic compounds including chlorinated solvents, ketones, ethers, mineral spirits, stoddard solvents, and napthas are measurable within the range of C6 - C10. High levels of heavier petroleum products such as diesel fuel may contain some volatile components producing a response within the retention time range for GRO. As defined in the method, results for GRO include petroleum fractions such as gasoline, stoddard solvent, or mineral spirits as well as other measurable organic compounds such as chlorinated solvents, ketones, and ethers (Wisconsin DNRb, 1995).

3.2.3 PFAS EPA Method 1633

The EPA has developed the 1633 method to test for 40 PFAS compounds in wastewater, surface water, groundwater, soil, biosolids, sediment, landfill leachate, and fish tissue. Method 1633 can be used in several applications including National Pollution Discharge Elimination System (NPDES) discharge permits and is approved method within MPCA Guidance Document p-eao2-28 (MPCA, 2022). This method is a performance-based approach to accommodate the unique challenges PFAS compounds possess. Samples are extracted using a methanol solution, cleaned with carbon and other filters, and then analyzed with a liquid chromatography–tandem mass spectrometry instrument. This filtering and cleaning removes materials that may interfere with accurate results. Care needs to be taken with sample collection, preparation, and analysis to prevent cross contamination. The method specifies that strict quality control and detailed record-keeping measures be taken in order to ensure reliable and repeatable results. (EPA, December 2024; MPCA, January 2022).

3.3 Quality Assurance/Quality Control

Eurofins is a Minnesota-certified laboratory and have a current QA/QC manual on file with the Minnesota Department of Health (MDH) and the MPCA. A QA/QC report “Project Narrative” is

attached near the beginning of each Eurofins laboratory report (**Appendix A**). The QA/QC report includes:

- General information
- Hold time
- Sample preparation
- Initial calibrations
- Continuing calibrations
- Surrogates
- Method blanks
- Laboratory control spikes
- Matrix spikes
- Duplicate samples
- Additional comments

Based on review of the laboratory results and QA/QC data, the quality of the data is acceptable for the purposes of this report.

3.4 Regulatory and Guidance Levels

To evaluate the magnitude of impacts, MPCA regulatory levels and guidelines, where established, are compared to analytical results for detected chemicals.

3.4.1 Soil

Soil results are compared to MPCA Residential/Recreational Soil Reference Values (RSRVs), Commercial/Industrial SRVs (ISRVs), SLVs, and UFC.

3.4.1.1 Soil Reference Values

Revised SRVs were published by the MPCA in May 2026 (MPCA, 2026), and are incorporated into this report. The MPCA intends to complete annual updates to the SRVs. The MPCA SRVs are intended to be risk-based screening values and were derived using methodology from the EPA's Superfund Program, exposure parameters based on land use categories, contaminants toxicity values, and a contaminant's chemical-specific parameters.

3.4.1.2 Screening Soil Leaching Values

The MPCA has established SLVs that provide a conservative estimate of whether groundwater contaminant concentrations could result from leaching to groundwater from contaminated soils in direct contact with groundwater. The current Screening SLVs were established in 2013 (as discussed in MPCA Guidance Document c-r1-04 [MPCA, May 2013]) and are referenced in the MPCA Guidance Document c-rem1-01, *Best Management Practices for the Off-Site Reuse of Unregulated Fill* (MPCA, 2024).

3.4.1.3 MPCA Unregulated Fill Criteria

The MPCA has defined unregulated fill in guidance document c-rem1-01, *Best Management Practices for the Off-Site Reuse of Unregulated Fill* (MPCA, March 2024). The guidance document states that soil that meets all SLV and SRV limits, is free from solid waste, debris, asbestos containing materials (ACM), visual staining and odors, and has organic vapors less

than 10 parts per million (ppm) (measured using a PID) is considered to meet the definition of unregulated fill. This document also defines limits for DRO and gasoline range organics (GRO) of 100 milligrams per kilogram (mg/kg) in soil are as meeting the definition of unregulated fill. ACM is material containing greater than 1% asbestos, as defined in Minnesota Statutes, Section 326.71, Subdivision 3.

3.4.2 Groundwater

Groundwater results are compared to MDH Health Based Guidance (HBG) that have been established to evaluate drinking water, NPDES General Permit Limits (GPLs) for contaminated groundwater discharges, and EPA maximum contaminant levels (MCLs) for drinking water contaminants.

The MDH HBGs, NPDES GPLs, and EPA MCLs are used as a proxy for evaluating the chemicals detected in water; however, for construction purposes the treatment limits for dewatering discharge would be established in the issued discharge permit for the project. Results for this project are compared to MDH HBGs, NPDES GPLs, and EPA MCLs on **Figure 3** and **Table 3**.

3.4.2.1 Minnesota Department of Health – Health Based Guidance

Groundwater results are compared to MDH HBGs that have been established to evaluate drinking water. These values include Health Risk Limits (HRLs), Health Based Values (HBVs), and Risk Assessment Advice (RAA) levels. The MDH developed guidance (published in November 2018) for petroleum contaminated drinking water wells which supersedes guidance of Total Petroleum Hydrocarbons (TPH) criteria developed in 2000. Petroleum products contain many chemicals and drinking water criteria are available for only a small fraction of them. This guidance provides a margin of safety in situations where drinking water is contaminated with petroleum residuals that do not exceed individual chemical criteria. The MDH recommends a RAA of 50 microgram per liter (ug/L) TPH which is based on a pyrene surrogate. The MDH guidance indicates that the DRO and GRO values should be added, and other volatile petroleum concentrations should be subtracted from the cumulative total. For the purpose of this Phase II Environmental Investigation, these values (except for RAAs) are used as a proxy for evaluating the chemicals detected in groundwater. A simplified approach of using 50 ug/L as the MDH HBG for DRO and GRO without the calculation and subtraction is being utilized. It should also be noted that reporting limits for this project are greater than 50 ug/L for DRO and GRO (MDH, 2018).

3.4.2.2 NPDES - General Permit Limits

The NPDES general permit (MNG790000) identifies discharge limits for contaminated groundwater discharges. The general permit (MNG790000) was reissued on May 1, 2022, and expires April 30, 2027 (MPCA, May 2022). The general permit regulates the discharge of groundwater extracted at cleanup and redevelopment sites. This includes discharges which have been contaminated by past or present activities, from both known and unknown sources of contamination. GPLs are used in this report as a comparison for groundwater contaminant concentrations. The permit limits used in this report are compared to three different types of groundwater discharge; 1) land application, 2) surface waters not designated as drinking water, and 3) trout streams/surface waters designated as drinking water.

3.4.2.3 Environmental Protection Agency – Maximum Contaminant Levels

The EPA has established National Primary Drinking Water Regulations (NPDWRs) that set mandatory water quality standards for drinking water contaminants that apply to public water systems. Standards called MCLs are established to protect the public against consumption of drinking water contaminants that present a risk to human health. MCLs are not enforceable standards that apply to construction related handling of groundwater (EPA, December 2025).

3.4.3 Regulatory Levels vs. Laboratory Reporting Limits

The following sections describe situations when the achievable laboratory reporting limits are above the established regulatory guidance. Tables of analytical results attached to this report include only detected parameters. In some cases, laboratory reporting limits are greater than the regulatory limits. If a parameter is not detected in any sample, the parameter is not included on the attached tables. All analytical results are included in **Appendix B**.

3.4.3.1 Soil Leaching Values

Several concentrations of VOCs in soil have laboratory reporting limits that exceed MPCA SLVs (SLVs are as low 0.000015 mg/kg). In these cases, the SLV is not achievable by the laboratory analytical method. Reporting limits that exceed regulatory limits also commonly occur when the sample is diluted (required by high level of target, non-target analytes or matrix interferences).

3.4.3.2 PAH Detection Limits

The effluent limitations contained in the General Permit for total carcinogenic PAHs, total non-carcinogenic PAHs, and anthracene are below the method detection limit of currently available and approved analytical test methods. The limit at which compliance or noncompliance is determined will be based on the Minimum Level of EPA method 625 or any updates to that method as published in 40 CFR Part 136, Appendix A. Method limit is synonymous with reporting limit. If during the life of the General Permit a more sensitive test method is approved by EPA for wastewater analyses, then the General Permit effluent limitation will become the enforceable limitation rather than the analytical detection limit (EPA, 2016).

4 Phase II Environmental Investigation Results

SEH advanced four hand auger borings (HA-01 through HA-04) and collected 8 soil samples for laboratory analysis. SEH also collected a groundwater sample (MW-12-5.95W) from a nearby existing monitoring well (MW-12) for laboratory analysis. Borings were advanced to a maximum depth of 5.0 feet bgs. **Figure 3** depicts boring and sample locations. The Investigation results are summarized on **Figure 3**. PID soil headspace readings are summarized on **Table 1**. Detected soil sample analytical results are summarized on **Table 2**. Work plan documents, laboratory reports and boring logs are included as **Appendix A**, **Appendix B**, and **Appendix C**, respectively.

4.1 Geologic, Hydrogeologic, and Field Screening Results

Fill material, consisting of well graded sand with silt was observed extending to the termination depth of the hand auger borings (5 feet bgs). No debris was observed in the borings and native deposits were not encountered.

PID headspace readings were recorded between 0.0 to 1.1 ppm, within background levels. No visual or olfactory indications of contamination were noted in observed soils. PID headspace results are summarized on **Table 1**.

Groundwater was not encountered during the advancement of the hand auger borings; however, groundwater from an existing monitoring well (MW-12), located to the northwest of the project Site, was sampled as part of the investigation. Groundwater was observed at 5.95 feet bgs at the time of the sampling. No visual or olfactory indications of contamination in groundwater were observed.

4.2 Results of Subsurface Investigation

Four hand auger borings (HA-01 through HA-04) were completed throughout the project Site. Select soil samples were collected and analyzed for DRO, GRO, VOCs, PAHs, RCRA metals, and PFAS. Soil samples were collected for chemical analyses with sampling intervals targeted to evaluate potential impacts in soil that will likely be excavated during the reconstruction.

A total of eight soil samples were analyzed, and detections of various metals and PAHs were commonly reported above their respective laboratory reporting limits. With exception of the samples collected at hand auger boring HA-02, various PFAS compounds were detected above their respective laboratory reporting limits in each of the samples collected. One detection of DRO (12.4 mg/kg) was also reported above its laboratory detection limit in hand auger boring HA-04 at a depth of 3 feet bgs. All soil sample analytical results were reported below their respective MPCA SLVs, SRVs, and UFC.

One groundwater sample (MW-12-5.95W) was taken from the existing MW-12 located to the northwest of the project Site. Various PFAS compounds (see **Table 3** for a tabulated list of the detections) were detected above their respective laboratory reporting limits but below their respective EPA MCLs and MDH HBGs. According to the NPDES GPLs, discharge of pollutants associated with emerging contaminants such as PFAS, pharmaceuticals, endocrine active substances, etc., are prohibited (Minn. R. 7050.0210, subp. 13 for).

DRO (<99.4 ug/L) and GRO (<100 ug/L) were not detected above their respective laboratory reporting limits, however, the MDH RAA for DRO and GRO is 50 ug/L, below the laboratory reporting limits. The NPDES GPL for DRO and GRO is 200 ug/L.

5 Conclusions and Recommendations

The Phase II Environmental Investigation included four hand auger borings (HA-01 through HA-04) completed to a depth of 5 feet bgs. The borings were completed under the existing Midfield Ramp concrete paving in areas of proposed pavement repair and subbase corrections, as well as stormwater drainage improvements. Fill material was encountered extending to the termination depth of the hand auger borings (5 feet bgs). No debris was observed in fill soil. Native deposits underlying the fill were not encountered and PID headspace readings were recorded between 0.0 to 1.1 ppm, within background levels. No visual or olfactory indications of contamination were noted during the investigation.

No contaminants were detected in soil samples at concentrations exceeding the MPCA UFC indicating excess soil, if generated by the project, could be re-used on or offsite.

A groundwater sample was collected from the nearby MW-12. Depth to groundwater was measured to be 5.95 feet bgs at the time of the sample. Various PFAS compounds were detected above their respective laboratory reporting limits but below their respective EPA MCLs and MDH HBGs. However, NPDES GPLs prohibit the discharge of pollutants associated with emerging contaminants such as PFAS.

Based on the current design for the Midfield Ramp Repair – Phase 4 project, SEH understands approximately 3 feet of soil below the proposed pavements will be corrected. Considering that no contaminants were detected in soil at concentrations exceeding the MPCA UFC, excess soil if generated by the project, could be re-used on or offsite. The proposed storm sewer construction is anticipated to be between 6 and 9 feet bgs across the site. Given that the identified groundwater impacts exceed the current NPDES GPLs, if groundwater will be discharged as part of the project, SEH recommends that it be handled in accordance with all regulations prior to its discharge.

Unknown contamination, if encountered during the project, should be handled in accordance with all applicable local, state, and federal regulations. If encountered, work in the area should be temporarily halted and reported to the project engineer.

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Wisconsin DNR (b), September 1995, *Modified GRO; Method for Determining Gasoline Range Organics, PUBL-SW-140,* https://dnr.wi.gov/topic/labcert/documents/methods/GROSep95.pdf

Tables

Table 1 – Photoionization Detector Results
Table 2 – Soil Analytical Results
Table 3 – Groundwater Analytical Results

Abbreviations and Descriptions

Abbreviations:
BaP - Benzo(a)pyrene equivalent
BRL - No detections above laboratory reporting limits
DRO - Diesel Range Organics
EOB - End of Boring
EPA - Environmental Protection Agency
ft bgs - feet below ground surface
GW - groundwater
GPL - General Permit Limits
GRO - Gasoline Range Organics
HA - hand auger
HBG - Health Based Guidance
LC-MS/MS - liquid chromatography/mass spectrometry
MDH - Minnesota Department of Health
MPCA - Minnesota Pollution Control Agency
MW - Monitoring Well
mg/kg - milligrams per kilogram
ng/g - nanograms per gram
ng/L - nanograms per liter
NPDES - National Pollutant Discharge Elimination System
PAH - Polycyclic Aromatic Hydrocarbon
PFAS - Per- and polyfluoroalkyl substances
PID - Photoionization Detector
ppm - parts per million
RCRA - Resource Conservation and Recovery Act
SIM - Selected Ion Monitoring
SLV - MPCA Screening Soil Leaching Values
SRV - MPCA Soil Reference Values
SVOC - Semi Volatile Organic Compound
UFC - MPCA Unregulated Fill Criteria
ug/L - micrograms per liter
<x - indicates analyte concentration not detected above the laboratory reporting limit

Lab Report Qualifiers:

Exceeds DRO/GRO MPCA UFC	DRO/GRO Exceeds MPCA UFC
Exceeds 2013 Screening SLV	Screening SLV - MPCA Screening Soil Leaching Values
Exceeds Residential/Recreational SRV	Minnesota Pollution Control Agency (MPCA) Soil Reference Values for Residential/Recreational properties
Exceeds Commercial/Industrial SRV	MPCA Soil Reference Values for Commerical/Industrial properties
NPDES Discharge General Permit Limits	NPDES Discharge General Permit Limits MNG790000 (surface waters designated as drinking water)
Exceeds 2026 MDH HBG	MDH HBG - Minnesota Department of Health (MDH) Health Based Guidance (HBGs) for drinking water
Exceeds EPA MCLs	EPA MCLs - Environmental Protection Agency (EPA) Maximum Concentration Levels (MCLs) for drinking water

Notes:
Sample ID is listed as: investigation type - identification number - depth
All depths are reported in feet below ground surface (bgs) and listed after the boring identification number

Soil analytical methods include:
Diesel Range Organics by Wisconsin Method DRO
DRO Silica Gel Cleanup by WIDRO GCS Silica Gel
Gasoline Range Organics by Wisconsin Method GRO
Volatile Organic Compounds (VOCs) by EPA Method 8260C
Mercury by EPA Method 7471B
Polycyclic Aromatic Hydrocarbons (PAHs) by EPA Method 8270E by SIM
Resource Conservation and Recovery Act (RCRA) 8 Metals by EPA Method 7471B/6020B
Per- and polyfluoroalkyl substances (PFAS) (EPA 1633, Revision A, by liquid chromatography/mass spectrometry [LC-MS/MS])

Groundwater analytical methods include:
DRO by Wisconsin Method DRO
GRO by Wisconsin Method GRO
VOC by EPA Method 8260C
RCRA 8 Metals by EPA Method 7471/6010B (field filtered)
Mercury by EPA Method 7470A
PAHs by EPA Method 8270E by selective ion monitoring (SIM)
PFAS (EPA 1633, Revision A, by liquid chromatography/mass spectrometry [LC-MS/MS])

Table 1
Photoionization Detector Results
Phase II Environmental Investigation
Midfield Ramp Repair - Phase 4
Duluth, Minnesota

Depth (feet)	HA-01	HA-02	HA-03	HA-04
0 to 1	1.1	0.1	0.4	0.9
1 to 3	0.3	0.0	0.1	0.2
3 to 5	0.2	0.0	0.0	0.1

Notes:

For a full list of acronyms, see the table glossary

Table 2
Soil Analytical Results
Phase II Environmental Investigation
Midfield Ramp Repair - Phase 4
Duluth, Minnesota

Boring ID	Units	*Screening SLV (2013)*	Residential and Recreational Chronic SRV	**Commercial and Industrial Chronic SRV**	HA-01	HA-01	HA-02	HA-02	HA-03	HA-03	HA-04	HA-04
Field Sample ID					HA-01-1	HA-01-3	HA-02-1	HA-02-3	HA-03-1	HA-03-3	HA-04-1	HA-04-3
Laboratory ID					310-330207-7	310-330207-8	310-330207-1	310-330207-2	310-330207-3	310-330207-4	310-330207-5	310-330207-6
Sample Date					4/20/2026	4/20/2026	4/20/2026	4/20/2026	4/20/2026	4/20/2026	4/20/2026	4/20/2026
Diesel Range Organics (DRO) and Gasoline Range Organics (GRO)												
Diesel Range Organics	mg/kg	The MPCA UFC for DRO is <100 mg/kg			<6.32	<5.96	<5.21	<6.27	<6.24	<6.81	<6.35	12.4
Gasoline Range Organics	mg/kg				<10.8	<10.7	<11.8	<10.9	<11.0	<9.97	<10.2	<9.76
Metals												
Arsenic	mg/kg	5.8	9	9	1.76	2.32	1.77	1.89	5.78	2.07	2.01	2.38
Barium	mg/kg	1700	3100	41000	37.2	43.3	47.8	40.4	73.4	39.8	35.2	47.2
Cadmium	mg/kg	8.8	1.6	23	<0.166	<0.161	<0.170	<0.166	0.385	<0.189	0.179	<0.177
Chromium (Total)*	mg/kg	36 / 1000000000	2.3 / 23000	62 / 100000	23.1	20.9	19.3	21.9	20.7	19.0	21.6	24.1
Lead	mg/kg	2700	200	460	3.86	4.62	4.12	4.06	22.0	3.98	4.11	4.73
Semi-VOCs												
Benzo(a)pyrene	mg/kg	1.4	-	-	0.00754	<0.00532	0.0185	<0.00503	0.0352	0.00929	<0.00501	0.00650
Benzo(a)anthracene	mg/kg	-	-	-	0.00694	<0.00532	0.0165	<0.00503	0.0295	0.00633	<0.00501	0.00628
Benzo(b)fluoranthene	mg/kg	-	-	-	0.00868	<0.00532	0.0217	0.00619	0.0416	0.0108	<0.00501	0.00706
Benzo(k)fluoranthene	mg/kg	-	-	-	0.00649	<0.00532	0.00902	<0.00503	0.0176	0.00570	<0.00501	<0.00536
Chrysene	mg/kg	-	-	-	0.0105	<0.00532	0.0193	<0.00503	0.0387	0.00937	<0.00501	0.00744
Dibenz(a,h)anthracene	mg/kg	-	-	-	<0.00509	<0.00532	<0.00498	<0.00503	0.00698	<0.00528	<0.00501	<0.00536
Indeno(1,2,3-cd)pyrene	mg/kg	-	-	-	0.00667	<0.00532	0.0136	<0.00503	0.0224	0.00691	<0.00501	<0.00536
Benzo(g,h,i)perylene	mg/kg	-	-	-	0.00807	<0.00532	0.0187	0.00646	0.0299	0.00977	0.00596	0.00549
Fluoranthene	mg/kg	670	210	2700	0.0262	<0.00532	0.0363	0.00879	0.0681	0.0130	<0.00501	0.0172
Fluorene	mg/kg	110	390	5800	<0.00509	<0.00532	<0.00498	<0.00503	<0.00583	<0.00528	<0.00501	<0.00536
2-Methylnaphthalene	mg/kg	-	39	580	<0.00509	<0.00532	0.00623	0.00526	<0.00583	<0.00528	<0.00501	<0.00536
Naphthalene	mg/kg	4.5	81	280	<0.00509	<0.00532	<0.00498	<0.00503	<0.00583	<0.00528	0.00672	<0.00536
Phenanthrene	mg/kg	-	-	-	0.0233	<0.00532	0.0209	0.00553	0.0345	0.00553	<0.00501	0.00918
Pyrene	mg/kg	440	220	3200	0.0214	<0.00532	0.0326	0.00768	0.0582	0.0114	<0.00501	0.0134
BaP Equiv result												
Benzo(a)pyrene Equivalents	mg/kg	1.4	0.91	23	0.0098	0	0.0238	0.0006	0.0517	0.0118	0	0.0078
Per- and Polyfluoroalkyl Substances (PFAS)												
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ng/g	-	-	-	0.535	0.508	<0.408	<0.418	<0.479	<0.414	0.531	<0.444
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ng/g	-	-	-	<0.408	<0.439	<0.408	<0.418	<0.479	<0.414	0.537	<0.444
Perfluorodecanesulfonic acid (PFDS)	ng/g	-	-	-	0.315	0.241	<0.204	<0.209	<0.240	<0.207	<0.207	<0.222
Perfluorododecanoic acid (PFDoA)	ng/g	-	-	-	0.272	<0.219	<0.204	<0.209	<0.240	<0.207	<0.207	<0.222
Perfluorohexanesulfonic acid (PFHxS)	ng/g	-	130	1600	0.210	<0.219	<0.204	<0.209	<0.240	<0.207	<0.207	<0.222
Perfluorooctanesulfonamide (PFOSA)	ng/g	-	-	-	<0.204	0.232	<0.204	<0.209	<0.240	<0.207	0.340	<0.222
Perfluorooctanesulfonic acid (PFOS)	ng/g	-	13	180	<0.204	0.309	0.231	<0.209	<0.240	0.293	0.686	0.526
VOCs												
All VOCs	mg/kg	Varies			BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL

Notes:
* = Total Chromium does not have established MPCA regulatory limits. Chromium III and VI regulatory limits are depicted.
For a full list of acronyms, see the table glossary

Table 3
Groundwater Analytical Results
Phase II Environmental Investigation
Midfield Ramp Repair - Phase 4
Duluth, Minnesota

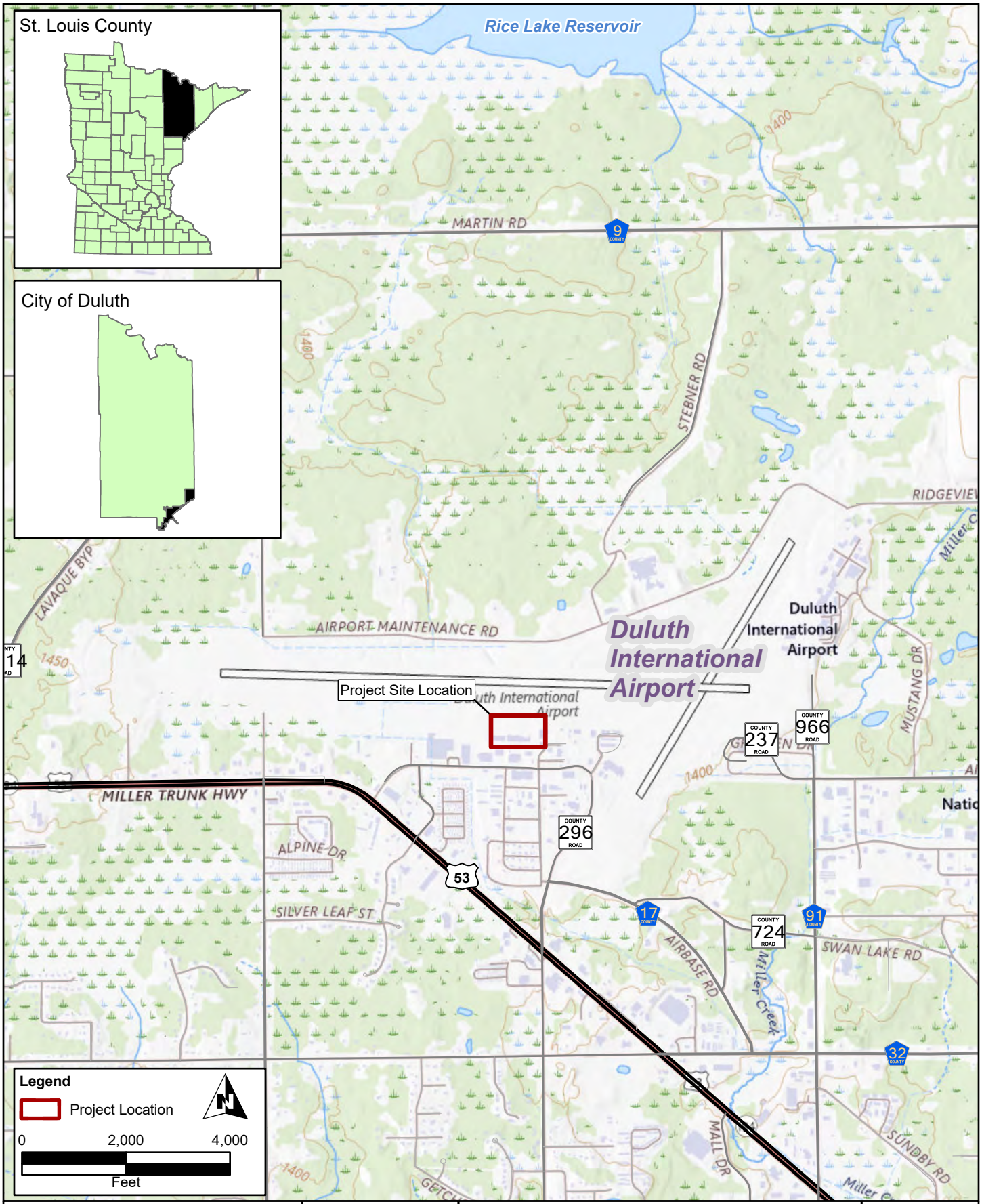
Boring ID	Units	EPA MCL 2025	2026 MDH Health Based Guidance			MPCA NPDES General Permit Limits [MNG700000, Issued 2022]			MW-12
Field Sample ID			Health Based Values	Health Risk Limits	Risk Assesment Advice	Land Application (non surface water discharge)	Trout/ surface waters designated as drinking water	surface waters not designated as drinking water	MW-12-5.95W
Laboratory ID									310-331056-1
Sample Date									04/30/2026
DRO and GRO									
Diesel Range Organics	ug/l	-	-	-	50	200	200	200	<99.4
Gasoline Range Organics	ug/l	-	-	-	50	200	200	200	<100
Metals									
Barium	ug/l	2000	-	2000	-	-	-	-	18.1
PFAS									
Perfluorobutanesulfonic acid (PFBS)	ng/L	-	-	100	-	Discharge of pollutants associated with emerging contaminants such as PFAS, pharmaceuticals, endocrine active substances, etc., are prohibited. (Minn. R. 7050.0210, subp. 13)			0.0218
Perfluorobutanoic acid (PFBA)	ng/L	-	-	7000	-				0.0179
Perfluoroheptanesulfonic acid (PFHpS)	ng/L	-	-	-	-				0.0148
Perfluoroheptanoic acid (PFHpA)	ng/L	-	-	-	-				0.0194
Perfluorohexanesulfonic acid (PFHxS)	ng/L	10	-	47	-				0.474
Perfluorohexanoic acid (PFHxA)	ng/L	-	-	-	-				0.0422
Perfluorononanoic acid (PFNA)	ng/L	10	-	-	-				0.00721
Perfluorooctanesulfonic acid (PFOS)	ng/L	4	-	2.3	-				0.214
Perfluorooctanoic acid (PFOA)	ng/L	4	-	0.24	-				0.0742
Perfluoropentanesulfonic acid (PFPeS)	ng/L	-	-	-	-				0.0243
Perfluoropentanoic acid (PFPeA)	ng/L	-	-	-	-				0.0288
PAHs									
All PAHs	ug/l	Varies	Varies			Varies			BRL
VOCs									
All other VOCs	ug/l	Varies	Varies			Varies			BRL

Notes:

For a full list of acronyms, see the table glossary

Figures

Figure 1 – Project Site Location
Figure 2 – Summary of Previous Assessments
Figure 3 – Select Soil and Groundwater Sample Analytical Results



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Project: DULAI 188850
Print Date: 5/14/2026

User Name: rhawkins
Projection: UTM NAD 83 Zone 15N
Source: ESRI, MnDOT, SEH Digi, St. Louis County

Project Site Location

Phase II Environmental Investigation
Midfield Ramp Repair - Phase 4
Duluth, St. Louis County, Minnesota

Figure 1

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources listed on this map and is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.

Legend

- Midfield Ramp Repair - Phase 4 Project Site

FUDS Program Areas of Concern

- Former UST Basin/Aircraft Washrack AOC
- Fuel Transfer AOC

Site Utilities

- Fuel Dispenser
- Fuel Transfer Piping
- Storm Sewer
- Subdrain
- Fuel Dispensers
- Fuel Vaults
- Former 55,000 Gallon USTs

Remedial Investigation Boring Locations (EMR, 2007)

- Pre-RD Geoprobe Boring
- Pre-RD Well Locations
- SI/RI Well Locations

Midfield Ramp Repair Boring Locations (Braun, 2021)

- Boring with Environmental Screening

*Midfield Ramp Repair - Phase 4 Boring Locations (SEH, 2026)**

- Hand Auger Boring

0 50 100
Feet

Notes:
- Area of Concern (AOC)
- Remedial Design (RD)
- Site Investigation (SI)
- Formerly Used Defense Sites (FUDs)
- Remedial Investigation (RI)
- Underground Storage Tank (UST)

* Monitoring well (MW-12) (EMR, 2007) was sampled and sealed in accordance with Minnesota Department of Health (MDH) guidance as a part of the 2026 Phase II Investigation.

Fuel Transfer AOC
Former UST Basin/ Aircraft Washrack AOC
Former 55,000 Gallon USTs
MW-15
MW-17
MW-11
MW-12
MW-14
MW-23
MW-24
MW-35
MW-36
MW-38
MW-39
MW-40
MW-7
TA-1
FTA-2
FTA-3
FTA-4
FTA-5
FTA-6
FTA-7
FTA-8
FTA-9
FTA-10
FTA-11
FTA-12
FTA-14
FTA-15
USTA-5
USTA-6
USTA-8
HA-01
HA-02
HA-03
HA-04
1
2
3
4
5
6
7
8
9
10
11
12

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SEH
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110
PHONE: (651) 490-2000
FAX: (888) 908-8166
TF: (800) 325-2055
www.sehinc.com

Project: DULAI 188850
Print Date: 5/17/2026

User Name: rhawkins
Projection: NAD 1983 UTM Zone 15N
Source: ESRI, MnDOT, SEH Digi, St. Louis County

Summary of Previous Assessments

Phase II Environmental Investigation
Midfield Ramp Repair - Phase 4
Duluth, St. Louis County, Minnesota

Figure 2

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources listed on this map and is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.

Legend

- Project Area
- 2026 Hand Auger Boring Location
- *Remedial Investigation (EMR, 2007)*
- Monitoring Well Location*

0 20 40 Feet

Hand Auger Boring ID

Termination Depth (ft)

HA-01
EOB = 10 (1, 15)
Soil Analytical Results
Diesel Range Organics - 108
Groundwater Observation Summary
PFOS - 0.01
Soil Observation Summary
0.5 ppm
Fill to EOB

Sample Depths

Analytical Results (mg/kg)

Analytical Results (ng/L)

Maximum PID Measurement

Soil Description

- Soil parameter concentrations shown exceed Minnesota Pollution Control Agency (MPCA) Screening Soil Reference Values (SLVs), Residential/Recreational Soil Reference Values (SRVs), and Commercial Industrial SRVs. Screening Soil Reference Values (SLVs), Residential Soil Reference Values (SRVs), and Commercial/ Industrial SRVs.
- Groundwater parameter concentrations shown exceed Minnesota Department of Health (MDH) Health Based Guidance (HBGs), Environmental Protection Agency (EPA) Maximum Contaminant Levels (MCLs), and National Pollutant Discharge Elimination System (NPDES) General Permit Limits (GPLs).
- Depth = Sample depth in feet below ground surface (bgs).
- EOB = End of Boring (Termination Depth of soil Boring).
- ppm = parts per million
- Groundwater detections shown are in nanograms per liter (ng/L).
- Perfluorobutanesulfonic acid (PFBS)
- Perfluorobutanoic acid (PFBA)
- Perfluoroheptanesulfonic acid (PFHpS)
- Perfluoroheptanoic acid (PFHpA)
- Perfluorohexanesulfonic acid (PFHxS)
- Perfluorohexanoic acid (PFHxA)
- Perfluorononanoic acid (PFNA)
- Perfluorooctanesulfonic acid (PFOS)
- Perfluorooctanoic acid (PFOA)
- Perfluoropentanesulfonic acid (PFPeS)
- Perfluoropentanoic acid (PFPeA)
- Photoionization Detector (PID)

* Monitoring well MW-12 was constructed in 2007 under the FUDs Remedial Investigation (EMR, 2007). as part of the 2007. MW-12 was sampled and sealed in accordance with Minnesota Department of Health (MDH) guidance as a part of the 2026 Phase II Investigation.

MW-12
(5.95w)
Soil Analytical Results
No soil sample collected.
Groundwater Aalytical Results
PFBS - 0.0218
PFBA - 0.0179
PFHpS - 0.0148
PFHpA - 0.0194
PFHxS - 0.474
PFHxA - 0.0422
PFNA - 0.00721
PFOS - 0.214
PFOA - 0.0742
PFPeS - 0.0243
PFPeA - 0.0288

HA-01
EOB=5 (1s and 3s)
Soil Analytical Results
All below MPCA SLVs, SRVs, and UFC.
Groundwater Aalytical Results
Groundwater not encountered.
Soil Observation Summary
1.1 ppm
Apparent aggregate base and sand fill to EOB.

HA-02
EOB=5 (1s and 3s)
Soil Analytical Results
All below MPCA SLVs, SRVs, and UFC.
Groundwater Aalytical Results
Groundwater not encountered.
Soil Observation Summary
0.1 ppm
Apparent aggregate base and sand fill to EOB.

HA-03
EOB=5 (1s and 3s)
Soil Analytical Results
All below MPCA SLVs, SRVs, and UFC.
Groundwater Aalytical Results
Groundwater not encountered.
Soil Observation Summary
0.4 ppm
Apparent aggregate base and sand fill to EOB.

HA-04
EOB=5 (1s and 3s)
Soil Analytical Results
All below MPCA SLVs, SRVs, and UFC.
Groundwater Aalytical Results
Groundwater not encountered.
Soil Observation Summary
0.9 ppm
Apparent aggregate base and sand fill to EOB.

Path: X:\AE\D\DULAI\188850\3-env-sdly-reqs\99GIS\DULAI_188850.aprx

SEH
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Project: DULAI 188850
Print Date: 5/18/2026

User Name: rhawkins
Projection: UTM NAD 83 Zone 15N
Source: ESRI, MnDOT, SEH Digi, St. Louis County

Select Soil and Groundwater Sample Analytical Results

Phase II Environmental Investigation
Midfield Ramp Repair - Phase 4
Duluth, St. Louis County, Minnesota

Figure 3

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources listed on this map and is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.

Appendix A

Work Plan

Work Plan

Midfield Ramp Repair Phase 4
Duluth International Airport
Duluth, St. Louis County, Minnesota

Proposed Boring ID	Boring Location Notes	Anticipated Total Depth (feet bgs)	Anticipated Soil Sample Depths (feet bgs)	Soil Sampling Parameters						Anticipated Depth to Groundwater (feet bgs)~	Groundwater Sampling Parameters					
				DRO	GRO	VOCs	PAHs	RCRA 8 Metals	PFAS		DRO	GRO	VOCs	PAHs	RCRA 8 Metals	PFAS
HA-01	Preliminary information for Project	4	1 and 3	2	2	2	2	2	2	6-10 ft bgs	-	-	-	-	-	-
HA-02	Preliminary information for Project	4	1 and 3	2	2	2	2	2	2	6-10 ft bgs	-	-	-	-	-	-
HA-03	Preliminary information for Project	4	1 and 3	2	2	2	2	2	2	6-10 ft bgs	-	-	-	-	-	-
HA-04	Preliminary information for Project	4	1 and 3	2	2	2	2	2	2	6-10 ft bgs	-	-	-	-	-	-
MW-12*	Preliminary information for Project	-	-	-	-	-	-	-	-	6-10 ft bgs	1	1	1	1	1	1
Totals				**8**	**8**	**8**	**8**	**8**	**8**		**1**	**1**	**1**	**1**	**1**	**1**

* MW-12 was constructed in connection with Fomerly Used Defense Sites (FUDs) investigation activites (FUDs #E05MN0033 - September 2007). Anticipated depth to groundwater is based on conditions observed during the well construction.

4/9/2026

Path: X:\AE\D\DULAI\188850\3-env-sdv-reqs\096\GIS\DULAI_188850_DULAI_188850.aprx

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Project: DULAI 188850
Print Date: 4/6/2026

User Name: rhawkins
Projection: UTM NAD 83 Zone 15N
Source: ESRI, MnDOT, SEH Digi, Hennepin County

Proposed Sampling Locations

Midfield Ramp Repair Phase 4
Duluth International Airport
Duluth, St. Louis County, Minnesota

Figure 1

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Appendix B

Laboratory Analytical Reports

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Keri Aufdencamp
Short Elliott Hendrickson, Inc. dba SEH
3535 Vadnais Center Drive
St. Paul, Minnesota 55110

Generated 5/3/2026 10:59:19 PM

JOB DESCRIPTION

Duluth Airport Midfield Ramp

JOB NUMBER

310-330207-1

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613

See page two for job notes and contact information.

my EOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization

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Authorized for release by
Zach Bindert, Senior Project Manager
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(319)595-2016

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Job Narrative
310-330207-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The samples were received on 4/22/2026 1:20 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.8°C.

GC/MS VOA
Method 8260D: The continuing calibration verification (CCV) associated with batch 310-487062 recovered above the upper control limit for Acetone(24%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is:(CCV 310-487062/3).

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-487062 recovered above the upper control limit for Chloroethane(44%D), Vinyl chloride(22%D), Dichlorofluoromethane(27%D), and Bromomethane(60%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is:(CCV 310-487062/4).

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-487065 recovered above the upper control limit for 1,2,3-Trichloropropane(23%D), Dibromomethane(22%D), Acetone(31%D), Tetrahydrofuran(29%D), 1,1,2,2-Tetrachloroethane(23%D), 2-Butanone(22%D), Methyl tert-butyl ether(23%D), and Ethyl ether(29%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is:(CCV 310-487065/3).

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-487065 recovered above the upper control limit for Chloromethane(29%D), Chloroethane(133%D), Vinyl chloride(45%D), Trichlorofluoromethane(31%D), Dichlorofluoromethane(40%D), and Bromomethane(83%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is:(CCV 310-487065/4).

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-487186 recovered outside of the control limits for 2,2-Dichloropropane(-23%D). A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The associated sample is impacted: (CCV 310-487186/3).

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-487186 recovered above the upper control limit for Chloroethane(53%D) and Bromomethane(52%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is:(CCV 310-487186/4).

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-487190 recovered above the upper control limit for Acetone(21%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is:(CCV 310-487190/3).

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-487190 recovered outside of the control limits for 2,2-Dichloropropane(-31%D). A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The associated sample is impacted: (CCV 310-487190/3).

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-487190 recovered above the upper control

limit for Chloroethane(102%D), Vinyl chloride(28%D), Chloromethane(23%D), Dichlorofluoromethane(29%D), and Bromomethane(77%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is:(CCV 310-487190/4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC/MS Semi VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Gasoline Range Organics
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Diesel Range Organics
Method WI-DRO: Significant peaks, readily distinguished from background, were detected in the following sample within five minutes after the end of the analytical window defined by the last component eluting in the Diesel Range Organics (DRO) mix (i.e., n-Octacosane): HA-04-3 (310-330207-6).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

PFAS
Method 1633A: The continuing calibration verification (CCV) recovered outside of control limits for IDA compound(s) (flagged). Section 14.3.3 of the finalized EPA 1633 states that the recovery of target analytes for the CCV(s) must be within 70 - 130%, unless the analyte is not of concern for a given project. Since target analyte(s) associated with this IDA are within spec, data is reported. The following samples are impacted: HA-02-3 (310-330207-2) and HA-03-1 (310-330207-3).

Method 1633A: The continuing calibration verification (CCV) recovered outside of control limits for IDA compound(s) (flagged). Section 14.3.3 of the finalized EPA 1633 states that the recovery of target analytes for the CCV must be within 70 - 130%, unless the analyte is not of concern for a given project. Since target analyte(s) associated with this IDA are within spec, data is reported. The following sample is impacted: HA-02-1 (310-330207-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Sample Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330207-1
Project/Site: Duluth Airport Midfield Ramp

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
310-330207-1	HA-02-1	Solid	04/20/26 18:05	04/22/26 13:20	Minnesota
310-330207-2	HA-02-3	Solid	04/20/26 18:10	04/22/26 13:20	Minnesota
310-330207-3	HA-03-1	Solid	04/20/26 18:25	04/22/26 13:20	Minnesota
310-330207-4	HA-03-3	Solid	04/20/26 18:30	04/22/26 13:20	Minnesota
310-330207-5	HA-04-1	Solid	04/20/26 18:50	04/22/26 13:20	Minnesota
310-330207-6	HA-04-3	Solid	04/20/26 18:55	04/22/26 13:20	Minnesota
310-330207-7	HA-01-1	Solid	04/20/26 19:10	04/22/26 13:20	Minnesota
310-330207-8	HA-01-3	Solid	04/20/26 19:15	04/22/26 13:20	Minnesota
310-330207-9	Rinsate Blank	Water	04/20/26 19:30	04/22/26 13:20	Minnesota
310-330207-10	Trip Blank - Soil	Solid	04/20/26 00:00	04/22/26 13:20	Minnesota

Detection Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330207-1
Project/Site: Duluth Airport Midfield Ramp

Client Sample ID: HA-02-1 — Lab Sample ID: 310-330207-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo(a)anthracene	0.0165		0.00498		mg/Kg	1	☼	8270E	Total/NA
Benzo(a)pyrene	0.0185		0.00498		mg/Kg	1	☼	8270E	Total/NA
Benzo(b)fluoranthene	0.0217		0.00498		mg/Kg	1	☼	8270E	Total/NA
Benzo(g,h,i)perylene	0.0187		0.00498		mg/Kg	1	☼	8270E	Total/NA
Benzo(k)fluoranthene	0.00902		0.00498		mg/Kg	1	☼	8270E	Total/NA
Chrysene	0.0193		0.00498		mg/Kg	1	☼	8270E	Total/NA
Fluoranthene	0.0363		0.00498		mg/Kg	1	☼	8270E	Total/NA
Indeno(1,2,3-cd)pyrene	0.0136		0.00498		mg/Kg	1	☼	8270E	Total/NA
2-Methylnaphthalene	0.00623		0.00498		mg/Kg	1	☼	8270E	Total/NA
Phenanthrene	0.0209		0.00498		mg/Kg	1	☼	8270E	Total/NA
Pyrene	0.0326		0.00498		mg/Kg	1	☼	8270E	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.231		0.204		ng/g	1	☼	1633A	Total/NA
Arsenic	1.77		0.852		mg/Kg	2	☼	6020B	Total/NA
Barium	47.8		0.852		mg/Kg	2	☼	6020B	Total/NA
Chromium	19.3		0.341		mg/Kg	2	☼	6020B	Total/NA
Lead	4.12		0.170		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-02-3 — Lab Sample ID: 310-330207-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo(b)fluoranthene	0.00619		0.00503		mg/Kg	1	☼	8270E	Total/NA
Benzo(g,h,i)perylene	0.00646		0.00503		mg/Kg	1	☼	8270E	Total/NA
Fluoranthene	0.00879		0.00503		mg/Kg	1	☼	8270E	Total/NA
2-Methylnaphthalene	0.00526		0.00503		mg/Kg	1	☼	8270E	Total/NA
Phenanthrene	0.00553		0.00503		mg/Kg	1	☼	8270E	Total/NA
Pyrene	0.00768		0.00503		mg/Kg	1	☼	8270E	Total/NA
Arsenic	1.89		0.830		mg/Kg	2	☼	6020B	Total/NA
Barium	40.4		0.830		mg/Kg	2	☼	6020B	Total/NA
Chromium	21.9		0.332		mg/Kg	2	☼	6020B	Total/NA
Lead	4.06		0.166		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-03-1 — Lab Sample ID: 310-330207-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo(a)anthracene	0.0295		0.00583		mg/Kg	1	☼	8270E	Total/NA
Benzo(a)pyrene	0.0352		0.00583		mg/Kg	1	☼	8270E	Total/NA
Benzo(b)fluoranthene	0.0416		0.00583		mg/Kg	1	☼	8270E	Total/NA
Benzo(g,h,i)perylene	0.0299		0.00583		mg/Kg	1	☼	8270E	Total/NA
Benzo(k)fluoranthene	0.0176		0.00583		mg/Kg	1	☼	8270E	Total/NA
Chrysene	0.0387		0.00583		mg/Kg	1	☼	8270E	Total/NA
Dibenz(a,h)anthracene	0.00698		0.00583		mg/Kg	1	☼	8270E	Total/NA
Fluoranthene	0.0681		0.00583		mg/Kg	1	☼	8270E	Total/NA
Indeno(1,2,3-cd)pyrene	0.0224		0.00583		mg/Kg	1	☼	8270E	Total/NA
Phenanthrene	0.0345		0.00583		mg/Kg	1	☼	8270E	Total/NA
Pyrene	0.0582		0.00583		mg/Kg	1	☼	8270E	Total/NA
Arsenic	5.78		1.19		mg/Kg	2	☼	6020B	Total/NA
Barium	73.4		1.19		mg/Kg	2	☼	6020B	Total/NA
Cadmium	0.385		0.238		mg/Kg	2	☼	6020B	Total/NA
Chromium	20.7		0.477		mg/Kg	2	☼	6020B	Total/NA
Lead	22.0		0.238		mg/Kg	2	☼	6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330207-1
Project/Site: Duluth Airport Midfield Ramp

Client Sample ID: HA-03-3 — Lab Sample ID: 310-330207-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo(a)anthracene	0.00633		0.00528		mg/Kg	1	☼	8270E	Total/NA
Benzo(a)pyrene	0.00929		0.00528		mg/Kg	1	☼	8270E	Total/NA
Benzo(b)fluoranthene	0.0108		0.00528		mg/Kg	1	☼	8270E	Total/NA
Benzo(g,h,i)perylene	0.00977		0.00528		mg/Kg	1	☼	8270E	Total/NA
Benzo(k)fluoranthene	0.00570		0.00528		mg/Kg	1	☼	8270E	Total/NA
Chrysene	0.00937		0.00528		mg/Kg	1	☼	8270E	Total/NA
Fluoranthene	0.0130		0.00528		mg/Kg	1	☼	8270E	Total/NA
Indeno(1,2,3-cd)pyrene	0.00691		0.00528		mg/Kg	1	☼	8270E	Total/NA
Phenanthrene	0.00553		0.00528		mg/Kg	1	☼	8270E	Total/NA
Pyrene	0.0114		0.00528		mg/Kg	1	☼	8270E	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.293		0.207		ng/g	1	☼	1633A	Total/NA
Arsenic	2.07		0.945		mg/Kg	2	☼	6020B	Total/NA
Barium	39.8		0.945		mg/Kg	2	☼	6020B	Total/NA
Chromium	19.0		0.378		mg/Kg	2	☼	6020B	Total/NA
Lead	3.98		0.189		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-04-1 — Lab Sample ID: 310-330207-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo(g,h,i)perylene	0.00596		0.00501		mg/Kg	1	☼	8270E	Total/NA
Naphthalene	0.00672		0.00501		mg/Kg	1	☼	8270E	Total/NA
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.531		0.414		ng/g	1	☼	1633A	Total/NA
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.537		0.414		ng/g	1	☼	1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA)	0.340		0.207		ng/g	1	☼	1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.686		0.207		ng/g	1	☼	1633A	Total/NA
Arsenic	2.01		0.867		mg/Kg	2	☼	6020B	Total/NA
Barium	35.2		0.867		mg/Kg	2	☼	6020B	Total/NA
Cadmium	0.179		0.173		mg/Kg	2	☼	6020B	Total/NA
Chromium	21.6		0.347		mg/Kg	2	☼	6020B	Total/NA
Lead	4.11		0.173		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-04-3 — Lab Sample ID: 310-330207-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo(a)anthracene	0.00628		0.00536		mg/Kg	1	☼	8270E	Total/NA
Benzo(a)pyrene	0.00650		0.00536		mg/Kg	1	☼	8270E	Total/NA
Benzo(b)fluoranthene	0.00706		0.00536		mg/Kg	1	☼	8270E	Total/NA
Benzo(g,h,i)perylene	0.00549		0.00536		mg/Kg	1	☼	8270E	Total/NA
Chrysene	0.00744		0.00536		mg/Kg	1	☼	8270E	Total/NA
Fluoranthene	0.0172		0.00536		mg/Kg	1	☼	8270E	Total/NA
Phenanthrene	0.00918		0.00536		mg/Kg	1	☼	8270E	Total/NA
Pyrene	0.0134		0.00536		mg/Kg	1	☼	8270E	Total/NA
Diesel Range Organics (DRO)	12.4		6.41		mg/Kg	1	☼	WI-DRO	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.526		0.222		ng/g	1	☼	1633A	Total/NA
Arsenic	2.38		0.883		mg/Kg	2	☼	6020B	Total/NA
Barium	47.2		0.883		mg/Kg	2	☼	6020B	Total/NA
Chromium	24.1		0.353		mg/Kg	2	☼	6020B	Total/NA
Lead	4.73		0.177		mg/Kg	2	☼	6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330207-1
Project/Site: Duluth Airport Midfield Ramp

Client Sample ID: HA-01-1 — Lab Sample ID: 310-330207-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo(a)anthracene	0.00694		0.00509		mg/Kg	1	☼	8270E	Total/NA
Benzo(a)pyrene	0.00754		0.00509		mg/Kg	1	☼	8270E	Total/NA
Benzo(b)fluoranthene	0.00868		0.00509		mg/Kg	1	☼	8270E	Total/NA
Benzo(g,h,i)perylene	0.00807		0.00509		mg/Kg	1	☼	8270E	Total/NA
Benzo(k)fluoranthene	0.00649		0.00509		mg/Kg	1	☼	8270E	Total/NA
Chrysene	0.0105		0.00509		mg/Kg	1	☼	8270E	Total/NA
Fluoranthene	0.0262		0.00509		mg/Kg	1	☼	8270E	Total/NA
Indeno(1,2,3-cd)pyrene	0.00667		0.00509		mg/Kg	1	☼	8270E	Total/NA
Phenanthrene	0.0233		0.00509		mg/Kg	1	☼	8270E	Total/NA
Pyrene	0.0214		0.00509		mg/Kg	1	☼	8270E	Total/NA
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.535		0.408		ng/g	1	☼	1633A	Total/NA
Perfluorodecanesulfonic acid (PFDS)	0.315		0.204		ng/g	1	☼	1633A	Total/NA
Perfluorododecanoic acid (PFDoA)	0.272		0.204		ng/g	1	☼	1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.210		0.204		ng/g	1	☼	1633A	Total/NA
Arsenic	1.76		0.832		mg/Kg	2	☼	6020B	Total/NA
Barium	37.2		0.832		mg/Kg	2	☼	6020B	Total/NA
Chromium	23.1		0.333		mg/Kg	2	☼	6020B	Total/NA
Lead	3.86		0.166		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: HA-01-3 — Lab Sample ID: 310-330207-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.508		0.439		ng/g	1	☼	1633A	Total/NA
Perfluorodecanesulfonic acid (PFDS)	0.241		0.219		ng/g	1	☼	1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA)	0.232		0.219		ng/g	1	☼	1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.309		0.219		ng/g	1	☼	1633A	Total/NA
Arsenic	2.32		0.807		mg/Kg	2	☼	6020B	Total/NA
Barium	43.3		0.807		mg/Kg	2	☼	6020B	Total/NA
Chromium	20.9		0.323		mg/Kg	2	☼	6020B	Total/NA
Lead	4.62		0.161		mg/Kg	2	☼	6020B	Total/NA

Client Sample ID: Rinsate Blank — Lab Sample ID: 310-330207-9

No Detections.

Client Sample ID: Trip Blank - Soil — Lab Sample ID: 310-330207-10

No Detections.

This Detection Summary does not include radiochemical test results.

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-02-1
Date Collected: 04/20/26 18:05
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-1
Matrix: Solid
Percent Solids: 96.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.560		0.560		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Allyl chloride	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Benzene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Bromobenzene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Bromochloromethane	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Bromodichloromethane	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Bromoform	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Bromomethane	<0.560		0.560		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
2-Butanone (MEK)	<0.840		0.840		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Carbon tetrachloride	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Chlorobenzene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Chlorodibromomethane	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Chloroethane	<0.280		0.280		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Chloroform	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Chloromethane	<0.280		0.280		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
2-Chlorotoluene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
4-Chlorotoluene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
cis-1,2-Dichloroethene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
cis-1,3-Dichloropropene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
1,2-Dibromo-3-chloropropane	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
1,2-Dibromoethane (EDB)	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Dibromomethane	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
1,2-Dichlorobenzene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
1,3-Dichlorobenzene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
1,4-Dichlorobenzene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Dichlorodifluoromethane	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
1,1-Dichloroethane	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
1,2-Dichloroethane	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
1,1-Dichloroethene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Dichlorofluoromethane	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
1,2-Dichloropropane	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
1,3-Dichloropropane	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
2,2-Dichloropropane	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
1,1-Dichloropropene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Diethyl ether	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Ethylbenzene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Hexachlorobutadiene	<0.280		0.280		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Isopropylbenzene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Methylene chloride	<0.280		0.280		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
4-Methyl-2-pentanone (MIBK)	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Methyl tert-butyl ether	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Naphthalene	<0.280		0.280		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
n-Butylbenzene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
n-Propylbenzene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
p-Isopropyltoluene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
sec-Butylbenzene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Styrene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
tert-Butylbenzene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
1,1,1,2-Tetrachloroethane	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-02-1
Date Collected: 04/20/26 18:05
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-1
Matrix: Solid
Percent Solids: 96.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Tetrachloroethene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Tetrahydrofuran	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Toluene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
trans-1,2-Dichloroethene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
trans-1,3-Dichloropropene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
1,2,3-Trichlorobenzene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
1,2,4-Trichlorobenzene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
1,1,1-Trichloroethane	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
1,1,2-Trichloroethane	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Trichloroethene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Trichlorofluoromethane	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
1,2,3-Trichloropropane	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
1,1,2-Trichlorotrifluoroethane	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
1,2,4-Trimethylbenzene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
1,3,5-Trimethylbenzene	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Vinyl chloride	<0.112		0.112		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1
Xylenes, Total	<0.168		0.168		mg/Kg	☼	04/27/26 09:01	04/28/26 07:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*	*04/27/26 09:01*	*04/28/26 07:18*	*1*
Dibromofluoromethane (Surr)	*85*		*80 - 120*	*04/27/26 09:01*	*04/28/26 07:18*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*	*04/27/26 09:01*	*04/28/26 07:18*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00498		0.00498		mg/Kg	☼	04/24/26 13:04	04/27/26 19:10	1
Acenaphthylene	<0.00498		0.00498		mg/Kg	☼	04/24/26 13:04	04/27/26 19:10	1
Anthracene	<0.00498		0.00498		mg/Kg	☼	04/24/26 13:04	04/27/26 19:10	1
Benzo(a)anthracene	**0.0165**		0.00498		mg/Kg	☼	04/24/26 13:04	04/27/26 19:10	1
Benzo(a)pyrene	**0.0185**		0.00498		mg/Kg	☼	04/24/26 13:04	04/27/26 19:10	1
Benzo(b)fluoranthene	**0.0217**		0.00498		mg/Kg	☼	04/24/26 13:04	04/27/26 19:10	1
Benzo(g,h,i)perylene	**0.0187**		0.00498		mg/Kg	☼	04/24/26 13:04	04/27/26 19:10	1
Benzo(k)fluoranthene	**0.00902**		0.00498		mg/Kg	☼	04/24/26 13:04	04/27/26 19:10	1
Chrysene	**0.0193**		0.00498		mg/Kg	☼	04/24/26 13:04	04/27/26 19:10	1
Dibenz(a,h)anthracene	<0.00498		0.00498		mg/Kg	☼	04/24/26 13:04	04/27/26 19:10	1
Fluoranthene	**0.0363**		0.00498		mg/Kg	☼	04/24/26 13:04	04/27/26 19:10	1
Fluorene	<0.00498		0.00498		mg/Kg	☼	04/24/26 13:04	04/27/26 19:10	1
Indeno(1,2,3-cd)pyrene	**0.0136**		0.00498		mg/Kg	☼	04/24/26 13:04	04/27/26 19:10	1
2-Methylnaphthalene	**0.00623**		0.00498		mg/Kg	☼	04/24/26 13:04	04/27/26 19:10	1
Naphthalene	<0.00498		0.00498		mg/Kg	☼	04/24/26 13:04	04/27/26 19:10	1
Phenanthrene	**0.0209**		0.00498		mg/Kg	☼	04/24/26 13:04	04/27/26 19:10	1
Pyrene	**0.0326**		0.00498		mg/Kg	☼	04/24/26 13:04	04/27/26 19:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*99*		*20 - 122*	*04/24/26 13:04*	*04/27/26 19:10*	*1*
Nitrobenzene-d5 (Surr)	*100*		*10 - 132*	*04/24/26 13:04*	*04/27/26 19:10*	*1*
Terphenyl-d14 (Surr)	*103*		*10 - 119*	*04/24/26 13:04*	*04/27/26 19:10*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-02-1
Date Collected: 04/20/26 18:05
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-1
Matrix: Solid
Percent Solids: 96.2

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<11.8		11.8		mg/Kg	☼	04/28/26 11:48	04/29/26 14:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*	*04/28/26 11:48*	*04/29/26 14:15*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<5.21		5.21		mg/Kg	☼	04/23/26 11:41	04/24/26 16:04	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.408		0.408		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.408		0.408		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.408		0.408		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.02		1.02		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.02		1.02		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
Perfluorobutanesulfonic acid (PFBS)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
Perfluorobutanoic acid (PFBA)	<0.408		0.408		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
Perfluorodecanesulfonic acid (PFDS)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
Perfluorodecanoic acid (PFDA)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
Perfluorododecanesulfonic acid (PFDoS)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
Perfluorododecanoic acid (PFDoA)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
Perfluoroheptanoic acid (PFHpA)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.02		1.02		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
Perfluorohexanesulfonic acid (PFHxS)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
Perfluorohexanoic acid (PFHxA)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-02-1
Date Collected: 04/20/26 18:05
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-1
Matrix: Solid
Percent Solids: 96.2

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
Perfluorononanesulfonic acid (PFNS)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
Perfluorononanoic acid (PFNA)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
Perfluorooctanesulfonamide (PFOSA)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
Perfluorooctanesulfonic acid (PFOS)	**0.231**		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
Perfluorooctanoic acid (PFOA)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
Perfluoropentanesulfonic acid (PFPeS)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
Perfluoropentanoic acid (PFPeA)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.02		1.02		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.408		0.408		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
Perfluorotetradecanoic acid (PFTeDA)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
Perfluorotridecanoic acid (PFTrDA)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1
Perfluoroundecanoic acid (PFUnA)	<0.204		0.204		ng/g	☼	04/28/26 08:24	04/29/26 07:00	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*61.2*		*40 - 130*	*04/28/26 08:24*	*04/29/26 07:00*	*1*
13C2 10:2 FTS	*65.0*		*40 - 275*	*04/28/26 08:24*	*04/29/26 07:00*	*1*
13C2 4:2 FTS	*62.6*		*40 - 165*	*04/28/26 08:24*	*04/29/26 07:00*	*1*
13C2 6:2 FTS	*57.9*		*40 - 215*	*04/28/26 08:24*	*04/29/26 07:00*	*1*
13C2 8:2 FTS	*59.7*		*40 - 275*	*04/28/26 08:24*	*04/29/26 07:00*	*1*
13C3 HFPO-DA	*43.6*		*40 - 130*	*04/28/26 08:24*	*04/29/26 07:00*	*1*
13C4 PFBA	*45.0*		*8 - 130*	*04/28/26 08:24*	*04/29/26 07:00*	*1*
13C3 PFBS	*53.9*		*40 - 135*	*04/28/26 08:24*	*04/29/26 07:00*	*1*
13C6 PFDA	*55.7*		*40 - 130*	*04/28/26 08:24*	*04/29/26 07:00*	*1*
13C2-PFDoA	*60.5*		*40 - 130*	*04/28/26 08:24*	*04/29/26 07:00*	*1*
13C4 PFHpA	*52.9*		*40 - 130*	*04/28/26 08:24*	*04/29/26 07:00*	*1*
13C5 PFHxA	*48.7*		*40 - 130*	*04/28/26 08:24*	*04/29/26 07:00*	*1*
13C3 PFHxS	*59.5*		*40 - 130*	*04/28/26 08:24*	*04/29/26 07:00*	*1*
13C9 PFNA	*55.7*		*40 - 130*	*04/28/26 08:24*	*04/29/26 07:00*	*1*
13C8 PFOA	*48.5*		*40 - 130*	*04/28/26 08:24*	*04/29/26 07:00*	*1*
13C8 PFOS	*63.5*		*40 - 130*	*04/28/26 08:24*	*04/29/26 07:00*	*1*
13C5 PFPeA	*50.0*		*35 - 130*	*04/28/26 08:24*	*04/29/26 07:00*	*1*
13C3-PFPrS	*42.0*		*20 - 150*	*04/28/26 08:24*	*04/29/26 07:00*	*1*
13C2 PFTeDA	*64.7*		*20 - 130*	*04/28/26 08:24*	*04/29/26 07:00*	*1*
13C7 PFUnA	*53.5*		*40 - 130*	*04/28/26 08:24*	*04/29/26 07:00*	*1*
d5-NEtFOSAA	*68.8*		*40 - 150*	*04/28/26 08:24*	*04/29/26 07:00*	*1*
d9-N-EtFOSE-M	*45.1*		*15 - 130*	*04/28/26 08:24*	*04/29/26 07:00*	*1*
d5-NEtPFOSA	*59.8*		*10 - 130*	*04/28/26 08:24*	*04/29/26 07:00*	*1*
d3-NMeFOSAA	*68.3*		*40 - 135*	*04/28/26 08:24*	*04/29/26 07:00*	*1*
d7-N-MeFOSE-M	*45.3*		*20 - 130*	*04/28/26 08:24*	*04/29/26 07:00*	*1*
d3-NMePFOSA	*56.6*		*10 - 130*	*04/28/26 08:24*	*04/29/26 07:00*	*1*

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.170		0.170		mg/Kg	☼	04/24/26 14:00	04/27/26 13:10	2

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-02-1
Date Collected: 04/20/26 18:05
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-1
Matrix: Solid
Percent Solids: 96.2

Method: SW846 6020B - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.77**		0.852		mg/Kg	☼	04/24/26 14:00	04/27/26 13:10	2
Barium	**47.8**		0.852		mg/Kg	☼	04/24/26 14:00	04/27/26 13:10	2
Cadmium	<0.170		0.170		mg/Kg	☼	04/24/26 14:00	04/27/26 13:10	2
Chromium	**19.3**		0.341		mg/Kg	☼	04/24/26 14:00	04/27/26 13:10	2
Lead	**4.12**		0.170		mg/Kg	☼	04/24/26 14:00	04/27/26 13:10	2
Selenium	<0.852		0.852		mg/Kg	☼	04/24/26 14:00	04/27/26 13:10	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.122		0.122		mg/Kg	☼	04/24/26 13:00	04/27/26 13:46	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**3.8**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**96.2**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-02-3
Date Collected: 04/20/26 18:10
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-2
Matrix: Solid
Percent Solids: 93.4

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.579		0.579		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Allyl chloride	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Benzene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Bromobenzene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Bromochloromethane	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Bromodichloromethane	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Bromoform	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Bromomethane	<0.579		0.579		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
2-Butanone (MEK)	<0.868		0.868		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Carbon tetrachloride	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Chlorobenzene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Chlorodibromomethane	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Chloroethane	<0.289		0.289		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Chloroform	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Chloromethane	<0.289		0.289		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
2-Chlorotoluene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
4-Chlorotoluene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
cis-1,2-Dichloroethene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
cis-1,3-Dichloropropene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
1,2-Dibromo-3-chloropropane	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
1,2-Dibromoethane (EDB)	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Dibromomethane	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
1,2-Dichlorobenzene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
1,3-Dichlorobenzene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
1,4-Dichlorobenzene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Dichlorodifluoromethane	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
1,1-Dichloroethane	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
1,2-Dichloroethane	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
1,1-Dichloroethene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Dichlorofluoromethane	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
1,2-Dichloropropane	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
1,3-Dichloropropane	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
2,2-Dichloropropane	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
1,1-Dichloropropene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Diethyl ether	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Ethylbenzene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Hexachlorobutadiene	<0.289		0.289		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Isopropylbenzene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Methylene chloride	<0.289		0.289		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
4-Methyl-2-pentanone (MIBK)	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Methyl tert-butyl ether	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Naphthalene	<0.289		0.289		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
n-Butylbenzene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
n-Propylbenzene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
p-Isopropyltoluene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
sec-Butylbenzene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Styrene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
tert-Butylbenzene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
1,1,1,2-Tetrachloroethane	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-02-3
Date Collected: 04/20/26 18:10
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-2
Matrix: Solid
Percent Solids: 93.4

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Tetrachloroethene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Tetrahydrofuran	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Toluene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
trans-1,2-Dichloroethene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
trans-1,3-Dichloropropene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
1,2,3-Trichlorobenzene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
1,2,4-Trichlorobenzene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
1,1,1-Trichloroethane	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
1,1,2-Trichloroethane	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Trichloroethene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Trichlorofluoromethane	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
1,2,3-Trichloropropane	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
1,1,2-Trichlorotrifluoroethane	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
1,2,4-Trimethylbenzene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
1,3,5-Trimethylbenzene	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Vinyl chloride	<0.116		0.116		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1
Xylenes, Total	<0.174		0.174		mg/Kg	☼	04/27/26 09:01	04/28/26 07:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*	*04/27/26 09:01*	*04/28/26 07:40*	*1*
Dibromofluoromethane (Surr)	*88*		*80 - 120*	*04/27/26 09:01*	*04/28/26 07:40*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*	*04/27/26 09:01*	*04/28/26 07:40*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00503		0.00503		mg/Kg	☼	04/24/26 13:04	04/27/26 19:46	1
Acenaphthylene	<0.00503		0.00503		mg/Kg	☼	04/24/26 13:04	04/27/26 19:46	1
Anthracene	<0.00503		0.00503		mg/Kg	☼	04/24/26 13:04	04/27/26 19:46	1
Benzo(a)anthracene	<0.00503		0.00503		mg/Kg	☼	04/24/26 13:04	04/27/26 19:46	1
Benzo(a)pyrene	<0.00503		0.00503		mg/Kg	☼	04/24/26 13:04	04/27/26 19:46	1
Benzo(b)fluoranthene	**0.00619**		0.00503		mg/Kg	☼	04/24/26 13:04	04/27/26 19:46	1
Benzo(g,h,i)perylene	**0.00646**		0.00503		mg/Kg	☼	04/24/26 13:04	04/27/26 19:46	1
Benzo(k)fluoranthene	<0.00503		0.00503		mg/Kg	☼	04/24/26 13:04	04/27/26 19:46	1
Chrysene	<0.00503		0.00503		mg/Kg	☼	04/24/26 13:04	04/27/26 19:46	1
Dibenz(a,h)anthracene	<0.00503		0.00503		mg/Kg	☼	04/24/26 13:04	04/27/26 19:46	1
Fluoranthene	**0.00879**		0.00503		mg/Kg	☼	04/24/26 13:04	04/27/26 19:46	1
Fluorene	<0.00503		0.00503		mg/Kg	☼	04/24/26 13:04	04/27/26 19:46	1
Indeno(1,2,3-cd)pyrene	<0.00503		0.00503		mg/Kg	☼	04/24/26 13:04	04/27/26 19:46	1
2-Methylnaphthalene	**0.00526**		0.00503		mg/Kg	☼	04/24/26 13:04	04/27/26 19:46	1
Naphthalene	<0.00503		0.00503		mg/Kg	☼	04/24/26 13:04	04/27/26 19:46	1
Phenanthrene	**0.00553**		0.00503		mg/Kg	☼	04/24/26 13:04	04/27/26 19:46	1
Pyrene	**0.00768**		0.00503		mg/Kg	☼	04/24/26 13:04	04/27/26 19:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*98*		*20 - 122*	*04/24/26 13:04*	*04/27/26 19:46*	*1*
Nitrobenzene-d5 (Surr)	*91*		*10 - 132*	*04/24/26 13:04*	*04/27/26 19:46*	*1*
Terphenyl-d14 (Surr)	*98*		*10 - 119*	*04/24/26 13:04*	*04/27/26 19:46*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-02-3

Date Collected: 04/20/26 18:10
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-2

Matrix: Solid
Percent Solids: 93.4

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<10.9		10.9		mg/Kg	☼	04/28/26 11:48	04/29/26 14:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*	*04/28/26 11:48*	*04/29/26 14:41*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<6.27		6.27		mg/Kg	☼	04/23/26 11:41	04/24/26 16:16	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.418		0.418		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.418		0.418		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.418		0.418		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.04		1.04		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.04		1.04		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
Perfluorobutanesulfonic acid (PFBS)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
Perfluorobutanoic acid (PFBA)	<0.418		0.418		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
Perfluorodecanesulfonic acid (PFDS)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
Perfluorodecanoic acid (PFDA)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
Perfluorododecanesulfonic acid (PFDoS)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
Perfluorododecanoic acid (PFDoA)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
Perfluoroheptanoic acid (PFHpA)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.04		1.04		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
Perfluorohexanesulfonic acid (PFHxS)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
Perfluorohexanoic acid (PFHxA)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1

Client Sample ID: HA-02-3
Date Collected: 04/20/26 18:10
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-2
Matrix: Solid
Percent Solids: 93.4

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
Perfluorononanesulfonic acid (PFNS)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
Perfluorononanoic acid (PFNA)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
Perfluorooctanesulfonamide (PFOSA)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
Perfluorooctanesulfonic acid (PFOS)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
Perfluorooctanoic acid (PFOA)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
Perfluoropentanesulfonic acid (PFPeS)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
Perfluoropentanoic acid (PFPeA)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.04		1.04		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.418		0.418		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
Perfluorotetradecanoic acid (PFTeDA)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
Perfluorotridecanoic acid (PFTrDA)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1
Perfluoroundecanoic acid (PFUnA)	<0.209		0.209		ng/g	☼	04/27/26 07:31	04/27/26 22:47	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*69.8*		*40 - 130*	*04/27/26 07:31*	*04/27/26 22:47*	*1*
13C2 10:2 FTS	*60.8*		*40 - 275*	*04/27/26 07:31*	*04/27/26 22:47*	*1*
13C2 4:2 FTS	*86.5*		*40 - 165*	*04/27/26 07:31*	*04/27/26 22:47*	*1*
13C2 6:2 FTS	*74.1*		*40 - 215*	*04/27/26 07:31*	*04/27/26 22:47*	*1*
13C2 8:2 FTS	*63.9*		*40 - 275*	*04/27/26 07:31*	*04/27/26 22:47*	*1*
13C3 HFPO-DA	*74.2*		*40 - 130*	*04/27/26 07:31*	*04/27/26 22:47*	*1*
13C4 PFBA	*76.1*		*8 - 130*	*04/27/26 07:31*	*04/27/26 22:47*	*1*
13C3 PFBS	*82.6*		*40 - 135*	*04/27/26 07:31*	*04/27/26 22:47*	*1*
13C6 PFDA	*63.0*		*40 - 130*	*04/27/26 07:31*	*04/27/26 22:47*	*1*
13C2-PFDoA	*55.4*		*40 - 130*	*04/27/26 07:31*	*04/27/26 22:47*	*1*
13C4 PFHpA	*70.3*		*40 - 130*	*04/27/26 07:31*	*04/27/26 22:47*	*1*
13C5 PFHxA	*75.9*		*40 - 130*	*04/27/26 07:31*	*04/27/26 22:47*	*1*
13C3 PFHxS	*79.2*		*40 - 130*	*04/27/26 07:31*	*04/27/26 22:47*	*1*
13C9 PFNA	*69.1*		*40 - 130*	*04/27/26 07:31*	*04/27/26 22:47*	*1*
13C8 PFOA	*64.2*		*40 - 130*	*04/27/26 07:31*	*04/27/26 22:47*	*1*
13C8 PFOS	*62.5*		*40 - 130*	*04/27/26 07:31*	*04/27/26 22:47*	*1*
13C5 PFPeA	*77.3*		*35 - 130*	*04/27/26 07:31*	*04/27/26 22:47*	*1*
13C3-PFPrS	*64.7*		*20 - 150*	*04/27/26 07:31*	*04/27/26 22:47*	*1*
13C2 PFTeDA	*69.4*		*20 - 130*	*04/27/26 07:31*	*04/27/26 22:47*	*1*
13C7 PFUnA	*56.7*		*40 - 130*	*04/27/26 07:31*	*04/27/26 22:47*	*1*
d5-NEtFOSAA	*55.1*		*40 - 150*	*04/27/26 07:31*	*04/27/26 22:47*	*1*
d9-N-EtFOSE-M	*42.6*		*15 - 130*	*04/27/26 07:31*	*04/27/26 22:47*	*1*
d5-NEtPFOSA	*58.0*		*10 - 130*	*04/27/26 07:31*	*04/27/26 22:47*	*1*
d3-NMeFOSAA	*58.9*		*40 - 135*	*04/27/26 07:31*	*04/27/26 22:47*	*1*
d7-N-MeFOSE-M	*39.0*		*20 - 130*	*04/27/26 07:31*	*04/27/26 22:47*	*1*
d3-NMePFOSA	*56.1*		*10 - 130*	*04/27/26 07:31*	*04/27/26 22:47*	*1*

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.166		0.166		mg/Kg	☼	04/24/26 14:00	04/27/26 13:29	2
Arsenic	**1.89**		0.830		mg/Kg	☼	04/24/26 14:00	04/27/26 13:29	2

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-02-3
Date Collected: 04/20/26 18:10
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-2
Matrix: Solid
Percent Solids: 93.4

Method: SW846 6020B - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**40.4**		0.830		mg/Kg	☼	04/24/26 14:00	04/27/26 13:29	2
Cadmium	<0.166		0.166		mg/Kg	☼	04/24/26 14:00	04/27/26 13:29	2
Chromium	**21.9**		0.332		mg/Kg	☼	04/24/26 14:00	04/27/26 13:29	2
Lead	**4.06**		0.166		mg/Kg	☼	04/24/26 14:00	04/27/26 13:29	2
Selenium	<0.830		0.830		mg/Kg	☼	04/24/26 14:00	04/27/26 13:29	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.109		0.109		mg/Kg	☼	04/24/26 13:00	04/27/26 13:51	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**6.6**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**93.4**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-03-1
Date Collected: 04/20/26 18:25
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-3
Matrix: Solid
Percent Solids: 82.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.706		0.706		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Allyl chloride	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Benzene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Bromobenzene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Bromochloromethane	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Bromodichloromethane	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Bromoform	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Bromomethane	<0.706		0.706		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
2-Butanone (MEK)	<1.06		1.06		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Carbon tetrachloride	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Chlorobenzene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Chlorodibromomethane	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Chloroethane	<0.353		0.353		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Chloroform	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Chloromethane	<0.353		0.353		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
2-Chlorotoluene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
4-Chlorotoluene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
cis-1,2-Dichloroethene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
cis-1,3-Dichloropropene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
1,2-Dibromo-3-chloropropane	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
1,2-Dibromoethane (EDB)	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Dibromomethane	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
1,2-Dichlorobenzene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
1,3-Dichlorobenzene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
1,4-Dichlorobenzene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Dichlorodifluoromethane	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
1,1-Dichloroethane	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
1,2-Dichloroethane	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
1,1-Dichloroethene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Dichlorofluoromethane	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
1,2-Dichloropropane	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
1,3-Dichloropropane	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
2,2-Dichloropropane	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
1,1-Dichloropropene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Diethyl ether	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Ethylbenzene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Hexachlorobutadiene	<0.353		0.353		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Isopropylbenzene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Methylene chloride	<0.353		0.353		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
4-Methyl-2-pentanone (MIBK)	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Methyl tert-butyl ether	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Naphthalene	<0.353		0.353		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
n-Butylbenzene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
n-Propylbenzene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
p-Isopropyltoluene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
sec-Butylbenzene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Styrene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
tert-Butylbenzene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
1,1,1,2-Tetrachloroethane	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1

Client Sample ID: HA-03-1
Date Collected: 04/20/26 18:25
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-3
Matrix: Solid
Percent Solids: 82.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Tetrachloroethene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Tetrahydrofuran	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Toluene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
trans-1,2-Dichloroethene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
trans-1,3-Dichloropropene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
1,2,3-Trichlorobenzene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
1,2,4-Trichlorobenzene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
1,1,1-Trichloroethane	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
1,1,2-Trichloroethane	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Trichloroethene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Trichlorofluoromethane	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
1,2,3-Trichloropropane	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
1,1,2-Trichlorotrifluoroethane	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
1,2,4-Trimethylbenzene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
1,3,5-Trimethylbenzene	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Vinyl chloride	<0.141		0.141		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1
Xylenes, Total	<0.212		0.212		mg/Kg	☼	04/27/26 09:06	04/28/26 11:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*	*04/27/26 09:06*	*04/28/26 11:52*	*1*
Dibromofluoromethane (Surr)	*86*		*80 - 120*	*04/27/26 09:06*	*04/28/26 11:52*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*	*04/27/26 09:06*	*04/28/26 11:52*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00583		0.00583		mg/Kg	☼	04/24/26 13:04	04/27/26 20:22	1
Acenaphthylene	<0.00583		0.00583		mg/Kg	☼	04/24/26 13:04	04/27/26 20:22	1
Anthracene	<0.00583		0.00583		mg/Kg	☼	04/24/26 13:04	04/27/26 20:22	1
Benzo(a)anthracene	**0.0295**		0.00583		mg/Kg	☼	04/24/26 13:04	04/27/26 20:22	1
Benzo(a)pyrene	**0.0352**		0.00583		mg/Kg	☼	04/24/26 13:04	04/27/26 20:22	1
Benzo(b)fluoranthene	**0.0416**		0.00583		mg/Kg	☼	04/24/26 13:04	04/27/26 20:22	1
Benzo(g,h,i)perylene	**0.0299**		0.00583		mg/Kg	☼	04/24/26 13:04	04/27/26 20:22	1
Benzo(k)fluoranthene	**0.0176**		0.00583		mg/Kg	☼	04/24/26 13:04	04/27/26 20:22	1
Chrysene	**0.0387**		0.00583		mg/Kg	☼	04/24/26 13:04	04/27/26 20:22	1
Dibenz(a,h)anthracene	**0.00698**		0.00583		mg/Kg	☼	04/24/26 13:04	04/27/26 20:22	1
Fluoranthene	**0.0681**		0.00583		mg/Kg	☼	04/24/26 13:04	04/27/26 20:22	1
Fluorene	<0.00583		0.00583		mg/Kg	☼	04/24/26 13:04	04/27/26 20:22	1
Indeno(1,2,3-cd)pyrene	**0.0224**		0.00583		mg/Kg	☼	04/24/26 13:04	04/27/26 20:22	1
2-Methylnaphthalene	<0.00583		0.00583		mg/Kg	☼	04/24/26 13:04	04/27/26 20:22	1
Naphthalene	<0.00583		0.00583		mg/Kg	☼	04/24/26 13:04	04/27/26 20:22	1
Phenanthrene	**0.0345**		0.00583		mg/Kg	☼	04/24/26 13:04	04/27/26 20:22	1
Pyrene	**0.0582**		0.00583		mg/Kg	☼	04/24/26 13:04	04/27/26 20:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*97*		*20 - 122*	*04/24/26 13:04*	*04/27/26 20:22*	*1*
Nitrobenzene-d5 (Surr)	*57*		*10 - 132*	*04/24/26 13:04*	*04/27/26 20:22*	*1*
Terphenyl-d14 (Surr)	*95*		*10 - 119*	*04/24/26 13:04*	*04/27/26 20:22*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-03-1

Date Collected: 04/20/26 18:25
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-3

Matrix: Solid
Percent Solids: 82.2

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<11.0		11.0		mg/Kg	☼	04/28/26 11:48	04/29/26 15:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*	*04/28/26 11:48*	*04/29/26 15:08*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<6.24		6.24		mg/Kg	☼	04/23/26 11:41	04/24/26 18:59	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.479		0.479		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.479		0.479		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.479		0.479		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.20		1.20		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.20		1.20		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
Perfluorobutanesulfonic acid (PFBS)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
Perfluorobutanoic acid (PFBA)	<0.479		0.479		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
Perfluorodecanesulfonic acid (PFDS)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
Perfluorodecanoic acid (PFDA)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
Perfluorododecanesulfonic acid (PFDoS)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
Perfluorododecanoic acid (PFDoA)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
Perfluoroheptanoic acid (PFHpA)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.20		1.20		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
Perfluorohexanesulfonic acid (PFHxS)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
Perfluorohexanoic acid (PFHxA)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1

Client Sample ID: HA-03-1
Lab Sample ID: 310-330207-3
Date Collected: 04/20/26 18:25
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 82.2

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
Perfluorononanesulfonic acid (PFNS)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
Perfluorononanoic acid (PFNA)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
Perfluorooctanesulfonamide (PFOSA)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
Perfluorooctanesulfonic acid (PFOS)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
Perfluorooctanoic acid (PFOA)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
Perfluoropentanesulfonic acid (PFPeS)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
Perfluoropentanoic acid (PFPeA)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.20		1.20		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.479		0.479		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
Perfluorotetradecanoic acid (PFTeDA)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
Perfluorotridecanoic acid (PFTrDA)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1
Perfluoroundecanoic acid (PFUnA)	<0.240		0.240		ng/g	☼	04/27/26 07:31	04/27/26 23:03	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*71.5*		*40 - 130*	*04/27/26 07:31*	*04/27/26 23:03*	*1*
13C2 10:2 FTS	*69.3*		*40 - 275*	*04/27/26 07:31*	*04/27/26 23:03*	*1*
13C2 4:2 FTS	*83.8*		*40 - 165*	*04/27/26 07:31*	*04/27/26 23:03*	*1*
13C2 6:2 FTS	*74.8*		*40 - 215*	*04/27/26 07:31*	*04/27/26 23:03*	*1*
13C2 8:2 FTS	*68.0*		*40 - 275*	*04/27/26 07:31*	*04/27/26 23:03*	*1*
13C3 HFPO-DA	*71.8*		*40 - 130*	*04/27/26 07:31*	*04/27/26 23:03*	*1*
13C4 PFBA	*73.6*		*8 - 130*	*04/27/26 07:31*	*04/27/26 23:03*	*1*
13C3 PFBS	*83.4*		*40 - 135*	*04/27/26 07:31*	*04/27/26 23:03*	*1*
13C6 PFDA	*67.8*		*40 - 130*	*04/27/26 07:31*	*04/27/26 23:03*	*1*
13C2-PFDoA	*66.5*		*40 - 130*	*04/27/26 07:31*	*04/27/26 23:03*	*1*
13C4 PFHpA	*71.1*		*40 - 130*	*04/27/26 07:31*	*04/27/26 23:03*	*1*
13C5 PFHxA	*71.4*		*40 - 130*	*04/27/26 07:31*	*04/27/26 23:03*	*1*
13C3 PFHxS	*82.2*		*40 - 130*	*04/27/26 07:31*	*04/27/26 23:03*	*1*
13C9 PFNA	*73.2*		*40 - 130*	*04/27/26 07:31*	*04/27/26 23:03*	*1*
13C8 PFOA	*68.0*		*40 - 130*	*04/27/26 07:31*	*04/27/26 23:03*	*1*
13C8 PFOS	*67.2*		*40 - 130*	*04/27/26 07:31*	*04/27/26 23:03*	*1*
13C5 PFPeA	*75.9*		*35 - 130*	*04/27/26 07:31*	*04/27/26 23:03*	*1*
13C3-PFPrS	*61.1*		*20 - 150*	*04/27/26 07:31*	*04/27/26 23:03*	*1*
13C2 PFTeDA	*81.2*		*20 - 130*	*04/27/26 07:31*	*04/27/26 23:03*	*1*
13C7 PFUnA	*65.1*		*40 - 130*	*04/27/26 07:31*	*04/27/26 23:03*	*1*
d5-NEtFOSAA	*60.1*		*40 - 150*	*04/27/26 07:31*	*04/27/26 23:03*	*1*
d9-N-EtFOSE-M	*50.6*		*15 - 130*	*04/27/26 07:31*	*04/27/26 23:03*	*1*
d5-NEtPFOSA	*65.6*		*10 - 130*	*04/27/26 07:31*	*04/27/26 23:03*	*1*
d3-NMeFOSAA	*62.1*		*40 - 135*	*04/27/26 07:31*	*04/27/26 23:03*	*1*
d7-N-MeFOSE-M	*57.9*		*20 - 130*	*04/27/26 07:31*	*04/27/26 23:03*	*1*
d3-NMePFOSA	*67.0*		*10 - 130*	*04/27/26 07:31*	*04/27/26 23:03*	*1*

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.238		0.238		mg/Kg	☼	04/24/26 14:00	04/27/26 13:32	2
Arsenic	**5.78**		1.19		mg/Kg	☼	04/24/26 14:00	04/27/26 13:32	2

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-03-1
Date Collected: 04/20/26 18:25
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-3
Matrix: Solid
Percent Solids: 82.2

Method: SW846 6020B - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	73.4		1.19		mg/Kg	☼	04/24/26 14:00	04/27/26 13:32	2
Cadmium	0.385		0.238		mg/Kg	☼	04/24/26 14:00	04/27/26 13:32	2
Chromium	20.7		0.477		mg/Kg	☼	04/24/26 14:00	04/27/26 13:32	2
Lead	22.0		0.238		mg/Kg	☼	04/24/26 14:00	04/27/26 13:32	2
Selenium	<1.19		1.19		mg/Kg	☼	04/24/26 14:00	04/27/26 13:32	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.135		0.135		mg/Kg	☼	04/24/26 13:00	04/27/26 13:52	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	17.8		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	82.2		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-03-3
Date Collected: 04/20/26 18:30
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-4
Matrix: Solid
Percent Solids: 92.9

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.587		0.587		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Allyl chloride	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Benzene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Bromobenzene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Bromochloromethane	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Bromodichloromethane	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Bromoform	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Bromomethane	<0.587		0.587		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
2-Butanone (MEK)	<0.880		0.880		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Carbon tetrachloride	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Chlorobenzene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Chlorodibromomethane	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Chloroethane	<0.293		0.293		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Chloroform	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Chloromethane	<0.293		0.293		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
2-Chlorotoluene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
4-Chlorotoluene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
cis-1,2-Dichloroethene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
cis-1,3-Dichloropropene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
1,2-Dibromo-3-chloropropane	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
1,2-Dibromoethane (EDB)	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Dibromomethane	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
1,2-Dichlorobenzene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
1,3-Dichlorobenzene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
1,4-Dichlorobenzene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Dichlorodifluoromethane	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
1,1-Dichloroethane	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
1,2-Dichloroethane	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
1,1-Dichloroethene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Dichlorofluoromethane	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
1,2-Dichloropropane	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
1,3-Dichloropropane	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
2,2-Dichloropropane	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
1,1-Dichloropropene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Diethyl ether	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Ethylbenzene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Hexachlorobutadiene	<0.293		0.293		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Isopropylbenzene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Methylene chloride	<0.293		0.293		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
4-Methyl-2-pentanone (MIBK)	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Methyl tert-butyl ether	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Naphthalene	<0.293		0.293		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
n-Butylbenzene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
n-Propylbenzene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
p-Isopropyltoluene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
sec-Butylbenzene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Styrene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
tert-Butylbenzene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
1,1,1,2-Tetrachloroethane	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-03-3
Date Collected: 04/20/26 18:30
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-4
Matrix: Solid
Percent Solids: 92.9

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Tetrachloroethene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Tetrahydrofuran	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Toluene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
trans-1,2-Dichloroethene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
trans-1,3-Dichloropropene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
1,2,3-Trichlorobenzene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
1,2,4-Trichlorobenzene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
1,1,1-Trichloroethane	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
1,1,2-Trichloroethane	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Trichloroethene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Trichlorofluoromethane	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
1,2,3-Trichloropropane	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
1,1,2-Trichlorotrifluoroethane	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
1,2,4-Trimethylbenzene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
1,3,5-Trimethylbenzene	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Vinyl chloride	<0.117		0.117		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1
Xylenes, Total	<0.176		0.176		mg/Kg	☼	04/28/26 08:11	04/29/26 15:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*	*04/28/26 08:11*	*04/29/26 15:32*	*1*
Dibromofluoromethane (Surr)	*87*		*80 - 120*	*04/28/26 08:11*	*04/29/26 15:32*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*	*04/28/26 08:11*	*04/29/26 15:32*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00528		0.00528		mg/Kg	☼	04/24/26 13:04	04/27/26 20:58	1
Acenaphthylene	<0.00528		0.00528		mg/Kg	☼	04/24/26 13:04	04/27/26 20:58	1
Anthracene	<0.00528		0.00528		mg/Kg	☼	04/24/26 13:04	04/27/26 20:58	1
Benzo(a)anthracene	**0.00633**		0.00528		mg/Kg	☼	04/24/26 13:04	04/27/26 20:58	1
Benzo(a)pyrene	**0.00929**		0.00528		mg/Kg	☼	04/24/26 13:04	04/27/26 20:58	1
Benzo(b)fluoranthene	**0.0108**		0.00528		mg/Kg	☼	04/24/26 13:04	04/27/26 20:58	1
Benzo(g,h,i)perylene	**0.00977**		0.00528		mg/Kg	☼	04/24/26 13:04	04/27/26 20:58	1
Benzo(k)fluoranthene	**0.00570**		0.00528		mg/Kg	☼	04/24/26 13:04	04/27/26 20:58	1
Chrysene	**0.00937**		0.00528		mg/Kg	☼	04/24/26 13:04	04/27/26 20:58	1
Dibenz(a,h)anthracene	<0.00528		0.00528		mg/Kg	☼	04/24/26 13:04	04/27/26 20:58	1
Fluoranthene	**0.0130**		0.00528		mg/Kg	☼	04/24/26 13:04	04/27/26 20:58	1
Fluorene	<0.00528		0.00528		mg/Kg	☼	04/24/26 13:04	04/27/26 20:58	1
Indeno(1,2,3-cd)pyrene	**0.00691**		0.00528		mg/Kg	☼	04/24/26 13:04	04/27/26 20:58	1
2-Methylnaphthalene	<0.00528		0.00528		mg/Kg	☼	04/24/26 13:04	04/27/26 20:58	1
Naphthalene	<0.00528		0.00528		mg/Kg	☼	04/24/26 13:04	04/27/26 20:58	1
Phenanthrene	**0.00553**		0.00528		mg/Kg	☼	04/24/26 13:04	04/27/26 20:58	1
Pyrene	**0.0114**		0.00528		mg/Kg	☼	04/24/26 13:04	04/27/26 20:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*94*		*20 - 122*	*04/24/26 13:04*	*04/27/26 20:58*	*1*
Nitrobenzene-d5 (Surr)	*64*		*10 - 132*	*04/24/26 13:04*	*04/27/26 20:58*	*1*
Terphenyl-d14 (Surr)	*86*		*10 - 119*	*04/24/26 13:04*	*04/27/26 20:58*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-03-3
Date Collected: 04/20/26 18:30
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-4
Matrix: Solid
Percent Solids: 92.9

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<9.97		9.97		mg/Kg	☼	04/28/26 11:48	04/29/26 15:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*	*04/28/26 11:48*	*04/29/26 15:34*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<6.81		6.81		mg/Kg	☼	04/23/26 11:41	04/24/26 16:29	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.414		0.414		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.414		0.414		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.414		0.414		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.04		1.04		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.04		1.04		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
Perfluorobutanesulfonic acid (PFBS)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
Perfluorobutanoic acid (PFBA)	<0.414		0.414		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
Perfluorodecanesulfonic acid (PFDS)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
Perfluorodecanoic acid (PFDA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
Perfluorododecanesulfonic acid (PFDoS)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
Perfluorododecanoic acid (PFDoA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
Perfluoroheptanoic acid (PFHpA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.04		1.04		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
Perfluorohexanesulfonic acid (PFHxS)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
Perfluorohexanoic acid (PFHxA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1

Client Sample ID: HA-03-3
Lab Sample ID: 310-330207-4
Date Collected: 04/20/26 18:30
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 92.9

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
Perfluorononanesulfonic acid (PFNS)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
Perfluorononanoic acid (PFNA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
Perfluorooctanesulfonamide (PFOSA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
Perfluorooctanesulfonic acid (PFOS)	**0.293**		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
Perfluorooctanoic acid (PFOA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
Perfluoropentanesulfonic acid (PFPeS)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
Perfluoropentanoic acid (PFPeA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.04		1.04		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.414		0.414		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
Perfluorotetradecanoic acid (PFTeDA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
Perfluorotridecanoic acid (PFTrDA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1
Perfluoroundecanoic acid (PFUnA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/27/26 23:53	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*63.3*		*40 - 130*	*04/27/26 07:31*	*04/27/26 23:53*	*1*
13C2 10:2 FTS	*60.0*		*40 - 275*	*04/27/26 07:31*	*04/27/26 23:53*	*1*
13C2 4:2 FTS	*73.3*		*40 - 165*	*04/27/26 07:31*	*04/27/26 23:53*	*1*
13C2 6:2 FTS	*65.9*		*40 - 215*	*04/27/26 07:31*	*04/27/26 23:53*	*1*
13C2 8:2 FTS	*61.1*		*40 - 275*	*04/27/26 07:31*	*04/27/26 23:53*	*1*
13C3 HFPO-DA	*67.5*		*40 - 130*	*04/27/26 07:31*	*04/27/26 23:53*	*1*
13C4 PFBA	*67.8*		*8 - 130*	*04/27/26 07:31*	*04/27/26 23:53*	*1*
13C3 PFBS	*72.3*		*40 - 135*	*04/27/26 07:31*	*04/27/26 23:53*	*1*
13C6 PFDA	*59.7*		*40 - 130*	*04/27/26 07:31*	*04/27/26 23:53*	*1*
13C2-PFDoA	*56.4*		*40 - 130*	*04/27/26 07:31*	*04/27/26 23:53*	*1*
13C4 PFHpA	*64.1*		*40 - 130*	*04/27/26 07:31*	*04/27/26 23:53*	*1*
13C5 PFHxA	*67.6*		*40 - 130*	*04/27/26 07:31*	*04/27/26 23:53*	*1*
13C3 PFHxS	*70.3*		*40 - 130*	*04/27/26 07:31*	*04/27/26 23:53*	*1*
13C9 PFNA	*63.8*		*40 - 130*	*04/27/26 07:31*	*04/27/26 23:53*	*1*
13C8 PFOA	*60.1*		*40 - 130*	*04/27/26 07:31*	*04/27/26 23:53*	*1*
13C8 PFOS	*57.6*		*40 - 130*	*04/27/26 07:31*	*04/27/26 23:53*	*1*
13C5 PFPeA	*70.8*		*35 - 130*	*04/27/26 07:31*	*04/27/26 23:53*	*1*
13C3-PFPrS	*57.9*		*20 - 150*	*04/27/26 07:31*	*04/27/26 23:53*	*1*
13C2 PFTeDA	*69.7*		*20 - 130*	*04/27/26 07:31*	*04/27/26 23:53*	*1*
13C7 PFUnA	*56.2*		*40 - 130*	*04/27/26 07:31*	*04/27/26 23:53*	*1*
d5-NEtFOSAA	*54.3*		*40 - 150*	*04/27/26 07:31*	*04/27/26 23:53*	*1*
d9-N-EtFOSE-M	*49.7*		*15 - 130*	*04/27/26 07:31*	*04/27/26 23:53*	*1*
d5-NEtPFOSA	*57.8*		*10 - 130*	*04/27/26 07:31*	*04/27/26 23:53*	*1*
d3-NMeFOSAA	*58.7*		*40 - 135*	*04/27/26 07:31*	*04/27/26 23:53*	*1*
d7-N-MeFOSE-M	*46.3*		*20 - 130*	*04/27/26 07:31*	*04/27/26 23:53*	*1*
d3-NMePFOSA	*55.1*		*10 - 130*	*04/27/26 07:31*	*04/27/26 23:53*	*1*

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.189		0.189		mg/Kg	☼	04/24/26 14:00	04/27/26 13:34	2

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-03-3
Date Collected: 04/20/26 18:30
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-4
Matrix: Solid
Percent Solids: 92.9

Method: SW846 6020B - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.07		0.945		mg/Kg	☼	04/24/26 14:00	04/27/26 13:34	2
Barium	39.8		0.945		mg/Kg	☼	04/24/26 14:00	04/27/26 13:34	2
Cadmium	<0.189		0.189		mg/Kg	☼	04/24/26 14:00	04/27/26 13:34	2
Chromium	19.0		0.378		mg/Kg	☼	04/24/26 14:00	04/27/26 13:34	2
Lead	3.98		0.189		mg/Kg	☼	04/24/26 14:00	04/27/26 13:34	2
Selenium	<0.945		0.945		mg/Kg	☼	04/24/26 14:00	04/27/26 13:34	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.0950		0.0950		mg/Kg	☼	04/24/26 13:00	04/27/26 13:54	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	7.1		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	92.9		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-04-1
Date Collected: 04/20/26 18:50
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-5
Matrix: Solid
Percent Solids: 93.8

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.581		0.581		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Allyl chloride	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Benzene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Bromobenzene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Bromochloromethane	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Bromodichloromethane	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Bromoform	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Bromomethane	<0.581		0.581		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
2-Butanone (MEK)	<0.871		0.871		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Carbon tetrachloride	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Chlorobenzene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Chlorodibromomethane	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Chloroethane	<0.290		0.290		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Chloroform	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Chloromethane	<0.290		0.290		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
2-Chlorotoluene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
4-Chlorotoluene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
cis-1,2-Dichloroethene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
cis-1,3-Dichloropropene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
1,2-Dibromo-3-chloropropane	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
1,2-Dibromoethane (EDB)	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Dibromomethane	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
1,2-Dichlorobenzene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
1,3-Dichlorobenzene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
1,4-Dichlorobenzene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Dichlorodifluoromethane	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
1,1-Dichloroethane	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
1,2-Dichloroethane	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
1,1-Dichloroethene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Dichlorofluoromethane	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
1,2-Dichloropropane	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
1,3-Dichloropropane	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
2,2-Dichloropropane	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
1,1-Dichloropropene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Diethyl ether	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Ethylbenzene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Hexachlorobutadiene	<0.290		0.290		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Isopropylbenzene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Methylene chloride	<0.290		0.290		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
4-Methyl-2-pentanone (MIBK)	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Methyl tert-butyl ether	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Naphthalene	<0.290		0.290		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
n-Butylbenzene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
n-Propylbenzene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
p-Isopropyltoluene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
sec-Butylbenzene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Styrene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
tert-Butylbenzene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
1,1,1,2-Tetrachloroethane	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1

Client Sample ID: HA-04-1
Date Collected: 04/20/26 18:50
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-5
Matrix: Solid
Percent Solids: 93.8

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Tetrachloroethene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Tetrahydrofuran	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Toluene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
trans-1,2-Dichloroethene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
trans-1,3-Dichloropropene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
1,2,3-Trichlorobenzene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
1,2,4-Trichlorobenzene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
1,1,1-Trichloroethane	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
1,1,2-Trichloroethane	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Trichloroethene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Trichlorofluoromethane	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
1,2,3-Trichloropropane	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
1,1,2-Trichlorotrifluoroethane	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
1,2,4-Trimethylbenzene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
1,3,5-Trimethylbenzene	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Vinyl chloride	<0.116		0.116		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1
Xylenes, Total	<0.174		0.174		mg/Kg	☼	04/28/26 08:11	04/29/26 15:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*	*04/28/26 08:11*	*04/29/26 15:55*	*1*
Dibromofluoromethane (Surr)	*90*		*80 - 120*	*04/28/26 08:11*	*04/29/26 15:55*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*	*04/28/26 08:11*	*04/29/26 15:55*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00501		0.00501		mg/Kg	☼	04/24/26 13:04	04/27/26 21:35	1
Acenaphthylene	<0.00501		0.00501		mg/Kg	☼	04/24/26 13:04	04/27/26 21:35	1
Anthracene	<0.00501		0.00501		mg/Kg	☼	04/24/26 13:04	04/27/26 21:35	1
Benzo(a)anthracene	<0.00501		0.00501		mg/Kg	☼	04/24/26 13:04	04/27/26 21:35	1
Benzo(a)pyrene	<0.00501		0.00501		mg/Kg	☼	04/24/26 13:04	04/27/26 21:35	1
Benzo(b)fluoranthene	<0.00501		0.00501		mg/Kg	☼	04/24/26 13:04	04/27/26 21:35	1
Benzo(g,h,i)perylene	**0.00596**		0.00501		mg/Kg	☼	04/24/26 13:04	04/27/26 21:35	1
Benzo(k)fluoranthene	<0.00501		0.00501		mg/Kg	☼	04/24/26 13:04	04/27/26 21:35	1
Chrysene	<0.00501		0.00501		mg/Kg	☼	04/24/26 13:04	04/27/26 21:35	1
Dibenz(a,h)anthracene	<0.00501		0.00501		mg/Kg	☼	04/24/26 13:04	04/27/26 21:35	1
Fluoranthene	<0.00501		0.00501		mg/Kg	☼	04/24/26 13:04	04/27/26 21:35	1
Fluorene	<0.00501		0.00501		mg/Kg	☼	04/24/26 13:04	04/27/26 21:35	1
Indeno(1,2,3-cd)pyrene	<0.00501		0.00501		mg/Kg	☼	04/24/26 13:04	04/27/26 21:35	1
2-Methylnaphthalene	<0.00501		0.00501		mg/Kg	☼	04/24/26 13:04	04/27/26 21:35	1
Naphthalene	**0.00672**		0.00501		mg/Kg	☼	04/24/26 13:04	04/27/26 21:35	1
Phenanthrene	<0.00501		0.00501		mg/Kg	☼	04/24/26 13:04	04/27/26 21:35	1
Pyrene	<0.00501		0.00501		mg/Kg	☼	04/24/26 13:04	04/27/26 21:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*100*		*20 - 122*	*04/24/26 13:04*	*04/27/26 21:35*	*1*
Nitrobenzene-d5 (Surr)	*99*		*10 - 132*	*04/24/26 13:04*	*04/27/26 21:35*	*1*
Terphenyl-d14 (Surr)	*95*		*10 - 119*	*04/24/26 13:04*	*04/27/26 21:35*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-04-1
Date Collected: 04/20/26 18:50
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-5
Matrix: Solid
Percent Solids: 93.8

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<10.2		10.2		mg/Kg	☼	04/28/26 11:48	04/29/26 16:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*	*04/28/26 11:48*	*04/29/26 16:00*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<6.35		6.35		mg/Kg	☼	04/23/26 11:41	04/24/26 16:41	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	**0.531**		0.414		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.414		0.414		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	**0.537**		0.414		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.04		1.04		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.04		1.04		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
Perfluorobutanesulfonic acid (PFBS)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
Perfluorobutanoic acid (PFBA)	<0.414		0.414		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
Perfluorodecanesulfonic acid (PFDS)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
Perfluorodecanoic acid (PFDA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
Perfluorododecanesulfonic acid (PFDoS)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
Perfluorododecanoic acid (PFDoA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
Perfluoroheptanoic acid (PFHpA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.04		1.04		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
Perfluorohexanesulfonic acid (PFHxS)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
Perfluorohexanoic acid (PFHxA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1

Client Sample ID: HA-04-1
Date Collected: 04/20/26 18:50
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-5
Matrix: Solid
Percent Solids: 93.8

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
Perfluorononanesulfonic acid (PFNS)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
Perfluorononanoic acid (PFNA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
Perfluorooctanesulfonamide (PFOSA)	**0.340**		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
Perfluorooctanesulfonic acid (PFOS)	**0.686**		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
Perfluorooctanoic acid (PFOA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
Perfluoropentanesulfonic acid (PFPeS)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
Perfluoropentanoic acid (PFPeA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.04		1.04		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.414		0.414		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
Perfluorotetradecanoic acid (PFTeDA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
Perfluorotridecanoic acid (PFTrDA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1
Perfluoroundecanoic acid (PFUnA)	<0.207		0.207		ng/g	☼	04/27/26 07:31	04/28/26 00:10	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*65.1*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:10*	*1*
13C2 10:2 FTS	*61.8*		*40 - 275*	*04/27/26 07:31*	*04/28/26 00:10*	*1*
13C2 4:2 FTS	*78.5*		*40 - 165*	*04/27/26 07:31*	*04/28/26 00:10*	*1*
13C2 6:2 FTS	*70.3*		*40 - 215*	*04/27/26 07:31*	*04/28/26 00:10*	*1*
13C2 8:2 FTS	*63.0*		*40 - 275*	*04/27/26 07:31*	*04/28/26 00:10*	*1*
13C3 HFPO-DA	*70.5*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:10*	*1*
13C4 PFBA	*69.6*		*8 - 130*	*04/27/26 07:31*	*04/28/26 00:10*	*1*
13C3 PFBS	*76.2*		*40 - 135*	*04/27/26 07:31*	*04/28/26 00:10*	*1*
13C6 PFDA	*64.1*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:10*	*1*
13C2-PFDoA	*60.4*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:10*	*1*
13C4 PFHpA	*67.4*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:10*	*1*
13C5 PFHxA	*69.5*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:10*	*1*
13C3 PFHxS	*74.6*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:10*	*1*
13C9 PFNA	*66.9*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:10*	*1*
13C8 PFOA	*63.8*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:10*	*1*
13C8 PFOS	*61.4*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:10*	*1*
13C5 PFPeA	*73.4*		*35 - 130*	*04/27/26 07:31*	*04/28/26 00:10*	*1*
13C3-PFPrS	*59.6*		*20 - 150*	*04/27/26 07:31*	*04/28/26 00:10*	*1*
13C2 PFTeDA	*57.9*		*20 - 130*	*04/27/26 07:31*	*04/28/26 00:10*	*1*
13C7 PFUnA	*61.5*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:10*	*1*
d5-NEtFOSAA	*53.0*		*40 - 150*	*04/27/26 07:31*	*04/28/26 00:10*	*1*
d9-N-EtFOSE-M	*34.8*		*15 - 130*	*04/27/26 07:31*	*04/28/26 00:10*	*1*
d5-NEtPFOSA	*59.3*		*10 - 130*	*04/27/26 07:31*	*04/28/26 00:10*	*1*
d3-NMeFOSAA	*55.9*		*40 - 135*	*04/27/26 07:31*	*04/28/26 00:10*	*1*
d7-N-MeFOSE-M	*36.9*		*20 - 130*	*04/27/26 07:31*	*04/28/26 00:10*	*1*
d3-NMePFOSA	*60.3*		*10 - 130*	*04/27/26 07:31*	*04/28/26 00:10*	*1*

Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-04-1

Date Collected: 04/20/26 18:50
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-5

Matrix: Solid
Percent Solids: 93.8

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.173		0.173		mg/Kg	☼	04/24/26 14:00	04/27/26 13:37	2
Arsenic	**2.01**		0.867		mg/Kg	☼	04/24/26 14:00	04/27/26 13:37	2
Barium	**35.2**		0.867		mg/Kg	☼	04/24/26 14:00	04/27/26 13:37	2
Cadmium	**0.179**		0.173		mg/Kg	☼	04/24/26 14:00	04/27/26 13:37	2
Chromium	**21.6**		0.347		mg/Kg	☼	04/24/26 14:00	04/27/26 13:37	2
Lead	**4.11**		0.173		mg/Kg	☼	04/24/26 14:00	04/27/26 13:37	2
Selenium	<0.867		0.867		mg/Kg	☼	04/24/26 14:00	04/27/26 13:37	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.118		0.118		mg/Kg	☼	04/24/26 13:00	04/27/26 13:56	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**6.2**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**93.8**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-04-3
Date Collected: 04/20/26 18:55
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-6
Matrix: Solid
Percent Solids: 89.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.616		0.616		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Allyl chloride	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Benzene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Bromobenzene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Bromochloromethane	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Bromodichloromethane	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Bromoform	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Bromomethane	<0.616		0.616		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
2-Butanone (MEK)	<0.923		0.923		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Carbon tetrachloride	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Chlorobenzene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Chlorodibromomethane	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Chloroethane	<0.308		0.308		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Chloroform	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Chloromethane	<0.308		0.308		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
2-Chlorotoluene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
4-Chlorotoluene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
cis-1,2-Dichloroethene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
cis-1,3-Dichloropropene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
1,2-Dibromo-3-chloropropane	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
1,2-Dibromoethane (EDB)	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Dibromomethane	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
1,2-Dichlorobenzene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
1,3-Dichlorobenzene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
1,4-Dichlorobenzene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Dichlorodifluoromethane	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
1,1-Dichloroethane	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
1,2-Dichloroethane	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
1,1-Dichloroethene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Dichlorofluoromethane	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
1,2-Dichloropropane	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
1,3-Dichloropropane	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
2,2-Dichloropropane	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
1,1-Dichloropropene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Diethyl ether	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Ethylbenzene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Hexachlorobutadiene	<0.308		0.308		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Isopropylbenzene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Methylene chloride	<0.308		0.308		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
4-Methyl-2-pentanone (MIBK)	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Methyl tert-butyl ether	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Naphthalene	<0.308		0.308		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
n-Butylbenzene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
n-Propylbenzene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
p-Isopropyltoluene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
sec-Butylbenzene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Styrene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
tert-Butylbenzene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
1,1,1,2-Tetrachloroethane	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-04-3
Date Collected: 04/20/26 18:55
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-6
Matrix: Solid
Percent Solids: 89.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Tetrachloroethene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Tetrahydrofuran	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Toluene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
trans-1,2-Dichloroethene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
trans-1,3-Dichloropropene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
1,2,3-Trichlorobenzene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
1,2,4-Trichlorobenzene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
1,1,1-Trichloroethane	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
1,1,2-Trichloroethane	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Trichloroethene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Trichlorofluoromethane	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
1,2,3-Trichloropropane	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
1,1,2-Trichlorotrifluoroethane	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
1,2,4-Trimethylbenzene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
1,3,5-Trimethylbenzene	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Vinyl chloride	<0.123		0.123		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1
Xylenes, Total	<0.185		0.185		mg/Kg	☼	04/28/26 08:11	04/29/26 16:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*	*04/28/26 08:11*	*04/29/26 16:18*	*1*
Dibromofluoromethane (Surr)	*88*		*80 - 120*	*04/28/26 08:11*	*04/29/26 16:18*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*	*04/28/26 08:11*	*04/29/26 16:18*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00536		0.00536		mg/Kg	☼	04/24/26 13:04	04/28/26 01:12	1
Acenaphthylene	<0.00536		0.00536		mg/Kg	☼	04/24/26 13:04	04/28/26 01:12	1
Anthracene	<0.00536		0.00536		mg/Kg	☼	04/24/26 13:04	04/28/26 01:12	1
Benzo(a)anthracene	**0.00628**		0.00536		mg/Kg	☼	04/24/26 13:04	04/28/26 01:12	1
Benzo(a)pyrene	**0.00650**		0.00536		mg/Kg	☼	04/24/26 13:04	04/28/26 01:12	1
Benzo(b)fluoranthene	**0.00706**		0.00536		mg/Kg	☼	04/24/26 13:04	04/28/26 01:12	1
Benzo(g,h,i)perylene	**0.00549**		0.00536		mg/Kg	☼	04/24/26 13:04	04/28/26 01:12	1
Benzo(k)fluoranthene	<0.00536		0.00536		mg/Kg	☼	04/24/26 13:04	04/28/26 01:12	1
Chrysene	**0.00744**		0.00536		mg/Kg	☼	04/24/26 13:04	04/28/26 01:12	1
Dibenz(a,h)anthracene	<0.00536		0.00536		mg/Kg	☼	04/24/26 13:04	04/28/26 01:12	1
Fluoranthene	**0.0172**		0.00536		mg/Kg	☼	04/24/26 13:04	04/28/26 01:12	1
Fluorene	<0.00536		0.00536		mg/Kg	☼	04/24/26 13:04	04/28/26 01:12	1
Indeno(1,2,3-cd)pyrene	<0.00536		0.00536		mg/Kg	☼	04/24/26 13:04	04/28/26 01:12	1
2-Methylnaphthalene	<0.00536		0.00536		mg/Kg	☼	04/24/26 13:04	04/28/26 01:12	1
Naphthalene	<0.00536		0.00536		mg/Kg	☼	04/24/26 13:04	04/28/26 01:12	1
Phenanthrene	**0.00918**		0.00536		mg/Kg	☼	04/24/26 13:04	04/28/26 01:12	1
Pyrene	**0.0134**		0.00536		mg/Kg	☼	04/24/26 13:04	04/28/26 01:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*103*		*20 - 122*	*04/24/26 13:04*	*04/28/26 01:12*	*1*
Nitrobenzene-d5 (Surr)	*76*		*10 - 132*	*04/24/26 13:04*	*04/28/26 01:12*	*1*
Terphenyl-d14 (Surr)	*105*		*10 - 119*	*04/24/26 13:04*	*04/28/26 01:12*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-04-3

Date Collected: 04/20/26 18:55
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-6

Matrix: Solid
Percent Solids: 89.2

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<9.76		9.76		mg/Kg	☼	04/28/26 11:48	04/29/26 16:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*	*04/28/26 11:48*	*04/29/26 16:26*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	**12.4**		6.41		mg/Kg	☼	04/23/26 11:41	04/24/26 16:54	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.444		0.444		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.444		0.444		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.444		0.444		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.11		1.11		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.11		1.11		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
Perfluorobutanesulfonic acid (PFBS)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
Perfluorobutanoic acid (PFBA)	<0.444		0.444		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
Perfluorodecanesulfonic acid (PFDS)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
Perfluorodecanoic acid (PFDA)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
Perfluorododecanesulfonic acid (PFDoS)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
Perfluorododecanoic acid (PFDoA)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
Perfluoroheptanoic acid (PFHpA)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.11		1.11		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
Perfluorohexanesulfonic acid (PFHxS)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
Perfluorohexanoic acid (PFHxA)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1

Client Sample ID: HA-04-3
Lab Sample ID: 310-330207-6
Date Collected: 04/20/26 18:55
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 89.2

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
Perfluorononanesulfonic acid (PFNS)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
Perfluorononanoic acid (PFNA)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
Perfluorooctanesulfonamide (PFOSA)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
Perfluorooctanesulfonic acid (PFOS)	**0.526**		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
Perfluorooctanoic acid (PFOA)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
Perfluoropentanesulfonic acid (PFPeS)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
Perfluoropentanoic acid (PFPeA)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.11		1.11		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.444		0.444		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
Perfluorotetradecanoic acid (PFTeDA)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
Perfluorotridecanoic acid (PFTrDA)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1
Perfluoroundecanoic acid (PFUnA)	<0.222		0.222		ng/g	☼	04/27/26 07:31	04/28/26 00:26	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*72.1*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:26*	*1*
13C2 10:2 FTS	*70.8*		*40 - 275*	*04/27/26 07:31*	*04/28/26 00:26*	*1*
13C2 4:2 FTS	*82.3*		*40 - 165*	*04/27/26 07:31*	*04/28/26 00:26*	*1*
13C2 6:2 FTS	*75.2*		*40 - 215*	*04/27/26 07:31*	*04/28/26 00:26*	*1*
13C2 8:2 FTS	*72.5*		*40 - 275*	*04/27/26 07:31*	*04/28/26 00:26*	*1*
13C3 HFPO-DA	*78.0*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:26*	*1*
13C4 PFBA	*73.3*		*8 - 130*	*04/27/26 07:31*	*04/28/26 00:26*	*1*
13C3 PFBS	*83.6*		*40 - 135*	*04/27/26 07:31*	*04/28/26 00:26*	*1*
13C6 PFDA	*73.3*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:26*	*1*
13C2-PFDoA	*67.2*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:26*	*1*
13C4 PFHpA	*75.7*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:26*	*1*
13C5 PFHxA	*76.9*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:26*	*1*
13C3 PFHxS	*83.5*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:26*	*1*
13C9 PFNA	*75.6*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:26*	*1*
13C8 PFOA	*69.6*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:26*	*1*
13C8 PFOS	*67.3*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:26*	*1*
13C5 PFPeA	*82.0*		*35 - 130*	*04/27/26 07:31*	*04/28/26 00:26*	*1*
13C3-PFPrS	*65.3*		*20 - 150*	*04/27/26 07:31*	*04/28/26 00:26*	*1*
13C2 PFTeDA	*60.2*		*20 - 130*	*04/27/26 07:31*	*04/28/26 00:26*	*1*
13C7 PFUnA	*69.0*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:26*	*1*
d5-NEtFOSAA	*60.3*		*40 - 150*	*04/27/26 07:31*	*04/28/26 00:26*	*1*
d9-N-EtFOSE-M	*28.4*		*15 - 130*	*04/27/26 07:31*	*04/28/26 00:26*	*1*
d5-NEtPFOSA	*66.5*		*10 - 130*	*04/27/26 07:31*	*04/28/26 00:26*	*1*
d3-NMeFOSAA	*63.7*		*40 - 135*	*04/27/26 07:31*	*04/28/26 00:26*	*1*
d7-N-MeFOSE-M	*31.9*		*20 - 130*	*04/27/26 07:31*	*04/28/26 00:26*	*1*
d3-NMePFOSA	*65.3*		*10 - 130*	*04/27/26 07:31*	*04/28/26 00:26*	*1*

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.177		0.177		mg/Kg	☼	04/24/26 14:00	04/27/26 13:40	2

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-04-3
Date Collected: 04/20/26 18:55
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-6
Matrix: Solid
Percent Solids: 89.2

Method: SW846 6020B - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.38		0.883		mg/Kg	☼	04/24/26 14:00	04/27/26 13:40	2
Barium	47.2		0.883		mg/Kg	☼	04/24/26 14:00	04/27/26 13:40	2
Cadmium	<0.177		0.177		mg/Kg	☼	04/24/26 14:00	04/27/26 13:40	2
Chromium	24.1		0.353		mg/Kg	☼	04/24/26 14:00	04/27/26 13:40	2
Lead	4.73		0.177		mg/Kg	☼	04/24/26 14:00	04/27/26 13:40	2
Selenium	<0.883		0.883		mg/Kg	☼	04/24/26 14:00	04/27/26 13:40	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.110		0.110		mg/Kg	☼	04/24/26 13:00	04/27/26 13:58	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	10.8		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	89.2		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-01-1
Date Collected: 04/20/26 19:10
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-7
Matrix: Solid
Percent Solids: 94.7

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.560		0.560		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Allyl chloride	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Benzene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Bromobenzene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Bromochloromethane	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Bromodichloromethane	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Bromoform	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Bromomethane	<0.560		0.560		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
2-Butanone (MEK)	<0.839		0.839		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Carbon tetrachloride	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Chlorobenzene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Chlorodibromomethane	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Chloroethane	<0.280		0.280		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Chloroform	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Chloromethane	<0.280		0.280		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
2-Chlorotoluene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
4-Chlorotoluene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
cis-1,2-Dichloroethene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
cis-1,3-Dichloropropene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
1,2-Dibromo-3-chloropropane	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
1,2-Dibromoethane (EDB)	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Dibromomethane	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
1,2-Dichlorobenzene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
1,3-Dichlorobenzene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
1,4-Dichlorobenzene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Dichlorodifluoromethane	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
1,1-Dichloroethane	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
1,2-Dichloroethane	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
1,1-Dichloroethene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Dichlorofluoromethane	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
1,2-Dichloropropane	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
1,3-Dichloropropane	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
2,2-Dichloropropane	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
1,1-Dichloropropene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Diethyl ether	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Ethylbenzene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Hexachlorobutadiene	<0.280		0.280		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Isopropylbenzene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Methylene chloride	<0.280		0.280		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
4-Methyl-2-pentanone (MIBK)	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Methyl tert-butyl ether	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Naphthalene	<0.280		0.280		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
n-Butylbenzene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
n-Propylbenzene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
p-Isopropyltoluene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
sec-Butylbenzene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Styrene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
tert-Butylbenzene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
1,1,1,2-Tetrachloroethane	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1

Client Sample ID: HA-01-1
Date Collected: 04/20/26 19:10
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-7
Matrix: Solid
Percent Solids: 94.7

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Tetrachloroethene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Tetrahydrofuran	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Toluene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
trans-1,2-Dichloroethene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
trans-1,3-Dichloropropene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
1,2,3-Trichlorobenzene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
1,2,4-Trichlorobenzene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
1,1,1-Trichloroethane	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
1,1,2-Trichloroethane	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Trichloroethene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Trichlorofluoromethane	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
1,2,3-Trichloropropane	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
1,1,2-Trichlorotrifluoroethane	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
1,2,4-Trimethylbenzene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
1,3,5-Trimethylbenzene	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Vinyl chloride	<0.112		0.112		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1
Xylenes, Total	<0.168		0.168		mg/Kg	☼	04/28/26 08:11	04/29/26 16:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*	*04/28/26 08:11*	*04/29/26 16:41*	*1*
Dibromofluoromethane (Surr)	*88*		*80 - 120*	*04/28/26 08:11*	*04/29/26 16:41*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*	*04/28/26 08:11*	*04/29/26 16:41*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00509		0.00509		mg/Kg	☼	04/24/26 13:04	04/28/26 01:48	1
Acenaphthylene	<0.00509		0.00509		mg/Kg	☼	04/24/26 13:04	04/28/26 01:48	1
Anthracene	<0.00509		0.00509		mg/Kg	☼	04/24/26 13:04	04/28/26 01:48	1
Benzo(a)anthracene	**0.00694**		0.00509		mg/Kg	☼	04/24/26 13:04	04/28/26 01:48	1
Benzo(a)pyrene	**0.00754**		0.00509		mg/Kg	☼	04/24/26 13:04	04/28/26 01:48	1
Benzo(b)fluoranthene	**0.00868**		0.00509		mg/Kg	☼	04/24/26 13:04	04/28/26 01:48	1
Benzo(g,h,i)perylene	**0.00807**		0.00509		mg/Kg	☼	04/24/26 13:04	04/28/26 01:48	1
Benzo(k)fluoranthene	**0.00649**		0.00509		mg/Kg	☼	04/24/26 13:04	04/28/26 01:48	1
Chrysene	**0.0105**		0.00509		mg/Kg	☼	04/24/26 13:04	04/28/26 01:48	1
Dibenz(a,h)anthracene	<0.00509		0.00509		mg/Kg	☼	04/24/26 13:04	04/28/26 01:48	1
Fluoranthene	**0.0262**		0.00509		mg/Kg	☼	04/24/26 13:04	04/28/26 01:48	1
Fluorene	<0.00509		0.00509		mg/Kg	☼	04/24/26 13:04	04/28/26 01:48	1
Indeno(1,2,3-cd)pyrene	**0.00667**		0.00509		mg/Kg	☼	04/24/26 13:04	04/28/26 01:48	1
2-Methylnaphthalene	<0.00509		0.00509		mg/Kg	☼	04/24/26 13:04	04/28/26 01:48	1
Naphthalene	<0.00509		0.00509		mg/Kg	☼	04/24/26 13:04	04/28/26 01:48	1
Phenanthrene	**0.0233**		0.00509		mg/Kg	☼	04/24/26 13:04	04/28/26 01:48	1
Pyrene	**0.0214**		0.00509		mg/Kg	☼	04/24/26 13:04	04/28/26 01:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*99*		*20 - 122*	*04/24/26 13:04*	*04/28/26 01:48*	*1*
Nitrobenzene-d5 (Surr)	*86*		*10 - 132*	*04/24/26 13:04*	*04/28/26 01:48*	*1*
Terphenyl-d14 (Surr)	*95*		*10 - 119*	*04/24/26 13:04*	*04/28/26 01:48*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-01-1
Date Collected: 04/20/26 19:10
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-7
Matrix: Solid
Percent Solids: 94.7

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<10.8		10.8		mg/Kg	☼	04/28/26 11:48	04/29/26 16:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*	*04/28/26 11:48*	*04/29/26 16:52*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<6.32		6.32		mg/Kg	☼	04/23/26 11:41	04/24/26 17:06	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	**0.535**		0.408		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.408		0.408		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.408		0.408		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.02		1.02		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.02		1.02		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
Perfluorobutanesulfonic acid (PFBS)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
Perfluorobutanoic acid (PFBA)	<0.408		0.408		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
Perfluorodecanesulfonic acid (PFDS)	**0.315**		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
Perfluorodecanoic acid (PFDA)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
Perfluorododecanesulfonic acid (PFDoS)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
Perfluorododecanoic acid (PFDoA)	**0.272**		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
Perfluoroheptanoic acid (PFHpA)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.02		1.02		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-01-1
Date Collected: 04/20/26 19:10
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-7
Matrix: Solid
Percent Solids: 94.7

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	**0.210**		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
Perfluorohexanoic acid (PFHxA)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
Perfluorononanesulfonic acid (PFNS)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
Perfluorononanoic acid (PFNA)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
Perfluorooctanesulfonamide (PFOSA)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
Perfluorooctanesulfonic acid (PFOS)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
Perfluorooctanoic acid (PFOA)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
Perfluoropentanesulfonic acid (PFPeS)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
Perfluoropentanoic acid (PFPeA)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.02		1.02		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.408		0.408		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
Perfluorotetradecanoic acid (PFTeDA)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
Perfluorotridecanoic acid (PFTrDA)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1
Perfluoroundecanoic acid (PFUnA)	<0.204		0.204		ng/g	☼	04/27/26 07:31	04/28/26 00:43	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*60.3*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:43*	*1*
13C2 10:2 FTS	*64.0*		*40 - 275*	*04/27/26 07:31*	*04/28/26 00:43*	*1*
13C2 4:2 FTS	*71.6*		*40 - 165*	*04/27/26 07:31*	*04/28/26 00:43*	*1*
13C2 6:2 FTS	*63.9*		*40 - 215*	*04/27/26 07:31*	*04/28/26 00:43*	*1*
13C2 8:2 FTS	*61.1*		*40 - 275*	*04/27/26 07:31*	*04/28/26 00:43*	*1*
13C3 HFPO-DA	*66.4*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:43*	*1*
13C4 PFBA	*62.6*		*8 - 130*	*04/27/26 07:31*	*04/28/26 00:43*	*1*
13C3 PFBS	*70.8*		*40 - 135*	*04/27/26 07:31*	*04/28/26 00:43*	*1*
13C6 PFDA	*59.3*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:43*	*1*
13C2-PFDoA	*60.0*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:43*	*1*
13C4 PFHpA	*62.6*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:43*	*1*
13C5 PFHxA	*63.7*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:43*	*1*
13C3 PFHxS	*68.5*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:43*	*1*
13C9 PFNA	*61.0*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:43*	*1*
13C8 PFOA	*56.7*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:43*	*1*
13C8 PFOS	*55.1*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:43*	*1*
13C5 PFPeA	*66.2*		*35 - 130*	*04/27/26 07:31*	*04/28/26 00:43*	*1*
13C3-PFPrS	*54.5*		*20 - 150*	*04/27/26 07:31*	*04/28/26 00:43*	*1*
13C2 PFTeDA	*72.8*		*20 - 130*	*04/27/26 07:31*	*04/28/26 00:43*	*1*
13C7 PFUnA	*58.9*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:43*	*1*
d5-NEtFOSAA	*52.9*		*40 - 150*	*04/27/26 07:31*	*04/28/26 00:43*	*1*
d9-N-EtFOSE-M	*45.1*		*15 - 130*	*04/27/26 07:31*	*04/28/26 00:43*	*1*
d5-NEtPFOSA	*57.7*		*10 - 130*	*04/27/26 07:31*	*04/28/26 00:43*	*1*
d3-NMeFOSAA	*57.9*		*40 - 135*	*04/27/26 07:31*	*04/28/26 00:43*	*1*
d7-N-MeFOSE-M	*44.4*		*20 - 130*	*04/27/26 07:31*	*04/28/26 00:43*	*1*
d3-NMePFOSA	*56.0*		*10 - 130*	*04/27/26 07:31*	*04/28/26 00:43*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-01-1
Date Collected: 04/20/26 19:10
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-7
Matrix: Solid
Percent Solids: 94.7

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.166		0.166		mg/Kg	☼	04/24/26 14:00	04/27/26 13:43	2
Arsenic	**1.76**		0.832		mg/Kg	☼	04/24/26 14:00	04/27/26 13:43	2
Barium	**37.2**		0.832		mg/Kg	☼	04/24/26 14:00	04/27/26 13:43	2
Cadmium	<0.166		0.166		mg/Kg	☼	04/24/26 14:00	04/27/26 13:43	2
Chromium	**23.1**		0.333		mg/Kg	☼	04/24/26 14:00	04/27/26 13:43	2
Lead	**3.86**		0.166		mg/Kg	☼	04/24/26 14:00	04/27/26 13:43	2
Selenium	<0.832		0.832		mg/Kg	☼	04/24/26 14:00	04/27/26 13:43	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.106		0.106		mg/Kg	☼	04/24/26 13:00	04/27/26 13:59	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**5.3**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**94.7**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-01-3
Date Collected: 04/20/26 19:15
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-8
Matrix: Solid
Percent Solids: 91.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.575		0.575		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Allyl chloride	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Benzene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Bromobenzene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Bromochloromethane	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Bromodichloromethane	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Bromoform	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Bromomethane	<0.575		0.575		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
2-Butanone (MEK)	<0.862		0.862		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Carbon tetrachloride	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Chlorobenzene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Chlorodibromomethane	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Chloroethane	<0.287		0.287		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Chloroform	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Chloromethane	<0.287		0.287		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
2-Chlorotoluene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
4-Chlorotoluene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
cis-1,2-Dichloroethene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
cis-1,3-Dichloropropene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
1,2-Dibromo-3-chloropropane	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
1,2-Dibromoethane (EDB)	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Dibromomethane	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
1,2-Dichlorobenzene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
1,3-Dichlorobenzene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
1,4-Dichlorobenzene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Dichlorodifluoromethane	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
1,1-Dichloroethane	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
1,2-Dichloroethane	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
1,1-Dichloroethene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Dichlorofluoromethane	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
1,2-Dichloropropane	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
1,3-Dichloropropane	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
2,2-Dichloropropane	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
1,1-Dichloropropene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Diethyl ether	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Ethylbenzene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Hexachlorobutadiene	<0.287		0.287		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Isopropylbenzene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Methylene chloride	<0.287		0.287		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
4-Methyl-2-pentanone (MIBK)	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Methyl tert-butyl ether	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Naphthalene	<0.287		0.287		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
n-Butylbenzene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
n-Propylbenzene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
p-Isopropyltoluene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
sec-Butylbenzene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Styrene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
tert-Butylbenzene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
1,1,1,2-Tetrachloroethane	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1

Client Sample ID: HA-01-3
Date Collected: 04/20/26 19:15
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-8
Matrix: Solid
Percent Solids: 91.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Tetrachloroethene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Tetrahydrofuran	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Toluene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
trans-1,2-Dichloroethene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
trans-1,3-Dichloropropene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
1,2,3-Trichlorobenzene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
1,2,4-Trichlorobenzene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
1,1,1-Trichloroethane	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
1,1,2-Trichloroethane	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Trichloroethene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Trichlorofluoromethane	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
1,2,3-Trichloropropane	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
1,1,2-Trichlorotrifluoroethane	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
1,2,4-Trimethylbenzene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
1,3,5-Trimethylbenzene	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Vinyl chloride	<0.115		0.115		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1
Xylenes, Total	<0.172		0.172		mg/Kg	☼	04/28/26 08:14	04/29/26 20:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*	*04/28/26 08:14*	*04/29/26 20:51*	*1*
Dibromofluoromethane (Surr)	*89*		*80 - 120*	*04/28/26 08:14*	*04/29/26 20:51*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*	*04/28/26 08:14*	*04/29/26 20:51*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00532		0.00532		mg/Kg	☼	04/24/26 13:04	04/28/26 02:24	1
Acenaphthylene	<0.00532		0.00532		mg/Kg	☼	04/24/26 13:04	04/28/26 02:24	1
Anthracene	<0.00532		0.00532		mg/Kg	☼	04/24/26 13:04	04/28/26 02:24	1
Benzo(a)anthracene	<0.00532		0.00532		mg/Kg	☼	04/24/26 13:04	04/28/26 02:24	1
Benzo(a)pyrene	<0.00532		0.00532		mg/Kg	☼	04/24/26 13:04	04/28/26 02:24	1
Benzo(b)fluoranthene	<0.00532		0.00532		mg/Kg	☼	04/24/26 13:04	04/28/26 02:24	1
Benzo(g,h,i)perylene	<0.00532		0.00532		mg/Kg	☼	04/24/26 13:04	04/28/26 02:24	1
Benzo(k)fluoranthene	<0.00532		0.00532		mg/Kg	☼	04/24/26 13:04	04/28/26 02:24	1
Chrysene	<0.00532		0.00532		mg/Kg	☼	04/24/26 13:04	04/28/26 02:24	1
Dibenz(a,h)anthracene	<0.00532		0.00532		mg/Kg	☼	04/24/26 13:04	04/28/26 02:24	1
Fluoranthene	<0.00532		0.00532		mg/Kg	☼	04/24/26 13:04	04/28/26 02:24	1
Fluorene	<0.00532		0.00532		mg/Kg	☼	04/24/26 13:04	04/28/26 02:24	1
Indeno(1,2,3-cd)pyrene	<0.00532		0.00532		mg/Kg	☼	04/24/26 13:04	04/28/26 02:24	1
2-Methylnaphthalene	<0.00532		0.00532		mg/Kg	☼	04/24/26 13:04	04/28/26 02:24	1
Naphthalene	<0.00532		0.00532		mg/Kg	☼	04/24/26 13:04	04/28/26 02:24	1
Phenanthrene	<0.00532		0.00532		mg/Kg	☼	04/24/26 13:04	04/28/26 02:24	1
Pyrene	<0.00532		0.00532		mg/Kg	☼	04/24/26 13:04	04/28/26 02:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*91*		*20 - 122*	*04/24/26 13:04*	*04/28/26 02:24*	*1*
Nitrobenzene-d5 (Surr)	*73*		*10 - 132*	*04/24/26 13:04*	*04/28/26 02:24*	*1*
Terphenyl-d14 (Surr)	*86*		*10 - 119*	*04/24/26 13:04*	*04/28/26 02:24*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-01-3
Date Collected: 04/20/26 19:15
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-8
Matrix: Solid
Percent Solids: 91.2

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<10.7		10.7		mg/Kg	☼	04/28/26 11:48	04/29/26 17:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*	*04/28/26 11:48*	*04/29/26 17:18*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<5.96		5.96		mg/Kg	☼	04/23/26 11:41	04/24/26 17:19	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	**0.508**		0.439		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.439		0.439		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.439		0.439		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.10		1.10		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.10		1.10		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
Perfluorobutanesulfonic acid (PFBS)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
Perfluorobutanoic acid (PFBA)	<0.439		0.439		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
Perfluorodecanesulfonic acid (PFDS)	**0.241**		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
Perfluorodecanoic acid (PFDA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
Perfluorododecanesulfonic acid (PFDoS)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
Perfluorododecanoic acid (PFDoA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
Perfluoroheptanoic acid (PFHpA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.10		1.10		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
Perfluorohexanesulfonic acid (PFHxS)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-01-3
Date Collected: 04/20/26 19:15
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-8
Matrix: Solid
Percent Solids: 91.2

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
Perfluorononanesulfonic acid (PFNS)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
Perfluorononanoic acid (PFNA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
Perfluorooctanesulfonamide (PFOSA)	**0.232**		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
Perfluorooctanesulfonic acid (PFOS)	**0.309**		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
Perfluorooctanoic acid (PFOA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
Perfluoropentanesulfonic acid (PFPeS)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
Perfluoropentanoic acid (PFPeA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.10		1.10		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.439		0.439		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
Perfluorotetradecanoic acid (PFTeDA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
Perfluorotridecanoic acid (PFTrDA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1
Perfluoroundecanoic acid (PFUnA)	<0.219		0.219		ng/g	☼	04/27/26 07:31	04/28/26 00:59	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*70.9*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:59*	*1*
13C2 10:2 FTS	*72.8*		*40 - 275*	*04/27/26 07:31*	*04/28/26 00:59*	*1*
13C2 4:2 FTS	*81.7*		*40 - 165*	*04/27/26 07:31*	*04/28/26 00:59*	*1*
13C2 6:2 FTS	*72.4*		*40 - 215*	*04/27/26 07:31*	*04/28/26 00:59*	*1*
13C2 8:2 FTS	*70.9*		*40 - 275*	*04/27/26 07:31*	*04/28/26 00:59*	*1*
13C3 HFPO-DA	*74.2*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:59*	*1*
13C4 PFBA	*69.3*		*8 - 130*	*04/27/26 07:31*	*04/28/26 00:59*	*1*
13C3 PFBS	*80.9*		*40 - 135*	*04/27/26 07:31*	*04/28/26 00:59*	*1*
13C6 PFDA	*68.6*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:59*	*1*
13C2-PFDoA	*67.6*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:59*	*1*
13C4 PFHpA	*71.0*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:59*	*1*
13C5 PFHxA	*70.5*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:59*	*1*
13C3 PFHxS	*78.4*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:59*	*1*
13C9 PFNA	*72.0*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:59*	*1*
13C8 PFOA	*66.0*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:59*	*1*
13C8 PFOS	*64.6*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:59*	*1*
13C5 PFPeA	*74.9*		*35 - 130*	*04/27/26 07:31*	*04/28/26 00:59*	*1*
13C3-PFPrS	*61.2*		*20 - 150*	*04/27/26 07:31*	*04/28/26 00:59*	*1*
13C2 PFTeDA	*66.8*		*20 - 130*	*04/27/26 07:31*	*04/28/26 00:59*	*1*
13C7 PFUnA	*67.9*		*40 - 130*	*04/27/26 07:31*	*04/28/26 00:59*	*1*
d5-NEtFOSAA	*63.9*		*40 - 150*	*04/27/26 07:31*	*04/28/26 00:59*	*1*
d9-N-EtFOSE-M	*51.1*		*15 - 130*	*04/27/26 07:31*	*04/28/26 00:59*	*1*
d5-NEtPFOSA	*62.9*		*10 - 130*	*04/27/26 07:31*	*04/28/26 00:59*	*1*
d3-NMeFOSAA	*66.6*		*40 - 135*	*04/27/26 07:31*	*04/28/26 00:59*	*1*
d7-N-MeFOSE-M	*51.9*		*20 - 130*	*04/27/26 07:31*	*04/28/26 00:59*	*1*
d3-NMePFOSA	*62.1*		*10 - 130*	*04/27/26 07:31*	*04/28/26 00:59*	*1*

Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330207-1
Project/Site: Duluth Airport Midfield Ramp

Client Sample ID: HA-01-3
Lab Sample ID: 310-330207-8
Date Collected: 04/20/26 19:15
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 91.2

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.161		0.161		mg/Kg	☼	04/24/26 14:00	04/27/26 13:45	2
Arsenic	**2.32**		0.807		mg/Kg	☼	04/24/26 14:00	04/27/26 13:45	2
Barium	**43.3**		0.807		mg/Kg	☼	04/24/26 14:00	04/27/26 13:45	2
Cadmium	<0.161		0.161		mg/Kg	☼	04/24/26 14:00	04/27/26 13:45	2
Chromium	**20.9**		0.323		mg/Kg	☼	04/24/26 14:00	04/27/26 13:45	2
Lead	**4.62**		0.161		mg/Kg	☼	04/24/26 14:00	04/27/26 13:45	2
Selenium	<0.807		0.807		mg/Kg	☼	04/24/26 14:00	04/27/26 13:45	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.0997		0.0997		mg/Kg	☼	04/24/26 13:00	04/27/26 14:04	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**8.8**		0.1		%			04/23/26 05:23	1
Percent Solids (EPA Moisture)	**91.2**		0.1		%			04/23/26 05:23	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: Rinsate Blank
Date Collected: 04/20/26 19:30
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-9
Matrix: Water

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.25		1.25		ng/L		04/24/26 10:05	04/25/26 07:43	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<3.33		3.33		ng/L		04/24/26 10:05	04/25/26 07:43	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<3.33		3.33		ng/L		04/24/26 10:05	04/25/26 07:43	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<3.33		3.33		ng/L		04/24/26 10:05	04/25/26 07:43	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<8.32		8.32		ng/L		04/24/26 10:05	04/25/26 07:43	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<8.32		8.32		ng/L		04/24/26 10:05	04/25/26 07:43	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
Perfluorobutanesulfonic acid (PFBS)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
Perfluorobutanoic acid (PFBA)	<3.33		3.33		ng/L		04/24/26 10:05	04/25/26 07:43	1
Perfluorodecanesulfonic acid (PFDS)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
Perfluorodecanoic acid (PFDA)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
Perfluorododecanesulfonic acid (PFDoS)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
Perfluorododecanoic acid (PFDoA)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
Perfluoroheptanoic acid (PFHpA)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<8.32		8.32		ng/L		04/24/26 10:05	04/25/26 07:43	1
Perfluorohexanesulfonic acid (PFHxS)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
Perfluorohexanoic acid (PFHxA)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
Perfluorononanesulfonic acid (PFNS)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
Perfluorononanoic acid (PFNA)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
Perfluorooctanesulfonamide (PFOSA)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
Perfluorooctanesulfonic acid (PFOS)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
Perfluorooctanoic acid (PFOA)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
Perfluoropentanesulfonic acid (PFPeS)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1

Client Sample ID: Rinsate Blank
Lab Sample ID: 310-330207-9
Date Collected: 04/20/26 19:30
Matrix: Water
Date Received: 04/22/26 13:20

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<8.32		8.32		ng/L		04/24/26 10:05	04/25/26 07:43	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<3.33		3.33		ng/L		04/24/26 10:05	04/25/26 07:43	1
Perfluorotetradecanoic acid (PFTeDA)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
Perfluorotridecanoic acid (PFTrDA)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1
Perfluoroundecanoic acid (PFUnA)	<1.66		1.66		ng/L		04/24/26 10:05	04/25/26 07:43	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*77.2*		*40 - 130*	*04/24/26 10:05*	*04/25/26 07:43*	*1*
13C2 10:2 FTS	*80.6*		*40 - 200*	*04/24/26 10:05*	*04/25/26 07:43*	*1*
13C2 4:2 FTS	*94.0*		*40 - 200*	*04/24/26 10:05*	*04/25/26 07:43*	*1*
13C2 6:2 FTS	*82.1*		*40 - 200*	*04/24/26 10:05*	*04/25/26 07:43*	*1*
13C2 8:2 FTS	*81.9*		*40 - 300*	*04/24/26 10:05*	*04/25/26 07:43*	*1*
13C3 HFPO-DA	*87.5*		*40 - 130*	*04/24/26 10:05*	*04/25/26 07:43*	*1*
13C4 PFBA	*77.3*		*5 - 130*	*04/24/26 10:05*	*04/25/26 07:43*	*1*
13C3 PFBS	*75.5*		*40 - 135*	*04/24/26 10:05*	*04/25/26 07:43*	*1*
13C6 PFDA	*77.9*		*40 - 130*	*04/24/26 10:05*	*04/25/26 07:43*	*1*
13C2-PFDoA	*63.8*		*10 - 130*	*04/24/26 10:05*	*04/25/26 07:43*	*1*
13C4 PFHpA	*87.4*		*40 - 130*	*04/24/26 10:05*	*04/25/26 07:43*	*1*
13C5 PFHxA	*90.0*		*40 - 130*	*04/24/26 10:05*	*04/25/26 07:43*	*1*
13C3 PFHxS	*79.9*		*40 - 130*	*04/24/26 10:05*	*04/25/26 07:43*	*1*
13C9 PFNA	*80.2*		*40 - 130*	*04/24/26 10:05*	*04/25/26 07:43*	*1*
13C8 PFOA	*87.8*		*40 - 130*	*04/24/26 10:05*	*04/25/26 07:43*	*1*
13C8 PFOS	*82.6*		*40 - 130*	*04/24/26 10:05*	*04/25/26 07:43*	*1*
13C5 PFPeA	*88.0*		*40 - 130*	*04/24/26 10:05*	*04/25/26 07:43*	*1*
13C3-PFPrS	*70.2*		*20 - 150*	*04/24/26 10:05*	*04/25/26 07:43*	*1*
13C2 PFTeDA	*67.6*		*10 - 130*	*04/24/26 10:05*	*04/25/26 07:43*	*1*
13C7 PFUnA	*71.5*		*30 - 130*	*04/24/26 10:05*	*04/25/26 07:43*	*1*
d5-NEtFOSAA	*81.2*		*25 - 135*	*04/24/26 10:05*	*04/25/26 07:43*	*1*
d9-N-EtFOSE-M	*44.8*		*10 - 130*	*04/24/26 10:05*	*04/25/26 07:43*	*1*
d5-NEtPFOSA	*63.5*		*10 - 130*	*04/24/26 10:05*	*04/25/26 07:43*	*1*
d3-NMeFOSAA	*60.2*		*40 - 170*	*04/24/26 10:05*	*04/25/26 07:43*	*1*
d7-N-MeFOSE-M	*49.9*		*10 - 130*	*04/24/26 10:05*	*04/25/26 07:43*	*1*
d3-NMePFOSA	*67.5*		*10 - 130*	*04/24/26 10:05*	*04/25/26 07:43*	*1*

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: Trip Blank - Soil
Date Collected: 04/20/26 00:00
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-10
Matrix: Solid

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.500		0.500		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Allyl chloride	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Benzene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Bromobenzene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Bromochloromethane	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Bromodichloromethane	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Bromoform	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Bromomethane	<0.500		0.500		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
2-Butanone (MEK)	<0.750		0.750		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Carbon tetrachloride	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Chlorobenzene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Chlorodibromomethane	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Chloroethane	<0.250		0.250		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Chloroform	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Chloromethane	<0.250		0.250		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
2-Chlorotoluene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
4-Chlorotoluene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
cis-1,2-Dichloroethene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
cis-1,3-Dichloropropene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
1,2-Dibromo-3-chloropropane	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
1,2-Dibromoethane (EDB)	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Dibromomethane	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
1,2-Dichlorobenzene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
1,3-Dichlorobenzene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
1,4-Dichlorobenzene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Dichlorodifluoromethane	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
1,1-Dichloroethane	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
1,2-Dichloroethane	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
1,1-Dichloroethene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Dichlorofluoromethane	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
1,2-Dichloropropane	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
1,3-Dichloropropane	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
2,2-Dichloropropane	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
1,1-Dichloropropene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Diethyl ether	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Ethylbenzene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Hexachlorobutadiene	<0.250		0.250		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Isopropylbenzene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Methylene chloride	<0.250		0.250		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
4-Methyl-2-pentanone (MIBK)	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Methyl tert-butyl ether	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Naphthalene	<0.250		0.250		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
n-Butylbenzene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
n-Propylbenzene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
p-Isopropyltoluene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
sec-Butylbenzene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Styrene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
tert-Butylbenzene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
1,1,1,2-Tetrachloroethane	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: Trip Blank - Soil
Date Collected: 04/20/26 00:00
Date Received: 04/22/26 13:20

Lab Sample ID: 310-330207-10
Matrix: Solid

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Tetrachloroethene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Tetrahydrofuran	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Toluene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
trans-1,2-Dichloroethene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
trans-1,3-Dichloropropene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
1,2,3-Trichlorobenzene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
1,2,4-Trichlorobenzene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
1,1,1-Trichloroethane	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
1,1,2-Trichloroethane	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Trichloroethene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Trichlorofluoromethane	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
1,2,3-Trichloropropane	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
1,1,2-Trichlorotrifluoroethane	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
1,2,4-Trimethylbenzene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
1,3,5-Trimethylbenzene	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Vinyl chloride	<0.100		0.100		mg/Kg		04/28/26 08:14	04/29/26 21:13	1
Xylenes, Total	<0.150		0.150		mg/Kg		04/28/26 08:14	04/29/26 21:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*	*04/28/26 08:14*	*04/29/26 21:13*	*1*
Dibromofluoromethane (Surr)	*82*		*80 - 120*	*04/28/26 08:14*	*04/29/26 21:13*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*	*04/28/26 08:14*	*04/29/26 21:13*	*1*

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<10.0		10.0		mg/Kg		04/28/26 11:48	04/29/26 17:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*	*04/28/26 11:48*	*04/29/26 17:44*	*1*

Qualifiers

LCMS

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Surrogate Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(80-120)	(80-120)
310-330207-1	HA-02-1	98	85	104
310-330207-2	HA-02-3	102	88	104
310-330207-3	HA-03-1	103	86	104
310-330207-4	HA-03-3	97	87	106
310-330207-5	HA-04-1	101	90	106
310-330207-6	HA-04-3	96	88	103
310-330207-7	HA-01-1	106	88	103
310-330207-8	HA-01-3	102	89	100
310-330207-10	Trip Blank - Soil	97	82	103
LCS 310-487060/2-A	Lab Control Sample	98	105	99
LCS 310-487063/2-A	Lab Control Sample	104	97	98
LCS 310-487184/2-A	Lab Control Sample	101	96	100
LCS 310-487187/2-A	Lab Control Sample	96	99	100
MB 310-487060/1-A	Method Blank	106	88	108
MB 310-487063/1-A	Method Blank	96	83	107
MB 310-487184/1-A	Method Blank	104	86	99
MB 310-487187/1-A	Method Blank	100	89	102

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		FBP	NBZ	TPHL
Lab Sample ID	Client Sample ID	(20-122)	(10-132)	(10-119)
310-330207-1	HA-02-1	99	100	103
310-330207-1 MS	HA-02-1	104	90	98
310-330207-1 MSD	HA-02-1	100	92	101
310-330207-2	HA-02-3	98	91	98
310-330207-3	HA-03-1	97	57	95
310-330207-4	HA-03-3	94	64	86
310-330207-5	HA-04-1	100	99	95
310-330207-6	HA-04-3	103	76	105
310-330207-7	HA-01-1	99	86	95
310-330207-8	HA-01-3	91	73	86
LCS 310-486997/2-A	Lab Control Sample	92	114	100
MB 310-486997/1-A	Method Blank	100	94	97

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)

Surrogate Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330207-1
Project/Site: Duluth Airport Midfield Ramp

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)								
		BFB								
Lab Sample ID	Client Sample ID	(80-120)								
310-330207-1	HA-02-1	103								
310-330207-2	HA-02-3	104								
310-330207-3	HA-03-1	102								
310-330207-4	HA-03-3	103								
310-330207-5	HA-04-1	101								
310-330207-6	HA-04-3	101								
310-330207-7	HA-01-1	103								
310-330207-8	HA-01-3	100								
310-330207-10	Trip Blank - Soil	102								
LCS 310-487248/2-A	Lab Control Sample	97								
LCSD 310-487248/23-A	Lab Control Sample Dup	98								
MB 310-487248/1-A	Method Blank	98								

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 310-487060/1-A
Matrix: Solid
Analysis Batch: 487062

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487060

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.484		0.484		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Allyl chloride	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Benzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Bromobenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Bromochloromethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Bromodichloromethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Bromoform	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Bromomethane	<0.484		0.484		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
2-Butanone (MEK)	<0.726		0.726		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Carbon tetrachloride	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Chlorobenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Chlorodibromomethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Chloroethane	<0.242		0.242		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Chloroform	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Chloromethane	<0.242		0.242		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
2-Chlorotoluene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
4-Chlorotoluene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
cis-1,2-Dichloroethene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
cis-1,3-Dichloropropene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,2-Dibromo-3-chloropropane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,2-Dibromoethane (EDB)	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Dibromomethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,2-Dichlorobenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,3-Dichlorobenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,4-Dichlorobenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Dichlorodifluoromethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,1-Dichloroethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,2-Dichloroethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,1-Dichloroethene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Dichlorofluoromethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,2-Dichloropropane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,3-Dichloropropane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
2,2-Dichloropropane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,1-Dichloropropene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Diethyl ether	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Ethylbenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Hexachlorobutadiene	<0.242		0.242		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Isopropylbenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Methylene chloride	<0.242		0.242		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
4-Methyl-2-pentanone (MIBK)	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Methyl tert-butyl ether	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Naphthalene	<0.242		0.242		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
n-Butylbenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
n-Propylbenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
p-Isopropyltoluene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
sec-Butylbenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Styrene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
tert-Butylbenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-487060/1-A
Matrix: Solid
Analysis Batch: 487062

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487060

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,1,2,2-Tetrachloroethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Tetrachloroethene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Tetrahydrofuran	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Toluene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
trans-1,2-Dichloroethene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
trans-1,3-Dichloropropene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,2,3-Trichlorobenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,2,4-Trichlorobenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,1,1-Trichloroethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,1,2-Trichloroethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Trichloroethene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Trichlorofluoromethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,2,3-Trichloropropane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,1,2-Trichlorotrifluoroethane	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,2,4-Trimethylbenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
1,3,5-Trimethylbenzene	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Vinyl chloride	<0.0968		0.0968		mg/Kg		04/27/26 09:01	04/27/26 23:43	1
Xylenes, Total	<0.145		0.145		mg/Kg		04/27/26 09:01	04/27/26 23:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*	*04/27/26 09:01*	*04/27/26 23:43*	*1*
Dibromofluoromethane (Surr)	*88*		*80 - 120*	*04/27/26 09:01*	*04/27/26 23:43*	*1*
Toluene-d8 (Surr)	*108*		*80 - 120*	*04/27/26 09:01*	*04/27/26 23:43*	*1*

Lab Sample ID: LCS 310-487060/2-A
Matrix: Solid
Analysis Batch: 487062

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487060

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	1.89	2.605		mg/Kg		138	54 - 150
Allyl chloride	0.947	1.020		mg/Kg		108	68 - 135
Benzene	0.947	0.9574		mg/Kg		101	76 - 129
Bromobenzene	0.947	0.8466		mg/Kg		89	76 - 125
Bromochloromethane	0.947	0.9159		mg/Kg		97	74 - 136
Bromodichloromethane	0.947	0.8981		mg/Kg		95	73 - 126
Bromoform	0.947	0.8240		mg/Kg		87	64 - 130
2-Butanone (MEK)	1.89	2.111		mg/Kg		111	66 - 147
Carbon tetrachloride	0.947	0.8632		mg/Kg		91	73 - 136
Chlorobenzene	0.947	0.8918		mg/Kg		94	78 - 123
Chlorodibromomethane	0.947	0.8698		mg/Kg		92	73 - 121
Chloroform	0.947	0.9066		mg/Kg		96	75 - 131
2-Chlorotoluene	0.947	0.8866		mg/Kg		94	78 - 126
4-Chlorotoluene	0.947	0.8967		mg/Kg		95	76 - 123
cis-1,2-Dichloroethene	0.947	0.9167		mg/Kg		97	76 - 134
cis-1,3-Dichloropropene	0.947	0.8945		mg/Kg		94	73 - 126
1,2-Dibromo-3-chloropropane	0.947	0.9974		mg/Kg		105	65 - 130
1,2-Dibromoethane (EDB)	0.947	0.9266		mg/Kg		98	80 - 126

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-487060/2-A
Matrix: Solid
Analysis Batch: 487062

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487060

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dibromomethane	0.947	0.9776		mg/Kg		103	79 - 130
1,2-Dichlorobenzene	0.947	0.9103		mg/Kg		96	77 - 122
1,3-Dichlorobenzene	0.947	0.9144		mg/Kg		97	77 - 124
1,4-Dichlorobenzene	0.947	0.8773		mg/Kg		93	75 - 122
1,1-Dichloroethane	0.947	0.9882		mg/Kg		104	68 - 142
1,2-Dichloroethane	0.947	0.9423		mg/Kg		99	70 - 140
1,1-Dichloroethene	0.947	0.9955		mg/Kg		105	64 - 141
1,2-Dichloropropane	0.947	0.9665		mg/Kg		102	77 - 129
1,3-Dichloropropane	0.947	0.9418		mg/Kg		99	77 - 132
2,2-Dichloropropane	0.947	0.8158		mg/Kg		86	55 - 145
1,1-Dichloropropene	0.947	0.9583		mg/Kg		101	75 - 136
Diethyl ether	0.947	1.067		mg/Kg		113	68 - 138
Ethylbenzene	0.947	0.9091		mg/Kg		96	76 - 128
Hexachlorobutadiene	0.947	0.8803		mg/Kg		93	66 - 141
Isopropylbenzene	0.947	0.8862		mg/Kg		94	76 - 126
Methylene chloride	0.947	1.019		mg/Kg		108	68 - 139
4-Methyl-2-pentanone (MIBK)	1.89	1.818		mg/Kg		96	66 - 139
Methyl tert-butyl ether	0.947	1.086		mg/Kg		115	68 - 139
Naphthalene	0.947	0.8999		mg/Kg		95	71 - 125
n-Butylbenzene	0.947	0.9409		mg/Kg		99	70 - 131
n-Propylbenzene	0.947	0.8915		mg/Kg		94	77 - 127
p-Isopropyltoluene	0.947	0.9006		mg/Kg		95	74 - 128
sec-Butylbenzene	0.947	0.9424		mg/Kg		100	75 - 127
Styrene	0.947	0.8706		mg/Kg		92	77 - 124
tert-Butylbenzene	0.947	0.8983		mg/Kg		95	76 - 128
1,1,1,2-Tetrachloroethane	0.947	0.8821		mg/Kg		93	77 - 126
1,1,2,2-Tetrachloroethane	0.947	0.9614		mg/Kg		102	76 - 126
Tetrachloroethene	0.947	0.8793		mg/Kg		93	73 - 135
Tetrahydrofuran	1.89	2.175		mg/Kg		115	67 - 143
Toluene	0.947	0.8851		mg/Kg		93	75 - 126
trans-1,2-Dichloroethene	0.947	1.040		mg/Kg		110	68 - 138
trans-1,3-Dichloropropene	0.947	0.8615		mg/Kg		91	72 - 126
1,2,3-Trichlorobenzene	0.947	0.8466		mg/Kg		89	67 - 127
1,2,4-Trichlorobenzene	0.947	0.8920		mg/Kg		94	70 - 125
1,1,1-Trichloroethane	0.947	0.8962		mg/Kg		95	74 - 135
1,1,2-Trichloroethane	0.947	0.9642		mg/Kg		102	77 - 131
Trichloroethene	0.947	0.9552		mg/Kg		101	77 - 132
1,2,3-Trichloropropane	0.947	0.9062		mg/Kg		96	77 - 133
1,1,2-Trichlorotrifluoroethane	0.947	1.013		mg/Kg		107	57 - 150
1,2,4-Trimethylbenzene	0.947	0.9414		mg/Kg		99	75 - 126
1,3,5-Trimethylbenzene	0.947	0.8913		mg/Kg		94	74 - 127
Xylenes, Total	1.89	1.834		mg/Kg		97	77 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*105*		*80 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-487063/1-A
Matrix: Solid
Analysis Batch: 487065

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487063

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.464		0.464		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Allyl chloride	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Benzene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Bromobenzene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Bromochloromethane	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Bromodichloromethane	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Bromoform	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Bromomethane	<0.464		0.464		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
2-Butanone (MEK)	<0.695		0.695		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Carbon tetrachloride	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Chlorobenzene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Chlorodibromomethane	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Chloroethane	<0.232		0.232		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Chloroform	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Chloromethane	<0.232		0.232		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
2-Chlorotoluene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
4-Chlorotoluene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
cis-1,2-Dichloroethene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
cis-1,3-Dichloropropene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
1,2-Dibromo-3-chloropropane	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
1,2-Dibromoethane (EDB)	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Dibromomethane	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
1,2-Dichlorobenzene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
1,3-Dichlorobenzene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
1,4-Dichlorobenzene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Dichlorodifluoromethane	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
1,1-Dichloroethane	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
1,2-Dichloroethane	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
1,1-Dichloroethene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Dichlorofluoromethane	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
1,2-Dichloropropane	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
1,3-Dichloropropane	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
2,2-Dichloropropane	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
1,1-Dichloropropene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Diethyl ether	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Ethylbenzene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Hexachlorobutadiene	<0.232		0.232		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Isopropylbenzene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Methylene chloride	<0.232		0.232		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
4-Methyl-2-pentanone (MIBK)	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Methyl tert-butyl ether	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Naphthalene	<0.232		0.232		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
n-Butylbenzene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
n-Propylbenzene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
p-Isopropyltoluene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
sec-Butylbenzene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Styrene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
tert-Butylbenzene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-487063/1-A
Matrix: Solid
Analysis Batch: 487065

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487063

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
1,1,2,2-Tetrachloroethane	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Tetrachloroethene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Tetrahydrofuran	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Toluene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
trans-1,2-Dichloroethene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
trans-1,3-Dichloropropene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
1,2,3-Trichlorobenzene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
1,2,4-Trichlorobenzene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
1,1,1-Trichloroethane	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
1,1,2-Trichloroethane	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Trichloroethene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Trichlorofluoromethane	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
1,2,3-Trichloropropane	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
1,1,2-Trichlorotrifluoroethane	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
1,2,4-Trimethylbenzene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
1,3,5-Trimethylbenzene	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Vinyl chloride	<0.0927		0.0927		mg/Kg		04/27/26 09:06	04/28/26 10:44	1
Xylenes, Total	<0.139		0.139		mg/Kg		04/27/26 09:06	04/28/26 10:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*	*04/27/26 09:06*	*04/28/26 10:44*	*1*
Dibromofluoromethane (Surr)	*83*		*80 - 120*	*04/27/26 09:06*	*04/28/26 10:44*	*1*
Toluene-d8 (Surr)	*107*		*80 - 120*	*04/27/26 09:06*	*04/28/26 10:44*	*1*

Lab Sample ID: LCS 310-487063/2-A
Matrix: Solid
Analysis Batch: 487065

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487063

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	1.92	2.550		mg/Kg		133	54 - 150
Allyl chloride	0.961	1.011		mg/Kg		105	68 - 135
Benzene	0.961	0.9970		mg/Kg		104	76 - 129
Bromobenzene	0.961	0.9231		mg/Kg		96	76 - 125
Bromochloromethane	0.961	0.9937		mg/Kg		103	74 - 136
Bromodichloromethane	0.961	0.9680		mg/Kg		101	73 - 126
Bromoform	0.961	0.9488		mg/Kg		99	64 - 130
2-Butanone (MEK)	1.92	2.102		mg/Kg		109	66 - 147
Carbon tetrachloride	0.961	0.9325		mg/Kg		97	73 - 136
Chlorobenzene	0.961	0.9810		mg/Kg		102	78 - 123
Chlorodibromomethane	0.961	0.9307		mg/Kg		97	73 - 121
Chloroform	0.961	0.9721		mg/Kg		101	75 - 131
2-Chlorotoluene	0.961	0.9834		mg/Kg		102	78 - 126
4-Chlorotoluene	0.961	0.9737		mg/Kg		101	76 - 123
cis-1,2-Dichloroethene	0.961	1.010		mg/Kg		105	76 - 134
cis-1,3-Dichloropropene	0.961	0.9218		mg/Kg		96	73 - 126
1,2-Dibromo-3-chloropropane	0.961	1.125		mg/Kg		117	65 - 130
1,2-Dibromoethane (EDB)	0.961	1.050		mg/Kg		109	80 - 126

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-487063/2-A
Matrix: Solid
Analysis Batch: 487065

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487063

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dibromomethane	0.961	1.002		mg/Kg		104	79 - 130
1,2-Dichlorobenzene	0.961	1.014		mg/Kg		105	77 - 122
1,3-Dichlorobenzene	0.961	1.010		mg/Kg		105	77 - 124
1,4-Dichlorobenzene	0.961	0.9659		mg/Kg		100	75 - 122
1,1-Dichloroethane	0.961	0.9754		mg/Kg		101	68 - 142
1,2-Dichloroethane	0.961	0.9886		mg/Kg		103	70 - 140
1,1-Dichloroethene	0.961	0.9960		mg/Kg		104	64 - 141
1,2-Dichloropropane	0.961	0.9953		mg/Kg		104	77 - 129
1,3-Dichloropropane	0.961	1.016		mg/Kg		106	77 - 132
2,2-Dichloropropane	0.961	0.7506		mg/Kg		78	55 - 145
1,1-Dichloropropene	0.961	1.015		mg/Kg		106	75 - 136
Diethyl ether	0.961	1.060		mg/Kg		110	68 - 138
Ethylbenzene	0.961	0.9722		mg/Kg		101	76 - 128
Hexachlorobutadiene	0.961	0.8727		mg/Kg		91	66 - 141
Isopropylbenzene	0.961	0.9865		mg/Kg		103	76 - 126
Methylene chloride	0.961	1.049		mg/Kg		109	68 - 139
4-Methyl-2-pentanone (MIBK)	1.92	1.931		mg/Kg		100	66 - 139
Methyl tert-butyl ether	0.961	1.105		mg/Kg		115	68 - 139
Naphthalene	0.961	1.012		mg/Kg		105	71 - 125
n-Butylbenzene	0.961	0.9983		mg/Kg		104	70 - 131
n-Propylbenzene	0.961	0.9649		mg/Kg		100	77 - 127
p-Isopropyltoluene	0.961	0.9792		mg/Kg		102	74 - 128
sec-Butylbenzene	0.961	1.009		mg/Kg		105	75 - 127
Styrene	0.961	0.9560		mg/Kg		99	77 - 124
tert-Butylbenzene	0.961	0.9961		mg/Kg		104	76 - 128
1,1,1,2-Tetrachloroethane	0.961	0.9567		mg/Kg		100	77 - 126
1,1,2,2-Tetrachloroethane	0.961	1.015		mg/Kg		106	76 - 126
Tetrachloroethene	0.961	0.8869		mg/Kg		92	73 - 135
Tetrahydrofuran	1.92	2.126		mg/Kg		111	67 - 143
Toluene	0.961	0.9690		mg/Kg		101	75 - 126
trans-1,2-Dichloroethene	0.961	1.052		mg/Kg		109	68 - 138
trans-1,3-Dichloropropene	0.961	0.9262		mg/Kg		96	72 - 126
1,2,3-Trichlorobenzene	0.961	0.9215		mg/Kg		96	67 - 127
1,2,4-Trichlorobenzene	0.961	0.9494		mg/Kg		99	70 - 125
1,1,1-Trichloroethane	0.961	0.9158		mg/Kg		95	74 - 135
1,1,2-Trichloroethane	0.961	1.064		mg/Kg		111	77 - 131
Trichloroethene	0.961	1.024		mg/Kg		107	77 - 132
1,2,3-Trichloropropane	0.961	1.101		mg/Kg		115	77 - 133
1,1,2-Trichlorotrifluoroethane	0.961	0.9757		mg/Kg		101	57 - 150
1,2,4-Trimethylbenzene	0.961	0.9818		mg/Kg		102	75 - 126
1,3,5-Trimethylbenzene	0.961	0.9478		mg/Kg		99	74 - 127
Xylenes, Total	1.92	1.934		mg/Kg		101	77 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*
Dibromofluoromethane (Surr)	*97*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-487184/1-A
Matrix: Solid
Analysis Batch: 487186

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487184

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.484		0.484		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Allyl chloride	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Benzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Bromobenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Bromochloromethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Bromodichloromethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Bromoform	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Bromomethane	<0.484		0.484		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
2-Butanone (MEK)	<0.726		0.726		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Carbon tetrachloride	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Chlorobenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Chlorodibromomethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Chloroethane	<0.242		0.242		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Chloroform	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Chloromethane	<0.242		0.242		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
2-Chlorotoluene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
4-Chlorotoluene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
cis-1,2-Dichloroethene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
cis-1,3-Dichloropropene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,2-Dibromo-3-chloropropane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,2-Dibromoethane (EDB)	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Dibromomethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,2-Dichlorobenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,3-Dichlorobenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,4-Dichlorobenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Dichlorodifluoromethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,1-Dichloroethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,2-Dichloroethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,1-Dichloroethene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Dichlorofluoromethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,2-Dichloropropane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,3-Dichloropropane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
2,2-Dichloropropane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,1-Dichloropropene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Diethyl ether	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Ethylbenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Hexachlorobutadiene	<0.242		0.242		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Isopropylbenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Methylene chloride	<0.242		0.242		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
4-Methyl-2-pentanone (MIBK)	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Methyl tert-butyl ether	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Naphthalene	<0.242		0.242		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
n-Butylbenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
n-Propylbenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
p-Isopropyltoluene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
sec-Butylbenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Styrene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
tert-Butylbenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-487184/1-A
Matrix: Solid
Analysis Batch: 487186

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487184

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,1,2,2-Tetrachloroethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Tetrachloroethene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Tetrahydrofuran	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Toluene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
trans-1,2-Dichloroethene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
trans-1,3-Dichloropropene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,2,3-Trichlorobenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,2,4-Trichlorobenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,1,1-Trichloroethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,1,2-Trichloroethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Trichloroethene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Trichlorofluoromethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,2,3-Trichloropropane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,1,2-Trichlorotrifluoroethane	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,2,4-Trimethylbenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
1,3,5-Trimethylbenzene	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Vinyl chloride	<0.0967		0.0967		mg/Kg		04/28/26 08:11	04/29/26 08:45	1
Xylenes, Total	<0.145		0.145		mg/Kg		04/28/26 08:11	04/29/26 08:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*	*04/28/26 08:11*	*04/29/26 08:45*	*1*
Dibromofluoromethane (Surr)	*86*		*80 - 120*	*04/28/26 08:11*	*04/29/26 08:45*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*	*04/28/26 08:11*	*04/29/26 08:45*	*1*

Lab Sample ID: LCS 310-487184/2-A
Matrix: Solid
Analysis Batch: 487186

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487184

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	1.93	2.280		mg/Kg		118	54 - 150
Allyl chloride	0.963	0.9542		mg/Kg		99	68 - 135
Benzene	0.963	0.9672		mg/Kg		100	76 - 129
Bromobenzene	0.963	0.9764		mg/Kg		101	76 - 125
Bromochloromethane	0.963	0.9039		mg/Kg		94	74 - 136
Bromodichloromethane	0.963	1.002		mg/Kg		104	73 - 126
Bromoform	0.963	0.9612		mg/Kg		100	64 - 130
2-Butanone (MEK)	1.93	1.995		mg/Kg		104	66 - 147
Carbon tetrachloride	0.963	0.9312		mg/Kg		97	73 - 136
Chlorobenzene	0.963	1.011		mg/Kg		105	78 - 123
Chlorodibromomethane	0.963	1.001		mg/Kg		104	73 - 121
Chloroform	0.963	0.9451		mg/Kg		98	75 - 131
2-Chlorotoluene	0.963	1.027		mg/Kg		107	78 - 126
4-Chlorotoluene	0.963	0.9987		mg/Kg		104	76 - 123
cis-1,2-Dichloroethene	0.963	0.9322		mg/Kg		97	76 - 134
cis-1,3-Dichloropropene	0.963	0.9605		mg/Kg		100	73 - 126
1,2-Dibromo-3-chloropropane	0.963	1.170		mg/Kg		122	65 - 130
1,2-Dibromoethane (EDB)	0.963	1.036		mg/Kg		108	80 - 126

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-487184/2-A
Matrix: Solid
Analysis Batch: 487186

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487184

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dibromomethane	0.963	0.9860		mg/Kg		102	79 - 130
1,2-Dichlorobenzene	0.963	1.020		mg/Kg		106	77 - 122
1,3-Dichlorobenzene	0.963	0.9935		mg/Kg		103	77 - 124
1,4-Dichlorobenzene	0.963	0.9906		mg/Kg		103	75 - 122
1,1-Dichloroethane	0.963	0.9124		mg/Kg		95	68 - 142
1,2-Dichloroethane	0.963	0.9842		mg/Kg		102	70 - 140
1,1-Dichloroethene	0.963	0.9738		mg/Kg		101	64 - 141
1,2-Dichloropropane	0.963	0.9855		mg/Kg		102	77 - 129
1,3-Dichloropropane	0.963	1.046		mg/Kg		109	77 - 132
2,2-Dichloropropane	0.963	0.7124		mg/Kg		74	55 - 145
1,1-Dichloropropene	0.963	0.9623		mg/Kg		100	75 - 136
Diethyl ether	0.963	1.104		mg/Kg		115	68 - 138
Ethylbenzene	0.963	0.9883		mg/Kg		103	76 - 128
Hexachlorobutadiene	0.963	0.9998		mg/Kg		104	66 - 141
Isopropylbenzene	0.963	1.016		mg/Kg		106	76 - 126
Methylene chloride	0.963	1.037		mg/Kg		108	68 - 139
4-Methyl-2-pentanone (MIBK)	1.93	1.945		mg/Kg		101	66 - 139
Methyl tert-butyl ether	0.963	1.038		mg/Kg		108	68 - 139
Naphthalene	0.963	0.9397		mg/Kg		98	71 - 125
n-Butylbenzene	0.963	1.029		mg/Kg		107	70 - 131
n-Propylbenzene	0.963	1.004		mg/Kg		104	77 - 127
p-Isopropyltoluene	0.963	0.9906		mg/Kg		103	74 - 128
sec-Butylbenzene	0.963	1.032		mg/Kg		107	75 - 127
Styrene	0.963	0.9928		mg/Kg		103	77 - 124
tert-Butylbenzene	0.963	0.9926		mg/Kg		103	76 - 128
1,1,1,2-Tetrachloroethane	0.963	1.010		mg/Kg		105	77 - 126
1,1,2,2-Tetrachloroethane	0.963	1.052		mg/Kg		109	76 - 126
Tetrachloroethene	0.963	0.9749		mg/Kg		101	73 - 135
Tetrahydrofuran	1.93	1.999		mg/Kg		104	67 - 143
Toluene	0.963	0.9784		mg/Kg		102	75 - 126
trans-1,2-Dichloroethene	0.963	0.9789		mg/Kg		102	68 - 138
trans-1,3-Dichloropropene	0.963	0.9523		mg/Kg		99	72 - 126
1,2,3-Trichlorobenzene	0.963	0.9337		mg/Kg		97	67 - 127
1,2,4-Trichlorobenzene	0.963	0.9613		mg/Kg		100	70 - 125
1,1,1-Trichloroethane	0.963	0.9133		mg/Kg		95	74 - 135
1,1,2-Trichloroethane	0.963	1.077		mg/Kg		112	77 - 131
Trichloroethene	0.963	1.003		mg/Kg		104	77 - 132
1,2,3-Trichloropropane	0.963	1.066		mg/Kg		111	77 - 133
1,1,2-Trichlorotrifluoroethane	0.963	1.008		mg/Kg		105	57 - 150
1,2,4-Trimethylbenzene	0.963	0.9980		mg/Kg		104	75 - 126
1,3,5-Trimethylbenzene	0.963	0.9922		mg/Kg		103	74 - 127
Xylenes, Total	1.93	1.979		mg/Kg		103	77 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-487187/1-A
Matrix: Solid
Analysis Batch: 487190

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487187

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.493		0.493		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Allyl chloride	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Benzene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Bromobenzene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Bromochloromethane	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Bromodichloromethane	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Bromoform	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Bromomethane	<0.493		0.493		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
2-Butanone (MEK)	<0.739		0.739		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Carbon tetrachloride	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Chlorobenzene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Chlorodibromomethane	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Chloroethane	<0.246		0.246		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Chloroform	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Chloromethane	<0.246		0.246		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
2-Chlorotoluene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
4-Chlorotoluene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
cis-1,2-Dichloroethene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
cis-1,3-Dichloropropene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
1,2-Dibromo-3-chloropropane	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
1,2-Dibromoethane (EDB)	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Dibromomethane	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
1,2-Dichlorobenzene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
1,3-Dichlorobenzene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
1,4-Dichlorobenzene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Dichlorodifluoromethane	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
1,1-Dichloroethane	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
1,2-Dichloroethane	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
1,1-Dichloroethene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Dichlorofluoromethane	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
1,2-Dichloropropane	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
1,3-Dichloropropane	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
2,2-Dichloropropane	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
1,1-Dichloropropene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Diethyl ether	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Ethylbenzene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Hexachlorobutadiene	<0.246		0.246		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Isopropylbenzene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Methylene chloride	<0.246		0.246		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
4-Methyl-2-pentanone (MIBK)	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Methyl tert-butyl ether	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Naphthalene	<0.246		0.246		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
n-Butylbenzene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
n-Propylbenzene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
p-Isopropyltoluene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
sec-Butylbenzene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Styrene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
tert-Butylbenzene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-487187/1-A
Matrix: Solid
Analysis Batch: 487190

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487187

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
1,1,2,2-Tetrachloroethane	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Tetrachloroethene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Tetrahydrofuran	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Toluene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
trans-1,2-Dichloroethene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
trans-1,3-Dichloropropene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
1,2,3-Trichlorobenzene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
1,2,4-Trichlorobenzene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
1,1,1-Trichloroethane	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
1,1,2-Trichloroethane	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Trichloroethene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Trichlorofluoromethane	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
1,2,3-Trichloropropane	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
1,1,2-Trichlorotrifluoroethane	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
1,2,4-Trimethylbenzene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
1,3,5-Trimethylbenzene	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Vinyl chloride	<0.0985		0.0985		mg/Kg		04/28/26 08:14	04/29/26 19:42	1
Xylenes, Total	<0.148		0.148		mg/Kg		04/28/26 08:14	04/29/26 19:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*	*04/28/26 08:14*	*04/29/26 19:42*	*1*
Dibromofluoromethane (Surr)	*89*		*80 - 120*	*04/28/26 08:14*	*04/29/26 19:42*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*	*04/28/26 08:14*	*04/29/26 19:42*	*1*

Lab Sample ID: LCS 310-487187/2-A
Matrix: Solid
Analysis Batch: 487190

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487187

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	1.93	2.367		mg/Kg		122	54 - 150
Allyl chloride	0.967	0.9011		mg/Kg		93	68 - 135
Benzene	0.967	0.9316		mg/Kg		96	76 - 129
Bromobenzene	0.967	0.9122		mg/Kg		94	76 - 125
Bromochloromethane	0.967	0.8964		mg/Kg		93	74 - 136
Bromodichloromethane	0.967	0.9301		mg/Kg		96	73 - 126
Bromoform	0.967	0.9154		mg/Kg		95	64 - 130
2-Butanone (MEK)	1.93	1.907		mg/Kg		99	66 - 147
Carbon tetrachloride	0.967	0.8776		mg/Kg		91	73 - 136
Chlorobenzene	0.967	0.9431		mg/Kg		98	78 - 123
Chlorodibromomethane	0.967	0.9447		mg/Kg		98	73 - 121
Chloroform	0.967	0.9037		mg/Kg		93	75 - 131
2-Chlorotoluene	0.967	0.9309		mg/Kg		96	78 - 126
4-Chlorotoluene	0.967	0.9013		mg/Kg		93	76 - 123
cis-1,2-Dichloroethene	0.967	0.9118		mg/Kg		94	76 - 134
cis-1,3-Dichloropropene	0.967	0.8657		mg/Kg		89	73 - 126
1,2-Dibromo-3-chloropropane	0.967	1.051		mg/Kg		109	65 - 130
1,2-Dibromoethane (EDB)	0.967	0.9567		mg/Kg		99	80 - 126

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-487187/2-A
Matrix: Solid
Analysis Batch: 487190

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487187

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dibromomethane	0.967	0.9900		mg/Kg		102	79 - 130
1,2-Dichlorobenzene	0.967	0.9638		mg/Kg		100	77 - 122
1,3-Dichlorobenzene	0.967	0.9564		mg/Kg		99	77 - 124
1,4-Dichlorobenzene	0.967	0.9176		mg/Kg		95	75 - 122
1,1-Dichloroethane	0.967	0.9644		mg/Kg		100	68 - 142
1,2-Dichloroethane	0.967	0.9458		mg/Kg		98	70 - 140
1,1-Dichloroethene	0.967	0.9232		mg/Kg		95	64 - 141
1,2-Dichloropropane	0.967	0.9691		mg/Kg		100	77 - 129
1,3-Dichloropropane	0.967	0.9937		mg/Kg		103	77 - 132
2,2-Dichloropropane	0.967	0.6006		mg/Kg		62	55 - 145
1,1-Dichloropropene	0.967	0.9175		mg/Kg		95	75 - 136
Diethyl ether	0.967	0.9984		mg/Kg		103	68 - 138
Ethylbenzene	0.967	0.9393		mg/Kg		97	76 - 128
Hexachlorobutadiene	0.967	0.7840		mg/Kg		81	66 - 141
Isopropylbenzene	0.967	0.9271		mg/Kg		96	76 - 126
Methylene chloride	0.967	0.9438		mg/Kg		98	68 - 139
4-Methyl-2-pentanone (MIBK)	1.93	1.960		mg/Kg		101	66 - 139
Methyl tert-butyl ether	0.967	1.043		mg/Kg		108	68 - 139
Naphthalene	0.967	0.9144		mg/Kg		95	71 - 125
n-Butylbenzene	0.967	0.9133		mg/Kg		94	70 - 131
n-Propylbenzene	0.967	0.9157		mg/Kg		95	77 - 127
p-Isopropyltoluene	0.967	0.9046		mg/Kg		94	74 - 128
sec-Butylbenzene	0.967	0.9416		mg/Kg		97	75 - 127
Styrene	0.967	0.9147		mg/Kg		95	77 - 124
tert-Butylbenzene	0.967	0.9253		mg/Kg		96	76 - 128
1,1,1,2-Tetrachloroethane	0.967	0.9635		mg/Kg		100	77 - 126
1,1,2,2-Tetrachloroethane	0.967	0.9907		mg/Kg		102	76 - 126
Tetrachloroethene	0.967	0.8997		mg/Kg		93	73 - 135
Tetrahydrofuran	1.93	2.027		mg/Kg		105	67 - 143
Toluene	0.967	0.9168		mg/Kg		95	75 - 126
trans-1,2-Dichloroethene	0.967	0.9572		mg/Kg		99	68 - 138
trans-1,3-Dichloropropene	0.967	0.8568		mg/Kg		89	72 - 126
1,2,3-Trichlorobenzene	0.967	0.8491		mg/Kg		88	67 - 127
1,2,4-Trichlorobenzene	0.967	0.8895		mg/Kg		92	70 - 125
1,1,1-Trichloroethane	0.967	0.8838		mg/Kg		91	74 - 135
1,1,2-Trichloroethane	0.967	1.026		mg/Kg		106	77 - 131
Trichloroethene	0.967	0.9572		mg/Kg		99	77 - 132
1,2,3-Trichloropropane	0.967	1.055		mg/Kg		109	77 - 133
1,1,2-Trichlorotrifluoroethane	0.967	0.9795		mg/Kg		101	57 - 150
1,2,4-Trimethylbenzene	0.967	0.9492		mg/Kg		98	75 - 126
1,3,5-Trimethylbenzene	0.967	0.9003		mg/Kg		93	74 - 127
Xylenes, Total	1.93	1.828		mg/Kg		94	77 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*

Method: 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Lab Sample ID: MB 310-486997/1-A
Matrix: Solid
Analysis Batch: 487075

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 486997

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00482		0.00482		mg/Kg		04/24/26 13:04	04/27/26 16:45	1
Acenaphthylene	<0.00482		0.00482		mg/Kg		04/24/26 13:04	04/27/26 16:45	1
Anthracene	<0.00482		0.00482		mg/Kg		04/24/26 13:04	04/27/26 16:45	1
Benzo(a)anthracene	<0.00482		0.00482		mg/Kg		04/24/26 13:04	04/27/26 16:45	1
Benzo(a)pyrene	<0.00482		0.00482		mg/Kg		04/24/26 13:04	04/27/26 16:45	1
Benzo(b)fluoranthene	<0.00482		0.00482		mg/Kg		04/24/26 13:04	04/27/26 16:45	1
Benzo(g,h,i)perylene	<0.00482		0.00482		mg/Kg		04/24/26 13:04	04/27/26 16:45	1
Benzo(k)fluoranthene	<0.00482		0.00482		mg/Kg		04/24/26 13:04	04/27/26 16:45	1
Chrysene	<0.00482		0.00482		mg/Kg		04/24/26 13:04	04/27/26 16:45	1
Dibenz(a,h)anthracene	<0.00482		0.00482		mg/Kg		04/24/26 13:04	04/27/26 16:45	1
Fluoranthene	<0.00482		0.00482		mg/Kg		04/24/26 13:04	04/27/26 16:45	1
Fluorene	<0.00482		0.00482		mg/Kg		04/24/26 13:04	04/27/26 16:45	1
Indeno(1,2,3-cd)pyrene	<0.00482		0.00482		mg/Kg		04/24/26 13:04	04/27/26 16:45	1
2-Methylnaphthalene	<0.00482		0.00482		mg/Kg		04/24/26 13:04	04/27/26 16:45	1
Naphthalene	<0.00482		0.00482		mg/Kg		04/24/26 13:04	04/27/26 16:45	1
Phenanthrene	<0.00482		0.00482		mg/Kg		04/24/26 13:04	04/27/26 16:45	1
Pyrene	<0.00482		0.00482		mg/Kg		04/24/26 13:04	04/27/26 16:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*100*		*20 - 122*	*04/24/26 13:04*	*04/27/26 16:45*	*1*
Nitrobenzene-d5 (Surr)	*94*		*10 - 132*	*04/24/26 13:04*	*04/27/26 16:45*	*1*
Terphenyl-d14 (Surr)	*97*		*10 - 119*	*04/24/26 13:04*	*04/27/26 16:45*	*1*

Lab Sample ID: LCS 310-486997/2-A
Matrix: Solid
Analysis Batch: 487217

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 486997

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	0.0657	0.07574		mg/Kg		115	32 - 132
Acenaphthylene	0.0657	0.08035		mg/Kg		122	31 - 133
Anthracene	0.0657	0.06557		mg/Kg		100	25 - 124
Benzo(a)anthracene	0.0657	0.06642		mg/Kg		101	19 - 124
Benzo(a)pyrene	0.0657	0.06736		mg/Kg		103	14 - 122
Benzo(b)fluoranthene	0.0657	0.06376		mg/Kg		97	17 - 121
Benzo(g,h,i)perylene	0.0657	0.06816		mg/Kg		104	12 - 135
Benzo(k)fluoranthene	0.0657	0.06822		mg/Kg		104	18 - 124
Chrysene	0.0657	0.06839		mg/Kg		104	20 - 126
Dibenz(a,h)anthracene	0.0657	0.06818		mg/Kg		104	11 - 130
Fluoranthene	0.0657	0.06945		mg/Kg		106	24 - 125
Fluorene	0.0657	0.07711		mg/Kg		117	27 - 127
Indeno(1,2,3-cd)pyrene	0.0657	0.06922		mg/Kg		105	12 - 125
2-Methylnaphthalene	0.0657	0.07125		mg/Kg		109	33 - 125
Naphthalene	0.0657	0.06378		mg/Kg		97	33 - 127
Phenanthrene	0.0657	0.06292		mg/Kg		96	23 - 124
Pyrene	0.0657	0.06916		mg/Kg		105	19 - 124

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*92*		*20 - 122*

Method: 8270E - Semivolatile Organic Compounds (GC-MS/MS) (Continued)

Lab Sample ID: LCS 310-486997/2-A
Matrix: Solid
Analysis Batch: 487217

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 486997

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5 (Surr)	*114*		*10 - 132*
Terphenyl-d14 (Surr)	*100*		*10 - 119*

Lab Sample ID: 310-330207-1 MS
Matrix: Solid
Analysis Batch: 487075

Client Sample ID: HA-02-1
Prep Type: Total/NA
Prep Batch: 486997

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	<0.00498		0.0685	0.06410		mg/Kg	☼	94	10 - 150
Acenaphthylene	<0.00498		0.0685	0.06329		mg/Kg	☼	92	10 - 148
Anthracene	<0.00498		0.0685	0.06395		mg/Kg	☼	88	10 - 138
Benzo(a)anthracene	0.0165		0.0685	0.07104		mg/Kg	☼	80	10 - 149
Benzo(a)pyrene	0.0185		0.0685	0.06986		mg/Kg	☼	75	10 - 131
Benzo(b)fluoranthene	0.0217		0.0685	0.06585		mg/Kg	☼	64	10 - 134
Benzo(g,h,i)perylene	0.0187		0.0685	0.08203		mg/Kg	☼	92	10 - 139
Benzo(k)fluoranthene	0.00902		0.0685	0.07018		mg/Kg	☼	89	10 - 129
Chrysene	0.0193		0.0685	0.08182		mg/Kg	☼	91	10 - 143
Dibenz(a,h)anthracene	<0.00498		0.0685	0.07365		mg/Kg	☼	101	10 - 130
Fluoranthene	0.0363		0.0685	0.07969		mg/Kg	☼	63	10 - 150
Fluorene	<0.00498		0.0685	0.05721		mg/Kg	☼	84	10 - 140
Indeno(1,2,3-cd)pyrene	0.0136		0.0685	0.07978		mg/Kg	☼	97	10 - 129
2-Methylnaphthalene	0.00623		0.0685	0.07523		mg/Kg	☼	101	10 - 150
Naphthalene	<0.00498		0.0685	0.07486		mg/Kg	☼	104	10 - 150
Phenanthrene	0.0209		0.0685	0.07366		mg/Kg	☼	77	10 - 150
Pyrene	0.0326		0.0685	0.08353		mg/Kg	☼	74	10 - 150

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Fluorobiphenyl (Surr)	*104*		*20 - 122*
Nitrobenzene-d5 (Surr)	*90*		*10 - 132*
Terphenyl-d14 (Surr)	*98*		*10 - 119*

Lab Sample ID: 310-330207-1 MSD
Matrix: Solid
Analysis Batch: 487075

Client Sample ID: HA-02-1
Prep Type: Total/NA
Prep Batch: 486997

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene	<0.00498		0.0660	0.06630		mg/Kg	☼	100	10 - 150	3	40
Acenaphthylene	<0.00498		0.0660	0.06494		mg/Kg	☼	98	10 - 148	3	40
Anthracene	<0.00498		0.0660	0.06685		mg/Kg	☼	96	10 - 138	4	40
Benzo(a)anthracene	0.0165		0.0660	0.07336		mg/Kg	☼	86	10 - 149	3	40
Benzo(a)pyrene	0.0185		0.0660	0.07720		mg/Kg	☼	89	10 - 131	10	40
Benzo(b)fluoranthene	0.0217		0.0660	0.07281		mg/Kg	☼	77	10 - 134	10	40
Benzo(g,h,i)perylene	0.0187		0.0660	0.08560		mg/Kg	☼	101	10 - 139	4	40
Benzo(k)fluoranthene	0.00902		0.0660	0.07422		mg/Kg	☼	99	10 - 129	6	40
Chrysene	0.0193		0.0660	0.08421		mg/Kg	☼	98	10 - 143	3	40
Dibenz(a,h)anthracene	<0.00498		0.0660	0.07561		mg/Kg	☼	108	10 - 130	3	40
Fluoranthene	0.0363		0.0660	0.09768		mg/Kg	☼	93	10 - 150	20	40
Fluorene	<0.00498		0.0660	0.06131		mg/Kg	☼	93	10 - 140	7	40

Method: 8270E - Semivolatile Organic Compounds (GC-MS/MS) (Continued)

Lab Sample ID: 310-330207-1 MSD
Matrix: Solid
Analysis Batch: 487075

Client Sample ID: HA-02-1
Prep Type: Total/NA
Prep Batch: 486997

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Indeno(1,2,3-cd)pyrene	0.0136		0.0660	0.08749		mg/Kg	☼	112	10 - 129	9	40
2-Methylnaphthalene	0.00623		0.0660	0.07774		mg/Kg	☼	108	10 - 150	3	40
Naphthalene	<0.00498		0.0660	0.07274		mg/Kg	☼	104	10 - 150	3	40
Phenanthrene	0.0209		0.0660	0.08764		mg/Kg	☼	101	10 - 150	17	40
Pyrene	0.0326		0.0660	0.09270		mg/Kg	☼	91	10 - 150	10	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*100*		*20 - 122*
Nitrobenzene-d5 (Surr)	*92*		*10 - 132*
Terphenyl-d14 (Surr)	*101*		*10 - 119*

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Lab Sample ID: MB 310-487248/1-A
Matrix: Solid
Analysis Batch: 487252

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487248

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<9.82		9.82		mg/Kg		04/28/26 11:48	04/29/26 09:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*	*04/28/26 11:48*	*04/29/26 09:29*	*1*

Lab Sample ID: LCS 310-487248/2-A
Matrix: Solid
Analysis Batch: 487252

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487248

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Wisconsin GRO			19.5	16.92		mg/Kg		87	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*

Lab Sample ID: LCSD 310-487248/23-A
Matrix: Solid
Analysis Batch: 487252

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 487248

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Wisconsin GRO			19.8	15.86		mg/Kg		80	80 - 120	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Lab Sample ID: MB 310-486815/1-A
Matrix: Solid
Analysis Batch: 486913

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 486815

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<6.96		6.96		mg/Kg		04/23/26 11:41	04/24/26 15:39	1

Lab Sample ID: LCS 310-486815/2-A
Matrix: Solid
Analysis Batch: 486913

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 486815

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics (DRO)	98.8	100.6		mg/Kg		102	70 - 120

Lab Sample ID: LCSD 310-486815/3-A
Matrix: Solid
Analysis Batch: 486913

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 486815

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics (DRO)	99.6	107.4		mg/Kg		108	70 - 120	7	20

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Lab Sample ID: MB 240-699234/1-A
Matrix: Water
Analysis Batch: 699297

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699234

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.50		1.50		ng/L		04/24/26 10:05	04/25/26 03:34	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<4.00		4.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<4.00		4.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<4.00		4.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<10.0		10.0		ng/L		04/24/26 10:05	04/25/26 03:34	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<10.0		10.0		ng/L		04/24/26 10:05	04/25/26 03:34	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorobutanesulfonic acid (PFBS)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorobutanoic acid (PFBA)	<4.00		4.00		ng/L		04/24/26 10:05	04/25/26 03:34	1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: MB 240-699234/1-A
Matrix: Water
Analysis Batch: 699297

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699234

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanesulfonic acid (PFDS)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorodecanoic acid (PFDA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorododecanesulfonic acid (PFDoS)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorododecanoic acid (PFDoA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluoroheptanoic acid (PFHpA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<10.0		10.0		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorohexanesulfonic acid (PFHxS)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorohexanoic acid (PFHxA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorononanesulfonic acid (PFNS)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorononanoic acid (PFNA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorooctanesulfonamide (PFOSA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorooctanesulfonic acid (PFOS)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorooctanoic acid (PFOA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluoropentanesulfonic acid (PFPeS)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluoropentanoic acid (PFPeA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<10.0		10.0		ng/L		04/24/26 10:05	04/25/26 03:34	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<4.00		4.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorotetradecanoic acid (PFTeDA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluorotridecanoic acid (PFTrDA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1
Perfluoroundecanoic acid (PFUnA)	<2.00		2.00		ng/L		04/24/26 10:05	04/25/26 03:34	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*51.2*		*40 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C2 10:2 FTS	*62.1*		*40 - 200*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C2 4:2 FTS	*56.3*		*40 - 200*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C2 6:2 FTS	*51.0*		*40 - 200*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C2 8:2 FTS	*53.1*		*40 - 300*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C3 HFPO-DA	*54.9*		*40 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C4 PFBA	*47.4*		*5 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C3 PFBS	*48.3*		*40 - 135*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C6 PFDA	*52.3*		*40 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C2-PFDoA	*57.3*		*10 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C4 PFHpA	*53.4*		*40 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C5 PFHxA	*58.9*		*40 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C3 PFHxS	*49.5*		*40 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C9 PFNA	*50.4*		*40 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C8 PFOA	*52.6*		*40 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*
13C8 PFOS	*54.3*		*40 - 130*	*04/24/26 10:05*	*04/25/26 03:34*	*1*

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: MB 240-699234/1-A
Matrix: Water
Analysis Batch: 699297

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699234

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	56.0		40 - 130	04/24/26 10:05	04/25/26 03:34	1
13C3-PFPrS	39.9		20 - 150	04/24/26 10:05	04/25/26 03:34	1
13C2 PFTeDA	61.7		10 - 130	04/24/26 10:05	04/25/26 03:34	1
13C7 PFUnA	59.3		30 - 130	04/24/26 10:05	04/25/26 03:34	1
d5-NEtFOSAA	64.5		25 - 135	04/24/26 10:05	04/25/26 03:34	1
d9-N-EtFOSE-M	45.3		10 - 130	04/24/26 10:05	04/25/26 03:34	1
d5-NEtPFOSA	46.1		10 - 130	04/24/26 10:05	04/25/26 03:34	1
d3-NMeFOSAA	62.9		40 - 170	04/24/26 10:05	04/25/26 03:34	1
d7-N-MeFOSE-M	44.5		10 - 130	04/24/26 10:05	04/25/26 03:34	1
d3-NMePFOSA	49.3		10 - 130	04/24/26 10:05	04/25/26 03:34	1

Lab Sample ID: LCS 240-699234/3-A
Matrix: Water
Analysis Batch: 699297

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699234

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	37.8	36.83		ng/L		98	55 - 160
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	37.4	41.22		ng/L		110	70 - 155
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	43.98		ng/L		116	65 - 145
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	30.0	34.44		ng/L		115	70 - 140
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	76.8	83.08		ng/L		108	60 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	75.0	75.71		ng/L		101	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	76.2	79.50		ng/L		104	65 - 155
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	45.47		ng/L		114	65 - 145
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	46.06		ng/L		115	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	222.7		ng/L		111	70 - 135
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	43.71		ng/L		109	60 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	43.76		ng/L		109	50 - 140
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	232.2		ng/L		116	70 - 145
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	36.34		ng/L		91	50 - 150
Perfluorobutanesulfonic acid (PFBS)	35.5	32.83		ng/L		92	60 - 145
Perfluorobutanoic acid (PFBA)	80.0	92.15		ng/L		115	70 - 140
Perfluorodecanesulfonic acid (PFDS)	38.6	38.65		ng/L		100	60 - 145
Perfluorodecanoic acid (PFDA)	40.0	42.21		ng/L		106	70 - 140

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LCS 240-699234/3-A
Matrix: Water
Analysis Batch: 699297

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699234

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorododecanesulfonic acid (PFDoS)	38.8	35.98		ng/L		93	50 - 145
Perfluorododecanoic acid (PFDoA)	40.0	44.13		ng/L		110	70 - 140
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	35.7	38.15		ng/L		107	70 - 140
Perfluoroheptanesulfonic acid (PFHpS)	38.2	42.29		ng/L		111	70 - 150
Perfluoroheptanoic acid (PFHpA)	40.0	44.17		ng/L		110	70 - 150
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	172.4		ng/L		86	50 - 145
Perfluorohexanesulfonic acid (PFHxS)	36.5	27.07		ng/L		74	65 - 145
Perfluorohexanoic acid (PFHxA)	40.0	40.35		ng/L		101	70 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	42.15		ng/L		105	60 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	44.38		ng/L		111	55 - 140
Perfluorononanesulfonic acid (PFNS)	38.5	40.71		ng/L		106	65 - 145
Perfluorononanoic acid (PFNA)	40.0	42.48		ng/L		106	70 - 150
Perfluorooctanesulfonamide (PFOSA)	40.0	44.37		ng/L		111	70 - 145
Perfluorooctanesulfonic acid (PFOS)	37.2	38.88		ng/L		105	55 - 150
Perfluorooctanoic acid (PFOA)	40.0	42.10		ng/L		105	70 - 150
Perfluoropentanesulfonic acid (PFPeS)	37.6	40.95		ng/L		109	65 - 140
Perfluoropentanoic acid (PFPeA)	40.0	42.62		ng/L		107	65 - 135
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	192.7		ng/L		96	70 - 135
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	78.22		ng/L		98	65 - 130
Perfluorotetradecanoic acid (PFTeDA)	40.0	38.53		ng/L		96	60 - 140
Perfluorotridecanoic acid (PFTrDA)	40.0	41.02		ng/L		103	65 - 140
Perfluoroundecanoic acid (PFUnA)	40.0	42.78		ng/L		107	70 - 145

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C8 FOSA	*96.3*		*40 - 130*
13C2 10:2 FTS	*96.1*		*10 - 200*
13C2 4:2 FTS	*118*		*40 - 200*
13C2 6:2 FTS	*105*		*40 - 200*
13C2 8:2 FTS	*98.4*		*40 - 300*
13C3 HFPO-DA	*102*		*40 - 130*
13C4 PFBA	*99.7*		*5 - 130*
13C3 PFBS	*103*		*40 - 135*
13C6 PFDA	*98.7*		*40 - 130*
13C2-PFDoA	*86.7*		*10 - 130*
13C4 PFHpA	*104*		*40 - 130*
13C5 PFHxA	*105*		*40 - 130*

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LCS 240-699234/3-A
Matrix: Water
Analysis Batch: 699297

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699234

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C3 PFHxS	104		40 - 130
13C9 PFNA	101		40 - 130
13C8 PFOA	110		40 - 130
13C8 PFOS	108		40 - 130
13C5 PFPeA	110		40 - 130
13C3-PFPrS	94.9		20 - 150
13C2 PFTeDA	91.5		10 - 130
13C7 PFUnA	95.8		30 - 130
d5-NEtFOSAA	94.5		25 - 135
d9-N-EtFOSE-M	55.5		10 - 130
d5-NEtPFOSA	75.7		10 - 130
d3-NMeFOSAA	99.9		40 - 170
d7-N-MeFOSE-M	56.0		10 - 130
d3-NMePFOSA	87.0		10 - 130

Lab Sample ID: LLCS 240-699234/2-A
Matrix: Water
Analysis Batch: 699297

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699234

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	3.78	3.982		ng/L		105	55 - 160
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	3.74	4.316		ng/L		116	70 - 155
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	4.267		ng/L		113	65 - 145
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	3.00	3.622		ng/L		121	70 - 140
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	7.68	8.506		ng/L		111	60 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	7.50	8.190		ng/L		109	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	7.62	8.909		ng/L		117	65 - 155
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	4.848		ng/L		121	65 - 145
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	4.853		ng/L		121	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	25.83		ng/L		129	70 - 135
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	4.474		ng/L		112	60 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	4.904		ng/L		123	50 - 140
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	23.64		ng/L		118	70 - 145
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	3.749		ng/L		94	50 - 150
Perfluorobutanesulfonic acid (PFBS)	3.55	3.587		ng/L		101	60 - 145
Perfluorobutanoic acid (PFBA)	8.00	9.673		ng/L		121	70 - 140

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LLCS 240-699234/2-A
Matrix: Water
Analysis Batch: 699297

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699234

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorodecanesulfonic acid (PFDS)	3.86	4.132		ng/L		107	60 - 145
Perfluorodecanoic acid (PFDA)	4.00	5.015		ng/L		125	70 - 140
Perfluorododecanesulfonic acid (PFDoS)	3.88	3.882		ng/L		100	50 - 145
Perfluorododecanoic acid (PFDoA)	4.00	4.693		ng/L		117	70 - 140
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.57	3.389		ng/L		95	70 - 140
Perfluoroheptanesulfonic acid (PFHpS)	3.82	4.495		ng/L		118	70 - 150
Perfluoroheptanoic acid (PFHpA)	4.00	4.823		ng/L		121	70 - 150
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20.0	14.17		ng/L		71	50 - 145
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.166		ng/L		87	65 - 145
Perfluorohexanoic acid (PFHxA)	4.00	4.278		ng/L		107	70 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.580		ng/L		115	60 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	4.635		ng/L		116	55 - 140
Perfluorononanesulfonic acid (PFNS)	3.85	4.471		ng/L		116	65 - 145
Perfluorononanoic acid (PFNA)	4.00	4.528		ng/L		113	70 - 150
Perfluorooctanesulfonamide (PFOSA)	4.00	4.657		ng/L		116	70 - 145
Perfluorooctanesulfonic acid (PFOS)	3.72	4.375		ng/L		118	55 - 150
Perfluorooctanoic acid (PFOA)	4.00	4.409		ng/L		110	70 - 150
Perfluoropentanesulfonic acid (PFPeS)	3.76	4.238		ng/L		113	65 - 140
Perfluoropentanoic acid (PFPeA)	4.00	4.477		ng/L		112	65 - 135
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20.0	17.21		ng/L		86	70 - 135
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.00	7.433		ng/L		93	65 - 130
Perfluorotetradecanoic acid (PFTeDA)	4.00	4.097		ng/L		102	60 - 140
Perfluorotridecanoic acid (PFTrDA)	4.00	4.115		ng/L		103	65 - 140
Perfluoroundecanoic acid (PFUnA)	4.00	4.621		ng/L		116	70 - 145

Isotope Dilution	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C8 FOSA	*74.8*		*40 - 130*
13C2 10:2 FTS	*76.0*		*10 - 200*
13C2 4:2 FTS	*95.2*		*40 - 200*
13C2 6:2 FTS	*82.7*		*40 - 200*
13C2 8:2 FTS	*77.7*		*40 - 300*
13C3 HFPO-DA	*87.0*		*40 - 130*
13C4 PFBA	*82.0*		*5 - 130*
13C3 PFBS	*80.1*		*40 - 135*
13C6 PFDA	*76.0*		*40 - 130*

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LLCS 240-699234/2-A
Matrix: Water
Analysis Batch: 699297

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699234

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits
13C2-PFDoA	68.5		10 - 130
13C4 PFHpA	89.6		40 - 130
13C5 PFHxA	99.8		40 - 130
13C3 PFHxS	81.6		40 - 130
13C9 PFNA	81.4		40 - 130
13C8 PFOA	89.4		40 - 130
13C8 PFOS	83.9		40 - 130
13C5 PFPeA	96.5		40 - 130
13C3-PFPrS	72.8		20 - 150
13C2 PFTeDA	71.2		10 - 130
13C7 PFUnA	73.9		30 - 130
d5-NEtFOSAA	73.1		25 - 135
d9-N-EtFOSE-M	43.4		10 - 130
d5-NEtPFOSA	55.7		10 - 130
d3-NMeFOSAA	76.2		40 - 170
d7-N-MeFOSE-M	46.6		10 - 130
d3-NMePFOSA	59.4		10 - 130

Lab Sample ID: MB 240-699386/1-A
Matrix: Solid
Analysis Batch: 699448

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699386

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.400		0.400		ng/g		04/27/26 07:31	04/27/26 20:34	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.400		0.400		ng/g		04/27/26 07:31	04/27/26 20:34	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.400		0.400		ng/g		04/27/26 07:31	04/27/26 20:34	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.00		1.00		ng/g		04/27/26 07:31	04/27/26 20:34	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.00		1.00		ng/g		04/27/26 07:31	04/27/26 20:34	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorobutanesulfonic acid (PFBS)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: MB 240-699386/1-A
Matrix: Solid
Analysis Batch: 699448

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699386

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.400		0.400		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorodecanesulfonic acid (PFDS)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorodecanoic acid (PFDA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorododecanesulfonic acid (PFDoS)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorododecanoic acid (PFDoA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluoroheptanoic acid (PFHpA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.00		1.00		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorohexanesulfonic acid (PFHxS)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorohexanoic acid (PFHxA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorononanesulfonic acid (PFNS)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorononanoic acid (PFNA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorooctanesulfonamide (PFOSA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorooctanesulfonic acid (PFOS)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorooctanoic acid (PFOA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluoropentanesulfonic acid (PFPeS)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluoropentanoic acid (PFPeA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.00		1.00		ng/g		04/27/26 07:31	04/27/26 20:34	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.400		0.400		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorotetradecanoic acid (PFTeDA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluorotridecanoic acid (PFTrDA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1
Perfluoroundecanoic acid (PFUnA)	<0.200		0.200		ng/g		04/27/26 07:31	04/27/26 20:34	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*97.2*		*40 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C2 10:2 FTS	*95.6*		*40 - 275*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C2 4:2 FTS	*118*		*40 - 165*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C2 6:2 FTS	*106*		*40 - 215*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C2 8:2 FTS	*96.4*		*40 - 275*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C3 HFPO-DA	*95.4*		*40 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C4 PFBA	*92.7*		*8 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C3 PFBS	*111*		*40 - 135*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C6 PFDA	*89.2*		*40 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C2-PFDoA	*84.4*		*40 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C4 PFHpA	*98.6*		*40 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C5 PFHxA	*102*		*40 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C3 PFHxS	*109*		*40 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C9 PFNA	*93.5*		*40 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*
13C8 PFOA	*87.0*		*40 - 130*	*04/27/26 07:31*	*04/27/26 20:34*	*1*

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: MB 240-699386/1-A
Matrix: Solid
Analysis Batch: 699448

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699386

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	89.9		40 - 130	04/27/26 07:31	04/27/26 20:34	1
13C5 PFPeA	103		35 - 130	04/27/26 07:31	04/27/26 20:34	1
13C3-PFPrS	87.6		20 - 150	04/27/26 07:31	04/27/26 20:34	1
13C2 PFTeDA	103		20 - 130	04/27/26 07:31	04/27/26 20:34	1
13C7 PFUnA	85.6		40 - 130	04/27/26 07:31	04/27/26 20:34	1
d5-NEtFOSAA	82.8		40 - 150	04/27/26 07:31	04/27/26 20:34	1
d9-N-EtFOSE-M	62.3		15 - 130	04/27/26 07:31	04/27/26 20:34	1
d5-NEtPFOSA	96.3		10 - 130	04/27/26 07:31	04/27/26 20:34	1
d3-NMeFOSAA	86.5		40 - 135	04/27/26 07:31	04/27/26 20:34	1
d7-N-MeFOSE-M	61.2		20 - 130	04/27/26 07:31	04/27/26 20:34	1
d3-NMePFOSA	95.0		10 - 130	04/27/26 07:31	04/27/26 20:34	1

Lab Sample ID: LCS 240-699386/3-A
Matrix: Solid
Analysis Batch: 699448

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699386

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.36	3.009		ng/g		128	45 - 160
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.34	2.710		ng/g		116	70 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.37	2.541		ng/g		107	70 - 160
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1.88	2.102		ng/g		112	70 - 145
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	4.80	5.623		ng/g		117	70 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	4.69	5.085		ng/g		108	60 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	4.76	5.302		ng/g		111	55 - 200
N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.50	2.760		ng/g		110	70 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.50	2.848		ng/g		114	65 - 165
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	12.5	13.49		ng/g		108	70 - 135
N-methylperfluorooctane sulfonamide (NMeFOSA)	2.50	2.944		ng/g		118	70 - 155
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.50	2.727		ng/g		109	65 - 155
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.5	14.23		ng/g		114	70 - 140
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.50	2.808		ng/g		112	60 - 155
Perfluorobutanesulfonic acid (PFBS)	2.22	2.526		ng/g		114	65 - 145
Perfluorobutanoic acid (PFBA)	5.00	5.692		ng/g		114	70 - 140
Perfluorodecanesulfonic acid (PFDS)	2.41	2.844		ng/g		118	40 - 155
Perfluorodecanoic acid (PFDA)	2.50	2.726		ng/g		109	70 - 155

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LCS 240-699386/3-A
Matrix: Solid
Analysis Batch: 699448

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699386

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorododecanesulfonic acid (PFDoS)	2.43	3.141		ng/g		130	25 - 160
Perfluorododecanoic acid (PFDoA)	2.50	2.698		ng/g		108	70 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.23	2.453		ng/g		110	70 - 140
Perfluoroheptanesulfonic acid (PFHpS)	2.39	2.865		ng/g		120	65 - 155
Perfluoroheptanoic acid (PFHpA)	2.50	2.803		ng/g		112	65 - 145
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	12.5	12.34		ng/g		99	60 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.28	2.472		ng/g		108	60 - 150
Perfluorohexanoic acid (PFHxA)	2.50	2.714		ng/g		109	65 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.50	2.710		ng/g		108	60 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.50	2.984		ng/g		119	30 - 140
Perfluorononanesulfonic acid (PFNS)	2.41	2.676		ng/g		111	55 - 140
Perfluorononanoic acid (PFNA)	2.50	2.660		ng/g		106	70 - 155
Perfluorooctanesulfonamide (PFOSA)	2.50	2.908		ng/g		116	70 - 140
Perfluorooctanesulfonic acid (PFOS)	2.33	2.646		ng/g		114	65 - 160
Perfluorooctanoic acid (PFOA)	2.50	2.888		ng/g		116	70 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.35	2.860		ng/g		122	55 - 160
Perfluoropentanoic acid (PFPeA)	2.50	2.699		ng/g		108	60 - 150
3-Perfluoropentylpropanoic acid (5:3 FTCA)	12.5	13.86		ng/g		111	60 - 130
3-Perfluoropropylpropanoic acid (3:3 FTCA)	5.00	5.806		ng/g		116	45 - 130
Perfluorotetradecanoic acid (PFTeDA)	2.50	2.496		ng/g		100	65 - 150
Perfluorotridecanoic acid (PFTrDA)	2.50	2.588		ng/g		104	65 - 150
Perfluoroundecanoic acid (PFUnA)	2.50	2.949		ng/g		118	70 - 155

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C8 FOSA	*70.3*		*40 - 130*
13C2 10:2 FTS	*68.7*		*10 - 200*
13C2 4:2 FTS	*92.5*		*40 - 165*
13C2 6:2 FTS	*77.8*		*40 - 215*
13C2 8:2 FTS	*67.7*		*40 - 275*
13C3 HFPO-DA	*76.5*		*40 - 130*
13C4 PFBA	*73.7*		*8 - 130*
13C3 PFBS	*89.2*		*40 - 135*
13C6 PFDA	*64.4*		*40 - 130*
13C2-PFDoA	*63.0*		*40 - 130*
13C4 PFHpA	*73.4*		*40 - 130*
13C5 PFHxA	*75.9*		*40 - 130*

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LCS 240-699386/3-A
Matrix: Solid
Analysis Batch: 699448

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699386

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C3 PFHxS	81.6		40 - 130
13C9 PFNA	68.4		40 - 130
13C8 PFOA	66.1		40 - 130
13C8 PFOS	63.5		40 - 130
13C5 PFPeA	81.0		35 - 130
13C3-PFPrS	67.6		20 - 150
13C2 PFTeDA	83.1		20 - 130
13C7 PFUnA	60.4		40 - 130
d5-NEtFOSAA	57.7		40 - 150
d9-N-EtFOSE-M	51.1		15 - 130
d5-NEtPFOSA	66.8		10 - 130
d3-NMeFOSAA	62.4		40 - 135
d7-N-MeFOSE-M	47.0		20 - 130
d3-NMePFOSA	65.3		10 - 130

Lab Sample ID: LLCS 240-699386/2-A
Matrix: Solid
Analysis Batch: 699448

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699386

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.236	0.2161		ng/g		92	45 - 160
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.234	0.2146		ng/g		92	70 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.237	0.2228		ng/g		94	70 - 160
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.188	0.1635	J	ng/g		87	70 - 145
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.480	0.4293		ng/g		89	70 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.469	0.4145		ng/g		88	60 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.476	0.4271		ng/g		90	55 - 200
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.250	0.2189		ng/g		88	70 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.250	0.2167		ng/g		87	65 - 165
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1.25	1.073		ng/g		86	70 - 135
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.250	0.2385		ng/g		95	70 - 155
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.250	0.2416		ng/g		97	65 - 155
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1.25	1.310		ng/g		105	70 - 140
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.250	0.2544		ng/g		102	60 - 155
Perfluorobutanesulfonic acid (PFBS)	0.222	0.1945	J	ng/g		88	65 - 145
Perfluorobutanoic acid (PFBA)	0.500	0.4600		ng/g		92	70 - 140

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LLCS 240-699386/2-A
Matrix: Solid
Analysis Batch: 699448

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699386

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorodecanesulfonic acid (PFDS)	0.241	0.2093		ng/g		87	40 - 155
Perfluorodecanoic acid (PFDA)	0.250	0.2161		ng/g		86	70 - 155
Perfluorododecanesulfonic acid (PFDoS)	0.243	0.2088		ng/g		86	25 - 160
Perfluorododecanoic acid (PFDoA)	0.250	0.2173		ng/g		87	70 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.223	0.2062		ng/g		92	70 - 140
Perfluoroheptanesulfonic acid (PFHpS)	0.239	0.2177		ng/g		91	65 - 155
Perfluoroheptanoic acid (PFHpA)	0.250	0.2228		ng/g		89	65 - 145
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1.25	1.073		ng/g		86	60 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.228	0.2347		ng/g		103	60 - 150
Perfluorohexanoic acid (PFHxA)	0.250	0.2434		ng/g		97	65 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.250	0.2131		ng/g		85	60 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.250	0.2298		ng/g		92	30 - 140
Perfluorononanesulfonic acid (PFNS)	0.241	0.2169		ng/g		90	55 - 140
Perfluorononanoic acid (PFNA)	0.250	0.2186		ng/g		87	70 - 155
Perfluorooctanesulfonamide (PFOSA)	0.250	0.2332		ng/g		93	70 - 140
Perfluorooctanesulfonic acid (PFOS)	0.233	0.2323		ng/g		100	65 - 160
Perfluorooctanoic acid (PFOA)	0.250	0.2423		ng/g		97	70 - 150
Perfluoropentanesulfonic acid (PFPeS)	0.235	0.2045		ng/g		87	55 - 160
Perfluoropentanoic acid (PFPeA)	0.250	0.2281		ng/g		91	60 - 150
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.25	1.134		ng/g		91	60 - 130
3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.500	0.4225		ng/g		84	45 - 130
Perfluorotetradecanoic acid (PFTeDA)	0.250	0.2065		ng/g		83	65 - 150
Perfluorotridecanoic acid (PFTrDA)	0.250	0.2040		ng/g		82	65 - 150
Perfluoroundecanoic acid (PFUnA)	0.250	0.2160		ng/g		86	70 - 155

Isotope Dilution	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C8 FOSA	*76.2*		*40 - 130*
13C2 10:2 FTS	*71.5*		*10 - 200*
13C2 4:2 FTS	*86.7*		*40 - 165*
13C2 6:2 FTS	*78.2*		*40 - 215*
13C2 8:2 FTS	*74.8*		*40 - 275*
13C3 HFPO-DA	*69.8*		*40 - 130*
13C4 PFBA	*68.4*		*8 - 130*
13C3 PFBS	*83.1*		*40 - 135*
13C6 PFDA	*69.6*		*40 - 130*

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LLCS 240-699386/2-A
Matrix: Solid
Analysis Batch: 699448

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699386

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits
13C2-PFDoA	65.5		40 - 130
13C4 PFHpA	74.3		40 - 130
13C5 PFHxA	71.4		40 - 130
13C3 PFHxS	84.5		40 - 130
13C9 PFNA	71.3		40 - 130
13C8 PFOA	67.6		40 - 130
13C8 PFOS	70.1		40 - 130
13C5 PFPeA	77.4		35 - 130
13C3-PFPrS	62.9		20 - 150
13C2 PFTeDA	80.6		20 - 130
13C7 PFUnA	65.2		40 - 130
d5-NEtFOSAA	64.9		40 - 150
d9-N-EtFOSE-M	52.7		15 - 130
d5-NEtPFOSA	76.7		10 - 130
d3-NMeFOSAA	69.0		40 - 135
d7-N-MeFOSE-M	48.3		20 - 130
d3-NMePFOSA	76.6		10 - 130

Lab Sample ID: MB 240-699578/1-A
Matrix: Solid
Analysis Batch: 699712

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699578

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.400		0.400		ng/g		04/28/26 08:24	04/29/26 02:01	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.400		0.400		ng/g		04/28/26 08:24	04/29/26 02:01	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.400		0.400		ng/g		04/28/26 08:24	04/29/26 02:01	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<1.00		1.00		ng/g		04/28/26 08:24	04/29/26 02:01	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<1.00		1.00		ng/g		04/28/26 08:24	04/29/26 02:01	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorobutanesulfonic acid (PFBS)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: MB 240-699578/1-A
Matrix: Solid
Analysis Batch: 699712

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699578

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.400		0.400		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorodecanesulfonic acid (PFDS)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorodecanoic acid (PFDA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorododecanesulfonic acid (PFDoS)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorododecanoic acid (PFDoA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluoroheptanoic acid (PFHpA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<1.00		1.00		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorohexanesulfonic acid (PFHxS)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorohexanoic acid (PFHxA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorononanesulfonic acid (PFNS)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorononanoic acid (PFNA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorooctanesulfonamide (PFOSA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorooctanesulfonic acid (PFOS)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorooctanoic acid (PFOA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluoropentanesulfonic acid (PFPeS)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluoropentanoic acid (PFPeA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<1.00		1.00		ng/g		04/28/26 08:24	04/29/26 02:01	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.400		0.400		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorotetradecanoic acid (PFTeDA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluorotridecanoic acid (PFTrDA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1
Perfluoroundecanoic acid (PFUnA)	<0.200		0.200		ng/g		04/28/26 08:24	04/29/26 02:01	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*55.5*		*40 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C2 10:2 FTS	*54.4*		*40 - 275*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C2 4:2 FTS	*68.8*		*40 - 165*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C2 6:2 FTS	*60.0*		*40 - 215*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C2 8:2 FTS	*58.1*		*40 - 275*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C3 HFPO-DA	*44.5*		*40 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C4 PFBA	*47.4*		*8 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C3 PFBS	*54.3*		*40 - 135*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C6 PFDA	*46.1*		*40 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C2-PFDoA	*47.2*		*40 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C4 PFHpA	*49.4*		*40 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C5 PFHxA	*45.9*		*40 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C3 PFHxS	*58.1*		*40 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C9 PFNA	*51.6*		*40 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*
13C8 PFOA	*45.0*		*40 - 130*	*04/28/26 08:24*	*04/29/26 02:01*	*1*

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: MB 240-699578/1-A
Matrix: Solid
Analysis Batch: 699712

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699578

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	57.0		40 - 130	04/28/26 08:24	04/29/26 02:01	1
13C5 PFPeA	50.0		35 - 130	04/28/26 08:24	04/29/26 02:01	1
13C3-PFPrS	45.5		20 - 150	04/28/26 08:24	04/29/26 02:01	1
13C2 PFTeDA	52.8		20 - 130	04/28/26 08:24	04/29/26 02:01	1
13C7 PFUnA	42.4		40 - 130	04/28/26 08:24	04/29/26 02:01	1
d5-NEtFOSAA	58.7		40 - 150	04/28/26 08:24	04/29/26 02:01	1
d9-N-EtFOSE-M	43.1		15 - 130	04/28/26 08:24	04/29/26 02:01	1
d5-NEtPFOSA	50.3		10 - 130	04/28/26 08:24	04/29/26 02:01	1
d3-NMeFOSAA	60.1		40 - 135	04/28/26 08:24	04/29/26 02:01	1
d7-N-MeFOSE-M	45.8		20 - 130	04/28/26 08:24	04/29/26 02:01	1
d3-NMePFOSA	47.4		10 - 130	04/28/26 08:24	04/29/26 02:01	1

Lab Sample ID: LCS 240-699578/3-A
Matrix: Solid
Analysis Batch: 699712

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699578

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.36	2.625		ng/g		111	45 - 160
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.34	2.522		ng/g		108	70 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.37	3.099		ng/g		131	70 - 160
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1.88	2.347		ng/g		125	70 - 145
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	4.80	5.569		ng/g		116	70 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	4.69	4.849		ng/g		103	60 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	4.76	5.126		ng/g		108	55 - 200
N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.50	2.855		ng/g		114	70 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.50	3.124		ng/g		125	65 - 165
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	12.5	11.87		ng/g		95	70 - 135
N-methylperfluorooctane sulfonamide (NMeFOSA)	2.50	2.884		ng/g		115	70 - 155
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.50	2.953		ng/g		118	65 - 155
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.5	12.55		ng/g		100	70 - 140
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.50	2.874		ng/g		115	60 - 155
Perfluorobutanesulfonic acid (PFBS)	2.22	2.306		ng/g		104	65 - 145
Perfluorobutanoic acid (PFBA)	5.00	6.039		ng/g		121	70 - 140
Perfluorodecanesulfonic acid (PFDS)	2.41	2.793		ng/g		116	40 - 155
Perfluorodecanoic acid (PFDA)	2.50	2.624		ng/g		105	70 - 155

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LCS 240-699578/3-A
Matrix: Solid
Analysis Batch: 699712

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699578

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorododecanesulfonic acid (PFDoS)	2.43	2.484		ng/g		102	25 - 160
Perfluorododecanoic acid (PFDoA)	2.50	2.687		ng/g		107	70 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.23	2.318		ng/g		104	70 - 140
Perfluoroheptanesulfonic acid (PFHpS)	2.39	2.858		ng/g		120	65 - 155
Perfluoroheptanoic acid (PFHpA)	2.50	2.675		ng/g		107	65 - 145
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	12.5	13.46		ng/g		108	60 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.28	2.273		ng/g		100	60 - 150
Perfluorohexanoic acid (PFHxA)	2.50	2.962		ng/g		118	65 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.50	2.617		ng/g		105	60 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.50	2.507		ng/g		100	30 - 140
Perfluorononanesulfonic acid (PFNS)	2.41	2.445		ng/g		102	55 - 140
Perfluorononanoic acid (PFNA)	2.50	2.700		ng/g		108	70 - 155
Perfluorooctanesulfonamide (PFOSA)	2.50	3.015		ng/g		121	70 - 140
Perfluorooctanesulfonic acid (PFOS)	2.33	2.430		ng/g		105	65 - 160
Perfluorooctanoic acid (PFOA)	2.50	2.803		ng/g		112	70 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.35	2.773		ng/g		118	55 - 160
Perfluoropentanoic acid (PFPeA)	2.50	2.558		ng/g		102	60 - 150
3-Perfluoropentylpropanoic acid (5:3 FTCA)	12.5	14.61		ng/g		117	60 - 130
3-Perfluoropropylpropanoic acid (3:3 FTCA)	5.00	4.339		ng/g		87	45 - 130
Perfluorotetradecanoic acid (PFTeDA)	2.50	2.330		ng/g		93	65 - 150
Perfluorotridecanoic acid (PFTrDA)	2.50	2.691		ng/g		108	65 - 150
Perfluoroundecanoic acid (PFUnA)	2.50	2.949		ng/g		118	70 - 155

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C8 FOSA	*86.7*		*40 - 130*
13C2 10:2 FTS	*90.3*		*10 - 200*
13C2 4:2 FTS	*109*		*40 - 165*
13C2 6:2 FTS	*94.9*		*40 - 215*
13C2 8:2 FTS	*88.8*		*40 - 275*
13C3 HFPO-DA	*65.6*		*40 - 130*
13C4 PFBA	*71.0*		*8 - 130*
13C3 PFBS	*88.1*		*40 - 135*
13C6 PFDA	*74.6*		*40 - 130*
13C2-PFDoA	*73.4*		*40 - 130*
13C4 PFHpA	*81.5*		*40 - 130*
13C5 PFHxA	*72.6*		*40 - 130*

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LCS 240-699578/3-A
Matrix: Solid
Analysis Batch: 699712

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699578

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C3 PFHxS	94.0		40 - 130
13C9 PFNA	82.1		40 - 130
13C8 PFOA	71.5		40 - 130
13C8 PFOS	89.2		40 - 130
13C5 PFPeA	82.8		35 - 130
13C3-PFPrS	71.2		20 - 150
13C2 PFTeDA	72.6		20 - 130
13C7 PFUnA	73.5		40 - 130
d5-NEtFOSAA	93.1		40 - 150
d9-N-EtFOSE-M	54.5		15 - 130
d5-NEtPFOSA	71.5		10 - 130
d3-NMeFOSAA	98.0		40 - 135
d7-N-MeFOSE-M	58.9		20 - 130
d3-NMePFOSA	71.0		10 - 130

Lab Sample ID: LLCS 240-699578/2-A
Matrix: Solid
Analysis Batch: 699712

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699578

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.236	0.2780		ng/g		118	45 - 160
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.234	0.2420		ng/g		104	70 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.237	0.2880		ng/g		122	70 - 160
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.188	0.2297		ng/g		123	70 - 145
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.480	0.5376		ng/g		112	70 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.469	0.4897		ng/g		104	60 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.476	0.5368		ng/g		113	55 - 200
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.250	0.2811		ng/g		112	70 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.250	0.2899		ng/g		116	65 - 165
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1.25	1.600		ng/g		128	70 - 135
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.250	0.2853		ng/g		114	70 - 155
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.250	0.3055		ng/g		122	65 - 155
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1.25	1.068		ng/g		85	70 - 140
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.250	0.3132		ng/g		125	60 - 155
Perfluorobutanesulfonic acid (PFBS)	0.222	0.1897	J	ng/g		85	65 - 145
Perfluorobutanoic acid (PFBA)	0.500	0.6073		ng/g		121	70 - 140

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LLCS 240-699578/2-A
Matrix: Solid
Analysis Batch: 699712

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699578

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorodecanesulfonic acid (PFDS)	0.241	0.2803		ng/g		116	40 - 155
Perfluorodecanoic acid (PFDA)	0.250	0.2330		ng/g		93	70 - 155
Perfluorododecanesulfonic acid (PFDoS)	0.243	0.2793		ng/g		115	25 - 160
Perfluorododecanoic acid (PFDoA)	0.250	0.2715		ng/g		109	70 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.223	0.2269		ng/g		102	70 - 140
Perfluoroheptanesulfonic acid (PFHpS)	0.239	0.2796		ng/g		117	65 - 155
Perfluoroheptanoic acid (PFHpA)	0.250	0.2725		ng/g		109	65 - 145
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1.25	1.259		ng/g		101	60 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.228	0.1965	J	ng/g		86	60 - 150
Perfluorohexanoic acid (PFHxA)	0.250	0.3113		ng/g		125	65 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.250	0.2724		ng/g		109	60 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.250	0.2613		ng/g		105	30 - 140
Perfluorononanesulfonic acid (PFNS)	0.241	0.2449		ng/g		102	55 - 140
Perfluorononanoic acid (PFNA)	0.250	0.2582		ng/g		103	70 - 155
Perfluorooctanesulfonamide (PFOSA)	0.250	0.3094		ng/g		124	70 - 140
Perfluorooctanesulfonic acid (PFOS)	0.233	0.2593		ng/g		112	65 - 160
Perfluorooctanoic acid (PFOA)	0.250	0.3027		ng/g		121	70 - 150
Perfluoropentanesulfonic acid (PFPeS)	0.235	0.2827		ng/g		120	55 - 160
Perfluoropentanoic acid (PFPeA)	0.250	0.2774		ng/g		111	60 - 150
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.25	1.321		ng/g		106	60 - 130
3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.500	0.5115		ng/g		102	45 - 130
Perfluorotetradecanoic acid (PFTeDA)	0.250	0.2351		ng/g		94	65 - 150
Perfluorotridecanoic acid (PFTrDA)	0.250	0.2615		ng/g		105	65 - 150
Perfluoroundecanoic acid (PFUnA)	0.250	0.3097		ng/g		124	70 - 155

Isotope Dilution	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C8 FOSA	*71.0*		*40 - 130*
13C2 10:2 FTS	*74.8*		*10 - 200*
13C2 4:2 FTS	*88.0*		*40 - 165*
13C2 6:2 FTS	*77.3*		*40 - 215*
13C2 8:2 FTS	*73.7*		*40 - 275*
13C3 HFPO-DA	*61.0*		*40 - 130*
13C4 PFBA	*60.5*		*8 - 130*
13C3 PFBS	*74.3*		*40 - 135*
13C6 PFDA	*64.4*		*40 - 130*

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LLCS 240-699578/2-A
Matrix: Solid
Analysis Batch: 699712

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699578

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits
13C2-PFDoA	62.2		40 - 130
13C4 PFHpA	70.6		40 - 130
13C5 PFHxA	65.0		40 - 130
13C3 PFHxS	76.4		40 - 130
13C9 PFNA	66.7		40 - 130
13C8 PFOA	58.3		40 - 130
13C8 PFOS	72.9		40 - 130
13C5 PFPeA	72.4		35 - 130
13C3-PFPrS	60.6		20 - 150
13C2 PFTeDA	73.4		20 - 130
13C7 PFUnA	58.6		40 - 130
d5-NEtFOSAA	78.7		40 - 150
d9-N-EtFOSE-M	59.7		15 - 130
d5-NEtPFOSA	59.4		10 - 130
d3-NMeFOSAA	80.4		40 - 135
d7-N-MeFOSE-M	59.2		20 - 130
d3-NMePFOSA	58.6		10 - 130

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-699236/1-A
Matrix: Solid
Analysis Batch: 699552

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699236

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.200		0.200		mg/Kg		04/24/26 14:00	04/27/26 13:04	2
Arsenic	<1.00		1.00		mg/Kg		04/24/26 14:00	04/27/26 13:04	2
Barium	<1.00		1.00		mg/Kg		04/24/26 14:00	04/27/26 13:04	2
Cadmium	<0.200		0.200		mg/Kg		04/24/26 14:00	04/27/26 13:04	2
Chromium	<0.400		0.400		mg/Kg		04/24/26 14:00	04/27/26 13:04	2
Lead	<0.200		0.200		mg/Kg		04/24/26 14:00	04/27/26 13:04	2
Selenium	<1.00		1.00		mg/Kg		04/24/26 14:00	04/27/26 13:04	2

Lab Sample ID: LCS 240-699236/2-A
Matrix: Solid
Analysis Batch: 699552

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699236

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	10.0	10.01		mg/Kg		100	80 - 120
Arsenic	100	95.86		mg/Kg		96	80 - 120
Barium	100	98.53		mg/Kg		99	80 - 120
Cadmium	50.0	48.09		mg/Kg		96	80 - 120
Chromium	50.0	50.35		mg/Kg		101	80 - 120
Lead	50.0	49.68		mg/Kg		99	80 - 120
Selenium	100	97.31		mg/Kg		97	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 310-330207-1 MS
Matrix: Solid
Analysis Batch: 699552

Client Sample ID: HA-02-1
Prep Type: Total/NA
Prep Batch: 699236

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	<0.170		9.71	9.949		mg/Kg	☼	102	80 - 120
Arsenic	1.77		97.1	96.17		mg/Kg	☼	97	80 - 120
Barium	47.8		97.1	141.8		mg/Kg	☼	97	80 - 120
Cadmium	<0.170		48.6	47.52		mg/Kg	☼	98	80 - 120
Chromium	19.3		48.6	66.65		mg/Kg	☼	97	80 - 120
Lead	4.12		48.6	52.18		mg/Kg	☼	99	80 - 120
Selenium	<0.852		97.1	92.35		mg/Kg	☼	95	80 - 120

Lab Sample ID: 310-330207-1 MSD
Matrix: Solid
Analysis Batch: 699552

Client Sample ID: HA-02-1
Prep Type: Total/NA
Prep Batch: 699236

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Silver	<0.170		9.71	10.05		mg/Kg	☼	103	80 - 120	1	20
Arsenic	1.77		97.1	97.33		mg/Kg	☼	98	80 - 120	1	20
Barium	47.8		97.1	145.6		mg/Kg	☼	101	80 - 120	3	20
Cadmium	<0.170		48.6	47.35		mg/Kg	☼	97	80 - 120	0	20
Chromium	19.3		48.6	68.51		mg/Kg	☼	101	80 - 120	3	20
Lead	4.12		48.6	52.08		mg/Kg	☼	99	80 - 120	0	20
Selenium	<0.852		97.1	92.95		mg/Kg	☼	96	80 - 120	1	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 240-699242/1-A
Matrix: Solid
Analysis Batch: 699620

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699242

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.100		0.100		mg/Kg		04/24/26 13:00	04/27/26 13:39	1

Lab Sample ID: LCS 240-699242/2-A
Matrix: Solid
Analysis Batch: 699620

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699242

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.833	0.8282		mg/Kg		99	80 - 120

Lab Sample ID: 310-330207-1 MS
Matrix: Solid
Analysis Batch: 699620

Client Sample ID: HA-02-1
Prep Type: Total/NA
Prep Batch: 699242

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	<0.122		0.170	0.1672		mg/Kg	☼	98	80 - 120

Lab Sample ID: 310-330207-1 MSD
Matrix: Solid
Analysis Batch: 699620

Client Sample ID: HA-02-1
Prep Type: Total/NA
Prep Batch: 699242

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	<0.122		0.170	0.1535		mg/Kg	☼	90	80 - 120	9	20

GC/MS VOA

Prep Batch: 487060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330207-1	HA-02-1	Total/NA	Solid	5035	
310-330207-2	HA-02-3	Total/NA	Solid	5035	
MB 310-487060/1-A	Method Blank	Total/NA	Solid	5035	
LCS 310-487060/2-A	Lab Control Sample	Total/NA	Solid	5035	

Analysis Batch: 487062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330207-1	HA-02-1	Total/NA	Solid	8260D	487060
310-330207-2	HA-02-3	Total/NA	Solid	8260D	487060
MB 310-487060/1-A	Method Blank	Total/NA	Solid	8260D	487060
LCS 310-487060/2-A	Lab Control Sample	Total/NA	Solid	8260D	487060

Prep Batch: 487063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330207-3	HA-03-1	Total/NA	Solid	5035	
MB 310-487063/1-A	Method Blank	Total/NA	Solid	5035	
LCS 310-487063/2-A	Lab Control Sample	Total/NA	Solid	5035	

Analysis Batch: 487065

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330207-3	HA-03-1	Total/NA	Solid	8260D	487063
MB 310-487063/1-A	Method Blank	Total/NA	Solid	8260D	487063
LCS 310-487063/2-A	Lab Control Sample	Total/NA	Solid	8260D	487063

Prep Batch: 487184

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330207-4	HA-03-3	Total/NA	Solid	5035	
310-330207-5	HA-04-1	Total/NA	Solid	5035	
310-330207-6	HA-04-3	Total/NA	Solid	5035	
310-330207-7	HA-01-1	Total/NA	Solid	5035	
MB 310-487184/1-A	Method Blank	Total/NA	Solid	5035	
LCS 310-487184/2-A	Lab Control Sample	Total/NA	Solid	5035	

Analysis Batch: 487186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330207-4	HA-03-3	Total/NA	Solid	8260D	487184
310-330207-5	HA-04-1	Total/NA	Solid	8260D	487184
310-330207-6	HA-04-3	Total/NA	Solid	8260D	487184
310-330207-7	HA-01-1	Total/NA	Solid	8260D	487184
MB 310-487184/1-A	Method Blank	Total/NA	Solid	8260D	487184
LCS 310-487184/2-A	Lab Control Sample	Total/NA	Solid	8260D	487184

Prep Batch: 487187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330207-8	HA-01-3	Total/NA	Solid	5035	
310-330207-10	Trip Blank - Soil	Total/NA	Solid	5035	
MB 310-487187/1-A	Method Blank	Total/NA	Solid	5035	
LCS 310-487187/2-A	Lab Control Sample	Total/NA	Solid	5035	

GC/MS VOA

Analysis Batch: 487190

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330207-8	HA-01-3	Total/NA	Solid	8260D	487187
310-330207-10	Trip Blank - Soil	Total/NA	Solid	8260D	487187
MB 310-487187/1-A	Method Blank	Total/NA	Solid	8260D	487187
LCS 310-487187/2-A	Lab Control Sample	Total/NA	Solid	8260D	487187

GC/MS Semi VOA

Prep Batch: 486997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330207-1	HA-02-1	Total/NA	Solid	3546	
310-330207-2	HA-02-3	Total/NA	Solid	3546	
310-330207-3	HA-03-1	Total/NA	Solid	3546	
310-330207-4	HA-03-3	Total/NA	Solid	3546	
310-330207-5	HA-04-1	Total/NA	Solid	3546	
310-330207-6	HA-04-3	Total/NA	Solid	3546	
310-330207-7	HA-01-1	Total/NA	Solid	3546	
310-330207-8	HA-01-3	Total/NA	Solid	3546	
MB 310-486997/1-A	Method Blank	Total/NA	Solid	3546	
LCS 310-486997/2-A	Lab Control Sample	Total/NA	Solid	3546	
310-330207-1 MS	HA-02-1	Total/NA	Solid	3546	
310-330207-1 MSD	HA-02-1	Total/NA	Solid	3546	

Analysis Batch: 487075

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330207-1	HA-02-1	Total/NA	Solid	8270E	486997
310-330207-2	HA-02-3	Total/NA	Solid	8270E	486997
310-330207-3	HA-03-1	Total/NA	Solid	8270E	486997
310-330207-4	HA-03-3	Total/NA	Solid	8270E	486997
310-330207-5	HA-04-1	Total/NA	Solid	8270E	486997
MB 310-486997/1-A	Method Blank	Total/NA	Solid	8270E	486997
310-330207-1 MS	HA-02-1	Total/NA	Solid	8270E	486997
310-330207-1 MSD	HA-02-1	Total/NA	Solid	8270E	486997

Analysis Batch: 487150

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330207-6	HA-04-3	Total/NA	Solid	8270E	486997
310-330207-7	HA-01-1	Total/NA	Solid	8270E	486997
310-330207-8	HA-01-3	Total/NA	Solid	8270E	486997

Analysis Batch: 487217

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 310-486997/2-A	Lab Control Sample	Total/NA	Solid	8270E	486997

GC VOA

Prep Batch: 487248

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330207-1	HA-02-1	Total/NA	Solid	WI GRO	
310-330207-2	HA-02-3	Total/NA	Solid	WI GRO	
310-330207-3	HA-03-1	Total/NA	Solid	WI GRO	
310-330207-4	HA-03-3	Total/NA	Solid	WI GRO	
310-330207-5	HA-04-1	Total/NA	Solid	WI GRO	

GC VOA (Continued)

Prep Batch: 487248 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330207-6	HA-04-3	Total/NA	Solid	WI GRO	
310-330207-7	HA-01-1	Total/NA	Solid	WI GRO	
310-330207-8	HA-01-3	Total/NA	Solid	WI GRO	
310-330207-10	Trip Blank - Soil	Total/NA	Solid	WI GRO	
MB 310-487248/1-A	Method Blank	Total/NA	Solid	WI GRO	
LCS 310-487248/2-A	Lab Control Sample	Total/NA	Solid	WI GRO	
LCSD 310-487248/23-A	Lab Control Sample Dup	Total/NA	Solid	WI GRO	

Analysis Batch: 487252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330207-1	HA-02-1	Total/NA	Solid	WI-GRO	487248
310-330207-2	HA-02-3	Total/NA	Solid	WI-GRO	487248
310-330207-3	HA-03-1	Total/NA	Solid	WI-GRO	487248
310-330207-4	HA-03-3	Total/NA	Solid	WI-GRO	487248
310-330207-5	HA-04-1	Total/NA	Solid	WI-GRO	487248
310-330207-6	HA-04-3	Total/NA	Solid	WI-GRO	487248
310-330207-7	HA-01-1	Total/NA	Solid	WI-GRO	487248
310-330207-8	HA-01-3	Total/NA	Solid	WI-GRO	487248
310-330207-10	Trip Blank - Soil	Total/NA	Solid	WI-GRO	487248
MB 310-487248/1-A	Method Blank	Total/NA	Solid	WI-GRO	487248
LCS 310-487248/2-A	Lab Control Sample	Total/NA	Solid	WI-GRO	487248
LCSD 310-487248/23-A	Lab Control Sample Dup	Total/NA	Solid	WI-GRO	487248

GC Semi VOA

Prep Batch: 486815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330207-1	HA-02-1	Total/NA	Solid	WI DRO PREP	
310-330207-2	HA-02-3	Total/NA	Solid	WI DRO PREP	
310-330207-3	HA-03-1	Total/NA	Solid	WI DRO PREP	
310-330207-4	HA-03-3	Total/NA	Solid	WI DRO PREP	
310-330207-5	HA-04-1	Total/NA	Solid	WI DRO PREP	
310-330207-6	HA-04-3	Total/NA	Solid	WI DRO PREP	
310-330207-7	HA-01-1	Total/NA	Solid	WI DRO PREP	
310-330207-8	HA-01-3	Total/NA	Solid	WI DRO PREP	
MB 310-486815/1-A	Method Blank	Total/NA	Solid	WI DRO PREP	
LCS 310-486815/2-A	Lab Control Sample	Total/NA	Solid	WI DRO PREP	
LCSD 310-486815/3-A	Lab Control Sample Dup	Total/NA	Solid	WI DRO PREP	

Analysis Batch: 486913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330207-1	HA-02-1	Total/NA	Solid	WI-DRO	486815
310-330207-2	HA-02-3	Total/NA	Solid	WI-DRO	486815
310-330207-3	HA-03-1	Total/NA	Solid	WI-DRO	486815
310-330207-4	HA-03-3	Total/NA	Solid	WI-DRO	486815
310-330207-5	HA-04-1	Total/NA	Solid	WI-DRO	486815
310-330207-6	HA-04-3	Total/NA	Solid	WI-DRO	486815
310-330207-7	HA-01-1	Total/NA	Solid	WI-DRO	486815
310-330207-8	HA-01-3	Total/NA	Solid	WI-DRO	486815
MB 310-486815/1-A	Method Blank	Total/NA	Solid	WI-DRO	486815
LCS 310-486815/2-A	Lab Control Sample	Total/NA	Solid	WI-DRO	486815

GC Semi VOA (Continued)

Analysis Batch: 486913 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 310-486815/3-A	Lab Control Sample Dup	Total/NA	Solid	WI-DRO	486815

LCMS

Prep Batch: 699234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330207-9	Rinsate Blank	Total/NA	Water	1633	
MB 240-699234/1-A	Method Blank	Total/NA	Water	1633	
LCS 240-699234/3-A	Lab Control Sample	Total/NA	Water	1633	
LLCS 240-699234/2-A	Lab Control Sample	Total/NA	Water	1633	

Analysis Batch: 699297

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330207-9	Rinsate Blank	Total/NA	Water	1633A	699234
MB 240-699234/1-A	Method Blank	Total/NA	Water	1633A	699234
LCS 240-699234/3-A	Lab Control Sample	Total/NA	Water	1633A	699234
LLCS 240-699234/2-A	Lab Control Sample	Total/NA	Water	1633A	699234

Prep Batch: 699386

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330207-2	HA-02-3	Total/NA	Solid	1633 Shake	
310-330207-3	HA-03-1	Total/NA	Solid	1633 Shake	
310-330207-4	HA-03-3	Total/NA	Solid	1633 Shake	
310-330207-5	HA-04-1	Total/NA	Solid	1633 Shake	
310-330207-6	HA-04-3	Total/NA	Solid	1633 Shake	
310-330207-7	HA-01-1	Total/NA	Solid	1633 Shake	
310-330207-8	HA-01-3	Total/NA	Solid	1633 Shake	
MB 240-699386/1-A	Method Blank	Total/NA	Solid	1633 Shake	
LCS 240-699386/3-A	Lab Control Sample	Total/NA	Solid	1633 Shake	
LLCS 240-699386/2-A	Lab Control Sample	Total/NA	Solid	1633 Shake	

Analysis Batch: 699448

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330207-2	HA-02-3	Total/NA	Solid	1633A	699386
310-330207-3	HA-03-1	Total/NA	Solid	1633A	699386
310-330207-4	HA-03-3	Total/NA	Solid	1633A	699386
310-330207-5	HA-04-1	Total/NA	Solid	1633A	699386
310-330207-6	HA-04-3	Total/NA	Solid	1633A	699386
310-330207-7	HA-01-1	Total/NA	Solid	1633A	699386
310-330207-8	HA-01-3	Total/NA	Solid	1633A	699386
MB 240-699386/1-A	Method Blank	Total/NA	Solid	1633A	699386
LCS 240-699386/3-A	Lab Control Sample	Total/NA	Solid	1633A	699386
LLCS 240-699386/2-A	Lab Control Sample	Total/NA	Solid	1633A	699386

Prep Batch: 699578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330207-1	HA-02-1	Total/NA	Solid	1633 Shake	
MB 240-699578/1-A	Method Blank	Total/NA	Solid	1633 Shake	
LCS 240-699578/3-A	Lab Control Sample	Total/NA	Solid	1633 Shake	
LLCS 240-699578/2-A	Lab Control Sample	Total/NA	Solid	1633 Shake	

LCMS

Analysis Batch: 699712

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330207-1	HA-02-1	Total/NA	Solid	1633A	699578
MB 240-699578/1-A	Method Blank	Total/NA	Solid	1633A	699578
LCS 240-699578/3-A	Lab Control Sample	Total/NA	Solid	1633A	699578
LLCS 240-699578/2-A	Lab Control Sample	Total/NA	Solid	1633A	699578

Metals

Prep Batch: 699236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330207-1	HA-02-1	Total/NA	Solid	3050B	
310-330207-2	HA-02-3	Total/NA	Solid	3050B	
310-330207-3	HA-03-1	Total/NA	Solid	3050B	
310-330207-4	HA-03-3	Total/NA	Solid	3050B	
310-330207-5	HA-04-1	Total/NA	Solid	3050B	
310-330207-6	HA-04-3	Total/NA	Solid	3050B	
310-330207-7	HA-01-1	Total/NA	Solid	3050B	
310-330207-8	HA-01-3	Total/NA	Solid	3050B	
MB 240-699236/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 240-699236/2-A	Lab Control Sample	Total/NA	Solid	3050B	
310-330207-1 MS	HA-02-1	Total/NA	Solid	3050B	
310-330207-1 MSD	HA-02-1	Total/NA	Solid	3050B	

Prep Batch: 699242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330207-1	HA-02-1	Total/NA	Solid	7471B	
310-330207-2	HA-02-3	Total/NA	Solid	7471B	
310-330207-3	HA-03-1	Total/NA	Solid	7471B	
310-330207-4	HA-03-3	Total/NA	Solid	7471B	
310-330207-5	HA-04-1	Total/NA	Solid	7471B	
310-330207-6	HA-04-3	Total/NA	Solid	7471B	
310-330207-7	HA-01-1	Total/NA	Solid	7471B	
310-330207-8	HA-01-3	Total/NA	Solid	7471B	
MB 240-699242/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 240-699242/2-A	Lab Control Sample	Total/NA	Solid	7471B	
310-330207-1 MS	HA-02-1	Total/NA	Solid	7471B	
310-330207-1 MSD	HA-02-1	Total/NA	Solid	7471B	

Analysis Batch: 699552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330207-1	HA-02-1	Total/NA	Solid	6020B	699236
310-330207-2	HA-02-3	Total/NA	Solid	6020B	699236
310-330207-3	HA-03-1	Total/NA	Solid	6020B	699236
310-330207-4	HA-03-3	Total/NA	Solid	6020B	699236
310-330207-5	HA-04-1	Total/NA	Solid	6020B	699236
310-330207-6	HA-04-3	Total/NA	Solid	6020B	699236
310-330207-7	HA-01-1	Total/NA	Solid	6020B	699236
310-330207-8	HA-01-3	Total/NA	Solid	6020B	699236
MB 240-699236/1-A	Method Blank	Total/NA	Solid	6020B	699236
LCS 240-699236/2-A	Lab Control Sample	Total/NA	Solid	6020B	699236
310-330207-1 MS	HA-02-1	Total/NA	Solid	6020B	699236
310-330207-1 MSD	HA-02-1	Total/NA	Solid	6020B	699236

QC Association Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Metals

Analysis Batch: 699620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330207-1	HA-02-1	Total/NA	Solid	7471B	699242
310-330207-2	HA-02-3	Total/NA	Solid	7471B	699242
310-330207-3	HA-03-1	Total/NA	Solid	7471B	699242
310-330207-4	HA-03-3	Total/NA	Solid	7471B	699242
310-330207-5	HA-04-1	Total/NA	Solid	7471B	699242
310-330207-6	HA-04-3	Total/NA	Solid	7471B	699242
310-330207-7	HA-01-1	Total/NA	Solid	7471B	699242
310-330207-8	HA-01-3	Total/NA	Solid	7471B	699242
MB 240-699242/1-A	Method Blank	Total/NA	Solid	7471B	699242
LCS 240-699242/2-A	Lab Control Sample	Total/NA	Solid	7471B	699242
310-330207-1 MS	HA-02-1	Total/NA	Solid	7471B	699242
310-330207-1 MSD	HA-02-1	Total/NA	Solid	7471B	699242

General Chemistry

Analysis Batch: 486736

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-330207-1	HA-02-1	Total/NA	Solid	Moisture	
310-330207-2	HA-02-3	Total/NA	Solid	Moisture	
310-330207-3	HA-03-1	Total/NA	Solid	Moisture	
310-330207-4	HA-03-3	Total/NA	Solid	Moisture	
310-330207-5	HA-04-1	Total/NA	Solid	Moisture	
310-330207-6	HA-04-3	Total/NA	Solid	Moisture	
310-330207-7	HA-01-1	Total/NA	Solid	Moisture	
310-330207-8	HA-01-3	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-02-1

Lab Sample ID: 310-330207-1

Date Collected: 04/20/26 18:05

Matrix: Solid

Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-02-1

Lab Sample ID: 310-330207-1

Date Collected: 04/20/26 18:05

Matrix: Solid

Date Received: 04/22/26 13:20

Percent Solids: 96.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487060	MZR8	EET CF	04/27/26 09:01
Total/NA	Analysis	8260D		1	487062	MZR8	EET CF	04/28/26 07:18
Total/NA	Prep	3546			486997	SC2A	EET CF	04/24/26 13:04
Total/NA	Analysis	8270E		1	487075	P5ZC	EET CF	04/27/26 19:10
Total/NA	Prep	WI GRO			487248	GP2V	EET CF	04/28/26 11:48
Total/NA	Analysis	WI-GRO		1	487252	GP2V	EET CF	04/29/26 14:15
Total/NA	Prep	WI DRO PREP			486815	KG6X	EET CF	04/23/26 11:41
Total/NA	Analysis	WI-DRO		1	486913	C3AA	EET CF	04/24/26 16:04
Total/NA	Prep	1633 Shake			699578	JVB4	EET CLE	04/28/26 08:24
Total/NA	Analysis	1633A		1	699712	DSH	EET CLE	04/29/26 07:00
Total/NA	Prep	3050B			699236	DEE	EET CLE	04/24/26 14:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 13:10
Total/NA	Prep	7471B			699242	DEE	EET CLE	04/24/26 13:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 13:46

Client Sample ID: HA-02-3

Lab Sample ID: 310-330207-2

Date Collected: 04/20/26 18:10

Matrix: Solid

Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-02-3

Lab Sample ID: 310-330207-2

Date Collected: 04/20/26 18:10

Matrix: Solid

Date Received: 04/22/26 13:20

Percent Solids: 93.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487060	MZR8	EET CF	04/27/26 09:01
Total/NA	Analysis	8260D		1	487062	MZR8	EET CF	04/28/26 07:40
Total/NA	Prep	3546			486997	SC2A	EET CF	04/24/26 13:04
Total/NA	Analysis	8270E		1	487075	P5ZC	EET CF	04/27/26 19:46
Total/NA	Prep	WI GRO			487248	GP2V	EET CF	04/28/26 11:48
Total/NA	Analysis	WI-GRO		1	487252	GP2V	EET CF	04/29/26 14:41
Total/NA	Prep	WI DRO PREP			486815	KG6X	EET CF	04/23/26 11:41
Total/NA	Analysis	WI-DRO		1	486913	C3AA	EET CF	04/24/26 16:16
Total/NA	Prep	1633 Shake			699386	DW4U	EET CLE	04/27/26 07:31
Total/NA	Analysis	1633A		1	699448	MRL	EET CLE	04/27/26 22:47

Client Sample ID: HA-02-3

Lab Sample ID: 310-330207-2

Date Collected: 04/20/26 18:10

Matrix: Solid

Date Received: 04/22/26 13:20

Percent Solids: 93.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			699236	DEE	EET CLE	04/24/26 14:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 13:29
Total/NA	Prep	7471B			699242	DEE	EET CLE	04/24/26 13:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 13:51

Client Sample ID: HA-03-1

Lab Sample ID: 310-330207-3

Date Collected: 04/20/26 18:25

Matrix: Solid

Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-03-1

Lab Sample ID: 310-330207-3

Date Collected: 04/20/26 18:25

Matrix: Solid

Date Received: 04/22/26 13:20

Percent Solids: 82.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487063	MZR8	EET CF	04/27/26 09:06
Total/NA	Analysis	8260D		1	487065	MZR8	EET CF	04/28/26 11:52
Total/NA	Prep	3546			486997	SC2A	EET CF	04/24/26 13:04
Total/NA	Analysis	8270E		1	487075	P5ZC	EET CF	04/27/26 20:22
Total/NA	Prep	WI GRO			487248	GP2V	EET CF	04/28/26 11:48
Total/NA	Analysis	WI-GRO		1	487252	GP2V	EET CF	04/29/26 15:08
Total/NA	Prep	WI DRO PREP			486815	KG6X	EET CF	04/23/26 11:41
Total/NA	Analysis	WI-DRO		1	486913	C3AA	EET CF	04/24/26 18:59
Total/NA	Prep	1633 Shake			699386	DW4U	EET CLE	04/27/26 07:31
Total/NA	Analysis	1633A		1	699448	MRL	EET CLE	04/27/26 23:03
Total/NA	Prep	3050B			699236	DEE	EET CLE	04/24/26 14:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 13:32
Total/NA	Prep	7471B			699242	DEE	EET CLE	04/24/26 13:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 13:52

Client Sample ID: HA-03-3

Lab Sample ID: 310-330207-4

Date Collected: 04/20/26 18:30

Matrix: Solid

Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-03-3

Lab Sample ID: 310-330207-4

Date Collected: 04/20/26 18:30

Matrix: Solid

Date Received: 04/22/26 13:20

Percent Solids: 92.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487184	MZR8	EET CF	04/28/26 08:11
Total/NA	Analysis	8260D		1	487186	MZR8	EET CF	04/29/26 15:32

Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-03-3

Lab Sample ID: 310-330207-4

Date Collected: 04/20/26 18:30
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 92.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3546			486997	SC2A	EET CF	04/24/26 13:04
Total/NA	Analysis	8270E		1	487075	P5ZC	EET CF	04/27/26 20:58
Total/NA	Prep	WI GRO			487248	GP2V	EET CF	04/28/26 11:48
Total/NA	Analysis	WI-GRO		1	487252	GP2V	EET CF	04/29/26 15:34
Total/NA	Prep	WI DRO PREP			486815	KG6X	EET CF	04/23/26 11:41
Total/NA	Analysis	WI-DRO		1	486913	C3AA	EET CF	04/24/26 16:29
Total/NA	Prep	1633 Shake			699386	DW4U	EET CLE	04/27/26 07:31
Total/NA	Analysis	1633A		1	699448	MRL	EET CLE	04/27/26 23:53
Total/NA	Prep	3050B			699236	DEE	EET CLE	04/24/26 14:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 13:34
Total/NA	Prep	7471B			699242	DEE	EET CLE	04/24/26 13:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 13:54

Client Sample ID: HA-04-1

Lab Sample ID: 310-330207-5

Date Collected: 04/20/26 18:50
Matrix: Solid
Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-04-1

Lab Sample ID: 310-330207-5

Date Collected: 04/20/26 18:50
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 93.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487184	MZR8	EET CF	04/28/26 08:11
Total/NA	Analysis	8260D		1	487186	MZR8	EET CF	04/29/26 15:55
Total/NA	Prep	3546			486997	SC2A	EET CF	04/24/26 13:04
Total/NA	Analysis	8270E		1	487075	P5ZC	EET CF	04/27/26 21:35
Total/NA	Prep	WI GRO			487248	GP2V	EET CF	04/28/26 11:48
Total/NA	Analysis	WI-GRO		1	487252	GP2V	EET CF	04/29/26 16:00
Total/NA	Prep	WI DRO PREP			486815	KG6X	EET CF	04/23/26 11:41
Total/NA	Analysis	WI-DRO		1	486913	C3AA	EET CF	04/24/26 16:41
Total/NA	Prep	1633 Shake			699386	DW4U	EET CLE	04/27/26 07:31
Total/NA	Analysis	1633A		1	699448	MRL	EET CLE	04/28/26 00:10
Total/NA	Prep	3050B			699236	DEE	EET CLE	04/24/26 14:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 13:37
Total/NA	Prep	7471B			699242	DEE	EET CLE	04/24/26 13:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 13:56

Client Sample ID: HA-04-3
Lab Sample ID: 310-330207-6

Date Collected: 04/20/26 18:55
Matrix: Solid
Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-04-3
Lab Sample ID: 310-330207-6

Date Collected: 04/20/26 18:55
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 89.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487184	MZR8	EET CF	04/28/26 08:11
Total/NA	Analysis	8260D		1	487186	MZR8	EET CF	04/29/26 16:18
Total/NA	Prep	3546			486997	SC2A	EET CF	04/24/26 13:04
Total/NA	Analysis	8270E		1	487150	P5ZC	EET CF	04/28/26 01:12
Total/NA	Prep	WI GRO			487248	GP2V	EET CF	04/28/26 11:48
Total/NA	Analysis	WI-GRO		1	487252	GP2V	EET CF	04/29/26 16:26
Total/NA	Prep	WI DRO PREP			486815	KG6X	EET CF	04/23/26 11:41
Total/NA	Analysis	WI-DRO		1	486913	C3AA	EET CF	04/24/26 16:54
Total/NA	Prep	1633 Shake			699386	DW4U	EET CLE	04/27/26 07:31
Total/NA	Analysis	1633A		1	699448	MRL	EET CLE	04/28/26 00:26
Total/NA	Prep	3050B			699236	DEE	EET CLE	04/24/26 14:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 13:40
Total/NA	Prep	7471B			699242	DEE	EET CLE	04/24/26 13:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 13:58

Client Sample ID: HA-01-1
Lab Sample ID: 310-330207-7

Date Collected: 04/20/26 19:10
Matrix: Solid
Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-01-1
Lab Sample ID: 310-330207-7

Date Collected: 04/20/26 19:10
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 94.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487184	MZR8	EET CF	04/28/26 08:11
Total/NA	Analysis	8260D		1	487186	MZR8	EET CF	04/29/26 16:41
Total/NA	Prep	3546			486997	SC2A	EET CF	04/24/26 13:04
Total/NA	Analysis	8270E		1	487150	P5ZC	EET CF	04/28/26 01:48
Total/NA	Prep	WI GRO			487248	GP2V	EET CF	04/28/26 11:48
Total/NA	Analysis	WI-GRO		1	487252	GP2V	EET CF	04/29/26 16:52
Total/NA	Prep	WI DRO PREP			486815	KG6X	EET CF	04/23/26 11:41
Total/NA	Analysis	WI-DRO		1	486913	C3AA	EET CF	04/24/26 17:06
Total/NA	Prep	1633 Shake			699386	DW4U	EET CLE	04/27/26 07:31
Total/NA	Analysis	1633A		1	699448	MRL	EET CLE	04/28/26 00:43

Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Client Sample ID: HA-01-1

Lab Sample ID: 310-330207-7

Date Collected: 04/20/26 19:10
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 94.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			699236	DEE	EET CLE	04/24/26 14:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 13:43
Total/NA	Prep	7471B			699242	DEE	EET CLE	04/24/26 13:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 13:59

Client Sample ID: HA-01-3

Lab Sample ID: 310-330207-8

Date Collected: 04/20/26 19:15
Matrix: Solid
Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	486736	DGU1	EET CF	04/23/26 05:23

Client Sample ID: HA-01-3

Lab Sample ID: 310-330207-8

Date Collected: 04/20/26 19:15
Matrix: Solid
Date Received: 04/22/26 13:20
Percent Solids: 91.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487187	MZR8	EET CF	04/28/26 08:14
Total/NA	Analysis	8260D		1	487190	MZR8	EET CF	04/29/26 20:51
Total/NA	Prep	3546			486997	SC2A	EET CF	04/24/26 13:04
Total/NA	Analysis	8270E		1	487150	P5ZC	EET CF	04/28/26 02:24
Total/NA	Prep	WI GRO			487248	GP2V	EET CF	04/28/26 11:48
Total/NA	Analysis	WI-GRO		1	487252	GP2V	EET CF	04/29/26 17:18
Total/NA	Prep	WI DRO PREP			486815	KG6X	EET CF	04/23/26 11:41
Total/NA	Analysis	WI-DRO		1	486913	C3AA	EET CF	04/24/26 17:19
Total/NA	Prep	1633 Shake			699386	DW4U	EET CLE	04/27/26 07:31
Total/NA	Analysis	1633A		1	699448	MRL	EET CLE	04/28/26 00:59
Total/NA	Prep	3050B			699236	DEE	EET CLE	04/24/26 14:00
Total/NA	Analysis	6020B		2	699552	RKT	EET CLE	04/27/26 13:45
Total/NA	Prep	7471B			699242	DEE	EET CLE	04/24/26 13:00
Total/NA	Analysis	7471B		1	699620	TQ6W	EET CLE	04/27/26 14:04

Client Sample ID: Rinsate Blank

Lab Sample ID: 310-330207-9

Date Collected: 04/20/26 19:30
Matrix: Water
Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	1633			699234	DW4U	EET CLE	04/24/26 10:05
Total/NA	Analysis	1633A		1	699297	DSH	EET CLE	04/25/26 07:43

Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330207-1
Project/Site: Duluth Airport Midfield Ramp

Client Sample ID: Trip Blank - Soil
Lab Sample ID: 310-330207-10

Date Collected: 04/20/26 00:00
Matrix: Solid
Date Received: 04/22/26 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			487187	MZR8	EET CF	04/28/26 08:14
Total/NA	Analysis	8260D		1	487190	MZR8	EET CF	04/29/26 21:13
Total/NA	Prep	WI GRO			487248	GP2V	EET CF	04/28/26 11:48
Total/NA	Analysis	WI-GRO		1	487252	GP2V	EET CF	04/29/26 17:44

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330207-1
Project/Site: Duluth Airport Midfield Ramp

Laboratory: Eurofins Cedar Falls

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Minnesota	NELAP	019-999-319	12-31-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Laboratory: Eurofins Cleveland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Minnesota	NELAP	039-999-348	12-31-26

Method Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330207-1
Project/Site: Duluth Airport Midfield Ramp

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CF
8270E	Semivolatile Organic Compounds (GC-MS/MS)	SW846	EET CF
WI-GRO	Wisconsin - Gasoline Range Organics (GC)	WI-GRO	EET CF
WI-DRO	Wisconsin - Diesel Range Organics (GC)	WI-DRO	EET CF
1633A	Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A	EPA	EET CLE
6020B	Metals (ICP/MS)	SW846	EET CLE
7471B	Mercury (CVAA)	SW846	EET CLE
Moisture	Percent Moisture	EPA	EET CF
1633	Solid-Phase Extraction (SPE)	EPA	EET CLE
1633 Shake	Shake Extraction with SPE	EPA	EET CLE
3050B	Preparation, Metals	SW846	EET CLE
3546	Microwave Extraction	SW846	EET CF
5035	Closed System Purge and Trap	SW846	EET CF
7471B	Preparation, Mercury	SW846	EET CLE
WI DRO PREP	Wisconsin Extraction (Diesel Range Organics)	WI-DRO	EET CF
WI GRO	Closed System Purge and Trap	WI-GRO	EET CF

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

eurofins | Environment Testing America

310-330207 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SEH

City/State: CITY St Paul | STATE MN | Project:

Receipt Information

Date/Time Received: DATE 04/22/26 | TIME 1320 | Received By: EJ

Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:_____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☒ Yes ☐ No *If yes:* Cooler ID:

Multiple Coolers? ☐ Yes ☒ No *If yes:* Cooler # _____ of _____

Cooler Custody Seals Present? ☐ Yes ☒ No *If yes:* Cooler custody seals intact? ☐ Yes ☐ No

Sample Custody Seals Present? ☐ Yes ☒ No *If yes:* Sample custody seals intact? ☐ Yes ☐ No

Trip Blank Present? ☒ Yes ☐ No *If yes:* Which VOA samples are in cooler? ↓

All

Temperature Record

Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other:_____ ☐ NONE

Thermometer ID: AA | Correction Factor (°C): 0

• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C). 4.8 | Corrected Temp (°C): 4.8

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C).		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE If yes, contact PM before proceeding If no, proceed with login

Additional Comments

only received 2 125mL container for water for Rinsate Blank

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613
Phone (319) 277-2401 Phone (319) 277-2425

Chain of Custody Record

eurofins
Environment Testing

Eurofins Duluth SC 269

Client Information	Sampler: Jack Hagley/Reed Hou	Lab PM: Bindert, Zach T	Carrier Tracking No(s)	COC No: 310-120320-30764 1
Client Contact: Ken Aufdencamp	Phone:	E-Mail: Zach Bindert@et.eurofinsus com	State of Origin:	Page: Page 1 of 1
Company: Short Elliott Hendrickson Inc. dba SEH	PWSID			Job #:
Address: 3535 Vadnais Center Drive	Due Date Requested			
City: St. Paul	TAT Requested (days): Standard			
State, Zip: MN 55110	Compliance Project: Δ Yes Δ No			
Phone: 651-318-0354(Tel)	PO #:			
Email: kaufdencamp@sehinc.com	WO #:			
Project Name: Duluth Airport Midfield Ramp	Project #: 31020576			
Site:	SSOW#:			

Analysis Requested

Preservation Codes: N - None; F - MeOH; D - HNO3; A HCL; Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air DW=Drinking Water)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	DRO	GRO	VOCs	PAHs	RCRA Metals	PFAS	Moisture	Total Number of containers	Special Instructions/Note
			Preservation Code												
HA-02-1	4/20	1805	G	S			X	X	X	X	X	X	X		
HA-02-3		1810					X	X	X	X	X	X	X		
HA-03-1		1815					X	X	X	X	X	X	X		
HA-03-3		1830					X	X	X	X	X	X	X		
HA-04-1		1850					X	X	X	X	X	X	X		
HA-01-3		1855					X	X	X	X	X	X	X		
HA-01-1		1910					X	X	X	X	X	X	X		
HA-01-3		1915					X	X	X	X	X	X	X		
Rinsate Blank		1730					X	X	X	X	X	X	X		
Trip Blank-Soil								X	X						

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I II III IV Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	SEH	4/21/26 1500	SEH		4/21/26 1500	Eurofins
2		4/21/26 1530	Eurofins		04/22/26 0320	ET
3						

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks.

Ver: 05/06/2024

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613
Phone: 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

eurofins

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Bindert, Zach T	Carrier Tracking No(s): N/A	COC No: 310-93397 1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Zach.Bindert@et.eurofinsus.com	State of Origin: Minnesota	Page: Page 1 of 1
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note): NELAP Minnesota		Job #: 310-330207 1
Address: 180 S Van Buren Avenue,	Due Date Requested: 5/5/2026			
City: Barberton	TAT Requested (days): N/A			
State, Zip: OH 44203				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Duluth Airport Midfield Ramp	Project #: 31020576			
Site: N/A	SSOW#: N/A			

Analysis Requested

Preservation Codes.

Other: N/A

ES2 R85-32

Sample Identification Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B/3050BRCRA Metals Analyte List	7471B/7471B_PrepMercury	1633A/1633_Shake1633 Standard List 40	1633A/1633_SPE1633 Standard List 40	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
HA-02-1 (310-330207 1)	4/20/26	18:05 Central	G	Solid			X	X	X		2	
HA-02-3 (310-330207-2)	4/20/26	18:10 Central	G	Solid			X	X	X		2	
HA-03-1 (310-330207-3)	4/20/26	18:25 Central	G	Solid			X	X	X		2	
HA-03-3 (310-330207-4)	4/20/26	18:30 Central	G	Solid			X	X	X		2	
HA-04-1 (310-330207-5)	4/20/26	18:50 Central	G	Solid			X	X	X		2	
HA-04-3 (310-330207-6)	4/20/26	18:55 Central	G	Solid			X	X	X		2	
HA-01 1 (310-330207 7)	4/20/26	19:10 Central	G	Solid			X	X	X		2	
HA-01-3 (310-330207-8)	4/20/26	19:15 Central	G	Solid			X	X	X		2	
Rinsate Blank (310-330207-9)	4/20/26	19:30 Central	G	Water						X	2	

Note: Since laboratory accreditations are subject to change Eurofins Environment Testing North Central LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested I II III, IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time:	Company	Received by	Date/Time:	Company
[signature]	4/22/26/1645		JACK WILLIAMS	4/23/26 (000)	EC
Relinquished by	Date/Time:	Company	Received by	Date/Time:	Company
Relinquished by	Date/Time:	Company	Received by	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks:

Eurofins – Cleveland Sample Receipt Form/Narrative **Login # :**
Barberton Facility

Client Eurofins Site Name

Cooler unpacked by:

Cooler Received on 4/23/26 Opened on 4/23/26

FedEx: 1st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other

~~Receipt After-hours~~ Drop-off Date/Time Storage Location

~~Eurofins Cooler #~~ ~~Foam Box~~ Client Cooler Box Other

Packing material used. Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt ☐ See Multiple Cooler Form

IR GUN # 02 (CF -0.1 °C) Observed Cooler Temp. . °C Corrected Cooler Temp . °C

2. *Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity* 1	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3 Shippers' packing slip attached to the cooler(s)?	Yes	No
4 Did custody papers accompany the sample(s)?	Yes	No
5 Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6 Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7 Did all bottles arrive in good condition (Unbroken)?	Yes	No
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10 *Were correct bottle(s) used for the test(s) indicated?*	Yes	No
11 Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory		
13 Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC574455
14. Were VOAs on the COC?	Yes	No
15 Were air bubbles >6 mm in any VOA vials? ● ← Larger than this	Yes	No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #	Yes	No
17 Was a LL Hg or Me Hg trip blank present?	Yes	No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM Date by via Verbal Voice Mail Other

Concerning

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Labeled by:

Labels Verified by:

19. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.

Sample(s) were received in a broken container

Sample(s) were received with bubble >6 mm in diameter (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory

Time preserved Preservative(s) added/Lot number(s)

VOA Sample Preservation - Date/Time VOAs Frozen

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613
Phone: 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

eurofins

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Bindert, Zach T	Carrier Tracking No(s): N/A	COC No: 310-93397 1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Zach.Bindert@et.eurofinsus.com	State of Origin: Minnesota	Page: Page 1 of 1
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note): NELAP Minnesota		Job #: 310-330207 1
Address: 180 S. Van Buren Avenue	Due Date Requested: 5/5/2026			
City: Barberton	TAT Requested (days): N/A			
State, Zip: OH, 44203				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Duluth Airport Midfield Ramp	Project #: 31020576			
Site: N/A	SSOW#: N/A			

Analysis Requested

Preservation Codes:

Other: N/A

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Sample Identification Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B/3050BRCRA Metals Analyte List	7471B/7471B_PrepMercury	1633A/1633_Shake1633 Standard List 40	1633A/1633_SPE1633 Standard List 40	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
HA-02-1 (310-330207 1)	4/20/26	18:05 Central	G	Solid			X	X	X		2	
HA-02-3 (310-330207-2)	4/20/26	18:10 Central	G	Solid			X	X	X		2	
HA-03-1 (310-330207-3)	4/20/26	18:25 Central	G	Solid			X	X	X		2	
HA-03-3 (310-330207-4)	4/20/26	18:30 Central	G	Solid			X	X	X		2	
HA-04-1 (310-330207-5)	4/20/26	18:50 Central	G	Solid			X	X	X		2	
HA-04-3 (310-330207-6)	4/20/26	18:55 Central	G	Solid			X	X	X		2	
HA-01 1 (310-330207 7)	4/20/26	19:10 Central	G	Solid			X	X	X		2	
HA-01-3 (310-330207-8)	4/20/26	19:15 Central	G	Solid			X	X	X		2	
Rinsate Blank (310-330207-9)	4/20/26	19:30 Central	G	Water						X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I II III IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time: 4/22/26 1645	Company	Received by: JACK WILLIAMS	Date/Time: 4/23/26 (000)	Company EC
Relinquished by	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks.

Eurofins – Cleveland Sample Receipt Form/Narrative **Login # :**
Barberton Facility

Client Eurofins Site Name

Cooler unpacked by:

Cooler Received on 4/23/26 Opened on 4/23/26

FedEx: 1st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other

~~Receipt After-hours~~ Drop-off Date/Time Storage Location

~~Eurofins Cooler #~~ Foam Box Client Cooler Box Other

Packing material used Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☑ See Multiple Cooler Form

IR GUN # 02 (CF -0.1 °C) Observed Cooler Temp. ____.____°C Corrected Cooler Temp ____.____°C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3 Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5 Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7 Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10 Were correct bottle(s) used for the test(s) indicated?	Yes	No
11 Sufficient quantity received to perform indicated analyses?	Yes	No
12 Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory		
13 Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC574455
14. Were VOAs on the COC?	Yes	No
15 Were air bubbles >6 mm in any VOA vials? ● ← Larger than this	Yes	No NA
16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #	Yes	No
17 Was a LL Hg or Me Hg trip blank present?	Yes	No

Tests that are not checked for pH by Receiving

VOAs
Oil and Grease
TOC

Contacted PM Date by via Verbal Voice Mail Other

Concerning

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Labeled by:

Labels Verified by:

19 SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.

Sample(s) were received in a broken container

Sample(s) were received with bubble >6 mm in diameter (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory

Time preserved Preservative(s) added/Lot number(s)

VOA Sample Preservation - Date/Time VOAs Frozen

Login # : _____

Eurofins - Cleveland Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
EC Client Box Other	IR GUN #: _____	2.7	2.6	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____	2.0	1.9	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____	

1 of 2
TRK#
0201
4671 5432 1386
MASTER
NS CAKA
THU - 23 APR 10:30A
PRIORITY OVERNIGHT
44203
OH-US CLE
2 of 2
MPS#
0263
4671 5432 1397
Mstr# 4671 5432 1386
NS CAKA
THU - 23 APR 10:30A
PRIORITY OVERNIGHT
0201
44203
OH-US CLE

Login Sample Receipt Checklist

Client: Short Elliott Hendrickson, Inc. dba SEH

Job Number: 310-330207-1

Login Number: 330207

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Homolar, Dana J

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-330207-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFOSA (40-130)	M102FTS (40-275)	M242FTS (40-165)	M262FTS (40-215)	M282FTS (40-275)	HFPODA (40-130)	PFBA (8-130)	C3PFBS (40-135)
310-330207-1	HA-02-1	61.2	65.0	62.6	57.9	59.7	43.6	45.0	53.9
310-330207-2	HA-02-3	69.8	60.8	86.5	74.1	63.9	74.2	76.1	82.6
310-330207-3	HA-03-1	71.5	69.3	83.8	74.8	68.0	71.8	73.6	83.4
310-330207-4	HA-03-3	63.3	60.0	73.3	65.9	61.1	67.5	67.8	72.3
310-330207-5	HA-04-1	65.1	61.8	78.5	70.3	63.0	70.5	69.6	76.2
310-330207-6	HA-04-3	72.1	70.8	82.3	75.2	72.5	78.0	73.3	83.6
310-330207-7	HA-01-1	60.3	64.0	71.6	63.9	61.1	66.4	62.6	70.8
310-330207-8	HA-01-3	70.9	72.8	81.7	72.4	70.9	74.2	69.3	80.9
MB 240-699386/1-A	Method Blank	97.2	95.6	118	106	96.4	95.4	92.7	111
MB 240-699578/1-A	Method Blank	55.5	54.4	68.8	60.0	58.1	44.5	47.4	54.3

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	C6PFDA (40-130)	PFDoDA (40-130)	C4PFHA (40-130)	13C5PHA (40-130)	C3PFHS (40-130)	C9PFNA (40-130)	C8PFOA (40-130)	C8PFOS (40-130)
310-330207-1	HA-02-1	55.7	60.5	52.9	48.7	59.5	55.7	48.5	63.5
310-330207-2	HA-02-3	63.0	55.4	70.3	75.9	79.2	69.1	64.2	62.5
310-330207-3	HA-03-1	67.8	66.5	71.1	71.4	82.2	73.2	68.0	67.2
310-330207-4	HA-03-3	59.7	56.4	64.1	67.6	70.3	63.8	60.1	57.6
310-330207-5	HA-04-1	64.1	60.4	67.4	69.5	74.6	66.9	63.8	61.4
310-330207-6	HA-04-3	73.3	67.2	75.7	76.9	83.5	75.6	69.6	67.3
310-330207-7	HA-01-1	59.3	60.0	62.6	63.7	68.5	61.0	56.7	55.1
310-330207-8	HA-01-3	68.6	67.6	71.0	70.5	78.4	72.0	66.0	64.6
MB 240-699386/1-A	Method Blank	89.2	84.4	98.6	102	109	93.5	87.0	89.9
MB 240-699578/1-A	Method Blank	46.1	47.2	49.4	45.9	58.1	51.6	45.0	57.0

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFPeA (35-130)	I3C3-PFPrS (20-150)	PFTDA (20-130)	13C7PUA (40-130)	d5NEFOS (40-150)	NEFM (15-130)	d5NPFSA (10-130)	d3NMFOS (40-135)
310-330207-1	HA-02-1	50.0	42.0	64.7	53.5	68.8	45.1	59.8	68.3
310-330207-2	HA-02-3	77.3	64.7	69.4	56.7	55.1	42.6	58.0	58.9
310-330207-3	HA-03-1	75.9	61.1	81.2	65.1	60.1	50.6	65.6	62.1
310-330207-4	HA-03-3	70.8	57.9	69.7	56.2	54.3	49.7	57.8	58.7
310-330207-5	HA-04-1	73.4	59.6	57.9	61.5	53.0	34.8	59.3	55.9
310-330207-6	HA-04-3	82.0	65.3	60.2	69.0	60.3	28.4	66.5	63.7
310-330207-7	HA-01-1	66.2	54.5	72.8	58.9	52.9	45.1	57.7	57.9
310-330207-8	HA-01-3	74.9	61.2	66.8	67.9	63.9	51.1	62.9	66.6
MB 240-699386/1-A	Method Blank	103	87.6	103	85.6	82.8	62.3	96.3	86.5
MB 240-699578/1-A	Method Blank	50.0	45.5	52.8	42.4	58.7	43.1	50.3	60.1

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	NMFM (20-130)	d3NMFSA (10-130)
310-330207-1	HA-02-1	45.3	56.6
310-330207-2	HA-02-3	39.0	56.1
310-330207-3	HA-03-1	57.9	67.0
310-330207-4	HA-03-3	46.3	55.1
310-330207-5	HA-04-1	36.9	60.3
310-330207-6	HA-04-3	31.9	65.3
310-330207-7	HA-01-1	44.4	56.0
310-330207-8	HA-01-3	51.9	62.1
MB 240-699386/1-A	Method Blank	61.2	95.0
MB 240-699578/1-A	Method Blank	45.8	47.4

Isotope Dilution Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330207-1
Project/Site: Duluth Airport Midfield Ramp

Surrogate Legend

PFOSA = 13C8 FOSA
M102FTS = 13C2 10:2 FTS
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
PFBA = 13C4 PFBA
C3PFBS = 13C3 PFBS
C6PFDA = 13C6 PFDA
PFDoDA = 13C2-PFDoA
C4PFHA = 13C4 PFHpA
13C5PHA = 13C5 PFHxA
C3PFHS = 13C3 PFHxS
C9PFNA = 13C9 PFNA
C8PFOA = 13C8 PFOA
C8PFOS = 13C8 PFOS
PFPeA = 13C5 PFPeA
13C3-PFPrS = 13C3-PFPrS
PFTDA = 13C2 PFTeDA
13C7PUA = 13C7 PFUnA
d5NEFOS = d5-NEtFOSAA
NEFM = d9-N-EtFOSE-M
d5NPFSA = d5-NEtPFOSA
d3NMFOS = d3-NMeFOSAA
NMFM = d7-N-MeFOSE-M
d3NMFSA = d3-NMePFOSA

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Matrix: Solid **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFOSA	M102FTS	M242FTS	M262FTS	M282FTS	HFPODA	PFBA	C3PFBS
Lab Sample ID	Client Sample ID	(40-130)	(10-200)	(40-165)	(40-215)	(40-275)	(40-130)	(8-130)	(40-135)
LCS 240-699386/3-A	Lab Control Sample	70.3	68.7	92.5	77.8	67.7	76.5	73.7	89.2
LCS 240-699578/3-A	Lab Control Sample	86.7	90.3	109	94.9	88.8	65.6	71.0	88.1
LLCS 240-699386/2-A	Lab Control Sample	76.2	71.5	86.7	78.2	74.8	69.8	68.4	83.1
LLCS 240-699578/2-A	Lab Control Sample	71.0	74.8	88.0	77.3	73.7	61.0	60.5	74.3

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		C6PFDA	PFDoDA	C4PFHA	13C5PHA	C3PFHS	C9PFNA	C8PFOA	C8PFOS
Lab Sample ID	Client Sample ID	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)
LCS 240-699386/3-A	Lab Control Sample	64.4	63.0	73.4	75.9	81.6	68.4	66.1	63.5
LCS 240-699578/3-A	Lab Control Sample	74.6	73.4	81.5	72.6	94.0	82.1	71.5	89.2
LLCS 240-699386/2-A	Lab Control Sample	69.6	65.5	74.3	71.4	84.5	71.3	67.6	70.1
LLCS 240-699578/2-A	Lab Control Sample	64.4	62.2	70.6	65.0	76.4	66.7	58.3	72.9

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFPeA	13C3-PFPrS	PFTDA	13C7PUA	d5NEFOS	NEFM	d5NPFSA	d3NMFOS
Lab Sample ID	Client Sample ID	(35-130)	(20-150)	(20-130)	(40-130)	(40-150)	(15-130)	(10-130)	(40-135)
LCS 240-699386/3-A	Lab Control Sample	81.0	67.6	83.1	60.4	57.7	51.1	66.8	62.4
LCS 240-699578/3-A	Lab Control Sample	82.8	71.2	72.6	73.5	93.1	54.5	71.5	98.0
LLCS 240-699386/2-A	Lab Control Sample	77.4	62.9	80.6	65.2	64.9	52.7	76.7	69.0
LLCS 240-699578/2-A	Lab Control Sample	72.4	60.6	73.4	58.6	78.7	59.7	59.4	80.4

Isotope Dilution Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330207-1
Project/Site: Duluth Airport Midfield Ramp

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		NMFM	d3NMFSA						
Lab Sample ID	Client Sample ID	(20-130)	(10-130)						
LCS 240-699386/3-A	Lab Control Sample	47.0	65.3						
LCS 240-699578/3-A	Lab Control Sample	58.9	71.0						
LLCS 240-699386/2-A	Lab Control Sample	48.3	76.6						
LLCS 240-699578/2-A	Lab Control Sample	59.2	58.6						

Surrogate Legend

PFOSA = 13C8 FOSA
M102FTS = 13C2 10:2 FTS
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
PFBA = 13C4 PFBA
C3PFBS = 13C3 PFBS
C6PFDA = 13C6 PFDA
PFDoDA = 13C2-PFDoA
C4PFHA = 13C4 PFHpA
13C5PHA = 13C5 PFHxA
C3PFHS = 13C3 PFHxS
C9PFNA = 13C9 PFNA
C8PFOA = 13C8 PFOA
C8PFOS = 13C8 PFOS
PFPeA = 13C5 PFPeA
13C3-PFPrS = 13C3-PFPrS
PFTDA = 13C2 PFTeDA
13C7PUA = 13C7 PFUnA
d5NEFOS = d5-NEtFOSAA
NEFM = d9-N-EtFOSE-M
d5NPFSA = d5-NEtPFOSA
d3NMFOS = d3-NMeFOSAA
NMFM = d7-N-MeFOSE-M
d3NMFSA = d3-NMePFOSA

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFOSA	M102FTS	M242FTS	M262FTS	M282FTS	HFPODA	PFBA	C3PFBS
Lab Sample ID	Client Sample ID	(40-130)	(40-200)	(40-200)	(40-200)	(40-300)	(40-130)	(5-130)	(40-135)
310-330207-9	Rinsate Blank	77.2	80.6	94.0	82.1	81.9	87.5	77.3	75.5
MB 240-699234/1-A	Method Blank	51.2	62.1	56.3	51.0	53.1	54.9	47.4	48.3

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		C6PFDA	PFDoDA	C4PFHA	13C5PHA	C3PFHS	C9PFNA	C8PFOA	C8PFOS
Lab Sample ID	Client Sample ID	(40-130)	(10-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)
310-330207-9	Rinsate Blank	77.9	63.8	87.4	90.0	79.9	80.2	87.8	82.6
MB 240-699234/1-A	Method Blank	52.3	57.3	53.4	58.9	49.5	50.4	52.6	54.3

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFPeA	13C3-PFPrS	PFTDA	13C7PUA	d5NEFOS	NEFM	d5NPFSA	d3NMFOS
Lab Sample ID	Client Sample ID	(40-130)	(20-150)	(10-130)	(30-130)	(25-135)	(10-130)	(10-130)	(40-170)
310-330207-9	Rinsate Blank	88.0	70.2	67.6	71.5	81.2	44.8	63.5	60.2

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFPeA	13C3-PFPrS	PFTDA	13C7PUA	d5NEFOS	NEFM	d5NPFSA	d3NMFOS
Lab Sample ID	Client Sample ID	(40-130)	(20-150)	(10-130)	(30-130)	(25-135)	(10-130)	(10-130)	(40-170)
MB 240-699234/1-A	Method Blank	56.0	39.9	61.7	59.3	64.5	45.3	46.1	62.9

		Percent Isotope Dilution Recovery (Acceptance Limits)	
		NMFM	d3NMFSA
Lab Sample ID	Client Sample ID	(10-130)	(10-130)
310-330207-9	Rinsate Blank	49.9	67.5
MB 240-699234/1-A	Method Blank	44.5	49.3

Surrogate Legend

PFOSA = 13C8 FOSA
M102FTS = 13C2 10:2 FTS
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
PFBA = 13C4 PFBA
C3PFBS = 13C3 PFBS
C6PFDA = 13C6 PFDA
PFDoDA = 13C2-PFDoA
C4PFHA = 13C4 PFHpA
13C5PHA = 13C5 PFHxA
C3PFHS = 13C3 PFHxS
C9PFNA = 13C9 PFNA
C8PFOA = 13C8 PFOA
C8PFOS = 13C8 PFOS
PFPeA = 13C5 PFPeA
13C3-PFPrS = 13C3-PFPrS
PFTDA = 13C2 PFTeDA
13C7PUA = 13C7 PFUnA
d5NEFOS = d5-NEtFOSAA
NEFM = d9-N-EtFOSE-M
d5NPFSA = d5-NEtPFOSA
d3NMFOS = d3-NMeFOSAA
NMFM = d7-N-MeFOSE-M
d3NMFSA = d3-NMePFOSA

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFOSA	M102FTS	M242FTS	M262FTS	M282FTS	HFPODA	PFBA	C3PFBS
Lab Sample ID	Client Sample ID	(40-130)	(10-200)	(40-200)	(40-200)	(40-300)	(40-130)	(5-130)	(40-135)
LCS 240-699234/3-A	Lab Control Sample	96.3	96.1	118	105	98.4	102	99.7	103
LLCS 240-699234/2-A	Lab Control Sample	74.8	76.0	95.2	82.7	77.7	87.0	82.0	80.1

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		C6PFDA	PFDoDA	C4PFHA	13C5PHA	C3PFHS	C9PFNA	C8PFOA	C8PFOS
Lab Sample ID	Client Sample ID	(40-130)	(10-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)
LCS 240-699234/3-A	Lab Control Sample	98.7	86.7	104	105	104	101	110	108
LLCS 240-699234/2-A	Lab Control Sample	76.0	68.5	89.6	99.8	81.6	81.4	89.4	83.9

Isotope Dilution Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-330207-1
Project/Site: Duluth Airport Midfield Ramp

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFPeA	13C3-PFPrS	PFTDA	13C7PUA	d5NEFOS	NEFM	d5NPFSA	d3NMFOS
Lab Sample ID	Client Sample ID	(40-130)	(20-150)	(10-130)	(30-130)	(25-135)	(10-130)	(10-130)	(40-170)
LCS 240-699234/3-A	Lab Control Sample	110	94.9	91.5	95.8	94.5	55.5	75.7	99.9
LLCS 240-699234/2-A	Lab Control Sample	96.5	72.8	71.2	73.9	73.1	43.4	55.7	76.2

		Percent Isotope Dilution Recovery (Acceptance Limits)	
		NMFM	d3NMFSA
Lab Sample ID	Client Sample ID	(10-130)	(10-130)
LCS 240-699234/3-A	Lab Control Sample	56.0	87.0
LLCS 240-699234/2-A	Lab Control Sample	46.6	59.4

Surrogate Legend

PFOSA = 13C8 FOSA
M102FTS = 13C2 10:2 FTS
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
PFBA = 13C4 PFBA
C3PFBS = 13C3 PFBS
C6PFDA = 13C6 PFDA
PFDoDA = 13C2-PFDoA
C4PFHA = 13C4 PFHpA
13C5PHA = 13C5 PFHxA
C3PFHS = 13C3 PFHxS
C9PFNA = 13C9 PFNA
C8PFOA = 13C8 PFOA
C8PFOS = 13C8 PFOS
PFPeA = 13C5 PFPeA
13C3-PFPrS = 13C3-PFPrS
PFTDA = 13C2 PFTeDA
13C7PUA = 13C7 PFUnA
d5NEFOS = d5-NEtFOSAA
NEFM = d9-N-EtFOSE-M
d5NPFSA = d5-NEtPFOSA
d3NMFOS = d3-NMeFOSAA
NMFM = d7-N-MeFOSE-M
d3NMFSA = d3-NMePFOSA

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ANALYTICAL REPORT

PREPARED FOR

Attn: Keri Aufdencamp
Short Elliott Hendrickson, Inc. dba SEH
3535 Vadnais Center Drive
St. Paul, Minnesota 55110

Generated 5/12/2026 2:13:49 PM

JOB DESCRIPTION

Duluth Airport Midfield Ramp

JOB NUMBER

310-331056-1

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613

See page two for job notes and contact information.

my EOL

Job Notes

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Authorization

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Job Narrative
310-331056-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The samples were received on 5/1/2026 1:15 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C.

GC/MS VOA
Method 8260D: The method requirement for no headspace was not met. The following volatile sample was analyzed with headspace in the sample container(s): Trip Blank Water (310-331056-2).

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-487948 recovered above the upper control limit for Styrene(23%D) and Isopropylbenzene(26%D). The LCS associated with this CCV passes CCV criteria for the affected analytes; therefore, the data have been reported. The associated sample is:(CCV 310-487948/3).

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-487948 recovered above the upper control limit for Vinyl chloride(37%D), Chloroethane(47%D), Chloromethane(29%D), Trichlorofluoromethane(33%D), Dichlorofluoromethane(38%D), and Bromomethane(27%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is:(CCV 310-487948/4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC/MS Semi VOA
Method 8270E: The continuing calibration verification (CCV) associated with batch 310-488499 recovered above the upper control limit for benzo (a) pyrene (22 %D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is:(CCV 310-488499/4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Gasoline Range Organics
Method WI-GRO: The method requirement for no headspace was not met. The following volatile sample was analyzed with headspace in the sample container(s): Trip Blank Water (310-331056-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Diesel Range Organics
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

PFAS
Method 1633A: The continuing calibration verification (CCV) associated with batch 240-700716 recovered above the upper control limit for affected analytes. The samples associated with this CCV below the reporting limit for the affected analytes; therefore, the data have been reported. The associated sample is:MW-12-5.95W (310-331056-1).

Method 1633A: The continuing calibration verification (CCV) recovered outside of control limits for IDA compound(s) (flagged). Section 14.3.3 of the finalized EPA 1633 states that the recovery of target analytes for the CCV must be within 70 - 130%, unless the analyte is not of concern for a given project. Since target analyte(s) associated with this IDA are within spec, data is reported. The following sample is impacted: MW-12-5.95W (310-331056-1).

Job ID: 310-331056-1 (Continued)

Method 1633A: The low level continuing calibration verification (CCVL) associated with batch 240-700716 recovered above the upper control limit for affected analytes. The samples associated with this CCVL were below the reporting limit for the affected analytes; therefore, the data have been reported.

Method 1633A: The low level continuing calibration verification (CCVL) associated with batch 240-700716 recovered outside of control limits for IDA compound(s) (flagged). Section 14.3.3 of the finalized EPA 1633 states that the recovery of target analytes for the CCVL must be within 70 - 130%, unless the analyte is not of concern for a given project. Since target analyte(s) associated with this IDA are within spec, data is reported.

Method 1633A: The laboratory control sample (LCS) for preparation batch 240-700664 and analytical batch 240-700716 recovered outside control limits for affected analytes.These analytes were biased high in the LCS and were below the reporting limit in the associated samples; therefore, the data have been reported.

Method 1633A: The low level laboratory control sample (LLCS) for preparation batch 240-700664 and analytical batch 240-700716 recovered outside control limits for affected analytes. These analytes were biased high in the LLCS and were below the reporting limit in the associated samples; therefore, the data have been reported.

Method 1633A: Re-prep at full volume due to prior batch QC failure.

MW-12-5.95W (310-331056-1)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Sample Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-331056-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
310-331056-1	MW-12-5.95W	Water	04/30/26 09:30	05/01/26 13:15	Minnesota
310-331056-2	Trip Blank Water	Water	04/30/26 09:45	05/01/26 13:15	Minnesota

Detection Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-331056-1
Project/Site: Duluth Airport Midfield Ramp

Client Sample ID: MW-12-5.95W — Lab Sample ID: 310-331056-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.0179		0.00334		ug/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.0194		0.00167		ug/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.474		0.00167		ug/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	0.0422		0.00167		ug/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.00721		0.00167		ug/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	0.0742		0.00167		ug/L	1		1633A	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.0243		0.00167		ug/L	1		1633A	Total/NA
Perfluoropentanoic acid (PFPeA)	0.0288		0.00167		ug/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS) - RE	0.0218		0.00172		ug/L	1		1633A	Total/NA
Perfluoroheptanesulfonic acid (PFHpS) - RE	0.0148		0.00172		ug/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS) - RE	0.214		0.00172		ug/L	1		1633A	Total/NA
Barium	18.1		5.00		ug/L	1		6020B	Total Recoverable

Client Sample ID: Trip Blank Water — Lab Sample ID: 310-331056-2

No Detections.

This Detection Summary does not include radiochemical test results.

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-331056-1

Client Sample ID: MW-12-5.95W
Date Collected: 04/30/26 09:30
Date Received: 05/01/26 13:15

Lab Sample ID: 310-331056-1
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L			05/06/26 06:06	1
Allyl chloride	<2.00		2.00		ug/L			05/06/26 06:06	1
Benzene	<0.500		0.500		ug/L			05/06/26 06:06	1
Bromobenzene	<1.00		1.00		ug/L			05/06/26 06:06	1
Bromochloromethane	<5.00		5.00		ug/L			05/06/26 06:06	1
Bromodichloromethane	<1.00		1.00		ug/L			05/06/26 06:06	1
Bromoform	<5.00		5.00		ug/L			05/06/26 06:06	1
Bromomethane	<4.00		4.00		ug/L			05/06/26 06:06	1
2-Butanone (MEK)	<10.0		10.0		ug/L			05/06/26 06:06	1
Carbon tetrachloride	<2.00		2.00		ug/L			05/06/26 06:06	1
Chlorobenzene	<1.00		1.00		ug/L			05/06/26 06:06	1
Chlorodibromomethane	<5.00		5.00		ug/L			05/06/26 06:06	1
Chloroethane	<4.00		4.00		ug/L			05/06/26 06:06	1
Chloroform	<3.00		3.00		ug/L			05/06/26 06:06	1
Chloromethane	<3.00		3.00		ug/L			05/06/26 06:06	1
2-Chlorotoluene	<1.00		1.00		ug/L			05/06/26 06:06	1
4-Chlorotoluene	<1.00		1.00		ug/L			05/06/26 06:06	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			05/06/26 06:06	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			05/06/26 06:06	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			05/06/26 06:06	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			05/06/26 06:06	1
Dibromomethane	<1.00		1.00		ug/L			05/06/26 06:06	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			05/06/26 06:06	1
1,3-Dichlorobenzene	<1.00		1.00		ug/L			05/06/26 06:06	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			05/06/26 06:06	1
Dichlorodifluoromethane	<3.00		3.00		ug/L			05/06/26 06:06	1
1,1-Dichloroethane	<1.00		1.00		ug/L			05/06/26 06:06	1
1,2-Dichloroethane	<1.00		1.00		ug/L			05/06/26 06:06	1
1,1-Dichloroethene	<2.00		2.00		ug/L			05/06/26 06:06	1
Dichlorofluoromethane	<1.00		1.00		ug/L			05/06/26 06:06	1
1,2-Dichloropropane	<1.00		1.00		ug/L			05/06/26 06:06	1
1,3-Dichloropropane	<1.00		1.00		ug/L			05/06/26 06:06	1
2,2-Dichloropropane	<4.00		4.00		ug/L			05/06/26 06:06	1
1,1-Dichloropropene	<1.00		1.00		ug/L			05/06/26 06:06	1
Diethyl ether	<2.00		2.00		ug/L			05/06/26 06:06	1
Ethylbenzene	<1.00		1.00		ug/L			05/06/26 06:06	1
Hexachlorobutadiene	<5.00		5.00		ug/L			05/06/26 06:06	1
Isopropylbenzene	<1.00		1.00		ug/L			05/06/26 06:06	1
Methylene chloride	<5.00		5.00		ug/L			05/06/26 06:06	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			05/06/26 06:06	1
Methyl tert-butyl ether	<1.00		1.00		ug/L			05/06/26 06:06	1
Naphthalene	<5.00		5.00		ug/L			05/06/26 06:06	1
n-Butylbenzene	<1.00		1.00		ug/L			05/06/26 06:06	1
n-Propylbenzene	<1.00		1.00		ug/L			05/06/26 06:06	1
p-Isopropyltoluene	<1.00		1.00		ug/L			05/06/26 06:06	1
sec-Butylbenzene	<1.00		1.00		ug/L			05/06/26 06:06	1
Styrene	<1.00		1.00		ug/L			05/06/26 06:06	1
tert-Butylbenzene	<1.00		1.00		ug/L			05/06/26 06:06	1
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L			05/06/26 06:06	1

Client Sample ID: MW-12-5.95W
Lab Sample ID: 310-331056-1
Date Collected: 04/30/26 09:30
Matrix: Water
Date Received: 05/01/26 13:15

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			05/06/26 06:06	1
Tetrachloroethene	<1.00		1.00		ug/L			05/06/26 06:06	1
Tetrahydrofuran	<10.0		10.0		ug/L			05/06/26 06:06	1
Toluene	<1.00		1.00		ug/L			05/06/26 06:06	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			05/06/26 06:06	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			05/06/26 06:06	1
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L			05/06/26 06:06	1
1,2,4-Trichlorobenzene	<5.00		5.00		ug/L			05/06/26 06:06	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			05/06/26 06:06	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			05/06/26 06:06	1
Trichloroethene	<1.00		1.00		ug/L			05/06/26 06:06	1
Trichlorofluoromethane	<4.00		4.00		ug/L			05/06/26 06:06	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			05/06/26 06:06	1
1,1,2-Trichlorotrifluoroethane	<2.00	F1	2.00		ug/L			05/06/26 06:06	1
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L			05/06/26 06:06	1
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L			05/06/26 06:06	1
Vinyl chloride	<1.00		1.00		ug/L			05/06/26 06:06	1
Xylenes, Total	<3.00		3.00		ug/L			05/06/26 06:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*05/06/26 06:06*	*1*
Dibromofluoromethane (Surr)	*109*		*76 - 130*		*05/06/26 06:06*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*05/06/26 06:06*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.123		0.123		ug/L		05/05/26 12:12	05/11/26 14:15	1
Acenaphthylene	<0.123		0.123		ug/L		05/05/26 12:12	05/11/26 14:15	1
Anthracene	<0.123		0.123		ug/L		05/05/26 12:12	05/11/26 14:15	1
Benzo(a)anthracene	<0.123		0.123		ug/L		05/05/26 12:12	05/11/26 14:15	1
Benzo(a)pyrene	<0.123		0.123		ug/L		05/05/26 12:12	05/11/26 14:15	1
Benzo(b)fluoranthene	<0.123		0.123		ug/L		05/05/26 12:12	05/11/26 14:15	1
Benzo(g,h,i)perylene	<0.123		0.123		ug/L		05/05/26 12:12	05/11/26 14:15	1
Benzo(k)fluoranthene	<0.123		0.123		ug/L		05/05/26 12:12	05/11/26 14:15	1
Chrysene	<0.123		0.123		ug/L		05/05/26 12:12	05/11/26 14:15	1
Dibenz(a,h)anthracene	<0.123		0.123		ug/L		05/05/26 12:12	05/11/26 14:15	1
Fluoranthene	<0.123		0.123		ug/L		05/05/26 12:12	05/11/26 14:15	1
Fluorene	<0.123		0.123		ug/L		05/05/26 12:12	05/11/26 14:15	1
Indeno(1,2,3-cd)pyrene	<0.123		0.123		ug/L		05/05/26 12:12	05/11/26 14:15	1
2-Methylnaphthalene	<0.123		0.123		ug/L		05/05/26 12:12	05/11/26 14:15	1
Naphthalene	<0.123		0.123		ug/L		05/05/26 12:12	05/11/26 14:15	1
Phenanthrene	<0.123		0.123		ug/L		05/05/26 12:12	05/11/26 14:15	1
Pyrene	<0.123		0.123		ug/L		05/05/26 12:12	05/11/26 14:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*121*		*13 - 150*	*05/05/26 12:12*	*05/11/26 14:15*	*1*
Nitrobenzene-d5 (Surr)	*103*		*22 - 150*	*05/05/26 12:12*	*05/11/26 14:15*	*1*
Terphenyl-d14 (Surr)	*111*		*10 - 150*	*05/05/26 12:12*	*05/11/26 14:15*	*1*

Client Sample ID: MW-12-5.95W
Lab Sample ID: 310-331056-1
Date Collected: 04/30/26 09:30
Matrix: Water
Date Received: 05/01/26 13:15

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<100		100		ug/L			05/04/26 22:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*05/04/26 22:14*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<99.4		99.4		ug/L		05/04/26 11:10	05/04/26 16:12	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.00167		0.00167		ug/L		05/06/26 08:26	05/06/26 16:35	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.00167	*+	0.00167		ug/L		05/06/26 08:26	05/06/26 16:35	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.00167	*+	0.00167		ug/L		05/06/26 08:26	05/06/26 16:35	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.00125		0.00125		ug/L		05/06/26 08:26	05/06/26 16:35	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.00334		0.00334		ug/L		05/06/26 08:26	05/06/26 16:35	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.00334	*+	0.00334		ug/L		05/06/26 08:26	05/06/26 16:35	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.00334		0.00334		ug/L		05/06/26 08:26	05/06/26 16:35	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.00167	*+	0.00167		ug/L		05/06/26 08:26	05/06/26 16:35	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.00167		0.00167		ug/L		05/06/26 08:26	05/06/26 16:35	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<0.00834	*+	0.00834		ug/L		05/06/26 08:26	05/06/26 16:35	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.00167		0.00167		ug/L		05/06/26 08:26	05/06/26 16:35	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.00167		0.00167		ug/L		05/06/26 08:26	05/06/26 16:35	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<0.00834		0.00834		ug/L		05/06/26 08:26	05/06/26 16:35	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.00167		0.00167		ug/L		05/06/26 08:26	05/06/26 16:35	1
Perfluorobutanoic acid (PFBA)	**0.0179**		0.00334		ug/L		05/06/26 08:26	05/06/26 16:35	1
Perfluorodecanesulfonic acid (PFDS)	<0.00167		0.00167		ug/L		05/06/26 08:26	05/06/26 16:35	1
Perfluorodecanoic acid (PFDA)	<0.00167		0.00167		ug/L		05/06/26 08:26	05/06/26 16:35	1
Perfluorododecanesulfonic acid (PFDoS)	<0.00167		0.00167		ug/L		05/06/26 08:26	05/06/26 16:35	1
Perfluorododecanoic acid (PFDoA)	<0.00167		0.00167		ug/L		05/06/26 08:26	05/06/26 16:35	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.00167	*+	0.00167		ug/L		05/06/26 08:26	05/06/26 16:35	1
Perfluoroheptanoic acid (PFHpA)	**0.0194**		0.00167		ug/L		05/06/26 08:26	05/06/26 16:35	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<0.00834		0.00834		ug/L		05/06/26 08:26	05/06/26 16:35	1
Perfluorohexanesulfonic acid (PFHxS)	**0.474**		0.00167		ug/L		05/06/26 08:26	05/06/26 16:35	1
Perfluorohexanoic acid (PFHxA)	**0.0422**		0.00167		ug/L		05/06/26 08:26	05/06/26 16:35	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.00167		0.00167		ug/L		05/06/26 08:26	05/06/26 16:35	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-331056-1

Client Sample ID: MW-12-5.95W
Date Collected: 04/30/26 09:30
Date Received: 05/01/26 13:15

Lab Sample ID: 310-331056-1
Matrix: Water

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.00167		0.00167		ug/L		05/06/26 08:26	05/06/26 16:35	1
Perfluorononanesulfonic acid (PFNS)	<0.00167	*+	0.00167		ug/L		05/06/26 08:26	05/06/26 16:35	1
Perfluorononanoic acid (PFNA)	**0.00721**		0.00167		ug/L		05/06/26 08:26	05/06/26 16:35	1
Perfluorooctanesulfonamide (PFOSA)	<0.00167		0.00167		ug/L		05/06/26 08:26	05/06/26 16:35	1
Perfluorooctanoic acid (PFOA)	**0.0742**		0.00167		ug/L		05/06/26 08:26	05/06/26 16:35	1
Perfluoropentanesulfonic acid (PFPeS)	**0.0243**		0.00167		ug/L		05/06/26 08:26	05/06/26 16:35	1
Perfluoropentanoic acid (PFPeA)	**0.0288**		0.00167		ug/L		05/06/26 08:26	05/06/26 16:35	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<0.00834	*+	0.00834		ug/L		05/06/26 08:26	05/06/26 16:35	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.00334		0.00334		ug/L		05/06/26 08:26	05/06/26 16:35	1
Perfluorotetradecanoic acid (PFTeDA)	<0.00167		0.00167		ug/L		05/06/26 08:26	05/06/26 16:35	1
Perfluorotridecanoic acid (PFTrDA)	<0.00167		0.00167		ug/L		05/06/26 08:26	05/06/26 16:35	1
Perfluoroundecanoic acid (PFUnA)	<0.00167		0.00167		ug/L		05/06/26 08:26	05/06/26 16:35	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*65.6*		*40 - 130*	*05/06/26 08:26*	*05/06/26 16:35*	*1*
13C2 10:2 FTS	*105*		*40 - 200*	*05/06/26 08:26*	*05/06/26 16:35*	*1*
13C2 4:2 FTS	*76.6*		*40 - 200*	*05/06/26 08:26*	*05/06/26 16:35*	*1*
13C2 6:2 FTS	*78.1*		*40 - 200*	*05/06/26 08:26*	*05/06/26 16:35*	*1*
13C2 8:2 FTS	*100*		*40 - 300*	*05/06/26 08:26*	*05/06/26 16:35*	*1*
13C3 HFPO-DA	*85.2*		*40 - 130*	*05/06/26 08:26*	*05/06/26 16:35*	*1*
13C4 PFBA	*77.9*		*5 - 130*	*05/06/26 08:26*	*05/06/26 16:35*	*1*
13C3 PFBS	*78.7*		*40 - 135*	*05/06/26 08:26*	*05/06/26 16:35*	*1*
13C6 PFDA	*73.4*		*40 - 130*	*05/06/26 08:26*	*05/06/26 16:35*	*1*
13C2-PFDoA	*53.4*		*10 - 130*	*05/06/26 08:26*	*05/06/26 16:35*	*1*
13C4 PFHpA	*85.1*		*40 - 130*	*05/06/26 08:26*	*05/06/26 16:35*	*1*
13C5 PFHxA	*80.4*		*40 - 130*	*05/06/26 08:26*	*05/06/26 16:35*	*1*
13C3 PFHxS	*76.5*		*40 - 130*	*05/06/26 08:26*	*05/06/26 16:35*	*1*
13C9 PFNA	*86.1*		*40 - 130*	*05/06/26 08:26*	*05/06/26 16:35*	*1*
13C8 PFOA	*77.2*		*40 - 130*	*05/06/26 08:26*	*05/06/26 16:35*	*1*
13C8 PFOS	*61.2*		*40 - 130*	*05/06/26 08:26*	*05/06/26 16:35*	*1*
13C5 PFPeA	*97.5*		*40 - 130*	*05/06/26 08:26*	*05/06/26 16:35*	*1*
13C3-PFPrS	*78.0*		*20 - 150*	*05/06/26 08:26*	*05/06/26 16:35*	*1*
13C2 PFTeDA	*63.6*		*10 - 130*	*05/06/26 08:26*	*05/06/26 16:35*	*1*
13C7 PFUnA	*67.1*		*30 - 130*	*05/06/26 08:26*	*05/06/26 16:35*	*1*
d5-NEtFOSAA	*76.5*		*25 - 135*	*05/06/26 08:26*	*05/06/26 16:35*	*1*
d9-N-EtFOSE-M	*41.3*		*10 - 130*	*05/06/26 08:26*	*05/06/26 16:35*	*1*
d5-NEtPFOSA	*56.7*		*10 - 130*	*05/06/26 08:26*	*05/06/26 16:35*	*1*
d3-NMeFOSAA	*80.5*		*40 - 170*	*05/06/26 08:26*	*05/06/26 16:35*	*1*
d7-N-MeFOSE-M	*35.9*		*10 - 130*	*05/06/26 08:26*	*05/06/26 16:35*	*1*
d3-NMePFOSA	*56.3*		*10 - 130*	*05/06/26 08:26*	*05/06/26 16:35*	*1*

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	**0.0218**		0.00172		ug/L		05/11/26 08:40	05/11/26 13:19	1
Perfluoroheptanesulfonic acid (PFHpS)	**0.0148**		0.00172		ug/L		05/11/26 08:40	05/11/26 13:19	1

Client Sample ID: MW-12-5.95W
Date Collected: 04/30/26 09:30
Date Received: 05/01/26 13:15

Lab Sample ID: 310-331056-1
Matrix: Water

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	**0.214**		0.00172		ug/L		05/11/26 08:40	05/11/26 13:19	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*88.0*		*40 - 130*	*05/11/26 08:40*	*05/11/26 13:19*	*1*
13C2 10:2 FTS	*89.4*		*40 - 200*	*05/11/26 08:40*	*05/11/26 13:19*	*1*
13C2 4:2 FTS	*94.0*		*40 - 200*	*05/11/26 08:40*	*05/11/26 13:19*	*1*
13C2 6:2 FTS	*97.4*		*40 - 200*	*05/11/26 08:40*	*05/11/26 13:19*	*1*
13C2 8:2 FTS	*92.6*		*40 - 300*	*05/11/26 08:40*	*05/11/26 13:19*	*1*
13C3 HFPO-DA	*99.1*		*40 - 130*	*05/11/26 08:40*	*05/11/26 13:19*	*1*
13C4 PFBA	*96.5*		*5 - 130*	*05/11/26 08:40*	*05/11/26 13:19*	*1*
13C3 PFBS	*97.1*		*40 - 135*	*05/11/26 08:40*	*05/11/26 13:19*	*1*
13C6 PFDA	*91.6*		*40 - 130*	*05/11/26 08:40*	*05/11/26 13:19*	*1*
13C2-PFDoA	*86.4*		*10 - 130*	*05/11/26 08:40*	*05/11/26 13:19*	*1*
13C4 PFHpA	*99.8*		*40 - 130*	*05/11/26 08:40*	*05/11/26 13:19*	*1*
13C5 PFHxA	*96.4*		*40 - 130*	*05/11/26 08:40*	*05/11/26 13:19*	*1*
13C3 PFHxS	*92.6*		*40 - 130*	*05/11/26 08:40*	*05/11/26 13:19*	*1*
13C9 PFNA	*107*		*40 - 130*	*05/11/26 08:40*	*05/11/26 13:19*	*1*
13C8 PFOA	*98.2*		*40 - 130*	*05/11/26 08:40*	*05/11/26 13:19*	*1*
13C8 PFOS	*80.2*		*40 - 130*	*05/11/26 08:40*	*05/11/26 13:19*	*1*
13C5 PFPeA	*108*		*40 - 130*	*05/11/26 08:40*	*05/11/26 13:19*	*1*
13C3-PFPrS	*105*		*20 - 150*	*05/11/26 08:40*	*05/11/26 13:19*	*1*
13C2 PFTeDA	*103*		*10 - 130*	*05/11/26 08:40*	*05/11/26 13:19*	*1*
13C7 PFUnA	*93.5*		*30 - 130*	*05/11/26 08:40*	*05/11/26 13:19*	*1*
d5-NEtFOSAA	*83.1*		*25 - 135*	*05/11/26 08:40*	*05/11/26 13:19*	*1*
d9-N-EtFOSE-M	*45.9*		*10 - 130*	*05/11/26 08:40*	*05/11/26 13:19*	*1*
d5-NEtPFOSA	*73.3*		*10 - 130*	*05/11/26 08:40*	*05/11/26 13:19*	*1*
d3-NMeFOSAA	*81.5*		*40 - 170*	*05/11/26 08:40*	*05/11/26 13:19*	*1*
d7-N-MeFOSE-M	*49.2*		*10 - 130*	*05/11/26 08:40*	*05/11/26 13:19*	*1*
d3-NMePFOSA	*78.4*		*10 - 130*	*05/11/26 08:40*	*05/11/26 13:19*	*1*

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<1.00		1.00		ug/L		05/05/26 14:00	05/06/26 23:46	1
Arsenic	<5.00		5.00		ug/L		05/05/26 14:00	05/06/26 23:46	1
Barium	**18.1**		5.00		ug/L		05/05/26 14:00	05/06/26 23:46	1
Cadmium	<1.00		1.00		ug/L		05/08/26 14:00	05/11/26 10:58	1
Chromium	<5.00		5.00		ug/L		05/05/26 14:00	05/06/26 23:46	1
Lead	<1.00		1.00		ug/L		05/05/26 14:00	05/06/26 23:46	1
Selenium	<5.00		5.00		ug/L		05/08/26 14:00	05/11/26 10:58	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.200		0.200		ug/L		05/05/26 14:00	05/06/26 11:30	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-331056-1

Client Sample ID: Trip Blank Water
Date Collected: 04/30/26 09:45
Date Received: 05/01/26 13:15

Lab Sample ID: 310-331056-2
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L			05/06/26 02:27	1
Allyl chloride	<2.00		2.00		ug/L			05/06/26 02:27	1
Benzene	<0.500		0.500		ug/L			05/06/26 02:27	1
Bromobenzene	<1.00		1.00		ug/L			05/06/26 02:27	1
Bromochloromethane	<5.00		5.00		ug/L			05/06/26 02:27	1
Bromodichloromethane	<1.00		1.00		ug/L			05/06/26 02:27	1
Bromoform	<5.00		5.00		ug/L			05/06/26 02:27	1
Bromomethane	<4.00		4.00		ug/L			05/06/26 02:27	1
2-Butanone (MEK)	<10.0		10.0		ug/L			05/06/26 02:27	1
Carbon tetrachloride	<2.00		2.00		ug/L			05/06/26 02:27	1
Chlorobenzene	<1.00		1.00		ug/L			05/06/26 02:27	1
Chlorodibromomethane	<5.00		5.00		ug/L			05/06/26 02:27	1
Chloroethane	<4.00		4.00		ug/L			05/06/26 02:27	1
Chloroform	<3.00		3.00		ug/L			05/06/26 02:27	1
Chloromethane	<3.00		3.00		ug/L			05/06/26 02:27	1
2-Chlorotoluene	<1.00		1.00		ug/L			05/06/26 02:27	1
4-Chlorotoluene	<1.00		1.00		ug/L			05/06/26 02:27	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			05/06/26 02:27	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			05/06/26 02:27	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			05/06/26 02:27	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			05/06/26 02:27	1
Dibromomethane	<1.00		1.00		ug/L			05/06/26 02:27	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			05/06/26 02:27	1
1,3-Dichlorobenzene	<1.00		1.00		ug/L			05/06/26 02:27	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			05/06/26 02:27	1
Dichlorodifluoromethane	<3.00		3.00		ug/L			05/06/26 02:27	1
1,1-Dichloroethane	<1.00		1.00		ug/L			05/06/26 02:27	1
1,2-Dichloroethane	<1.00		1.00		ug/L			05/06/26 02:27	1
1,1-Dichloroethene	<2.00		2.00		ug/L			05/06/26 02:27	1
Dichlorofluoromethane	<1.00		1.00		ug/L			05/06/26 02:27	1
1,2-Dichloropropane	<1.00		1.00		ug/L			05/06/26 02:27	1
1,3-Dichloropropane	<1.00		1.00		ug/L			05/06/26 02:27	1
2,2-Dichloropropane	<4.00		4.00		ug/L			05/06/26 02:27	1
1,1-Dichloropropene	<1.00		1.00		ug/L			05/06/26 02:27	1
Diethyl ether	<2.00		2.00		ug/L			05/06/26 02:27	1
Ethylbenzene	<1.00		1.00		ug/L			05/06/26 02:27	1
Hexachlorobutadiene	<5.00		5.00		ug/L			05/06/26 02:27	1
Isopropylbenzene	<1.00		1.00		ug/L			05/06/26 02:27	1
Methylene chloride	<5.00		5.00		ug/L			05/06/26 02:27	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			05/06/26 02:27	1
Methyl tert-butyl ether	<1.00		1.00		ug/L			05/06/26 02:27	1
Naphthalene	<5.00		5.00		ug/L			05/06/26 02:27	1
n-Butylbenzene	<1.00		1.00		ug/L			05/06/26 02:27	1
n-Propylbenzene	<1.00		1.00		ug/L			05/06/26 02:27	1
p-Isopropyltoluene	<1.00		1.00		ug/L			05/06/26 02:27	1
sec-Butylbenzene	<1.00		1.00		ug/L			05/06/26 02:27	1
Styrene	<1.00		1.00		ug/L			05/06/26 02:27	1
tert-Butylbenzene	<1.00		1.00		ug/L			05/06/26 02:27	1
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L			05/06/26 02:27	1

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-331056-1

Client Sample ID: Trip Blank Water
Date Collected: 04/30/26 09:45
Date Received: 05/01/26 13:15

Lab Sample ID: 310-331056-2
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			05/06/26 02:27	1
Tetrachloroethene	<1.00		1.00		ug/L			05/06/26 02:27	1
Tetrahydrofuran	<10.0		10.0		ug/L			05/06/26 02:27	1
Toluene	<1.00		1.00		ug/L			05/06/26 02:27	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			05/06/26 02:27	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			05/06/26 02:27	1
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L			05/06/26 02:27	1
1,2,4-Trichlorobenzene	<5.00		5.00		ug/L			05/06/26 02:27	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			05/06/26 02:27	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			05/06/26 02:27	1
Trichloroethene	<1.00		1.00		ug/L			05/06/26 02:27	1
Trichlorofluoromethane	<4.00		4.00		ug/L			05/06/26 02:27	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			05/06/26 02:27	1
1,1,2-Trichlorotrifluoroethane	<2.00		2.00		ug/L			05/06/26 02:27	1
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L			05/06/26 02:27	1
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L			05/06/26 02:27	1
Vinyl chloride	<1.00		1.00		ug/L			05/06/26 02:27	1
Xylenes, Total	<3.00		3.00		ug/L			05/06/26 02:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*05/06/26 02:27*	*1*
Dibromofluoromethane (Surr)	*106*		*76 - 130*		*05/06/26 02:27*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*05/06/26 02:27*	*1*

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<100		100		ug/L			05/04/26 17:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*05/04/26 17:53*	*1*

Definitions/Glossary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-331056-1
Project/Site: Duluth Airport Midfield Ramp

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.

LCMS

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Surrogate Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-331056-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(76-130)	(80-120)
310-331056-1	MW-12-5.95W	95	109	96
310-331056-1 MS	MW-12-5.95W	100	99	102
310-331056-1 MSD	MW-12-5.95W	100	99	101
310-331056-2	Trip Blank Water	99	106	100
LCS 310-487948/6	Lab Control Sample	105	100	101
LCS 310-487948/7	Lab Control Sample	100	106	100
MB 310-487948/5	Method Blank	100	102	101

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		FBP	NBZ	TPHL
Lab Sample ID	Client Sample ID	(13-150)	(22-150)	(10-150)
310-331056-1	MW-12-5.95W	121	103	111
LCS 310-487958/22-A	Lab Control Sample	89	89	76
MB 310-487958/1-A	Method Blank	83	85	77

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	(80-120)
310-331056-1	MW-12-5.95W	104
310-331056-2	Trip Blank Water	103
LCS 310-487860/4	Lab Control Sample	95
LCSD 310-487860/26	Lab Control Sample Dup	96
MB 310-487860/3	Method Blank	105

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-331056-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 310-487948/5
Matrix: Water
Analysis Batch: 487948

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L			05/06/26 01:21	1
Allyl chloride	<2.00		2.00		ug/L			05/06/26 01:21	1
Benzene	<0.500		0.500		ug/L			05/06/26 01:21	1
Bromobenzene	<1.00		1.00		ug/L			05/06/26 01:21	1
Bromochloromethane	<5.00		5.00		ug/L			05/06/26 01:21	1
Bromodichloromethane	<1.00		1.00		ug/L			05/06/26 01:21	1
Bromoform	<5.00		5.00		ug/L			05/06/26 01:21	1
Bromomethane	<4.00		4.00		ug/L			05/06/26 01:21	1
2-Butanone (MEK)	<10.0		10.0		ug/L			05/06/26 01:21	1
Carbon tetrachloride	<2.00		2.00		ug/L			05/06/26 01:21	1
Chlorobenzene	<1.00		1.00		ug/L			05/06/26 01:21	1
Chlorodibromomethane	<5.00		5.00		ug/L			05/06/26 01:21	1
Chloroethane	<4.00		4.00		ug/L			05/06/26 01:21	1
Chloroform	<3.00		3.00		ug/L			05/06/26 01:21	1
Chloromethane	<3.00		3.00		ug/L			05/06/26 01:21	1
2-Chlorotoluene	<1.00		1.00		ug/L			05/06/26 01:21	1
4-Chlorotoluene	<1.00		1.00		ug/L			05/06/26 01:21	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			05/06/26 01:21	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			05/06/26 01:21	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			05/06/26 01:21	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			05/06/26 01:21	1
Dibromomethane	<1.00		1.00		ug/L			05/06/26 01:21	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			05/06/26 01:21	1
1,3-Dichlorobenzene	<1.00		1.00		ug/L			05/06/26 01:21	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			05/06/26 01:21	1
Dichlorodifluoromethane	<3.00		3.00		ug/L			05/06/26 01:21	1
1,1-Dichloroethane	<1.00		1.00		ug/L			05/06/26 01:21	1
1,2-Dichloroethane	<1.00		1.00		ug/L			05/06/26 01:21	1
1,1-Dichloroethene	<2.00		2.00		ug/L			05/06/26 01:21	1
Dichlorofluoromethane	<1.00		1.00		ug/L			05/06/26 01:21	1
1,2-Dichloropropane	<1.00		1.00		ug/L			05/06/26 01:21	1
1,3-Dichloropropane	<1.00		1.00		ug/L			05/06/26 01:21	1
2,2-Dichloropropane	<4.00		4.00		ug/L			05/06/26 01:21	1
1,1-Dichloropropene	<1.00		1.00		ug/L			05/06/26 01:21	1
Diethyl ether	<2.00		2.00		ug/L			05/06/26 01:21	1
Ethylbenzene	<1.00		1.00		ug/L			05/06/26 01:21	1
Hexachlorobutadiene	<5.00		5.00		ug/L			05/06/26 01:21	1
Isopropylbenzene	<1.00		1.00		ug/L			05/06/26 01:21	1
Methylene chloride	<5.00		5.00		ug/L			05/06/26 01:21	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			05/06/26 01:21	1
Methyl tert-butyl ether	<1.00		1.00		ug/L			05/06/26 01:21	1
Naphthalene	<5.00		5.00		ug/L			05/06/26 01:21	1
n-Butylbenzene	<1.00		1.00		ug/L			05/06/26 01:21	1
n-Propylbenzene	<1.00		1.00		ug/L			05/06/26 01:21	1
p-Isopropyltoluene	<1.00		1.00		ug/L			05/06/26 01:21	1
sec-Butylbenzene	<1.00		1.00		ug/L			05/06/26 01:21	1
Styrene	<1.00		1.00		ug/L			05/06/26 01:21	1
tert-Butylbenzene	<1.00		1.00		ug/L			05/06/26 01:21	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-487948/5
Matrix: Water
Analysis Batch: 487948

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L			05/06/26 01:21	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			05/06/26 01:21	1
Tetrachloroethene	<1.00		1.00		ug/L			05/06/26 01:21	1
Tetrahydrofuran	<10.0		10.0		ug/L			05/06/26 01:21	1
Toluene	<1.00		1.00		ug/L			05/06/26 01:21	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			05/06/26 01:21	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			05/06/26 01:21	1
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L			05/06/26 01:21	1
1,2,4-Trichlorobenzene	<5.00		5.00		ug/L			05/06/26 01:21	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			05/06/26 01:21	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			05/06/26 01:21	1
Trichloroethene	<1.00		1.00		ug/L			05/06/26 01:21	1
Trichlorofluoromethane	<4.00		4.00		ug/L			05/06/26 01:21	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			05/06/26 01:21	1
1,1,2-Trichlorotrifluoroethane	<2.00		2.00		ug/L			05/06/26 01:21	1
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L			05/06/26 01:21	1
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L			05/06/26 01:21	1
Vinyl chloride	<1.00		1.00		ug/L			05/06/26 01:21	1
Xylenes, Total	<3.00		3.00		ug/L			05/06/26 01:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*05/06/26 01:21*	*1*
Dibromofluoromethane (Surr)	*102*		*76 - 130*		*05/06/26 01:21*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*05/06/26 01:21*	*1*

Lab Sample ID: LCS 310-487948/6
Matrix: Water
Analysis Batch: 487948

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	50.0	48.95		ug/L		98	59 - 136
Allyl chloride	25.0	21.80		ug/L		87	61 - 136
Benzene	25.0	22.06		ug/L		88	71 - 125
Bromobenzene	25.0	25.27		ug/L		101	71 - 120
Bromochloromethane	25.0	23.23		ug/L		93	69 - 131
Bromodichloromethane	25.0	24.78		ug/L		99	70 - 122
Bromoform	25.0	26.06		ug/L		104	62 - 122
2-Butanone (MEK)	50.0	49.30		ug/L		99	60 - 134
Carbon tetrachloride	25.0	21.29		ug/L		85	63 - 136
Chlorobenzene	25.0	24.29		ug/L		97	74 - 120
Chlorodibromomethane	25.0	25.19		ug/L		101	69 - 121
Chloroform	25.0	22.37		ug/L		89	72 - 122
2-Chlorotoluene	25.0	25.82		ug/L		103	73 - 121
4-Chlorotoluene	25.0	25.82		ug/L		103	72 - 121
cis-1,2-Dichloroethene	25.0	21.54		ug/L		86	72 - 123
cis-1,3-Dichloropropene	25.0	25.00		ug/L		100	72 - 123
1,2-Dibromo-3-chloropropane	25.0	24.78		ug/L		99	62 - 132
1,2-Dibromoethane (EDB)	25.0	25.65		ug/L		103	74 - 122

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-487948/6
Matrix: Water
Analysis Batch: 487948

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dibromomethane	25.0	24.13		ug/L		97	72 - 122
1,2-Dichlorobenzene	25.0	24.19		ug/L		97	74 - 120
1,3-Dichlorobenzene	25.0	23.40		ug/L		94	71 - 120
1,4-Dichlorobenzene	25.0	23.93		ug/L		96	72 - 120
1,1-Dichloroethane	25.0	21.65		ug/L		87	69 - 127
1,2-Dichloroethane	25.0	22.90		ug/L		92	68 - 125
1,1-Dichloroethene	25.0	19.44		ug/L		78	64 - 134
1,2-Dichloropropane	25.0	23.56		ug/L		94	72 - 128
1,3-Dichloropropane	25.0	25.12		ug/L		100	72 - 125
2,2-Dichloropropane	25.0	18.34		ug/L		73	51 - 146
1,1-Dichloropropene	25.0	22.34		ug/L		89	70 - 133
Diethyl ether	25.0	21.51		ug/L		86	59 - 139
Ethylbenzene	25.0	24.45		ug/L		98	75 - 120
Hexachlorobutadiene	25.0	21.67		ug/L		87	67 - 127
Isopropylbenzene	25.0	28.44		ug/L		114	74 - 122
Methylene chloride	25.0	21.19		ug/L		85	72 - 128
4-Methyl-2-pentanone (MIBK)	50.0	55.20		ug/L		110	62 - 136
Methyl tert-butyl ether	25.0	22.94		ug/L		92	66 - 130
Naphthalene	25.0	24.61		ug/L		98	69 - 126
n-Butylbenzene	25.0	23.48		ug/L		94	70 - 130
n-Propylbenzene	25.0	26.06		ug/L		104	73 - 125
p-Isopropyltoluene	25.0	23.83		ug/L		95	72 - 127
sec-Butylbenzene	25.0	23.78		ug/L		95	72 - 127
Styrene	25.0	27.00		ug/L		108	74 - 122
tert-Butylbenzene	25.0	24.23		ug/L		97	72 - 125
1,1,1,2-Tetrachloroethane	25.0	25.52		ug/L		102	70 - 121
1,1,2,2-Tetrachloroethane	25.0	26.62		ug/L		106	70 - 122
Tetrachloroethene	25.0	22.30		ug/L		89	70 - 128
Tetrahydrofuran	50.0	49.26		ug/L		99	64 - 131
Toluene	25.0	23.10		ug/L		92	74 - 120
trans-1,2-Dichloroethene	25.0	21.15		ug/L		85	67 - 127
trans-1,3-Dichloropropene	25.0	25.71		ug/L		103	67 - 123
1,2,3-Trichlorobenzene	25.0	22.92		ug/L		92	69 - 124
1,2,4-Trichlorobenzene	25.0	22.23		ug/L		89	69 - 125
1,1,1-Trichloroethane	25.0	22.12		ug/L		88	69 - 130
1,1,2-Trichloroethane	25.0	25.91		ug/L		104	75 - 121
Trichloroethene	25.0	22.33		ug/L		89	70 - 128
1,2,3-Trichloropropane	25.0	28.29		ug/L		113	70 - 122
1,1,2-Trichlorotrifluoroethane	25.0	20.55		ug/L		82	57 - 148
1,2,4-Trimethylbenzene	25.0	25.03		ug/L		100	71 - 125
1,3,5-Trimethylbenzene	25.0	24.39		ug/L		98	72 - 124
Xylenes, Total	50.0	51.25		ug/L		103	74 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*76 - 130*
Toluene-d8 (Surr)	*101*		*80 - 120*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-487948/7
Matrix: Water
Analysis Batch: 487948

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	25.0	24.22		ug/L		97	33 - 138
Chloroethane	25.0	27.03		ug/L		108	59 - 139
Chloromethane	25.0	29.28		ug/L		117	52 - 146
Dichlorodifluoromethane	25.0	26.71		ug/L		107	45 - 150
Dichlorofluoromethane	25.0	27.17		ug/L		109	61 - 142
Trichlorofluoromethane	25.0	27.00		ug/L		108	55 - 150
Vinyl chloride	25.0	29.61		ug/L		118	60 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*106*		*76 - 130*
Toluene-d8 (Surr)	*100*		*80 - 120*

Lab Sample ID: 310-331056-1 MS
Matrix: Water
Analysis Batch: 487948

Client Sample ID: MW-12-5.95W
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	<10.0		50.0	51.39		ug/L		103	39 - 141
Allyl chloride	<2.00		25.0	21.86		ug/L		87	47 - 136
Benzene	<0.500		25.0	23.42		ug/L		94	48 - 125
Bromobenzene	<1.00		25.0	24.78		ug/L		99	57 - 120
Bromochloromethane	<5.00		25.0	24.34		ug/L		97	55 - 131
Bromodichloromethane	<1.00		25.0	25.05		ug/L		100	53 - 122
Bromoform	<5.00		25.0	24.53		ug/L		98	47 - 122
2-Butanone (MEK)	<10.0		50.0	48.36		ug/L		97	46 - 134
Carbon tetrachloride	<2.00		25.0	18.82		ug/L		75	45 - 136
Chlorobenzene	<1.00		25.0	24.46		ug/L		98	59 - 120
Chlorodibromomethane	<5.00		25.0	24.51		ug/L		98	53 - 121
Chloroform	<3.00		25.0	23.46		ug/L		94	52 - 122
2-Chlorotoluene	<1.00		25.0	25.51		ug/L		102	54 - 121
4-Chlorotoluene	<1.00		25.0	25.47		ug/L		102	52 - 122
cis-1,2-Dichloroethene	<1.00		25.0	22.83		ug/L		91	51 - 123
cis-1,3-Dichloropropene	<5.00		25.0	23.76		ug/L		95	55 - 123
1,2-Dibromo-3-chloropropane	<5.00		25.0	24.57		ug/L		98	44 - 138
1,2-Dibromoethane (EDB)	<1.00		25.0	24.86		ug/L		99	60 - 122
Dibromomethane	<1.00		25.0	25.21		ug/L		101	57 - 122
1,2-Dichlorobenzene	<1.00		25.0	23.66		ug/L		95	60 - 120
1,3-Dichlorobenzene	<1.00		25.0	23.08		ug/L		92	58 - 120
1,4-Dichlorobenzene	<1.00		25.0	23.07		ug/L		92	58 - 120
1,1-Dichloroethane	<1.00		25.0	23.06		ug/L		92	53 - 127
1,2-Dichloroethane	<1.00		25.0	23.88		ug/L		96	48 - 128
1,1-Dichloroethene	<2.00		25.0	16.74		ug/L		67	51 - 134
1,2-Dichloropropane	<1.00		25.0	24.92		ug/L		100	59 - 128
1,3-Dichloropropane	<1.00		25.0	25.42		ug/L		102	58 - 125
2,2-Dichloropropane	<4.00		25.0	16.86		ug/L		67	34 - 146
1,1-Dichloropropene	<1.00		25.0	20.66		ug/L		83	55 - 133
Diethyl ether	<2.00		25.0	22.09		ug/L		88	49 - 139

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 310-331056-1 MS
Matrix: Water
Analysis Batch: 487948

Client Sample ID: MW-12-5.95W
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<1.00		25.0	24.83		ug/L		99	53 - 120
Hexachlorobutadiene	<5.00		25.0	20.05		ug/L		80	36 - 127
Isopropylbenzene	<1.00		25.0	27.30		ug/L		109	51 - 122
Methylene chloride	<5.00		25.0	22.24		ug/L		89	59 - 128
4-Methyl-2-pentanone (MIBK)	<10.0		50.0	51.19		ug/L		102	49 - 138
Methyl tert-butyl ether	<1.00		25.0	23.31		ug/L		93	50 - 130
Naphthalene	<5.00		25.0	21.83		ug/L		87	45 - 144
n-Butylbenzene	<1.00		25.0	21.06		ug/L		84	46 - 130
n-Propylbenzene	<1.00		25.0	24.98		ug/L		100	50 - 125
p-Isopropyltoluene	<1.00		25.0	22.00		ug/L		88	55 - 127
sec-Butylbenzene	<1.00		25.0	21.97		ug/L		88	53 - 127
Styrene	<1.00		25.0	26.35		ug/L		105	50 - 125
tert-Butylbenzene	<1.00		25.0	22.95		ug/L		92	57 - 125
1,1,1,2-Tetrachloroethane	<1.00		25.0	25.20		ug/L		101	55 - 121
1,1,2,2-Tetrachloroethane	<1.00		25.0	26.59		ug/L		106	55 - 123
Tetrachloroethene	<1.00		25.0	22.07		ug/L		88	51 - 128
Tetrahydrofuran	<10.0		50.0	49.90		ug/L		100	42 - 142
Toluene	<1.00		25.0	23.93		ug/L		96	52 - 120
trans-1,2-Dichloroethene	<1.00		25.0	21.65		ug/L		87	53 - 127
trans-1,3-Dichloropropene	<5.00		25.0	24.47		ug/L		98	50 - 123
1,2,3-Trichlorobenzene	<5.00		25.0	21.80		ug/L		87	54 - 127
1,2,4-Trichlorobenzene	<5.00		25.0	19.60		ug/L		78	55 - 126
1,1,1-Trichloroethane	<1.00		25.0	20.95		ug/L		84	53 - 130
1,1,2-Trichloroethane	<1.00		25.0	26.04		ug/L		104	60 - 121
Trichloroethene	<1.00		25.0	22.73		ug/L		91	50 - 128
1,2,3-Trichloropropane	<1.00		25.0	26.80		ug/L		107	56 - 122
1,1,2-Trichlorotrifluoroethane	<2.00	F1	25.0	9.398	F1	ug/L		38	44 - 148
1,2,4-Trimethylbenzene	<1.00		25.0	23.99		ug/L		96	51 - 125
1,3,5-Trimethylbenzene	<1.00		25.0	23.96		ug/L		96	53 - 124
Xylenes, Total	<3.00		50.0	50.42		ug/L		101	50 - 122

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*76 - 130*
Toluene-d8 (Surr)	*102*		*80 - 120*

Lab Sample ID: 310-331056-1 MSD
Matrix: Water
Analysis Batch: 487948

Client Sample ID: MW-12-5.95W
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone	<10.0		50.0	49.86		ug/L		100	39 - 141	3	23
Allyl chloride	<2.00		25.0	20.55		ug/L		82	47 - 136	6	33
Benzene	<0.500		25.0	21.77		ug/L		87	48 - 125	7	20
Bromobenzene	<1.00		25.0	23.97		ug/L		96	57 - 120	3	20
Bromochloromethane	<5.00		25.0	23.40		ug/L		94	55 - 131	4	21
Bromodichloromethane	<1.00		25.0	24.51		ug/L		98	53 - 122	2	20
Bromoform	<5.00		25.0	24.14		ug/L		97	47 - 122	2	20

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 310-331056-1 MSD
Matrix: Water
Analysis Batch: 487948

Client Sample ID: MW-12-5.95W
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-Butanone (MEK)	<10.0		50.0	47.60		ug/L		95	46 - 134	2	23
Carbon tetrachloride	<2.00		25.0	17.64		ug/L		71	45 - 136	6	20
Chlorobenzene	<1.00		25.0	23.12		ug/L		92	59 - 120	6	20
Chlorodibromomethane	<5.00		25.0	24.16		ug/L		97	53 - 121	1	20
Chloroform	<3.00		25.0	22.02		ug/L		88	52 - 122	6	20
2-Chlorotoluene	<1.00		25.0	24.42		ug/L		98	54 - 121	4	23
4-Chlorotoluene	<1.00		25.0	24.33		ug/L		97	52 - 122	5	20
cis-1,2-Dichloroethene	<1.00		25.0	21.32		ug/L		85	51 - 123	7	20
cis-1,3-Dichloropropene	<5.00		25.0	23.16		ug/L		93	55 - 123	3	20
1,2-Dibromo-3-chloropropane	<5.00		25.0	23.16		ug/L		93	44 - 138	6	24
1,2-Dibromoethane (EDB)	<1.00		25.0	24.38		ug/L		98	60 - 122	2	20
Dibromomethane	<1.00		25.0	24.36		ug/L		97	57 - 122	3	20
1,2-Dichlorobenzene	<1.00		25.0	22.98		ug/L		92	60 - 120	3	20
1,3-Dichlorobenzene	<1.00		25.0	22.44		ug/L		90	58 - 120	3	20
1,4-Dichlorobenzene	<1.00		25.0	22.56		ug/L		90	58 - 120	2	20
1,1-Dichloroethane	<1.00		25.0	21.22		ug/L		85	53 - 127	8	20
1,2-Dichloroethane	<1.00		25.0	23.01		ug/L		92	48 - 128	4	20
1,1-Dichloroethene	<2.00		25.0	15.83		ug/L		63	51 - 134	6	20
1,2-Dichloropropane	<1.00		25.0	24.12		ug/L		96	59 - 128	3	20
1,3-Dichloropropane	<1.00		25.0	24.33		ug/L		97	58 - 125	4	20
2,2-Dichloropropane	<4.00		25.0	15.54		ug/L		62	34 - 146	8	20
1,1-Dichloropropene	<1.00		25.0	19.05		ug/L		76	55 - 133	8	20
Diethyl ether	<2.00		25.0	20.16		ug/L		81	49 - 139	9	22
Ethylbenzene	<1.00		25.0	23.31		ug/L		93	53 - 120	6	20
Hexachlorobutadiene	<5.00		25.0	18.25		ug/L		73	36 - 127	9	30
Isopropylbenzene	<1.00		25.0	26.03		ug/L		104	51 - 122	5	20
Methylene chloride	<5.00		25.0	21.01		ug/L		84	59 - 128	6	20
4-Methyl-2-pentanone (MIBK)	<10.0		50.0	50.26		ug/L		101	49 - 138	2	20
Methyl tert-butyl ether	<1.00		25.0	22.55		ug/L		90	50 - 130	3	20
Naphthalene	<5.00		25.0	22.37		ug/L		89	45 - 144	2	32
n-Butylbenzene	<1.00		25.0	20.62		ug/L		82	46 - 130	2	27
n-Propylbenzene	<1.00		25.0	24.05		ug/L		96	50 - 125	4	20
p-Isopropyltoluene	<1.00		25.0	21.75		ug/L		87	55 - 127	1	20
sec-Butylbenzene	<1.00		25.0	21.29		ug/L		85	53 - 127	3	20
Styrene	<1.00		25.0	25.25		ug/L		101	50 - 125	4	20
tert-Butylbenzene	<1.00		25.0	22.01		ug/L		88	57 - 125	4	20
1,1,1,2-Tetrachloroethane	<1.00		25.0	24.27		ug/L		97	55 - 121	4	20
1,1,2,2-Tetrachloroethane	<1.00		25.0	25.92		ug/L		104	55 - 123	3	20
Tetrachloroethene	<1.00		25.0	20.98		ug/L		84	51 - 128	5	20
Tetrahydrofuran	<10.0		50.0	47.63		ug/L		95	42 - 142	5	27
Toluene	<1.00		25.0	22.34		ug/L		89	52 - 120	7	20
trans-1,2-Dichloroethene	<1.00		25.0	20.28		ug/L		81	53 - 127	7	20
trans-1,3-Dichloropropene	<5.00		25.0	23.94		ug/L		96	50 - 123	2	20
1,2,3-Trichlorobenzene	<5.00		25.0	21.17		ug/L		85	54 - 127	3	24
1,2,4-Trichlorobenzene	<5.00		25.0	19.84		ug/L		79	55 - 126	1	20
1,1,1-Trichloroethane	<1.00		25.0	19.56		ug/L		78	53 - 130	7	20
1,1,2-Trichloroethane	<1.00		25.0	25.22		ug/L		101	60 - 121	3	20
Trichloroethene	<1.00		25.0	21.45		ug/L		86	50 - 128	6	20
1,2,3-Trichloropropane	<1.00		25.0	26.52		ug/L		106	56 - 122	1	21

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 310-331056-1 MSD
Matrix: Water
Analysis Batch: 487948

Client Sample ID: MW-12-5.95W
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,2-Trichlorotrifluoroethane	<2.00	F1	25.0	8.762	F1	ug/L		35	44 - 148	7	21
1,2,4-Trimethylbenzene	<1.00		25.0	22.87		ug/L		91	51 - 125	5	20
1,3,5-Trimethylbenzene	<1.00		25.0	23.01		ug/L		92	53 - 124	4	20
Xylenes, Total	<3.00		50.0	47.95		ug/L		96	50 - 122	5	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*76 - 130*
Toluene-d8 (Surr)	*101*		*80 - 120*

Method: 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Lab Sample ID: MB 310-487958/1-A
Matrix: Water
Analysis Batch: 488499

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487958

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.119		0.119		ug/L		05/05/26 12:12	05/11/26 11:14	1
Acenaphthylene	<0.119		0.119		ug/L		05/05/26 12:12	05/11/26 11:14	1
Anthracene	<0.119		0.119		ug/L		05/05/26 12:12	05/11/26 11:14	1
Benzo(a)anthracene	<0.119		0.119		ug/L		05/05/26 12:12	05/11/26 11:14	1
Benzo(a)pyrene	<0.119		0.119		ug/L		05/05/26 12:12	05/11/26 11:14	1
Benzo(b)fluoranthene	<0.119		0.119		ug/L		05/05/26 12:12	05/11/26 11:14	1
Benzo(g,h,i)perylene	<0.119		0.119		ug/L		05/05/26 12:12	05/11/26 11:14	1
Benzo(k)fluoranthene	<0.119		0.119		ug/L		05/05/26 12:12	05/11/26 11:14	1
Chrysene	<0.119		0.119		ug/L		05/05/26 12:12	05/11/26 11:14	1
Dibenz(a,h)anthracene	<0.119		0.119		ug/L		05/05/26 12:12	05/11/26 11:14	1
Fluoranthene	<0.119		0.119		ug/L		05/05/26 12:12	05/11/26 11:14	1
Fluorene	<0.119		0.119		ug/L		05/05/26 12:12	05/11/26 11:14	1
Indeno(1,2,3-cd)pyrene	<0.119		0.119		ug/L		05/05/26 12:12	05/11/26 11:14	1
2-Methylnaphthalene	<0.119		0.119		ug/L		05/05/26 12:12	05/11/26 11:14	1
Naphthalene	<0.119		0.119		ug/L		05/05/26 12:12	05/11/26 11:14	1
Phenanthrene	<0.119		0.119		ug/L		05/05/26 12:12	05/11/26 11:14	1
Pyrene	<0.119		0.119		ug/L		05/05/26 12:12	05/11/26 11:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*83*		*13 - 150*	*05/05/26 12:12*	*05/11/26 11:14*	*1*
Nitrobenzene-d5 (Surr)	*85*		*22 - 150*	*05/05/26 12:12*	*05/11/26 11:14*	*1*
Terphenyl-d14 (Surr)	*77*		*10 - 150*	*05/05/26 12:12*	*05/11/26 11:14*	*1*

Lab Sample ID: LCS 310-487958/22-A
Matrix: Water
Analysis Batch: 488499

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487958

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	2.80	2.841		ug/L		102	36 - 150
Acenaphthylene	2.80	2.770		ug/L		99	35 - 150
Anthracene	2.80	3.052		ug/L		109	36 - 150

Method: 8270E - Semivolatile Organic Compounds (GC-MS/MS) (Continued)

Lab Sample ID: LCS 310-487958/22-A
Matrix: Water
Analysis Batch: 488499

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487958

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzo(a)anthracene			2.80	2.658		ug/L		95	13 - 150		
Benzo(a)pyrene			2.80	2.962		ug/L		106	10 - 150		
Benzo(b)fluoranthene			2.80	2.620		ug/L		94	10 - 150		
Benzo(g,h,i)perylene			2.80	3.161		ug/L		113	10 - 150		
Benzo(k)fluoranthene			2.80	2.774		ug/L		99	10 - 150		
Chrysene			2.80	3.034		ug/L		108	10 - 150		
Dibenz(a,h)anthracene			2.80	3.234		ug/L		116	10 - 150		
Fluoranthene			2.80	2.901		ug/L		104	30 - 150		
Fluorene			2.80	2.801		ug/L		100	40 - 150		
Indeno(1,2,3-cd)pyrene			2.80	3.062		ug/L		109	11 - 150		
2-Methylnaphthalene			2.80	3.458		ug/L		124	26 - 150		
Naphthalene			2.80	3.807		ug/L		136	30 - 150		
Phenanthrene			2.80	2.831		ug/L		101	35 - 150		
Pyrene			2.80	2.767		ug/L		99	30 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*89*		*13 - 150*
Nitrobenzene-d5 (Surr)	*89*		*22 - 150*
Terphenyl-d14 (Surr)	*76*		*10 - 150*

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Lab Sample ID: MB 310-487860/3
Matrix: Water
Analysis Batch: 487860

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Wisconsin GRO	<100		100		ug/L			05/04/26 17:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*05/04/26 17:06*	*1*

Lab Sample ID: LCS 310-487860/4
Matrix: Water
Analysis Batch: 487860

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Wisconsin GRO			400	398.6		ug/L		100	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*

Lab Sample ID: LCSD 310-487860/26
Matrix: Water
Analysis Batch: 487860

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Wisconsin GRO			400	412.5		ug/L		103	80 - 120	3	20

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC) (Continued)

Lab Sample ID: LCSD 310-487860/26
Matrix: Water
Analysis Batch: 487860

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Lab Sample ID: MB 310-487818/1-A
Matrix: Water
Analysis Batch: 487777

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487818

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<98.9		98.9		ug/L		05/04/26 11:10	05/04/26 13:01	1

Lab Sample ID: LCS 310-487818/2-A
Matrix: Water
Analysis Batch: 487777

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487818

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics (DRO)	1690	1279		ug/L		76	75 - 115

Lab Sample ID: LCSD 310-487818/3-A
Matrix: Water
Analysis Batch: 487777

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 487818

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics (DRO)	1680	1475		ug/L		88	75 - 115	14	20

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Lab Sample ID: MB 240-700664/1-A
Matrix: Water
Analysis Batch: 700716

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 700664

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.00150		0.00150		ug/L		05/06/26 08:26	05/06/26 14:39	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.00400		0.00400		ug/L		05/06/26 08:26	05/06/26 14:39	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.00400		0.00400		ug/L		05/06/26 08:26	05/06/26 14:39	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.00400		0.00400		ug/L		05/06/26 08:26	05/06/26 14:39	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<0.0100		0.0100		ug/L		05/06/26 08:26	05/06/26 14:39	1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: MB 240-700664/1-A
Matrix: Water
Analysis Batch: 700716

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 700664

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<0.0100		0.0100		ug/L		05/06/26 08:26	05/06/26 14:39	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
Perfluorobutanesulfonic acid (PFBS)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
Perfluorobutanoic acid (PFBA)	<0.00400		0.00400		ug/L		05/06/26 08:26	05/06/26 14:39	1
Perfluorodecanesulfonic acid (PFDS)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
Perfluorodecanoic acid (PFDA)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
Perfluorododecanesulfonic acid (PFDoS)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
Perfluorododecanoic acid (PFDoA)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
Perfluoroheptanoic acid (PFHpA)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<0.0100		0.0100		ug/L		05/06/26 08:26	05/06/26 14:39	1
Perfluorohexanesulfonic acid (PFHxS)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
Perfluorohexanoic acid (PFHxA)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
Perfluorononanesulfonic acid (PFNS)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
Perfluorononanoic acid (PFNA)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
Perfluorooctanesulfonamide (PFOSA)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
Perfluorooctanesulfonic acid (PFOS)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
Perfluorooctanoic acid (PFOA)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
Perfluoropentanesulfonic acid (PFPeS)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
Perfluoropentanoic acid (PFPeA)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<0.0100		0.0100		ug/L		05/06/26 08:26	05/06/26 14:39	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.00400		0.00400		ug/L		05/06/26 08:26	05/06/26 14:39	1
Perfluorotetradecanoic acid (PFTeDA)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
Perfluorotridecanoic acid (PFTrDA)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1
Perfluoroundecanoic acid (PFUnA)	<0.00200		0.00200		ug/L		05/06/26 08:26	05/06/26 14:39	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*75.4*		*40 - 130*	*05/06/26 08:26*	*05/06/26 14:39*	*1*
13C2 10:2 FTS	*67.5*		*40 - 200*	*05/06/26 08:26*	*05/06/26 14:39*	*1*
13C2 4:2 FTS	*79.9*		*40 - 200*	*05/06/26 08:26*	*05/06/26 14:39*	*1*
13C2 6:2 FTS	*80.5*		*40 - 200*	*05/06/26 08:26*	*05/06/26 14:39*	*1*
13C2 8:2 FTS	*70.5*		*40 - 300*	*05/06/26 08:26*	*05/06/26 14:39*	*1*
13C3 HFPO-DA	*85.0*		*40 - 130*	*05/06/26 08:26*	*05/06/26 14:39*	*1*
13C4 PFBA	*85.6*		*5 - 130*	*05/06/26 08:26*	*05/06/26 14:39*	*1*

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: MB 240-700664/1-A
Matrix: Water
Analysis Batch: 700716

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 700664

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	76.7		40 - 135	05/06/26 08:26	05/06/26 14:39	1
13C6 PFDA	77.9		40 - 130	05/06/26 08:26	05/06/26 14:39	1
13C2-PFDoA	67.7		10 - 130	05/06/26 08:26	05/06/26 14:39	1
13C4 PFHpA	90.0		40 - 130	05/06/26 08:26	05/06/26 14:39	1
13C5 PFHxA	80.8		40 - 130	05/06/26 08:26	05/06/26 14:39	1
13C3 PFHxS	76.6		40 - 130	05/06/26 08:26	05/06/26 14:39	1
13C9 PFNA	89.5		40 - 130	05/06/26 08:26	05/06/26 14:39	1
13C8 PFOA	76.1		40 - 130	05/06/26 08:26	05/06/26 14:39	1
13C8 PFOS	61.5		40 - 130	05/06/26 08:26	05/06/26 14:39	1
13C5 PFPeA	97.6		40 - 130	05/06/26 08:26	05/06/26 14:39	1
13C3-PFPrS	82.4		20 - 150	05/06/26 08:26	05/06/26 14:39	1
13C2 PFTeDA	74.2		10 - 130	05/06/26 08:26	05/06/26 14:39	1
13C7 PFUnA	73.5		30 - 130	05/06/26 08:26	05/06/26 14:39	1
d5-NEtFOSAA	62.8		25 - 135	05/06/26 08:26	05/06/26 14:39	1
d9-N-EtFOSE-M	37.3		10 - 130	05/06/26 08:26	05/06/26 14:39	1
d5-NEtPFOSA	57.0		10 - 130	05/06/26 08:26	05/06/26 14:39	1
d3-NMeFOSAA	62.7		40 - 170	05/06/26 08:26	05/06/26 14:39	1
d7-N-MeFOSE-M	33.0		10 - 130	05/06/26 08:26	05/06/26 14:39	1
d3-NMePFOSA	60.6		10 - 130	05/06/26 08:26	05/06/26 14:39	1

Lab Sample ID: LCS 240-700664/3-A
Matrix: Water
Analysis Batch: 700716

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 700664

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.0378	0.05621		ug/L		149	55 - 160
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.0374	0.06219	*+	ug/L		166	70 - 155
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.0378	0.05565	*+	ug/L		147	65 - 145
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.0300	0.04050		ug/L		135	70 - 140
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.0768	0.1027		ug/L		134	60 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.0750	0.1105	*+	ug/L		147	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.0762	0.1060		ug/L		139	65 - 155
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.0400	0.05863	*+	ug/L		147	65 - 145
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.0400	0.05145		ug/L		129	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	0.200	0.2876	*+	ug/L		144	70 - 135
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.0400	0.05729		ug/L		143	60 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.0400	0.05505		ug/L		138	50 - 140

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LCS 240-700664/3-A
Matrix: Water
Analysis Batch: 700716

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 700664

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	0.200	0.2636		ug/L		132	70 - 145
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.0400	0.04924		ug/L		123	50 - 150
Perfluorobutanesulfonic acid (PFBS)	0.0355	0.05025		ug/L		141	60 - 145
Perfluorobutanoic acid (PFBA)	0.0800	0.1118		ug/L		140	70 - 140
Perfluorodecanesulfonic acid (PFDS)	0.0386	0.05572		ug/L		144	60 - 145
Perfluorodecanoic acid (PFDA)	0.0400	0.05617		ug/L		140	70 - 140
Perfluorododecanesulfonic acid (PFDoS)	0.0388	0.05118		ug/L		132	50 - 145
Perfluorododecanoic acid (PFDoA)	0.0400	0.05311		ug/L		133	70 - 140
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.0357	0.05241	*+	ug/L		147	70 - 140
Perfluoroheptanesulfonic acid (PFHpS)	0.0382	0.05888	*+	ug/L		154	70 - 150
Perfluoroheptanoic acid (PFHpA)	0.0400	0.05637		ug/L		141	70 - 150
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	0.200	0.2546		ug/L		127	50 - 145
Perfluorohexanesulfonic acid (PFHxS)	0.0365	0.05168		ug/L		142	65 - 145
Perfluorohexanoic acid (PFHxA)	0.0400	0.05738		ug/L		143	70 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.0400	0.05213		ug/L		130	60 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.0400	0.05373		ug/L		134	55 - 140
Perfluorononanesulfonic acid (PFNS)	0.0385	0.06286	*+	ug/L		163	65 - 145
Perfluorononanoic acid (PFNA)	0.0400	0.05042		ug/L		126	70 - 150
Perfluorooctanesulfonamide (PFOSA)	0.0400	0.05230		ug/L		131	70 - 145
Perfluorooctanesulfonic acid (PFOS)	0.0372	0.05954	*+	ug/L		160	55 - 150
Perfluorooctanoic acid (PFOA)	0.0400	0.05393		ug/L		135	70 - 150
Perfluoropentanesulfonic acid (PFPeS)	0.0376	0.05142		ug/L		137	65 - 140
Perfluoropentanoic acid (PFPeA)	0.0400	0.05121		ug/L		128	65 - 135
3-Perfluoropentylpropanoic acid (5:3 FTCA)	0.200	0.2747	*+	ug/L		137	70 - 135
3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.0800	0.09943		ug/L		124	65 - 130
Perfluorotetradecanoic acid (PFTeDA)	0.0400	0.03970		ug/L		99	60 - 140
Perfluorotridecanoic acid (PFTrDA)	0.0400	0.04807		ug/L		120	65 - 140
Perfluoroundecanoic acid (PFUnA)	0.0400	0.05467		ug/L		137	70 - 145

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C8 FOSA	*79.1*		*40 - 130*
13C2 10:2 FTS	*74.0*		*10 - 200*
13C2 4:2 FTS	*82.5*		*40 - 200*

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LCS 240-700664/3-A
Matrix: Water
Analysis Batch: 700716

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 700664

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C2 6:2 FTS	86.3		40 - 200
13C2 8:2 FTS	73.8		40 - 300
13C3 HFPO-DA	84.6		40 - 130
13C4 PFBA	88.5		5 - 130
13C3 PFBS	84.4		40 - 135
13C6 PFDA	82.9		40 - 130
13C2-PFDoA	80.0		10 - 130
13C4 PFHpA	86.4		40 - 130
13C5 PFHxA	81.8		40 - 130
13C3 PFHxS	82.8		40 - 130
13C9 PFNA	96.2		40 - 130
13C8 PFOA	85.8		40 - 130
13C8 PFOS	66.8		40 - 130
13C5 PFPeA	94.7		40 - 130
13C3-PFPrS	88.0		20 - 150
13C2 PFTeDA	85.0		10 - 130
13C7 PFUnA	80.5		30 - 130
d5-NEtFOSAA	68.0		25 - 135
d9-N-EtFOSE-M	41.6		10 - 130
d5-NEtPFOSA	62.3		10 - 130
d3-NMeFOSAA	70.5		40 - 170
d7-N-MeFOSE-M	38.4		10 - 130
d3-NMePFOSA	62.8		10 - 130

Lab Sample ID: LLCS 240-700664/2-A
Matrix: Water
Analysis Batch: 700716

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 700664

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.00378	0.004619		ug/L		122	55 - 160
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.00374	0.005069		ug/L		136	70 - 155
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.00378	0.004508		ug/L		119	65 - 145
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.00300	0.003702		ug/L		123	70 - 140
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.00768	0.009303		ug/L		121	60 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.00750	0.009306		ug/L		124	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.00762	0.01012		ug/L		133	65 - 155
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.00400	0.005223		ug/L		131	65 - 145
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.00400	0.004526		ug/L		113	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	0.0200	0.02817	*+	ug/L		141	70 - 135

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LLCS 240-700664/2-A
Matrix: Water
Analysis Batch: 700716

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 700664

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.00400	0.004168		ug/L		104	60 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.00400	0.005569		ug/L		139	50 - 140
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	0.0200	0.02313		ug/L		116	70 - 145
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.00400	0.004284		ug/L		107	50 - 150
Perfluorobutanesulfonic acid (PFBS)	0.00355	0.004295		ug/L		121	60 - 145
Perfluorobutanoic acid (PFBA)	0.00800	0.009707		ug/L		121	70 - 140
Perfluorodecanesulfonic acid (PFDS)	0.00386	0.004503		ug/L		117	60 - 145
Perfluorodecanoic acid (PFDA)	0.00400	0.004922		ug/L		123	70 - 140
Perfluorododecanesulfonic acid (PFDoS)	0.00388	0.004941		ug/L		127	50 - 145
Perfluorododecanoic acid (PFDoA)	0.00400	0.004408		ug/L		110	70 - 140
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.00357	0.004195		ug/L		118	70 - 140
Perfluoroheptanesulfonic acid (PFHpS)	0.00382	0.005467		ug/L		143	70 - 150
Perfluoroheptanoic acid (PFHpA)	0.00400	0.004892		ug/L		122	70 - 150
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	0.0200	0.01556		ug/L		78	50 - 145
Perfluorohexanesulfonic acid (PFHxS)	0.00365	0.005165		ug/L		142	65 - 145
Perfluorohexanoic acid (PFHxA)	0.00400	0.004921		ug/L		123	70 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.00400	0.004591		ug/L		115	60 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.00400	0.004601		ug/L		115	55 - 140
Perfluorononanesulfonic acid (PFNS)	0.00385	0.004565		ug/L		119	65 - 145
Perfluorononanoic acid (PFNA)	0.00400	0.004431		ug/L		111	70 - 150
Perfluorooctanesulfonamide (PFOSA)	0.00400	0.004566		ug/L		114	70 - 145
Perfluorooctanesulfonic acid (PFOS)	0.00372	0.005415		ug/L		146	55 - 150
Perfluorooctanoic acid (PFOA)	0.00400	0.004912		ug/L		123	70 - 150
Perfluoropentanesulfonic acid (PFPeS)	0.00376	0.005141		ug/L		137	65 - 140
Perfluoropentanoic acid (PFPeA)	0.00400	0.004631		ug/L		116	65 - 135
3-Perfluoropentylpropanoic acid (5:3 FTCA)	0.0200	0.02317		ug/L		116	70 - 135
3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.00800	0.008986		ug/L		112	65 - 130
Perfluorotetradecanoic acid (PFTeDA)	0.00400	0.003620		ug/L		91	60 - 140
Perfluorotridecanoic acid (PFTrDA)	0.00400	0.003847		ug/L		96	65 - 140
Perfluoroundecanoic acid (PFUnA)	0.00400	0.004414		ug/L		110	70 - 145

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits
13C8 FOSA	57.7		40 - 130
13C2 10:2 FTS	59.3		10 - 200
13C2 4:2 FTS	80.5		40 - 200
13C2 6:2 FTS	76.9		40 - 200
13C2 8:2 FTS	58.4		40 - 300
13C3 HFPO-DA	72.9		40 - 130
13C4 PFBA	74.8		5 - 130
13C3 PFBS	76.1		40 - 135
13C6 PFDA	54.7		40 - 130
13C2-PFDoA	50.8		10 - 130
13C4 PFHpA	71.6		40 - 130
13C5 PFHxA	70.6		40 - 130
13C3 PFHxS	64.3		40 - 130
13C9 PFNA	67.6		40 - 130
13C8 PFOA	64.7		40 - 130
13C8 PFOS	46.3		40 - 130
13C5 PFPeA	80.2		40 - 130
13C3-PFPrS	71.6		20 - 150
13C2 PFTeDA	65.8		10 - 130
13C7 PFUnA	51.7		30 - 130
d5-NEtFOSAA	50.3		25 - 135
d9-N-EtFOSE-M	40.3		10 - 130
d5-NEtPFOSA	45.2		10 - 130
d3-NMeFOSAA	51.6		40 - 170
d7-N-MeFOSE-M	35.1		10 - 130
d3-NMePFOSA	45.5		10 - 130

Lab Sample ID: MB 240-701243/1-A
Matrix: Water
Analysis Batch: 701234

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 701243

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.00150		0.00150		ug/L		05/11/26 08:40	05/11/26 14:25	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.00400		0.00400		ug/L		05/11/26 08:40	05/11/26 14:25	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.00400		0.00400		ug/L		05/11/26 08:40	05/11/26 14:25	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.00400		0.00400		ug/L		05/11/26 08:40	05/11/26 14:25	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<0.0100		0.0100		ug/L		05/11/26 08:40	05/11/26 14:25	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: MB 240-701243/1-A
Matrix: Water
Analysis Batch: 701234

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 701243

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<0.0100		0.0100		ug/L		05/11/26 08:40	05/11/26 14:25	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
Perfluorobutanesulfonic acid (PFBS)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
Perfluorobutanoic acid (PFBA)	<0.00400		0.00400		ug/L		05/11/26 08:40	05/11/26 14:25	1
Perfluorodecanesulfonic acid (PFDS)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
Perfluorodecanoic acid (PFDA)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
Perfluorododecanesulfonic acid (PFDoS)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
Perfluorododecanoic acid (PFDoA)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
Perfluoroheptanoic acid (PFHpA)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<0.0100		0.0100		ug/L		05/11/26 08:40	05/11/26 14:25	1
Perfluorohexanesulfonic acid (PFHxS)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
Perfluorohexanoic acid (PFHxA)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
Perfluorononanesulfonic acid (PFNS)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
Perfluorononanoic acid (PFNA)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
Perfluorooctanesulfonamide (PFOSA)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
Perfluorooctanesulfonic acid (PFOS)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
Perfluorooctanoic acid (PFOA)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
Perfluoropentanesulfonic acid (PFPeS)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
Perfluoropentanoic acid (PFPeA)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<0.0100		0.0100		ug/L		05/11/26 08:40	05/11/26 14:25	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<0.00400		0.00400		ug/L		05/11/26 08:40	05/11/26 14:25	1
Perfluorotetradecanoic acid (PFTeDA)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
Perfluorotridecanoic acid (PFTrDA)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1
Perfluoroundecanoic acid (PFUnA)	<0.00200		0.00200		ug/L		05/11/26 08:40	05/11/26 14:25	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*82.1*		*40 - 130*	*05/11/26 08:40*	*05/11/26 14:25*	*1*
13C2 10:2 FTS	*86.7*		*40 - 200*	*05/11/26 08:40*	*05/11/26 14:25*	*1*
13C2 4:2 FTS	*84.0*		*40 - 200*	*05/11/26 08:40*	*05/11/26 14:25*	*1*
13C2 6:2 FTS	*88.9*		*40 - 200*	*05/11/26 08:40*	*05/11/26 14:25*	*1*
13C2 8:2 FTS	*87.8*		*40 - 300*	*05/11/26 08:40*	*05/11/26 14:25*	*1*
13C3 HFPO-DA	*92.0*		*40 - 130*	*05/11/26 08:40*	*05/11/26 14:25*	*1*
13C4 PFBA	*89.7*		*5 - 130*	*05/11/26 08:40*	*05/11/26 14:25*	*1*
13C3 PFBS	*87.1*		*40 - 135*	*05/11/26 08:40*	*05/11/26 14:25*	*1*
13C6 PFDA	*87.2*		*40 - 130*	*05/11/26 08:40*	*05/11/26 14:25*	*1*

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: MB 240-701243/1-A
Matrix: Water
Analysis Batch: 701234

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 701243

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2-PFDoA	85.5		10 - 130	05/11/26 08:40	05/11/26 14:25	1
13C4 PFHpA	94.7		40 - 130	05/11/26 08:40	05/11/26 14:25	1
13C5 PFHxA	90.1		40 - 130	05/11/26 08:40	05/11/26 14:25	1
13C3 PFHxS	84.3		40 - 130	05/11/26 08:40	05/11/26 14:25	1
13C9 PFNA	99.9		40 - 130	05/11/26 08:40	05/11/26 14:25	1
13C8 PFOA	86.6		40 - 130	05/11/26 08:40	05/11/26 14:25	1
13C8 PFOS	74.3		40 - 130	05/11/26 08:40	05/11/26 14:25	1
13C5 PFPeA	96.1		40 - 130	05/11/26 08:40	05/11/26 14:25	1
13C3-PFPrS	101		20 - 150	05/11/26 08:40	05/11/26 14:25	1
13C2 PFTeDA	105		10 - 130	05/11/26 08:40	05/11/26 14:25	1
13C7 PFUnA	90.6		30 - 130	05/11/26 08:40	05/11/26 14:25	1
d5-NEtFOSAA	76.5		25 - 135	05/11/26 08:40	05/11/26 14:25	1
d9-N-EtFOSE-M	52.3		10 - 130	05/11/26 08:40	05/11/26 14:25	1
d5-NEtPFOSA	64.0		10 - 130	05/11/26 08:40	05/11/26 14:25	1
d3-NMeFOSAA	74.4		40 - 170	05/11/26 08:40	05/11/26 14:25	1
d7-N-MeFOSE-M	54.0		10 - 130	05/11/26 08:40	05/11/26 14:25	1
d3-NMePFOSA	68.8		10 - 130	05/11/26 08:40	05/11/26 14:25	1

Lab Sample ID: LCS 240-701243/3-A
Matrix: Water
Analysis Batch: 701234

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 701243

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.0378	0.04300		ug/L		114	55 - 160
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.0374	0.04766		ug/L		128	70 - 155
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.0378	0.04416		ug/L		117	65 - 145
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.0300	0.03387		ug/L		113	70 - 140
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.0768	0.08590		ug/L		112	60 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.0750	0.08891		ug/L		118	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.0762	0.08975		ug/L		118	65 - 155
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.0400	0.04477		ug/L		112	65 - 145
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.0400	0.04542		ug/L		114	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	0.200	0.2286		ug/L		114	70 - 135
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.0400	0.04819		ug/L		120	60 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.0400	0.04801		ug/L		120	50 - 140
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	0.200	0.2190		ug/L		110	70 - 145
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.0400	0.04238		ug/L		106	50 - 150

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LCS 240-701243/3-A
Matrix: Water
Analysis Batch: 701234

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 701243

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanesulfonic acid (PFBS)	0.0355	0.04033		ug/L		114	60 - 145
Perfluorobutanoic acid (PFBA)	0.0800	0.09260		ug/L		116	70 - 140
Perfluorodecanesulfonic acid (PFDS)	0.0386	0.04542		ug/L		118	60 - 145
Perfluorodecanoic acid (PFDA)	0.0400	0.04545		ug/L		114	70 - 140
Perfluorododecanesulfonic acid (PFDoS)	0.0388	0.03968		ug/L		102	50 - 145
Perfluorododecanoic acid (PFDoA)	0.0400	0.04563		ug/L		114	70 - 140
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.0357	0.04309		ug/L		121	70 - 140
Perfluoroheptanesulfonic acid (PFHpS)	0.0382	0.05021		ug/L		132	70 - 150
Perfluoroheptanoic acid (PFHpA)	0.0400	0.04497		ug/L		112	70 - 150
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	0.200	0.2027		ug/L		101	50 - 145
Perfluorohexanesulfonic acid (PFHxS)	0.0365	0.04214		ug/L		116	65 - 145
Perfluorohexanoic acid (PFHxA)	0.0400	0.04253		ug/L		106	70 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.0400	0.04223		ug/L		106	60 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.0400	0.04236		ug/L		106	55 - 140
Perfluorononanesulfonic acid (PFNS)	0.0385	0.04711		ug/L		122	65 - 145
Perfluorononanoic acid (PFNA)	0.0400	0.04245		ug/L		106	70 - 150
Perfluorooctanesulfonamide (PFOSA)	0.0400	0.04324		ug/L		108	70 - 145
Perfluorooctanesulfonic acid (PFOS)	0.0372	0.04740		ug/L		127	55 - 150
Perfluorooctanoic acid (PFOA)	0.0400	0.04395		ug/L		110	70 - 150
Perfluoropentanesulfonic acid (PFPeS)	0.0376	0.04456		ug/L		119	65 - 140
Perfluoropentanoic acid (PFPeA)	0.0400	0.04144		ug/L		104	65 - 135
3-Perfluoropentylpropanoic acid (5:3 FTCA)	0.200	0.2099		ug/L		105	70 - 135
3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.0800	0.08067		ug/L		101	65 - 130
Perfluorotetradecanoic acid (PFTeDA)	0.0400	0.03449		ug/L		86	60 - 140
Perfluorotridecanoic acid (PFTrDA)	0.0400	0.03949		ug/L		99	65 - 140
Perfluoroundecanoic acid (PFUnA)	0.0400	0.04509		ug/L		113	70 - 145

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C8 FOSA	*90.8*		*40 - 130*
13C2 10:2 FTS	*86.9*		*10 - 200*
13C2 4:2 FTS	*91.4*		*40 - 200*
13C2 6:2 FTS	*95.6*		*40 - 200*
13C2 8:2 FTS	*93.6*		*40 - 300*
13C3 HFPO-DA	*101*		*40 - 130*

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LCS 240-701243/3-A
Matrix: Water
Analysis Batch: 701234

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 701243

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA	98.5		5 - 130
13C3 PFBS	96.4		40 - 135
13C6 PFDA	93.8		40 - 130
13C2-PFDoA	86.4		10 - 130
13C4 PFHpA	103		40 - 130
13C5 PFHxA	102		40 - 130
13C3 PFHxS	93.0		40 - 130
13C9 PFNA	108		40 - 130
13C8 PFOA	97.2		40 - 130
13C8 PFOS	81.8		40 - 130
13C5 PFPeA	106		40 - 130
13C3-PFPrS	113		20 - 150
13C2 PFTeDA	104		10 - 130
13C7 PFUnA	95.3		30 - 130
d5-NEtFOSAA	78.9		25 - 135
d9-N-EtFOSE-M	46.6		10 - 130
d5-NEtPFOSA	69.2		10 - 130
d3-NMeFOSAA	79.2		40 - 170
d7-N-MeFOSE-M	50.1		10 - 130
d3-NMePFOSA	75.8		10 - 130

Lab Sample ID: LLCS 240-701243/2-A
Matrix: Water
Analysis Batch: 701234

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 701243

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.00378	0.004494		ug/L		119	55 - 160
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.00374	0.004881		ug/L		131	70 - 155
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.00378	0.004556		ug/L		120	65 - 145
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.00300	0.003586		ug/L		120	70 - 140
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.00768	0.009033		ug/L		118	60 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.00750	0.009252		ug/L		123	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.00762	0.009146		ug/L		120	65 - 155
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.00400	0.005044		ug/L		126	65 - 145
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.00400	0.004630		ug/L		116	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	0.0200	0.02636		ug/L		132	70 - 135
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.00400	0.004570		ug/L		114	60 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.00400	0.004936		ug/L		123	50 - 140

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LLCS 240-701243/2-A
Matrix: Water
Analysis Batch: 701234

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 701243

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	0.0200	0.02197		ug/L		110	70 - 145
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.00400	0.004369		ug/L		109	50 - 150
Perfluorobutanesulfonic acid (PFBS)	0.00355	0.004144		ug/L		117	60 - 145
Perfluorobutanoic acid (PFBA)	0.00800	0.009717		ug/L		121	70 - 140
Perfluorodecanesulfonic acid (PFDS)	0.00386	0.004690		ug/L		122	60 - 145
Perfluorodecanoic acid (PFDA)	0.00400	0.004786		ug/L		120	70 - 140
Perfluorododecanesulfonic acid (PFDoS)	0.00388	0.004276		ug/L		110	50 - 145
Perfluorododecanoic acid (PFDoA)	0.00400	0.004882		ug/L		122	70 - 140
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.00357	0.004527		ug/L		127	70 - 140
Perfluoroheptanesulfonic acid (PFHpS)	0.00382	0.005153		ug/L		135	70 - 150
Perfluoroheptanoic acid (PFHpA)	0.00400	0.004654		ug/L		116	70 - 150
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	0.0200	0.02201		ug/L		110	50 - 145
Perfluorohexanesulfonic acid (PFHxS)	0.00365	0.004676		ug/L		128	65 - 145
Perfluorohexanoic acid (PFHxA)	0.00400	0.004951		ug/L		124	70 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.00400	0.004197		ug/L		105	60 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.00400	0.004617		ug/L		115	55 - 140
Perfluorononanesulfonic acid (PFNS)	0.00385	0.005056		ug/L		131	65 - 145
Perfluorononanoic acid (PFNA)	0.00400	0.004467		ug/L		112	70 - 150
Perfluorooctanesulfonamide (PFOSA)	0.00400	0.004736		ug/L		118	70 - 145
Perfluorooctanesulfonic acid (PFOS)	0.00372	0.005059		ug/L		136	55 - 150
Perfluorooctanoic acid (PFOA)	0.00400	0.004592		ug/L		115	70 - 150
Perfluoropentanesulfonic acid (PFPeS)	0.00376	0.004433		ug/L		118	65 - 140
Perfluoropentanoic acid (PFPeA)	0.00400	0.004470		ug/L		112	65 - 135
3-Perfluoropentylpropanoic acid (5:3 FTCA)	0.0200	0.02143		ug/L		107	70 - 135
3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.00800	0.009099		ug/L		114	65 - 130
Perfluorotetradecanoic acid (PFTeDA)	0.00400	0.003729		ug/L		93	60 - 140
Perfluorotridecanoic acid (PFTrDA)	0.00400	0.004126		ug/L		103	65 - 140
Perfluoroundecanoic acid (PFUnA)	0.00400	0.004555		ug/L		114	70 - 145

Isotope Dilution	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C8 FOSA	*71.2*		*40 - 130*
13C2 10:2 FTS	*68.1*		*10 - 200*
13C2 4:2 FTS	*75.5*		*40 - 200*

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A (Continued)

Lab Sample ID: LLCS 240-701243/2-A
Matrix: Water
Analysis Batch: 701234

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 701243

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits
13C2 6:2 FTS	78.2		40 - 200
13C2 8:2 FTS	76.6		40 - 300
13C3 HFPO-DA	82.7		40 - 130
13C4 PFBA	80.6		5 - 130
13C3 PFBS	78.0		40 - 135
13C6 PFDA	76.9		40 - 130
13C2-PFDoA	68.8		10 - 130
13C4 PFHpA	83.8		40 - 130
13C5 PFHxA	82.1		40 - 130
13C3 PFHxS	75.5		40 - 130
13C9 PFNA	89.9		40 - 130
13C8 PFOA	77.8		40 - 130
13C8 PFOS	67.2		40 - 130
13C5 PFPeA	90.1		40 - 130
13C3-PFPrS	89.0		20 - 150
13C2 PFTeDA	82.0		10 - 130
13C7 PFUnA	79.4		30 - 130
d5-NEtFOSAA	63.9		25 - 135
d9-N-EtFOSE-M	37.7		10 - 130
d5-NEtPFOSA	53.3		10 - 130
d3-NMeFOSAA	64.7		40 - 170
d7-N-MeFOSE-M	40.9		10 - 130
d3-NMePFOSA	59.5		10 - 130

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-700540/1-A
Matrix: Water
Analysis Batch: 700774

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 700540

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<1.00		1.00		ug/L		05/05/26 14:00	05/06/26 22:58	1
Arsenic	<5.00		5.00		ug/L		05/05/26 14:00	05/06/26 22:58	1
Barium	<5.00		5.00		ug/L		05/05/26 14:00	05/06/26 22:58	1
Cadmium	<1.00		1.00		ug/L		05/05/26 14:00	05/06/26 22:58	1
Chromium	<5.00		5.00		ug/L		05/05/26 14:00	05/06/26 22:58	1
Lead	<1.00		1.00		ug/L		05/05/26 14:00	05/06/26 22:58	1
Selenium	<5.00		5.00		ug/L		05/05/26 14:00	05/06/26 22:58	1

Lab Sample ID: LCS 240-700540/2-A
Matrix: Water
Analysis Batch: 700774

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 700540

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	100	98.02		ug/L		98	80 - 120
Arsenic	1000	811.0		ug/L		81	80 - 120
Barium	1000	797.6		ug/L		80	80 - 120
Chromium	500	410.2		ug/L		82	80 - 120
Lead	500	407.8		ug/L		82	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 240-701090/1-A
Matrix: Water
Analysis Batch: 701319

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 701090

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<1.00		1.00		ug/L		05/08/26 14:00	05/11/26 12:22	1
Selenium	<5.00		5.00		ug/L		05/08/26 14:00	05/11/26 12:22	1

Lab Sample ID: LCS 240-701090/2-A
Matrix: Water
Analysis Batch: 701319

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 701090

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cadmium	500	455.4		ug/L		91	80 - 120
Selenium	1000	958.5		ug/L		96	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-700544/1-A
Matrix: Water
Analysis Batch: 700741

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 700544

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.200		0.200		ug/L		05/05/26 14:00	05/06/26 11:26	1

Lab Sample ID: LCS 240-700544/2-A
Matrix: Water
Analysis Batch: 700741

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 700544

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.959		ug/L		99	80 - 120

Lab Sample ID: 310-331056-1 MS
Matrix: Water
Analysis Batch: 700741

Client Sample ID: MW-12-5.95W
Prep Type: Total/NA
Prep Batch: 700544

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	<0.200		1.00	1.034		ug/L		103	80 - 120

Lab Sample ID: 310-331056-1 MSD
Matrix: Water
Analysis Batch: 700741

Client Sample ID: MW-12-5.95W
Prep Type: Total/NA
Prep Batch: 700544

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	<0.200		1.00	1.054		ug/L		105	80 - 120	2	20

GC/MS VOA

Analysis Batch: 487948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331056-1	MW-12-5.95W	Total/NA	Water	8260D	
310-331056-2	Trip Blank Water	Total/NA	Water	8260D	
MB 310-487948/5	Method Blank	Total/NA	Water	8260D	
LCS 310-487948/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-487948/7	Lab Control Sample	Total/NA	Water	8260D	
310-331056-1 MS	MW-12-5.95W	Total/NA	Water	8260D	
310-331056-1 MSD	MW-12-5.95W	Total/NA	Water	8260D	

GC/MS Semi VOA

Prep Batch: 487958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331056-1	MW-12-5.95W	Total/NA	Water	3511	
MB 310-487958/1-A	Method Blank	Total/NA	Water	3511	
LCS 310-487958/22-A	Lab Control Sample	Total/NA	Water	3511	

Analysis Batch: 488499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331056-1	MW-12-5.95W	Total/NA	Water	8270E	487958
MB 310-487958/1-A	Method Blank	Total/NA	Water	8270E	487958
LCS 310-487958/22-A	Lab Control Sample	Total/NA	Water	8270E	487958

GC VOA

Analysis Batch: 487860

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331056-1	MW-12-5.95W	Total/NA	Water	WI-GRO	
310-331056-2	Trip Blank Water	Total/NA	Water	WI-GRO	
MB 310-487860/3	Method Blank	Total/NA	Water	WI-GRO	
LCS 310-487860/4	Lab Control Sample	Total/NA	Water	WI-GRO	
LCSD 310-487860/26	Lab Control Sample Dup	Total/NA	Water	WI-GRO	

GC Semi VOA

Analysis Batch: 487777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331056-1	MW-12-5.95W	Total/NA	Water	WI-DRO	487818
MB 310-487818/1-A	Method Blank	Total/NA	Water	WI-DRO	487818
LCS 310-487818/2-A	Lab Control Sample	Total/NA	Water	WI-DRO	487818
LCSD 310-487818/3-A	Lab Control Sample Dup	Total/NA	Water	WI-DRO	487818

Prep Batch: 487818

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331056-1	MW-12-5.95W	Total/NA	Water	3511	
MB 310-487818/1-A	Method Blank	Total/NA	Water	3511	
LCS 310-487818/2-A	Lab Control Sample	Total/NA	Water	3511	
LCSD 310-487818/3-A	Lab Control Sample Dup	Total/NA	Water	3511	

LCMS

Prep Batch: 700664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331056-1	MW-12-5.95W	Total/NA	Water	1633	
MB 240-700664/1-A	Method Blank	Total/NA	Water	1633	
LCS 240-700664/3-A	Lab Control Sample	Total/NA	Water	1633	
LLCS 240-700664/2-A	Lab Control Sample	Total/NA	Water	1633	

Analysis Batch: 700716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331056-1	MW-12-5.95W	Total/NA	Water	1633A	700664
MB 240-700664/1-A	Method Blank	Total/NA	Water	1633A	700664
LCS 240-700664/3-A	Lab Control Sample	Total/NA	Water	1633A	700664
LLCS 240-700664/2-A	Lab Control Sample	Total/NA	Water	1633A	700664

Analysis Batch: 701234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331056-1 - RE	MW-12-5.95W	Total/NA	Water	1633A	701243
MB 240-701243/1-A	Method Blank	Total/NA	Water	1633A	701243
LCS 240-701243/3-A	Lab Control Sample	Total/NA	Water	1633A	701243
LLCS 240-701243/2-A	Lab Control Sample	Total/NA	Water	1633A	701243

Prep Batch: 701243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331056-1 - RE	MW-12-5.95W	Total/NA	Water	1633	
MB 240-701243/1-A	Method Blank	Total/NA	Water	1633	
LCS 240-701243/3-A	Lab Control Sample	Total/NA	Water	1633	
LLCS 240-701243/2-A	Lab Control Sample	Total/NA	Water	1633	

Metals

Prep Batch: 700540

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331056-1	MW-12-5.95W	Total Recoverable	Water	3005A	
MB 240-700540/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-700540/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 700544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331056-1	MW-12-5.95W	Total/NA	Water	7470A	
MB 240-700544/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-700544/2-A	Lab Control Sample	Total/NA	Water	7470A	
310-331056-1 MS	MW-12-5.95W	Total/NA	Water	7470A	
310-331056-1 MSD	MW-12-5.95W	Total/NA	Water	7470A	

Analysis Batch: 700741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331056-1	MW-12-5.95W	Total/NA	Water	7470A	700544
MB 240-700544/1-A	Method Blank	Total/NA	Water	7470A	700544
LCS 240-700544/2-A	Lab Control Sample	Total/NA	Water	7470A	700544
310-331056-1 MS	MW-12-5.95W	Total/NA	Water	7470A	700544
310-331056-1 MSD	MW-12-5.95W	Total/NA	Water	7470A	700544

QC Association Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-331056-1
Project/Site: Duluth Airport Midfield Ramp

Metals

Analysis Batch: 700774

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331056-1	MW-12-5.95W	Total Recoverable	Water	6020B	700540
MB 240-700540/1-A	Method Blank	Total Recoverable	Water	6020B	700540
LCS 240-700540/2-A	Lab Control Sample	Total Recoverable	Water	6020B	700540

Prep Batch: 701090

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331056-1	MW-12-5.95W	Total Recoverable	Water	3005A	
MB 240-701090/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-701090/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 701319

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331056-1	MW-12-5.95W	Total Recoverable	Water	6020B	701090
MB 240-701090/1-A	Method Blank	Total Recoverable	Water	6020B	701090
LCS 240-701090/2-A	Lab Control Sample	Total Recoverable	Water	6020B	701090

Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-331056-1

Client Sample ID: MW-12-5.95W

Lab Sample ID: 310-331056-1

Date Collected: 04/30/26 09:30
Date Received: 05/01/26 13:15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	487948	MZR8	EET CF	05/06/26 06:06
Total/NA	Prep	3511			487958	V7YZ	EET CF	05/05/26 12:12
Total/NA	Analysis	8270E		1	488499	D2YP	EET CF	05/11/26 14:15
Total/NA	Analysis	WI-GRO		1	487860	GP2V	EET CF	05/04/26 22:14
Total/NA	Prep	3511			487818	J7XK	EET CF	05/04/26 11:10
Total/NA	Analysis	WI-DRO		1	487777	C3AA	EET CF	05/04/26 16:12
Total/NA	Prep	1633			700664	DW4U	EET CLE	05/06/26 08:26
Total/NA	Analysis	1633A		1	700716	DSH	EET CLE	05/06/26 16:35
Total/NA	Prep	1633	RE		701243	DW4U	EET CLE	05/11/26 08:40
Total/NA	Analysis	1633A	RE	1	701234	LD	EET CLE	05/11/26 13:19
Total Recoverable	Prep	3005A			700540	MN7X	EET CLE	05/05/26 14:00
Total Recoverable	Analysis	6020B		1	700774	AJC	EET CLE	05/06/26 23:46
Total Recoverable	Prep	3005A			701090	MN7X	EET CLE	05/08/26 14:00
Total Recoverable	Analysis	6020B		1	701319	AJC	EET CLE	05/11/26 10:58
Total/NA	Prep	7470A			700544	MN7X	EET CLE	05/05/26 14:00
Total/NA	Analysis	7470A		1	700741	TQ6W	EET CLE	05/06/26 11:30

Client Sample ID: Trip Blank Water

Lab Sample ID: 310-331056-2

Date Collected: 04/30/26 09:45
Date Received: 05/01/26 13:15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	487948	MZR8	EET CF	05/06/26 02:27
Total/NA	Analysis	WI-GRO		1	487860	GP2V	EET CF	05/04/26 17:53

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-331056-1
Project/Site: Duluth Airport Midfield Ramp

Laboratory: Eurofins Cedar Falls

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Minnesota	NELAP	019-999-319	12-31-26

Laboratory: Eurofins Cleveland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Minnesota	NELAP	039-999-348	12-31-26

Method Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-331056-1
Project/Site: Duluth Airport Midfield Ramp

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CF
8270E	Semivolatile Organic Compounds (GC-MS/MS)	SW846	EET CF
WI-GRO	Wisconsin - Gasoline Range Organics (GC)	WI-GRO	EET CF
WI-DRO	Wisconsin - Diesel Range Organics (GC)	WI-DRO	EET CF
1633A	Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A	EPA	EET CLE
6020B	Metals (ICP/MS)	SW846	EET CLE
7470A	Mercury (CVAA)	SW846	EET CLE
1633	Solid-Phase Extraction (SPE)	EPA	EET CLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CLE
3511	Microextraction of Organic Compounds	SW846	EET CF
5030B	Purge and Trap	SW846	EET CF
7470A	Preparation, Mercury	SW846	EET CLE

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

eurofins | Environment Testing America

310-331056 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SEH

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 5/1/26 | TIME 1315 | Received By: A

Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee
☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:_____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☒ Yes ☐ No — *If yes:* Cooler ID:

Multiple Coolers? ☐ Yes ☒ No — *If yes:* Cooler # _____ of _____

Cooler Custody Seals Present? ☐ Yes ☒ No — *If yes:* Cooler custody seals intact? ☐ Yes ☐ No

Sample Custody Seals Present? ☐ Yes ☒ No — *If yes:* Sample custody seals intact? ☐ Yes ☐ No

Trip Blank Present? ☒ Yes ☐ No — *If yes:* Which VOA samples are in cooler? ↓

All

Temperature Record

Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other:_____ ☐ NONE

Thermometer ID: DD | Correction Factor (°C): +0.0

• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 1.2 | Corrected Temp (°C): 1.2

• Sample Container Temperature

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e g , bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Phone 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

eurofins

Environment Testing

Eurofins Duluth SC 269

Client Information	Sampler: Jack Hagley	Lab PM: Bindert, Zach T	Carrier Tracking No(s):	COC No: ~~318-120319-30763-4~~
Client Contact: Keri Aufdencamp	Phone: 218-340-4798	E-Mail: Zach.Bindert@et.eurofinsus.com	State of Origin:	Page: Page 1 of 1
Company: Short Elliott Hendrickson Inc. dba SEH	PWSID			Job #
Address: 3535 Vadnais Center Drive	Due Date Requested			
City: St. Paul	TAT Requested (days): Standard			
State, Zip: MN 55110	Compliance Project: Δ Yes Δ No			
Phone: 651-318-0354(Tel)	PO #: Purchase Order not required			
Email: kaufdencamp@sehinc.com	WO #:			
Project Name: Duluth Airport ~~Taxiway A~~ Midfield Ramp	Project #: ~~31020575~~ 31020576			
Site:	SSOW#:			

Analysis Requested

Preservation Codes
N None
F - MeOH
D HNO3
A - HCL

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air DW=Drinking Water)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B, 7471B	1633A - 1633 Standard List 40	WI_GRO - Wisconsin GRO	8260D - Volatile Minnesota Sublist	8270E_QQQ, Moisture	WI_DRO - Wisconsin DRO	6020B, 7470A	WI_DRO - Wisconsin DRO (C10-C28)	8270E_QQQ - Standard PAH List	8260D, WI_GRO	Total Number of containers	Special Instructions/Note.
				Preservation Code.			N	N	F	F	N	N	D	A	N	A		
MW-12-5.95W	4/30	0930	G	W ~~Solid~~				X		X			X	X	X	X		
Trip Blank-Water	4/30	0945		W ~~Solid~~						X				X				
				Water														
				Water														

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I II III IV Other (specify)

Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Jack Hagley	4/30 1055	SEH		4/30/26 1055	Eurofins
2		4/30/26 1500	Eurofins			
3					5/1/24 1315	

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks:

Ver 10/10/2024

5/12/2026

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Phone: 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

eurofins

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Bindert, Zach T	Carrier Tracking No(s): N/A	COC No: 310-93810.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Zach.Bindert@et.eurofinsus.com	State of Origin: Minnesota	Page: Page 1 of 1
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note): NELAP Minnesota		Job #: 310-331056-1
Address: 180 S. Van Buren Avenue	Due Date Requested: 5/11/2026			
City: Barberton	TAT Requested (days): N/A			
State, Zip: OH 44203				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Duluth Airport Midfield Ramp	Project #: 31020576			
Site: N/A	SSOW#: N/A			

Analysis Requested

Preservation Codes:

Other: N/A

M2 P4O

Sample Identification Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Wwater S=solid, Owaste/oil BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B/3005ARCRA Metals Analyte List	7470A/7470A_PrepMercury	1633A/1633_SPE1633 Standard List 40	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-12-5.95W (310-331056-1)	4/30/26	09:30 Central	G	Water			X	X	X	3	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central LLC places the ownership of method analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested I II III, IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		5/1/26 1030		jmarosk	5/4/26 920	
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks.

Eurofins – Cleveland Sample Receipt Form/Narrative **Login # :** _____
Barberton Facility

Client Evonik CF Site Name _____ Cooler unpacked by: JM

Cooler Received on 5/4/26 Opened on 5/4/26

FedEx: 1st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other _____

Receipt After-hours Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # EC Foam Box Client Cooler Box Other _____

Packing material used Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt _____ ☐ See Multiple Cooler Form

IR GUN # 2 (CF -0.1 °C) Observed Cooler Temp 3.8 °C Corrected Cooler Temp. 3.7 °C

2.	Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes No
	-Were the seals on the outside of the cooler(s) signed & dated?	Yes No NA
	-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes No
	-Were tamper/custody seals intact and uncompromised?	Yes No NA
3	Shippers' packing slip attached to the cooler(s)?	Yes No
4	Did custody papers accompany the sample(s)?	Yes No
5	Were the custody papers relinquished & signed in the appropriate place?	Yes No
6.	Was/were the person(s) who collected the samples clearly identified on the COC?	Yes No
7	Did all bottles arrive in good condition (Unbroken)?	Yes No
8	Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes No
9	For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?	
10	Were correct bottle(s) used for the test(s) indicated?	Yes No
11	Sufficient quantity received to perform indicated analyses?	Yes No
12.	Are these work share samples and all listed on the COC?	Yes No
	If yes, Questions 13-17 have been checked at the originating laboratory	
13	Were all preserved sample(s) at the correct pH upon receipt?	Yes No NA pH Strip Lot# HC574455
14.	Were VOAs on the COC?	Yes No
15	Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this	Yes No NA
16.	Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes No
17	Was a LL Hg or Me Hg trip blank present? _____	Yes No

Tests that are not checked for pH by Receiving.

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Labeled by

Labels Verified by:

_____

_____

_____

_____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired

Sample(s) _____ were received in a broken container

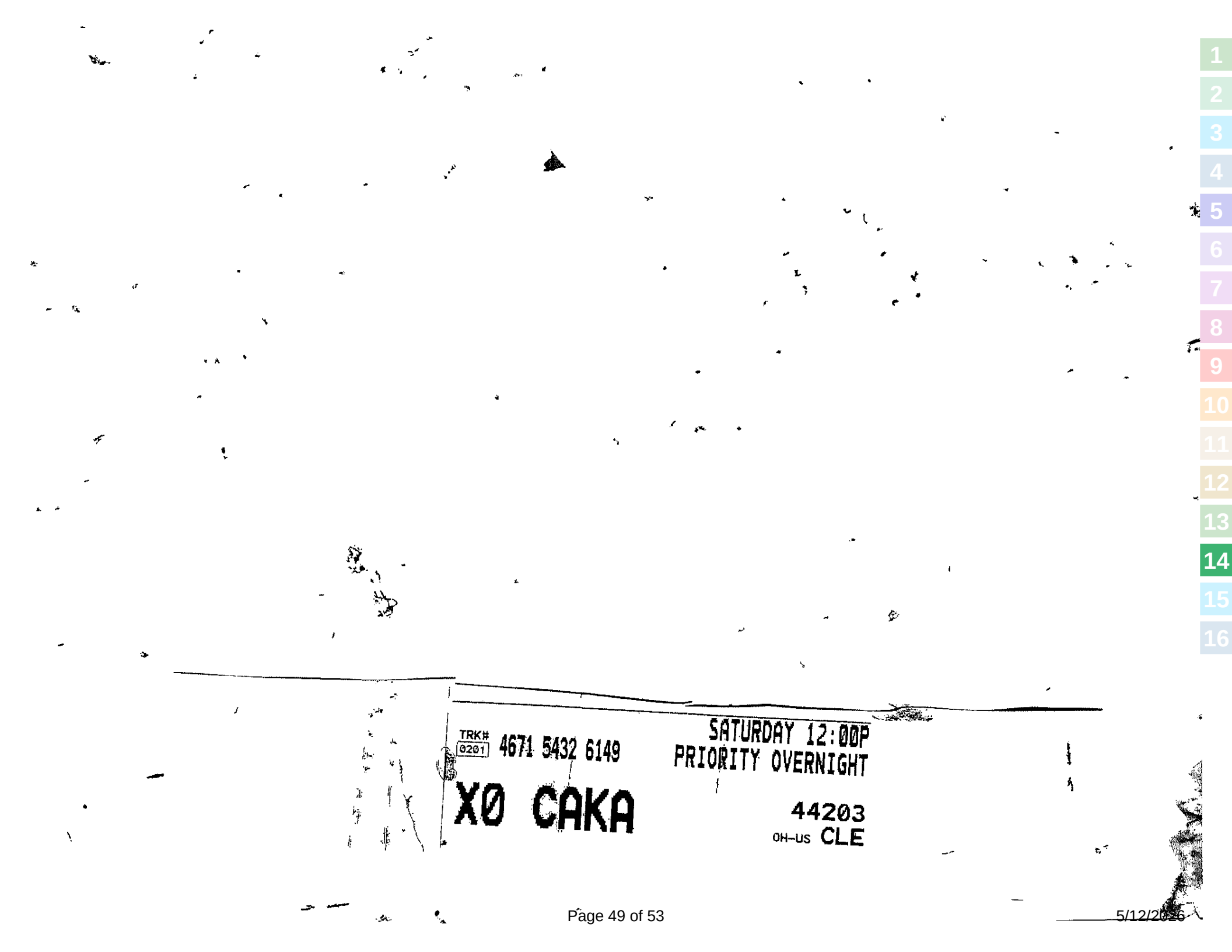
Sample(s) _____ were received with bubble >6 mm in diameter (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory

Time preserved _____ Preservative(s) added/Lot number(s) _____

VOA Sample Preservation - Date/Time VOAs Frozen _____


TRK#
0201
4671 5432 6149
SATURDAY 12:00P
PRIORITY OVERNIGHT
X0 CAKA
44203
OH-US CLE

Login Sample Receipt Checklist

Client: Short Elliott Hendrickson, Inc. dba SEH

Job Number: 310-331056-1

Login Number: 331056

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Homolar, Dana J

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Project/Site: Duluth Airport Midfield Ramp

Job ID: 310-331056-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFOSA	M102FTS	M242FTS	M262FTS	M282FTS	HFPODA	PFBA	C3PFBS
Lab Sample ID	Client Sample ID	(40-130)	(40-200)	(40-200)	(40-200)	(40-300)	(40-130)	(5-130)	(40-135)
310-331056-1	MW-12-5.95W	65.6	105	76.6	78.1	100	85.2	77.9	78.7
310-331056-1 - RE	MW-12-5.95W	88.0	89.4	94.0	97.4	92.6	99.1	96.5	97.1
MB 240-700664/1-A	Method Blank	75.4	67.5	79.9	80.5	70.5	85.0	85.6	76.7
MB 240-701243/1-A	Method Blank	82.1	86.7	84.0	88.9	87.8	92.0	89.7	87.1

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		C6PFDA	PFDoDA	C4PFHA	13C5PHA	C3PFHS	C9PFNA	C8PFOA	C8PFOS
Lab Sample ID	Client Sample ID	(40-130)	(10-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)
310-331056-1	MW-12-5.95W	73.4	53.4	85.1	80.4	76.5	86.1	77.2	61.2
310-331056-1 - RE	MW-12-5.95W	91.6	86.4	99.8	96.4	92.6	107	98.2	80.2
MB 240-700664/1-A	Method Blank	77.9	67.7	90.0	80.8	76.6	89.5	76.1	61.5
MB 240-701243/1-A	Method Blank	87.2	85.5	94.7	90.1	84.3	99.9	86.6	74.3

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFPeA	13C3-PFPrS	PFTDA	13C7PUA	d5NEFOS	NEFM	d5NPFSA	d3NMFOS
Lab Sample ID	Client Sample ID	(40-130)	(20-150)	(10-130)	(30-130)	(25-135)	(10-130)	(10-130)	(40-170)
310-331056-1	MW-12-5.95W	97.5	78.0	63.6	67.1	76.5	41.3	56.7	80.5
310-331056-1 - RE	MW-12-5.95W	108	105	103	93.5	83.1	45.9	73.3	81.5
MB 240-700664/1-A	Method Blank	97.6	82.4	74.2	73.5	62.8	37.3	57.0	62.7
MB 240-701243/1-A	Method Blank	96.1	101	105	90.6	76.5	52.3	64.0	74.4

		Percent Isotope Dilution Recovery (Acceptance Limits)	
		NMFM	d3NMFSA
Lab Sample ID	Client Sample ID	(10-130)	(10-130)
310-331056-1	MW-12-5.95W	35.9	56.3
310-331056-1 - RE	MW-12-5.95W	49.2	78.4
MB 240-700664/1-A	Method Blank	33.0	60.6
MB 240-701243/1-A	Method Blank	54.0	68.8

Surrogate Legend

PFOSA = 13C8 FOSA
M102FTS = 13C2 10:2 FTS
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
PFBA = 13C4 PFBA
C3PFBS = 13C3 PFBS
C6PFDA = 13C6 PFDA
PFDoDA = 13C2-PFDoA
C4PFHA = 13C4 PFHpA
13C5PHA = 13C5 PFHxA
C3PFHS = 13C3 PFHxS
C9PFNA = 13C9 PFNA
C8PFOA = 13C8 PFOA
C8PFOS = 13C8 PFOS
PFPeA = 13C5 PFPeA
13C3-PFPrS = 13C3-PFPrS
PFTDA = 13C2 PFTeDA
13C7PUA = 13C7 PFUnA
d5NEFOS = d5-NEtFOSAA
NEFM = d9-N-EtFOSE-M

Isotope Dilution Summary

Client: Short Elliott Hendrickson, Inc. dba SEH
Job ID: 310-331056-1
Project/Site: Duluth Airport Midfield Ramp

d5NPFSA = d5-NEtPFOSA
d3NMFOS = d3-NMeFOSAA
NMFM = d7-N-MeFOSE-M
d3NMFSA = d3-NMePFOSA

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFOSA	M102FTS	M242FTS	M262FTS	M282FTS	HFPODA	PFBA	C3PFBS
Lab Sample ID	Client Sample ID	(40-130)	(10-200)	(40-200)	(40-200)	(40-300)	(40-130)	(5-130)	(40-135)
LCS 240-700664/3-A	Lab Control Sample	79.1	74.0	82.5	86.3	73.8	84.6	88.5	84.4
LCS 240-701243/3-A	Lab Control Sample	90.8	86.9	91.4	95.6	93.6	101	98.5	96.4
LLCS 240-700664/2-A	Lab Control Sample	57.7	59.3	80.5	76.9	58.4	72.9	74.8	76.1
LLCS 240-701243/2-A	Lab Control Sample	71.2	68.1	75.5	78.2	76.6	82.7	80.6	78.0

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		C6PFDA	PFDoDA	C4PFHA	13C5PHA	C3PFHS	C9PFNA	C8PFOA	C8PFOS
Lab Sample ID	Client Sample ID	(40-130)	(10-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)
LCS 240-700664/3-A	Lab Control Sample	82.9	80.0	86.4	81.8	82.8	96.2	85.8	66.8
LCS 240-701243/3-A	Lab Control Sample	93.8	86.4	103	102	93.0	108	97.2	81.8
LLCS 240-700664/2-A	Lab Control Sample	54.7	50.8	71.6	70.6	64.3	67.6	64.7	46.3
LLCS 240-701243/2-A	Lab Control Sample	76.9	68.8	83.8	82.1	75.5	89.9	77.8	67.2

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFPeA	13C3-PFPrS	PFTDA	13C7PUA	d5NEFOS	NEFM	d5NPFSA	d3NMFOS
Lab Sample ID	Client Sample ID	(40-130)	(20-150)	(10-130)	(30-130)	(25-135)	(10-130)	(10-130)	(40-170)
LCS 240-700664/3-A	Lab Control Sample	94.7	88.0	85.0	80.5	68.0	41.6	62.3	70.5
LCS 240-701243/3-A	Lab Control Sample	106	113	104	95.3	78.9	46.6	69.2	79.2
LLCS 240-700664/2-A	Lab Control Sample	80.2	71.6	65.8	51.7	50.3	40.3	45.2	51.6
LLCS 240-701243/2-A	Lab Control Sample	90.1	89.0	82.0	79.4	63.9	37.7	53.3	64.7

		Percent Isotope Dilution Recovery (Acceptance Limits)	
		NMFM	d3NMFSA
Lab Sample ID	Client Sample ID	(10-130)	(10-130)
LCS 240-700664/3-A	Lab Control Sample	38.4	62.8
LCS 240-701243/3-A	Lab Control Sample	50.1	75.8
LLCS 240-700664/2-A	Lab Control Sample	35.1	45.5
LLCS 240-701243/2-A	Lab Control Sample	40.9	59.5

Surrogate Legend

PFOSA = 13C8 FOSA
M102FTS = 13C2 10:2 FTS
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
PFBA = 13C4 PFBA
C3PFBS = 13C3 PFBS
C6PFDA = 13C6 PFDA
PFDoDA = 13C2-PFDoA
C4PFHA = 13C4 PFHpA
13C5PHA = 13C5 PFHxA
C3PFHS = 13C3 PFHxS
C9PFNA = 13C9 PFNA
C8PFOA = 13C8 PFOA
C8PFOS = 13C8 PFOS
PFPeA = 13C5 PFPeA
13C3-PFPrS = 13C3-PFPrS

Isotope Dilution Summary

Client: Short Elliott Hendrickson, Inc. dba SEH

Job ID: 310-331056-1

Project/Site: Duluth Airport Midfield Ramp

PFTDA = 13C2 PFTeDA

13C7PUA = 13C7 PFUnA

d5NEFOS = d5-NEtFOSAA

NEFM = d9-N-EtFOSE-M

d5NPFSA = d5-NEtPFOSA

d3NMFOS = d3-NMeFOSAA

NMFM = d7-N-MeFOSE-M

d3NMFSA = d3-NMePFOSA

Appendix C

Boring Logs

BOREHOLE NUMBER HA-01

CLIENT Duluth Airport Authority
PROJECT NAME Midfield Ramp Repair Phase 4 - Phase II ESA
PROJECT NUMBER DULAI 188850
PROJECT LOCATION Duluth, MN
DATE STARTED 04-20-2026 **COMPLETED** 04-20-2026
POSITION
DRILLING CONTRACTOR
GROUND ELEVATION **FINAL DEPTH** 5.00 ft
DRILLING METHOD Hand Auger
GROUNDWATER LEVELS: Not Encountered
EQUIPMENT Hand Auger
AT TIME OF DRILLING
HOLE SIZE 4.0 in.
AT END OF DRILLING
LOGGED BY J. Hagley **CHECKED BY** R. Hawkins
AFTER DRILLING

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	ANALYTICAL LAB SAMPLE (s=soil, w=water)	PID (ppm) 10.6eV Bulb
					Concrete		
					1.00		
			GW		Aggregate base material, loose, moist	s	1.1
					2.00		
			SW		Brown well graded sand with gravel, loose, moist	s	0.3
							0.2
5					5.00		
					Terminated at 5.00 ft.		

NOTES

BOREHOLE NUMBER HA-02

CLIENT Duluth Airport Authority
PROJECT NAME Midfield Ramp Repair Phase 4 - Phase II ESA
PROJECT NUMBER DULAI 188850
PROJECT LOCATION Duluth, MN
DATE STARTED 04-20-2026 **COMPLETED** 04-20-2026
POSITION
DRILLING CONTRACTOR
GROUND ELEVATION **FINAL DEPTH** 5.00 ft
DRILLING METHOD Hand Auger
GROUNDWATER LEVELS: Not Encountered
EQUIPMENT Hand Auger
AT TIME OF DRILLING
HOLE SIZE 4.0 in.
AT END OF DRILLING
LOGGED BY J. Hagley **CHECKED BY** R. Hawkins
AFTER DRILLING

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	ANALYTICAL LAB SAMPLE (s=soil, w=water)	PID (ppm) 10.6eV Bulb
					Concrete		
					1.00		
			GW		Aggregate base material, loose, moist	s	0.1
					2.00		
			SW		Brown well graded sand with gravel and cobbles, loose, moist	s	0.0
							0.0
5					5.00		
					Terminated at 5.00 ft.		

NOTES

BOREHOLE NUMBER HA-03

CLIENT Duluth Airport Authority
PROJECT NAME Midfield Ramp Repair Phase 4 - Phase II ESA
PROJECT NUMBER DULAI 188850
PROJECT LOCATION Duluth, MN
DATE STARTED 04-20-2026 **COMPLETED** 04-20-2026
POSITION
DRILLING CONTRACTOR
GROUND ELEVATION **FINAL DEPTH** 5.00 ft
DRILLING METHOD Hand Auger
GROUNDWATER LEVELS: Not Encountered
EQUIPMENT Hand Auger
▽ **AT TIME OF DRILLING**
HOLE SIZE 4.0 in.
▼ **AT END OF DRILLING**
LOGGED BY J. Hagley **CHECKED BY** R. Hawkins
▽ **AFTER DRILLING**

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	ANALYTICAL LAB SAMPLE (s=soil, w=water)	PID (ppm) 10.6eV Bulb
					Concrete		
					1.00		
			GW		Aggregate base material, loose, moist	s	0.4
					2.00		
			SW		Brown well graded sand with gravel, loose, moist	s	0.1
							0.0
5					5.00		
					Terminated at 5.00 ft.		

NOTES

BOREHOLE NUMBER HA-04

CLIENT Duluth Airport Authority
PROJECT NAME Midfield Ramp Repair Phase 4 - Phase II ESA
PROJECT NUMBER DULAI 188850
PROJECT LOCATION Duluth, MN
DATE STARTED 04-20-2026 **COMPLETED** 04-20-2026
POSITION
DRILLING CONTRACTOR
GROUND ELEVATION **FINAL DEPTH** 5.00 ft
DRILLING METHOD Hand Auger
GROUNDWATER LEVELS: Not Encountered
EQUIPMENT Hand Auger
▽ **AT TIME OF DRILLING**
HOLE SIZE 4.0 in.
▼ **AT END OF DRILLING**
LOGGED BY J. Hagley **CHECKED BY** R. Hawkins
▽ **AFTER DRILLING**

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	ANALYTICAL LAB SAMPLE (s=soil, w=water)	PID (ppm) 10.6eV Bulb
					Concrete		
					1.00		
			GW		Aggregate base material, loose, moist	s	0.9
					2.00		
			SW		Brown well graded sand with gravel, loose, moist	s	0.2
							0.1
5					5.00		
					Terminated at 5.00 ft.		

NOTES

Building a Better World for All of Us®

Sustainable buildings, sound infrastructure, safe transportation systems, clean water, renewable energy, and a balanced environment. Building a Better World for All of Us communicates a company-wide commitment to act in the best interests of our clients and the world around us.

We're confident in our ability to balance these requirements.

JOIN OUR SOCIAL COMMUNITIES

STATEMENT OF ESTIMATED QUANTITIES

LINE NO.	ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITIY			FINAL QUANITTY		
				AIP ELIGIBLE FUNDING	AIP INELIGIBLE FUNDING	TOTAL	AIP ELIGIBLE FUNDING	AIP INELIGIBLE FUNDING	TOTAL
SCHEDULE A - TAXIWAY A RECONSTRUCTION, PHASE 7 (BASE BID)									
1	40-05	MAINTENANCE & RESTORATION OF HAUL ROADS	LS	1	0	1			
2	40-08	RESTORATION OF BATCH PLANT AND CONTRACTOR STORAGE AREAS	LS	1	0	1			
3	50-07	CONSTRUCTION LAYOUT & STAKING	LS	1	0	1			
4	60-05	FIELD OFFICE	LS	1	0	1			
5	70-08	TRAFFIC PROVISIONS/AIRPORT SECURITY & DEVICES/PHASING	LS	1	0	1			
6	70-10	ORANGE CONSTRUCTION FENCE	LF	1643	0	1,643			
7	02 41 35	REMOVE PAVEMENT MARKING BY WATER BLASTING	SF	1095	0	1,095			
8	02 60 10	OFF-SITE DISPOSAL OF PFAS-CONTAMINATED SOIL	TN	0	8,500	8,500			
9	02 60 10	PREPARATORY PAVEMENT TEST PIT EXCAVATION AND BACKFILL	EA	0	5	5			
10	02 60 10	PREPARATORY GRASS AREA TEST PIT EXCAVATION AND BACKFILL	EA	0	25	25			
11	32 12 16	PLANT-MIXED ASPHALT PAVEMENT	TON	4376	2,730	7,106			
12	C-100	CONTRACTOR QUALITY CONTROL PROGRAM (CQCP)	LS	1	0	1			
13	C-102	ROCK CONSTRUCTION ENTRANCE (INCLUDES MAINTENANCE AND REMOVAL)	EA	3	0	3			
14	C-102	SILT FENCE, TYPE PREASSEMBLED (INCLUDES MAINTENANCE AND REMOVAL)	LF	11880	0	11,880			
15	C-102	FILTER LOG, TYPE WOOD FIBER BIOROLL (INCLUDES MAINTENANCE AND REMOVAL)	LF	2682	0	2,682			
16	C-102	FLOATING SILT CURTAIN	LF	200	0	200			
17	C-102	INLET PROTECTION, TYPE B (INCLUDES MAINTENANCE AND REMOVAL)	EA	8	0	8			
18	C-102	EROSION CONTROL BLANKET CATEGORY 20	SY	3800	0	3,800			
19	C-105	MOBILIZATION	LS	1	0	1			
20	D-701	REINFORCED CONCRETE PIPE (RCP), 12" CLASS V	LF	164	0	164			
21	D-701	REINFORCED CONCRETE PIPE (RCP), 15" CLASS III	LF	86	0	86			
22	D-701	REINFORCED CONCRETE PIPE (RCP), 24" CLASS III	LF	271	0	271			
23	D-701	REINFORCED CONCRETE PIPE (RCP), 54" CLASS III	LF	701	0	701			
24	D-701	RCP FLARED END SECTION, 12" CLASS V	EA	3	0	3			
25	D-701	RCP FLARED END SECTION, 15" CLASS III	EA	4	0	4			
26	D-701	RCP FLARED END SECTION, 18" CLASS III	EA	1	0	1			
27	D-705	DRAIN TILE (6" PERFORATED SDR35 PVC PIPE, INCLUDING TRENCH, BACKFILL, FABRIC)	LF	5042	0	5,042			
28	D-705	DRAIN TILE (6" SOLID SDR35 PVC PIPE, INCLUDING TRENCH, BACKFILL)	LF	528	0	528			
29	D-705	DRAIN TILE (4" PERFORATED SDR26 PVC PIPE, INCLUDING UNDERDRAIN GRAVEL BLANKET, FABRIC)	LF	580	0	580			
30	D-705	DRAIN TILE (6" PERFORATED SDR26 PVC PIPE, INCLUDING UNDERDRAIN GRAVEL BLANKET, FABRIC)	LF	1100	0	1,100			
31	D-705	DRAIN TILE (10" SOLID SDR26 PVC PIPE, INCLUDING TRENCH, BACKFILL)	LF	100	0	100			
32	D-705	DRAIN TILE CLEAN OUT, 6" PVC	EA	7	0	7			
33	D-705	DRAIN TILE CLEAN OUT, 10" PVC	EA	7	0	7			
34	D-751	DRAIN TILE ACCESS/INSPECTION PIT (27" STRUCTURE)	EA	13	0	13			
35	D-751	DRAIN TILE ACCESS/INSPECTION PIT (48" STRUCTURE)	EA	1	0	1			
36	D-751	DRAIN TILE OUTLET STRUCTURE (MNDOT 3131C)	EA	2	0	2			
37	D-751	MANHOLE / CATCH BASIN 4' DIA.	EA	2	0	2			
38	D-751	MANHOLE / CATCH BASIN 7' DIA.	EA	3	0	3			
39	D-751	MANHOLE / CATCH BASIN 8' DIA.	EA	1	0	1			
40	L-108-5.1	NO. 8 AWG, 5 KV, L-824, TYPE C CABLE, INSTALLED IN DUCT BANK OR CONDUIT	LF	16650	0	16,650			
41	L-108-5.2	NO. 6 AWG, SOLID, BARE COUNTERPOISE WIRE, INSTALLED IN TRENCH, ABOVE THE DUCT BANK OR CONDUIT, INCLUDING CONNECTIONS/TERMINATIONS, GROUND RODS AND GROUND CONNECTORS	LF	7100	0	7,100			
42	L-108-5.3	2-#8 AWG AND 1-#8 GND, XHHW, INSTALLED IN TRENCH OR CONDUIT	LF	1350	0	1,350			
43	L-108-5.4	1/C #4 5KV UNSHIELDED XLP MV-90 CABLE, INSTALLED IN DUCT BANK OR CONDUIT (NON-AIP ELIGIBLE MNANG ITEM)	LF	0	3,300	3,300			
44	L-108-5.5	CABLE USED FOR TEMPORARY JUMPERS	LS	1	0	1			
45	L-108-5.6	1/C #4 COPPER GND, INSTALLED IN DUCT BANK OR CONDUIT (NON-AIP ELIGIBLE MNANG ITEM)	LF	0	1,100	1,100			
46	L-110-5.1	NON-ENCASED ELECTRICAL CONDUIT, 1-WAY 2-INCH, PVC SCHEDULE 40	LF	5100	0	5,100			
47	L-110-5.3	CONCRETE ENCASED ELECTRICAL CONDUIT, 4-WAY 2-INCH, PVC SCHEDULE 40	LF	1100	0	1,100			
48	L-110-5.4	DRAIN LINE CONNECTION TO STORM STRUCTURE	EA	6	0	6			
49	L-110-5.5	CONCRETE ENCASED ELECTRICAL CONDUIT, 1 CONDUIT OF 4-WAY 2-INCH, PVC SCHEDULE 40 (NON-AIP ELIGIBLE MNANG ITEM)	LF	0	900	900			
50	L-110-5.6	CONCRETE ENCASED ELECTRICAL CONDUIT, 3 CONDUITS OF 4-WAY 2-INCH, PVC SCHEDULE 40	LF	900	0	900			
51	L-110-5.7	NON-ENCASED ELECTRICAL CONDUIT, 1-WAY 2-INCH, PVC SCHEDULE 40 (NON-AIP ELIGIBLE MNANG ITEM)	LF	50	0	50			
52	L-125-5.1	REMOVAL OF EXISTING AIRFIELD ELECTRICAL	LS	1	0	1			
53	L-125-5.2	L-861T(L) MEDIUM INTENSITY TAXIWAY EDGE LIGHT (WITHOUT ARCTIC KIT), BLUE LENS INSTALLED ON NEW L-867-B GALVANIZED BASE CAN (INCLUDES FIXTURE, TRANSFORMER, AND BASE CAN)	EA	31	0	31			
54	L-125-5.3	L-862T(L) MEDIUM INTENSITY SEMI-FLUSH TAXIWAY EDGE LIGHT (WITHOUT ARCTIC KIT), BLUE LENS INSTALLED ON NEW L-868-B GALVANIZED BASE CAN (INCLUDES FIXTURE, TRANSFORMER AND BASE CAN,)	EA	2	0	2			
55	L-125-5.6	PRECAST AIRCRAFT-RATED ELECTRICAL HANDHOLE	EA	4	0	4			
56	L-125-5.7	PRECAST AIRCRAFT-RATED ELECTRICAL HANDHOLE (NON-AIP ELIGIBLE MNANG ITEM)	EA	0	2	2			
57	L-125-5.8	REMOVE EXISTING RUNWAY LIGHT FIXTURE, BASE CAN, CABLE, CONDUIT AND ISOLATION TRANSFORMER, AND RETURN LIGHT FIXTURE TO OWNER	EA	2	0	2			
58	L-125-5.9	L-862 RUNWAY LIGHT FIXTURE (WITHOUT ARCTIC KIT), WHITE/WHITE LENS INSTALLED ON NEW L-867B GALVANIZED BASE CAN (INCLUDES FIXTURE, TRANSFORMER, AND BASE CAN)	EA	2	0	2			
59	L-125-5.11	AIRFIELD SIGN PANEL REPLACEMENTS	EA	8	0	8			
60	L-125-5.12	REMOVE AND REINSTALL EXISTING L-858(L) GUIDANCE SIGN, SIZE 2, INCLUDING FOUNDATION, ISOLATION TRANSFORMER, WIRE, BASE CAN, AND CONDUIT	EA	1	0	1			
61	P-101	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LF	932	0	932			
62	P-101	REMOVE BITUMINOUS PAVEMENT (FULL DEPTH)	SY	23448	0	23,448			
63	P-101	MILL BITUMINOUS PAVEMENT (VARIABLE DEPTH)	SY	438	0	438			
64	P-101	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LF	420	0	420			
65	P-101	REMOVE CONCRETE PAVEMENT (FULL DEPTH)	SY	5928	0	5,928			
66	P-101	REMOVE STORM PIPE	LF	905	0	905			
67	P-101	REMOVE STORM STRUCTURE	EA	9	0	9			
68	P-101	REMOVE DRAIN TILE CLEANOUT	EA	15	0	15			
69	P-101	REMOVE DRAIN TILE	LF	4831	0	4,831			
70	P-101	REMOVE AND REINSTALL RIPRAP	CY	375	0	375			
71	P-101	REMOVE AND RESET FLARED END SECTION	EA	1	0	1			
72	P-151	CLEARING AND GRUBBING (AT EXPANDED CONTRACTOR STORAGE AREA)	ACRE	0.45	0	0.45			
73	P-152	COMMON EXCAVATION (EV)	CY	33350	5,778	39,128			
74	P-152	UNCLASSIFIED OVER-EXCAVATION (EV) (INCLUDES REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL WITH SUITABLE MATERIAL (P-154) AS DIRECTED BY ENGINEER, AND INCLUDES SUBGRADE PROOF ROLLING)	CY	1000	0	1,000			
75	P-152	MUCK EXCAVATION (EV) (INCLUDES REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL WITH SUITABLE MATERIAL [ON-SITE BORROW] AS DIRECTED BY ENGIINER, AND INCLUDES SUBGRADE PROOF ROLLING)	CY	300	0	300			
76	P-152	SUBGRADE PREPARATION (INCLUDES SUBGRADE PROOF ROLLING)	SY	26884	11,744	38,628			
77	P-152	ROCK EXCAVATION	CY	100	0	100			
78	P-152	STORMWATER POND DREDGING	CY	1500	0	1,500			
79	P-152	COMMON EXCAVATION (EV) (SOUTHEAST POND)	CY	3600	0	3,600			
80	P-152	IMPERMEABLE LINER (SOUTHEAST POND)	SF	16550	0	16,550			

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81	P-154	SELECT GRANULAR BORROW / SUBBASE COURSE (CV)	CY	12252	5,232	17,484			
82	P-154	GEOTEXTILE FABRIC, TYPE 7	SY	26170	11,744	37,914			
83	P-209	CRUSHED AGGREGATE BASE COURSE (CV)	CY	4824	2,048	6,872			
84	P-401	ASPHALT SURFACE COURSE	TON	50	0	50			
85	P-403	ASPHALT MIXTURE SURFACE COURSE	TON	1179	253	1,432			
86	P-403	ASPHALT MIXTURE BASE COURSE	TON	1179	253	1,432			
87	P-501	CEMENT CONCRETE PAVEMENT, 13"	SY	14815	9,464	24,278			
88	P-501	CEMENT CONCRETE PAVEMENT, REINFORCED 13"	SY	747	0	747			
89	P-603	EMULSIFIED ASPHALT TACK COAT	GAL	1313	585	1,898			
90	P-604	COMPRESSION JOINT SEALS FOR CONCRETE PAVEMENTS	LF	12836	15,412	28,248			
91	P-605	JOINT SEALING FILLER	LF	4514	0	4,514			
92	P-620	REMOVE RUNWAY & TAXIWAY PAVEMENT MARKING USING BLACK PAINT	SF	406	0	406			
93	P-620	RUNWAY & TAXIWAY PAVEMENT MARKING (PERMANENT RATE)	SF	16448	0	16,448			
94	P-620	RUNWAY & TAXIWAY PAVEMENT MARKING (TEMPORARY RATE)	SF	17026	0	17,026			
95	P-620	REFLECTIVE MEDIA	LB	706	0	706			
96	T-901	SEEDING (INCLUDING FERTILIZER)	ACRE	16.00	0	16.00			
97	T-905	SELECT TOPSOIL BORROW (IMPORT) (CV)	CY	200	0	200			
98	T-905	FILTER MEDIA (CV)	CY	975	0	975			
99	T-908	HYDROMULCHING	ACRE	16.00	0	16.00			

SEQ NOTES

GENERAL: TEMPORARY SANITARY FACILITIES, WATER FOR DUST CONTROL, AND TEMPORARY WATER SUPPLY FOR CONSTRUCTION OPERATIONS ARE CONSIDERED INCIDENTAL TO OTHER ITEMS OF PROJECT WORK.

40-05: PAID FOR BASED ON PERCENT COMPLETE.

40-08: RESTORATION OF EXPANDED CONTRACTOR STORAGE/STOCKPILE AREA WILL INCLUDE GRADING, TURF ESTABLISHMENT, SOIL RIPPING/SCARIFICATION TO A DEPTH OF 6-INCHES, AND ANY OTHER MEASURES REQUIRED TO RETURN THE AREA TO PRE-CONSTRUCTION CONDITIONS OR ESTABLISHMENT OF GRASS, AS APPROVED BY ENGINEER. PAID FOR BASED ON PERCENT COMPLETE.

50-07: PAID FOR BASED ON PERCENT COMPLETE.

60-05: PAID ON A MONTHLY BASIS (LS*MONTHS WORKED/TOTAL ANTICIPATED MONTHS OF WORK).

70-08: INCLUDES ALL TRAFFIC CONTROL SIGNAGE, BARRICADES, TEMPORARY FENCING, TRAFFIC CONTROL DEVICES, AND ALL ITEMS PERTAINING TO SECURITY, AND PHASING. PAID FOR BASED ON PERCENT COMPLETE.

C-100: PAID FOR BASED ON PERCENT COMPLETE.

C-105: MOBILIZATION SHALL BE LIMITED TO 10-PERCENT OF THE TOTAL PROJECT COST.

D-701: CONNECTIONS TO EXISTING STORM SEWER PIPE, STRUCTURES, DRAIN TILE, INSPECTION PITS, AND CLEANOUTS ARE ALL INCIDENTAL TO THESE PAY ITEMS.

D-705: CONNECTIONS TO EXISTING STORM SEWER PIPE, STRUCTURES, DRAIN TILE, INSPECTION PITS, AND CLEANOUTS ARE ALL INCIDENTAL TO THESE PAY ITEMS. ALL ITEMS REQUIRED FOR DRAIN TILE (TRENCHING, FILTER MATERIAL, FABRIC, CONNECTIONS, BACKFILLING, AND ASSOCIATED COMPACTION) ARE INCIDENTAL TO ITEM.

D-751: CONNECTIONS TO EXISTING STORM SEWER PIPE, STRUCTURES, DRAIN TILE, INSPECTION PITS, AND CLEANOUTS ARE ALL INCIDENTAL TO THESE PAY ITEMS.

L-108, L-110, L-125: NO PRICE ADJUSTMENT WILL BE MADE BASED ON PERCENTAGE OF QUANTITY USED. THE ENGINEER WILL PROVIDE A NOTICE TO PROCEED SPECIFICALLY FOR WIRE & CABLE ITEMS PRIOR TO ORDERING TO ENSURE THE CORRECT AMOUNT IS OBTAINED..

P-101 REMOVE BITUMINOUS PAVEMENT ITEM: WORK INCLUDES REMOVAL OF BITUMINOUS PAVEMENT, REGARDLESS OF ACTUAL PAVEMENT THICKNESS ENCOUNTERED. SEE APPENDIX A - GEOTECHNICAL REPORT FOR BORING LOGS REFLECTING EXISTING PAVEMENT THICKNESS.

P-101: REMOVE CONCRETE PAVEMENT ITEM: WORK INCLUDES REMOVAL OF CONCRETE PAVEMENT REGARDLESS OF ACTUAL PAVEMENT THICKNESS ENCOUNTERED. SEE APPENDIX A - GEOTECHNICAL REPORT FOR BORING LOGS REFLECTING EXISTING PAVEMENT THICKNESS.

P-101 PIPE REMOVAL (ALL): REQUIRED PIPE/STRUCTURE BULKHEADS ARE INCIDENTAL TO PIPE REMOVAL.

P-152: SEE EARTHWORK SUMMARY ON SHEET G6.00 AND C4.13.

P-152 UNCLASSIFIED OVER-EXCAVATION (EX): SEE EARTHWORK SUMMARY ON SHEET G6.00. ITEM INCLUDES MATERIAL EXCAVATED BELOW THE TYPICAL SECTION, AS DIRECTED BY ENGINEER. EXCAVATED MATERIAL TO BECOME PROPERTY OF CONTRACTOR, REPLACEMENT OF EXCAVATED MATERIAL WITH SUITABLE GRANULAR MATERIAL WILL BE INCIDENTAL TO THE UNCLASSIFIED OVER EXCAVATION.

P-152: ALL ON-SITE STRIPPING, SALVAGING, STOCKPILING, REPLACING AND SPREADING QUANTITY WILL BE PAID FOR UNDER COMMON EXCAVATION PRIOR TO THE PLACEMENT OF TOPSOIL BORROW (OBTAINED OFF-SITE) BY CONTRACTOR, IF NEEDED.

P-209: CONTRACTOR MAY SUBSTITUTE P-219 FOR P-209 WITH NO ADJUSTMENT TO UNIT PRICE.

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LICENSE PROFESSIONAL UNDER THE LAWS OF THE STATE OF STATE.

JARROD R NELSON, PE
DATE 05-08-26 LICENSE NO. 26794

TAXIWAY A RECONSTRUCTION - PHASE 7
DULUTH, MINNESOTA

STATEMENT OF ESTIMATED QUANTITIES

G5.04

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STATEMENT OF ESTIMATED QUANTITIES

LINE NO.	ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITIY			FINAL QUANITTY		
				AIP ELIGIBLE FUNDING	AIP INELIGIBLE FUNDING	TOTAL	AIP ELIGIBLE FUNDING	AIP INELIGIBLE FUNDING	TOTAL
SCHEDULE B - TAXIWAY A RECONSTRUCTION, PHASE 7 (ALTERNATE BID)									
100	50-07	CONSTRUCTION LAYOUT & STAKING	LS	1	0	1			
101	60-05	FIELD OFFICE	LS	1	0	1			
102	70-08	TRAFFIC PROVISIONS/AIRPORT SECURITY & DEVICES/PHASING	LS	1	0	1			
103	02 41 35	REMOVE PAVEMENT MARKING BY WATER BLASTING	SF	509	0	509			
104	02 60 10	PREPARATORY PAVEMENT TEST PIT EXCAVATION AND BACKFILL	EA	0	10	10			
105	02 60 10	PREPARATORY GRASS AREA TEST PIT EXCAVATION AND BACKFILL	EA	0	14	14			
106	32 12 16	PLANT-MIXED ASPHALT PAVEMENT	TON	1950	1,086	3,036			
107	C-102	SILT FENCE, TYPE PREASSEMBLED (INCLUDES MAINTENANCE AND REMOVAL)	LF	4982	0	4,982			
108	C-102	INLET PROTECTION, TYPE B (INCLUDES MAINTENANCE AND REMOVAL)	EA	1	0	1			
109	C-105	MOBILIZATION	LS	1	0	1			
110	D-705	DRAIN TILE (6" PERFORATED SDR35 PVC PIPE, INCLUDING TRENCH, BACKFILL, FABRIC)	LF	1920	0	1,920			
111	D-705	DRAIN TILE (6" SOLID SDR35 PVC PIPE, INCLUDING TRENCH, BACKFILL)	LF	195	0	195			
112	D-751	DRAIN TILE ACCESS/INSPECTION PIT (27" STRUCTURE)	EA	9	0	9			
113	D-751	DRAIN TILE OUTLET STRUCTURE (MNDOT 3131C)	EA	1	0	1			
114	L-108-5.1	NO. 8 AWG, 5 KV, L-824, TYPE C CABLE, INSTALLED IN DUCT BANK OR CONDUIT	LF	7350	0	7,350			
115	L-108-5.2	NO. 6 AWG, SOLID, BARE COUNTERPOISE WIRE, INSTALLED IN TRENCH, ABOVE THE DUCT BANK OR CONDUIT, INCLUDING CONNECTIONS/TERMINATIONS, GROUND RODS AND GROUND CONNECTORS	LF	3720	0	3,720			
116	L-110-5.1	NON-ENCASED ELECTRICAL CONDUIT, 1-WAY 2-INCH, PVC SCHEDULE 40	LF	3000	0	3,000			
117	L-110-5.2	CONCRETE ENCASED ELECTRICAL CONDUIT, 2-WAY 2-INCH, PVC SCHEDULE 40	LF	170	0	170			
118	L-110-5.3	CONCRETE ENCASED ELECTRICAL CONDUIT, 4-WAY 4-INCH, PVC SCHEDULE 40	LF	550	0	550			
119	L-110-5.4	DRAIN LINE CONNECTION TO STORM STRUCTURE	EA	2	0	2			
120	L-125-5.3	L-861T(L) MEDIUM INTENSITY TAXIWAY EDGE LIGHT (WITHOUT ARCTIC KIT), BLUE LENS INSTALLED ON EXISTING L-867-B GALVANIZED BASE CAN (INCLUDES FIXTURE AND TRANSFORMER,)	EA	36	0	36			
121	L-125-5.4	L-858(L) GUIDANCE SIGN, SIZE 2, INCLUDING FOUNDATION, ISOLATION TRANSFORMER, WIRE, BASE CAN, AND CONDUIT	EA	4	0	4			
122	L-125-5.5	L-829 4KW CONSTANT CURRENT REGULATOR	EA	2	0	2			
123	L-125-5.6	PRECAST AIRCRAFT-RATED ELECTRICAL HANDHOLE	EA	2	0	2			
124	L-125-5.8	REMOVE EXISTING RUNWAY LIGHT FIXTURE, BASE CAN, CABLE, CONDUIT AND ISOLATION TRANSFORMER, AND RETURN LIGHT FIXTURE TO OWNER	EA	1	0	1			
125	L-125-5.9	L-862 RUNWAY LIGHT FIXTURE (WITHOUT ARCTIC KIT), WHITE/YELLOW LENS INSTALLED ON NEW L-867B GALVANIZED BASE CAN (INCLUDES FIXTURE, TRANSFORMER, AND BASE CAN)	EA	1	0	1			
126	L-125-5.10	L-867-B GALVANIZED BASE CAN	EA	2	0	2			
127	P-101	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LF	72	0	72			
128	P-101	REMOVE BITUMINOUS PAVEMENT (FULL DEPTH)	SY	8808	0	8,808			
129	P-101	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LF	472	0	472			
130	P-101	REMOVE CONCRETE PAVEMENT (FULL DEPTH)	SY	12251	0	12,251			
131	P-101	REMOVE STORM STRUCTURE	EA	7	0	7			
132	P-101	REMOVE DRAIN TILE CLEANOUT	EA	6	0	6			
133	P-101	REMOVE DRAIN TILE	LF	2144	0	2,144			
134	P-152	COMMON EXCAVATION (EV)	CY	10000	4,013	14,013			
135	P-152	UNCLASSIFIED OVER EXCAVATION (EV) (INCLUDES REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL WITH SUITABLE MATERIAL (P-154) AS DIRECTED BY ENGINEER, AND ALSO INCLUDES SUBGRADE PROOF ROLLING)	CY	250	0	250			
136	P-152	MUCK EXCAVATION (EV)	CY	100	0	100			
137	P-152	SUBGRADE PREPARATION (INCLUDES SUBGRADE PROOF ROLLING)	SY	12007	5,720	17,727			
138	P-152	ROCK EXCAVATION	CY	50	0	50			
139	P-154	SELECT GRANULAR BORROW / SUBBASE COURSE (CV)	CY	5764	2,679	8,442			
140	P-154	GEOTEXTILE FABRIC, TYPE 7	SY	12007	5,720	17,727			
141	P-209	CRUSHED AGGREGATE BASE COURSE (CV)	CY	2159	1,030	3,189			
142	P-403	ASPHALT MIXTURE SURFACE COURSE	TON	518	218	736			
143	P-403	ASPHALT MIXTURE BASE COURSE	TON	518	218	736			
144	P-501	CEMENT CONCRETE PAVEMENT, 13"	SY	6542	3,767	10,309			
145	P-501	CEMENT CONCRETE PAVEMENT, REINFORCED 13"	SY	887	0	887			
146	P-603	EMULSIFIED ASPHALT TACK COAT	GAL	564	284	848			
147	P-604	COMPRESSION JOINT SEALS FOR CONCRETE PAVEMENTS	LF	8295	4,377	12,672			
148	P-605	JOINT SEALING FILLER	LF	2180	0	2,180			
149	P-620	RUNWAY & TAXIWAY PAVEMENT MARKING (PERMANENT RATE)	SF	10577	0	10,577			
150	P-620	RUNWAY & TAXIWAY PAVEMENT MARKING (TEMPORARY RATE)	SF	10866	0	10,866			
151	P-620	REFLECTIVE MEDIA	LB	508	0	508			
152	T-901	SEEDING (INCLUDING FERTILIZER)	ACRE	7.00	0	7.00			
153	T-905	SELECT TOPSOIL BORROW (IMPORT) (CV)	CY	300	0	300			
154	T-908	HYDROMULCHING	ACRE	7.00	0	7.00			

SEQ NOTES

GENERAL: TEMPORARY SANITARY FACILITIES, WATER FOR DUST CONTROL, AND TEMPORARY WATER SUPPLY FOR CONSTRUCTION OPERATIONS ARE CONSIDERED INCIDENTAL TO OTHER ITEMS OF PROJECT WORK.

50-07: PAID FOR BASED ON PERCENT COMPLETE.

60-05: PAID ON A MONTHLY BASIS (LS*MONTHS WORKED/TOTAL ANTICIPATED MONTHS OF WORK).

70-08: INCLUDES ALL TRAFFIC CONTROL SIGNAGE, BARRICADES, TEMPORARY FENCING, TRAFFIC CONTROL DEVICES, AND ALL ITEMS PERTAINING TO SECURITY, AND PHASING. PAID FOR BASED ON PERCENT COMPLETE.

C-105: MOBILIZATION SHALL BE LIMITED TO 10-PERCENT OF THE TOTAL PROJECT COST.

D-705: CONNECTIONS TO EXISTING STORM SEWER PIPE, STRUCTURES, DRAIN TILE, INSPECTION PITS, AND CLEANOUTS ARE ALL INCIDENTAL TO THESE PAY ITEMS. ALL ITEMS REQUIRED FOR DRAIN TILE (TRENCHING, FILTER MATERIAL, FABRIC, CONNECTIONS, BACKFILLING, AND ASSOCIATED COMPACTION) ARE INCIDENTAL TO ITEM.

D-751: CONNECTIONS TO EXISTING STORM SEWER PIPE, STRUCTURES, DRAIN TILE, INSPECTION PITS, AND CLEANOUTS ARE ALL INCIDENTAL TO THESE PAY ITEMS.

L-108, L-110, L-125: NO PRICE ADJUSTMENT WILL BE MADE BASED ON PERCENTAGE OF QUANTITY USED. THE ENGINEER WILL PROVIDE A NOTICE TO PROCEED SPECIFICALLY FOR WIRE & CABLE ITEMS PRIOR TO ORDERING TO ENSURE THE CORRECT AMOUNT IS OBTAINED.

P-101 REMOVE BITUMINOUS PAVEMENT ITEM: WORK INCLUDES REMOVAL OF BITUMINOUS PAVEMENT, REGARDLESS OF ACTUAL PAVEMENT THICKNESS ENCOUNTERED. SEE APPENDIX A - GEOTECHNICAL REPORT FOR BORING LOGS REFLECTING EXISTING PAVEMENT THICKNESS.

P-101: REMOVE CONCRETE PAVEMENT ITEM: WORK INCLUDES REMOVAL OF CONCRETE PAVEMENT REGARDLESS OF ACTUAL PAVEMENT THICKNESS ENCOUNTERED. SEE APPENDIX A - GEOTECHNICAL REPORT FOR BORING LOGS REFLECTING EXISTING PAVEMENT THICKNESS.

P-101 PIPE REMOVAL (ALL): REQUIRED PIPE/STRUCTURE BULKHEADS ARE INCIDENTAL TO PIPE REMOVAL.

P-152: SEE EARTHWORK SUMMARY ON SHEET G6.01.

P-152 UNCLASSIFIED OVER-EXCAVATION (EX): SEE EARTHWORK SUMMARY ON SHEET G6.01. ITEM INCLUDES MATERIAL EXCAVATED BELOW THE TYPICAL SECTION, AS DIRECTED BY ENGINEER. EXCAVATED MATERIAL TO BECOME PROPERTY OF CONTRACTOR, REPLACEMENT OF EXCAVATED MATERIAL WITH SUITABLE GRANULAR MATERIAL WILL BE INCIDENTAL TO THE UNCLASSIFIED OVER EXCAVATION.

P-152: ALL ON-SITE STRIPPING, SALVAGING, STOCKPILING, REPLACING AND SPREADING QUANTITY WILL BE PAID FOR UNDER COMMON EXCAVATION PRIOR TO THE PLACEMENT OF TOPSOIL BORROW (OBTAINED OFF-SITE) BY CONTRACTOR, IF NEEDED.

P-209: CONTRACTOR MAY SUBSTITUTE P-219 FOR P-209 WITH NO ADJUSTMENT TO UNIT PRICE.

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SEH Project	DLH 186683	Rev.#	Plan Revision Issue Description	Date	Rev.#	Sheet Revision Issue Description	Date
Drawn By	LN				1	ADDENDUM NO. 1	05-26-2026
Designed By	JRN						
Checked By	AVE						

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LICENSE PROFESSIONAL UNDER THE LAWS OF THE STATE OF STATE.

JARROD R NELSON, PE
DATE 05-08-26 LICENSE NO. 26794

TAXIWAY A RECONSTRUCTION - PHASE 7
DULUTH, MINNESOTA

STATEMENT OF ESTIMATED QUANTITIES

G5.05

STATEMENT OF ESTIMATED QUANTITIES										
LINE NO.	ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY			FINAL QUANTITY			
				MNDOT ELIGIBLE FUNDING	MNDOT INELIGIBLE FUNDING	TOTAL	MNDOT ELIGIBLE FUNDING	MNDOT INELIGIBLE FUNDING	TOTAL	
SCHEDULE C - MIDFIELD RAMP REPAIR, PHASE 4 (BASE BID)										
1	40-05	MAINTENANCE & RESTORATION OF HAUL ROADS	LS	1	0	1				
2	50-07	CONSTRUCTION LAYOUT & STAKING	LS	1	0	1				
3	70-08	TRAFFIC PROVISIONS/AIRPORT SECURITY & DEVICES/PHASING	LS	1	0	1				
4	C-102	FILTER LOG, TYPE WOOD FIBER BIOROLL	LF	1,040	0	1,040				
5	C-102	INLET PROTECTION, TYPE B	EA	12	0	12				
6	C102	STABILIZED CONSTRUCTION EXIT	EA	1	0	1				
7	C-105	MOBILIZATION	LS	1	0	1				
8	02 41 35	REMOVE PAVEMENT MARKING BY WATER BLASTING	SF	1,090	0	1,090				
9	D-701	TRENCH DRAIN INSTALLATION	LF	412	0	412				
10	D-701	REINFORCED CONCRETE PIPE (RCP), 12" CLASS III	LF	338	0	338				
11	D-701	REINFORCED CONCRETE PIPE (RCP), 30" CLASS III	LF	135	0	135				
12	D-705	REPLACE DOWNSPOUTS AND CONNECT INTO STORM SEWER SYSTEM	LS	1	0	1				
13	D-705	DRAIN TILE, 6" PERFORATED SDR35 PVC	LF	550	0	550				
14	D-751	MANHOLE / CATCH BASIN, 4' DIA.	EA	1	0	1				
15	D-751	MANHOLE / CATCH BASIN, 5' DIA.	EA	1	0	1				
16	P-101	REMOVE TRENCH DRAIN	LF	420	0	420				
17	P-101	REMOVE STORM PIPE	LF	472	0	472				
18	P-101	REMOVE DRAIN TILE	LF	180	0	180				
19	P-101	REMOVE STORM STRUCTURE	EA	2	0	2				
20	P-101	SAWING CONCRETE PAVEMENT, FULL DEPTH	LF	775	0	775				
21	P-101	SELECTIVE CONCRETE PAVEMENT REMOVAL, FULL DEPTH	LF	450	0	450				
22	P-101	REMOVE CONCRETE PAVEMENT, FULL DEPTH	SY	1,880	0	1,880				
23	P-152	COMMON EXCAVATION (EV)	CY	1,330	0	1,330				
24	P-152	UNCLASSIFIED OVER-EXCAVATION (EV)	CY	260	0	260				
25	P-152	SUBGRADE PREPARATION	SY	1,880	0	1,880				
26	P-154	GEOTEXTILE FABRIC, MNDOT TYPE 7	SY	1,880	0	1,880				
27	P-154	SELECT GRANULAR BORROW / SUBBASE COURSE (CV)	CY	910	0	910				
28	P-209	CRUSHED AGGREGATE BASE COURSE (CV)	CY	615	0	615				
29	P-501	CEMENT CONCRETE PAVEMENT, 12"	SY	1,205	0	1,205				
30	P-501	CEMENT CONCRETE PAVEMENT, REINFORCED 12"	SY	295	0	295				
31	P-501	CONCRETE SLAB REPAIR	SF	120	0	120				
32	P-501	CONCRETE FOR TRENCH DRAIN	SF	3,475	0	3,475				
33	P-604	COMPRESSION JOINT SEALS FOR CONCRETE PAVEMENTS	LF	3,430	0	3,430				
34	P-620	TEMPORARY PAVEMENT MARKING	SF	565	0	565				
35	P-620	PERMANENT PAVEMENT MARKING	SF	780	0	780				
36	P-620	REFLECTIVE BEADS	LB	70	0	70				
1 37	02 60 10	STORM SEWER CONSTRUCTION DEWATERING INCLUDING REQUIRED DISPOSAL	LS	1	0	1				

STATEMENT OF ESTIMATED QUANTITIES NOTES	
LINE NO.	ITEM NOTE
ALL	**UNLESS OTHERWISE NOTED IN THE FOLLOWING NOTES OR ELSEWHERE IN THE DRAWINGS AND SPECIFICATIONS, FULL COMPENSATION FOR ALL ITEMS SHALL INCLUDE FURNISHING ALL MATERIALS AND FOR ALL PREPARATION, ASSEMBLY, AND INSTALLATION OF THESE MATERIALS, AND FOR ALL LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THESE ITEMS.**
1	INCLUDES SWEEPING AND ANY OTHER MEASURES REQUIRED TO MAINTAIN AND RETURN THE HAUL ROUTE TO PRE-CONSTRUCTION CONDITIONS OR BETTER, AS APPROVED BY RPR/ENGINEER. INCLUDES WORK REQUIRED TO REINFORCE EAST-WEST PORTION OF MALSTROM ST WITH MILLINGS FROM THE ADJACENT TAXIWAY A RECONSTRUCTION - PHASE 7 PROJECT, PRIOR TO HAULING OPERATIONS FOR THIS MIDFIELD RAMP REPAIR - PHASE 4 PROJECT.
3	INCLUDES LOW-PROFILE BARRICADES AND TRAFFIC SIGNAGE AS SHOWN ON THE CONSTRUCTION SAFETY PLAN AND CONSTRUCTION SIGNAGE PLAN. INCLUDES INSTALLATION, MAINTENANCE AS NEEDED, RELOCATION AS NEEDED, AND REMOVAL. INCLUDES TEMPORARY FENCING AND RAISED TARP TO CEILING INSIDE EASTERN TWO HANGAR BAYS. WESTERN TWO HANGAR BAYS DO NOT OPEN, SO DO NOT REQUIRE THIS CONTROL MEASURE.
4, 5	INCLUDES INSTALLATION, MAINTENANCE, AND REMOVAL.
6	VEHICLE TRACKING PAD, INCLUDES INSTALLATION, MAINTENANCE, AND REMOVAL.
7	MOBILIZATION SHALL BE LIMITED TO 10% OF THE TOTAL PROJECT COST. THIS ITEM INCLUDES EXPENSES FOR WORK AND OPERATIONS NECESSARY FOR THE MOVEMENT OF PERSONNEL, EQUIPMENT, MATERIAL, AND SUPPLIES TO AND FROM THE PROJECT SITE FOR WORK ON THE PROJECT.
9	INCLUDES 8" PVC PIPE AND WATERTIGHT CONNECTION TO STORM SEWER STRUCTURES.
10	INCLUDES TEMPORARY SHORING AS NEEDED, WATERTIGHT CONNECTIONS OF BUILDING DOWNSPOUT DRAINS AS NEEDED, TRENCHING, EXCAVATION, PIPE BEDDING, BACKFILL TO SUBGRADE ELEVATION, AND COMPACTION.
11	INCLUDES TRENCHING, EXCAVATION, PIPE BEDDING, BACKFILL TO SUBGRADE ELEVATION, AND COMPACTION.
12	INCLUDES 12" X 6" PVC REDUCER AND 6" PVC DRAIN PIPE ROUTED TO 12" STORM SEWER OR STORM SEWER STRUCTURE, AS INDICATED ON THE PLANS.
13	INCLUDES TRENCHING, GEOTEXTILE FABRIC, PIPE, FILTER SOCK, FILTER AGGREGATE, BACKFILLING, AND COMPACTION.
14, 15	INCLUDES TEMPORARY SHORING AS NEEDED, WATERTIGHT PIPE CONNECTIONS, CONNECTIONS TO EXISTING PIPES, RUBBER GASKETS, RAMNECK, ADJUSTMENT RINGS, AND FRAME AND GRATE.
16	INCLUDES REMOVAL AND DISPOSAL OF FRAMES AND GRATES.
17	INCLUDES TEMPORARY SHORING AS NEEDED TO SUPPORT REMOVAL OF 10" STORM SEWER PIPE ALONG HANGAR 104.
19	INCLUDES TEMPORARY SHORING AS NEEDED.
21	INCLUDES FULL DEPTH SAWCUT ALONG FACE OF HANGAR 104.
22	INCLUDES REMOVAL OF EXISTING AIRCRAFT TIE-DOWNS. CONTRACTOR WILL BE PAID FOR PAVEMENT REMOVAL ONLY IN THIS LINE ITEM. THIS INCLUDES ALL UNDERLYING CONCRETE AND BITUMINOUS PAVEMENT. ANY OTHER PAVEMENT SECTION REMOVALS SHALL BE PAID AS COMMON EXCAVATION.
23	EXCAVATED VOLUME. INCLUDES ALL EXCAVATION REQUIRED TO REACH THE DEPTH REQUIRED FOR INSTALLATION OF THE TYPICAL SECTION. ALL EXCESS QUANTITIES RESULTING FROM EXCAVATIONS SHALL BE HAULED OFFSITE BY CONTRACTOR. SEE EARTHWORK NOTES, SHEET G3.02.
24	EXCAVATED VOLUME. INCLUDES REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL WITH SUITABLE MATERIAL (P-154) AS DIRECTED BY RPR/ENGINEER, AND INCLUDES SUBGRADE PROOF ROLLING.
25	INCLUDES ALL GRADING, COMPACTION, AND ANY OTHER NECESSARY MEASURE TO PROVIDE AN ACCEPTABLE BASE SURFACE TO THE SATISFACTION OF THE RPR/ENGINEER AND SPECIFICATIONS (INCLUDES ALL AREAS TO BE PAVED).
26	DOES NOT INCLUDE MATERIAL REQUIRED FOR SUITABLE OVERLAP AND/OR STITCHING OF THE GEOTEXTIEL FABRIC PER THE SPECIFICATION.
27	COMPACTED VOLUME PER THE DIMENSIONS IN THE TYPICAL SECTION AND DETAILS.
28	COMPACTED VOLUME PER THE DIMENSIONS IN THE TYPICAL SECTION AND DETAILS. CONTRACTOR CAN SUBSTITUTE FAA P-219 FOR FAA P-209 WITH NO ADDITIONAL PRICE ADJUSTMENT.
29	INCLUDES DOWEL BARS AND BASKETS AND DRILLING AND EPOXYING OF DOWEL BARS.
30	INCLUDES DOWEL BARS AND BASKETS, REBAR, WIRE MESH, AND DRILLING AND EPOXYING OF DOWEL BARS.
31	THIS ITEM IS FOR PERFORMING CONCRETE SLAB REPAIRS AS NECESSARY ALONG INTERFACE OF PROPOSED TRENCH DRAIN CONCRETE AND EXISTING INTERIOR FLOOR SLAB OF EASTERN TWO HANGAR 104 BAYS.
32	INCLUDES NECESSARY STEEL REINFORCEMENT, DOWEL BARS, AND BITUMINOUS EXPANSION MATERIAL BACKER ROD AND SEALANT.
33	INCLUDES SAWCUTTING AND SEALANT, AND NON-EXTRUDING PREMOLDED COMPRESSIBLE MATERIAL WHERE REQUIRED.
34	DOES NOT INCLUDE OR REQUIRE REFLECTIVE BEADS.
35	DOES NOT INCLUDE REQUIRED REFLECTIVE BEADS.
36	REFLECTIVE MEDIA CALCULATED PER TABLE IN P-620-2.2.
1 37	IF NEEDED, CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FOR DEWATERING AND MUST PROPERLY DISPOSE OF CONTAIMINATED GROUND WATER PER REGULATORY REQUIREMENTS AS CALLED OUT IN 02 60 10.
GENERAL	**TEMPORARY SANITARY FACILITIES, WATER FOR DUST CONTROL, AND TEMPORARY WATER ARE CONSIDERED INCIDENTAL TO THE PROJECT.**

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SEH Project DULAI_188850
Drawn By SJL
Designed By AA
Checked By JRN

Rev.#	Plan Revision Issue Description	Date
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Rev.#	Sheet Revision Issue Description	Date
1	ADDENDUM NO. 1	05-26-2026
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I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

ALLISON ANDRASHKO, PE
DATE 05-08-2026 LICENSE NO. 60427

MIDFIELD RAMP REPAIR - PHASE 4
DULUTH, MINNESOTA

STATEMENT OF ESTIMATED QUANTITIES

G3.03