

**Phase I Environmental Property Assessment
City of Duluth Waterfront Properties
500-1000 Railroad Street
Duluth, MN**

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Phase I Environmental Property Assessment

City of Duluth Waterfront Properties

500-1000 Railroad Street

Duluth, MN

Barr Engineering Company (Barr) completed a Phase I Environmental Property Assessment (Assessment) in November - December 2003 of waterfront property (the Property) located on Railroad Street between 5th and 10th Avenue West in Duluth, Minnesota. The Property location is shown on Figure 1.

The Assessment report was prepared for the City of Duluth, under an EPA Brownfield Assessment Pilot Program Grant. The purpose of this Assessment is to identify potential environmental concerns associated with the Property in anticipation of future redevelopment activities. The City of Duluth authorizes the Property owner, the Duluth Economic Development Authority (DEDA) to rely upon the contents of this Phase I Assessment for their use as a voluntary participant in the grant program. Any other parties that request to rely upon the contents of this report must receive authorization from the City of Duluth.

The Property is currently composed of two separate parcels made up of numerous different historical parcels, located along the waterfront as depicted on Figure 2. For clarity this Assessment refers to the parcels as Parcel A to the northeast, and Parcel B to the southwest, separated by privately-owned waterfront property.

The major historical Property land uses have been various materials and freight handling, dockage and material storage, as well as light and heavy industry. The area is comprised predominantly of fill materials originally placed to form piers and slips. The areas was used for loading and unloading freight and other materials including coal, foodstuffs and other dry goods, scrap metal, grain, and construction materials (Ref 1a, 1b, 1c, 1d). It is also possible that petroleum products were loaded or stored in the area (Ref. 1d). The first land filling was on Parcel A, which was partially filled by 1888 but not completely filled until after 1972. Filling on Parcel B didn't start until after 1908. This parcel was also not completely filled until sometime after 1972 (Ref. 1a, 1b, 1c, 1d).

Both parcels of the Property were used for light and heavy industry, including various service industries (i.e. truck servicing, printing, a cooperage), and manufacturing, including a Western Electric equipment manufacturing facility on Parcel B (Ref. 1a, 1b, 1c, 1d). Details for the site land-use and associated activities are summarized in the tables below (Appendix A) and in the Findings section of this Assessment. In addition to the historical land uses, soil and groundwater contamination has been documented on the Property on Parcel A at the former Food Service of America property (Ref. 5c, 6a).

This narrative summarizes the findings, opinions, and conclusions of the Assessment. Descriptions of the Property setting, utility information, land-use history, regulatory history, previous

investigations, and current Property conditions and features are presented in the Phase I documentation in Appendix A. The following tasks were completed during the Assessment:

- A property inspection of the interior of an existing structure and exterior features was conducted at the Property. Current conditions, and if present, chemical/waste storage, operations, equipment and utilities were inspected and documented.
- Historical aerial photographs, historical maps, reverse city directories, and a plat map were reviewed and pertinent results were documented.
- A Sanborn map search was conducted and maps with coverage of the site were found and reviewed for the years 1888, 1908, 1950, 1955, 1963 and 1969. Complete coverage was found for Parcel B, but only coverage from west of 7th Avenue for Parcel A was available.
- Interviews were conducted with a City of Duluth former City Planner familiar with the Property, the City of Duluth fire marshal, and representatives from the City of Duluth public works, engineering and zoning departments.
- An online file review of the Minnesota Pollution Control Agency (MPCA) was conducted for the Property, and associated previous investigation reports and other documents from the file were reviewed and summarized.
- Minnesota Department of Health well and boring records for wells in the Property vicinity and other published geological sources were reviewed and utilized to determine physical setting information.
- Regulatory database reports were obtained and federal and state databases were reviewed and results of the review were documented.

Barr performed this Assessment in general conformance with American Society for Testing and Materials (ASTM) Practice E 1527-00 (Practice). No intentional deviations from the Practice were made in preparing this report except as indicated in the Limitations and Qualifications in Appendix G.

Informational resources are described in Section II of Appendix A and allocated unique reference numbers, which are used throughout the report and appendix.

Findings

The following table is a summary of observations regarding the Property. Current and historical Property features are depicted on Figure 2.

Table 1

| Finding ID # | Subject | Description of Findings |
|---------------------|-----------------------------------|--|
| 1 | Fill Materials | The site is almost entirely composed of fill materials. The type of fill material is unknown but likely includes dredging spoils, soil, concrete, wood, metal and other debris, and may include asphalt, and waste materials. (Ref. 1a, 1b, 1c). |
| 2 | Food Service of America LUST | An UST and contaminated soil materials have been documented on Parcel A. The UST has been removed and a quantity of contaminated soil has been removed. (Ref 1c, 3a) |
| 3 | Northern Scrap Iron and Metal | A scrap metal operation was run on part of Parcel B. No evidence is available to document the extent or exact location of the operation. (Ref. 1c, 1d). |
| 4 | Various Oil Companies | Several small oil companies were present on the Property (Parcel A and Parcel B) as well as on the adjacent property to the southwest along the waterfront. These may have been distribution offices but there is evidence that some oil storage may have taken place on the property even though the location of the storage tanks is unknown. (Ref. 1b, 1c, 1d). |
| 5 | Western Electric Company | A telephone equipment manufacturing facility was located on the 9 th Avenue Pier in Parcel B from before 1936 to between 1955 and 1963. (Ref. 1b, 1c). |
| 6 | Rail Lines and Rail Staging Areas | Rail lines at one time accessed the majority of the Property. Staging areas for loading loose materials such as coal, lime, cement and other materials were also present. (Ref 1b, 1c). |
| 7 | Small Quantity Generators | Two small quantity generators are located within the ASTM search area for the site. No violations have been found for their generator status and the sites are not located immediately adjacent to the Property. (Ref. 3a) |
| 8 | LUST site | A LUST site is located approximately ¼ to ½ mile up-gradient from the Property. The site has been closed since 1996, was a small capacity tank (<1000 gallons), and is separated from the site by Interstate Hwy 35. (Ref. 1a, 1b, 1c, 3a) |
| 9 | Paint Warehouse | A Sherwin Williams paint warehouse was present on Parcel B from 1935 to 1940. (Ref. 1d). |

| Finding ID # | Subject | Description of Findings |
|---------------------|----------------|---|
| 10 | Cold Storage | Several cold storage operations were conducted on Parcel A and Parcel B. These would have handled ice for refrigerated goods such as perishable foodstuffs. (Ref. 1c, 1d). |
| 11 | Transformers | Several electrical transformers were noted on Parcel A during the property inspection (see Figure 2). None of the transformers were leaking, and they all appeared to be in good condition. (Ref. App. A, Sec. VII) |

Opinions

This section is a discussion used to define the rationale for concluding if a condition or observation listed as a finding is a Recognized Environmental Concern (REC). A REC is defined as the presence or likely presence of any hazardous substances or petroleum products on the Property under conditions that indicate an existing release, a past release or a material threat of a release into structures on the Property or onto the ground, groundwater, or surface water. Barr has evaluated the observations and potential concerns identified and listed in the above section, and our opinions are summarized in the following paragraphs.

Table 2

| Finding ID # | REC ID # | Subject | Opinions with Respect to Findings |
|---------------------|-----------------|-------------------------------|--|
| 1 | 1 | Fill Materials | This is a REC. Unknown fill materials are a common source for soil and groundwater contamination as they may contain municipal and industrial waste materials, metals contaminants and petroleum products and byproducts. (Ref. 1a, 1b, 1c). |
| 2 | 2 | Food Service of America | This is a REC. Although the UST has been removed including removal of some contaminated soil, a comprehensive investigation of the magnitude and extent of the contamination from the LUST has not been performed. (Ref 1c, 3a) |
| 3 | 3 | Northern Scrap Iron and Metal | This is a REC. Although there is no indication of the extent of the operation, these activities are typically associated with waste oils, lubricants and other contaminants from recycled machinery (Ref. 1c, 1d). |

| Finding ID # | REC ID # | Subject | Opinions with Respect to Findings |
|---------------------|-----------------|-----------------------------------|---|
| 4 | 4 | Various Oil Companies | This is a REC. Several small oil companies were present on the Property (Parcel A and Parcel B) as well as on the adjacent property to the southwest along the waterfront. These may have been distribution offices but there is evidence that some oil storage may have taken place on the property even though the location of the storage tanks is unknown. (Ref. 1b, 1c, 1d). |
| 5 | 5 | Western Electric Company | This is a potential REC. Although there is no evidence available to indicate the former facility is definitely a REC, there is some likelihood that waste materials associated with electrical equipment manufacturing, and the materials to produce the equipment have been stored onsite. (Ref. 1b, 1c). |
| 6 | None | Rail Lines and Rail Staging Areas | Based on current information the tracks and staging areas are not a REC. The quantity and duration of rail traffic across the site may have led to an accumulation of spilled and dripped fuel oil and lubricants, but this isn't typically observed except in fueling areas. The potential for spilled railcar contents to cause environmental impacts to soils and/or groundwater is possible, but isn't currently indicated from available information (Ref 1b, 1c). |
| 7 | None | Small Quantity Generators | These are not RECs for the Property. They are located outside of the ASTM impact zone for the Property and also have no violations. |
| 8 | None | LUST site | This is not a REC for the Property. The site is too distant and the release likely too small to impact soil or groundwater at the Property. |
| 9 | None | Paint Warehouse | This is not a REC for the Property. There is no indication that paint or related products were manufactured or packaged at the facility. It is unlikely sufficient quantities of paints or solvents were released and impacted soils or groundwater at the site. (Ref. 1d). |
| 10 | None | Cold Storage | This is not a REC for the Property. These facilities likely used ice for refrigeration. (Ref. 1c, 1d). |
| 11 | None | Transformers | This is not a REC. The transformers are in good condition and not leaking. (Ref. App. A, Sec. VIII). |

Conclusions

Barr performed this Assessment in December 2003 in conformance with the Practice. Company qualifications, special terms, conditions, limitations, and exceptions that apply to the Assessment are described in Appendix G

The Assessment revealed the following recognized environmental conditions in connection with the Property:

- REC #1 – Property primarily composed of fill materials of unknown origin.
- REC #2 – Documented release from Food Service of America LUST site.
- REC #3 – Activities associated with scrap materials handling at Northern Scrap Iron and Metal property.
- REC #4 – Potential oil storage associated with various oil companies.
- REC #5 – Waste materials associated with electrical equipment manufacture at Western Electric property.

See the Opinions section above for additional details.

Appendix A

Phase I Environmental Assessment Documentation City of Duluth Waterfront Properties 500-1000 Railroad Street Duluth, MN

I. Property Information

Property location map is shown on Figure 1. Property layout with existing and former features is depicted on Figure 2.

Property name: City of Duluth Waterfront Properties

County: St. Louis County, Minnesota

Township: 49N **Range:** 14W **Section:** 34

Property owner: City of Duluth

Current Property use: Inactive and vacant, with some storage on Parcel B.

Property size: Approximately 22 acres in two irregular parcels (Parcel A and Parcel B), each approximately 11 acres in size.

II. Information Resources

The following resources are numbered for use as references.

| REF# | Resource | Years |
|--------------------------|--|--|
| Primary Resources | | |
| 1a | U.S. Geological Survey Topographic and Historical Maps | 1895, 1953, 1969, 1975, 1976, 1987, 1993 |
| 1b | Aerial Photographs | 1939, 1953, 1961, 1972, 1975, 1981, 1991, 1997, 2002 |
| 1c | Historical Sanborn Fire Insurance Maps | 1884, 1888, 1908, 1923, 1950, 1955, 1963, 1969 |
| 1d | Reverse City Directories | 1930-2001 |
| 1e | City of Duluth Plat Maps | 1976, 1987 |

| REF# | Resource | Years |
|------------------------------------|--|--|
| Physical Setting Resources | | |
| 2a | Minnesota Department of Health Well and Boring Records | N/A |
| 2b | Published Geologic Report: Howard C. Hobbs and Joseph E. Goebel. 1982. <i>Geologic Map of Minnesota, Quaternary Geology</i> . Minnesota Geologic Survey, University of Minnesota. | N/A |
| 2c | Published Geologic Report: G.B. Morey. 1996 <i>Geologic Map of Minnesota, Bedrock Geology</i> . Minnesota Geological Survey, University of Minnesota. | N/A |
| 2d | Olcott, P.G., et.al. 1978. <i>Water Resources of the Lake Superior Watershed Northeastern Minnesota, USGS Hydrologic Investigation Atlas HA-582</i> . U.S. Geological Survey. | N/A |
| Regulatory Status Resources | | |
| 3a | Vendor Report (Appendix C) Date: 6/26/03 | N/A |
| Interviews | | |
| 4a | Bill Majewski, Retired City Planner – City of Duluth, November 6, 2003, 763-717-2625 | Years familiar with the Property: 12 years |
| 4b | City of Duluth Public Works/City Engineering: Bob Forbort, City Engineer, December 22, 2003, Phone: 218-723-3278 | N/A |
| 4c | Eric Simonson, City of Duluth Fire Marshall January 8, 2004, Phone: 218-723-3208 | N/A |
| 4d | Dave Prusack, City of Duluth Engineering, November 6, 2003, Phone: 218-723-3320 | N/A |
| Supplemental Resources | | |
| 5a | City of Duluth Engineering file records – City Engineer File #5018, Project file for Railroad Street, Garfield Avenue to 8 th Avenue W, City Job #8754MA93, 1998. | File review conducted on 11/6/03 |
| 5b | Zoning Regulations for the City of Duluth, Minnesota; Chs. 50 & 51 of the Legislative Code, updated February 14, 2003. | N/A |
| 5c | MPCA Leaking Underground Storage Tank Site Database | Information from MPCA's on-line database, reviewed on-line on November 7, 2003 and January 13, 2004. |

| REF# | Resource | Years |
|---|---|-------|
| MPCA File Review Documents & Investigation Reports | | |
| 6a | <u>Leak File for Leak #2094, Food Service of America gasoline tank. Includes excavation report (J&D Tank Services, November 1990) and Remedial Investigation Report (American Engineering Testing, Inc., 1993).</u> | N/A |
| Additional Investigations | | |
| 7a | <u>Barr Engineering Company, Limited Phase I Assessment (Historical Records Review), Bayfront Property, Duluth, MN, April 14, 1992.</u> | N/A |

III. Physical Setting

Surface elevation: Approximately 604 feet above mean sea level (Ref. 1a).

Topographic conditions of Property: The elevation is relatively flat across the Property without significant relief (Ref. 1a).

Stratigraphy (soils and upper bedrock units): Surficial geology in this area is typically a thin layer of fill materials and intermittent thin, silty soil over fractured, crystalline gabbro and basalt of the Duluth Complex and North Shore Volcanic Group (Ref. 2b-2d). Borings placed on Parcel B encountered over 15 feet of sand, silty sand and gravel fill materials (Ref. 6a).

Nearest surface water body: The Property is comprised of waterfront and boat slips of the St. Louis Bay/Duluth Harbor at the mouth of the St. Louis River (Ref. 1a).

Anticipated groundwater depth/flow direction: The groundwater is within about 2.5 feet of the ground surface based on the surface topography (604 to 605 feet) and the mean lake level (602 feet) (Ref. 1a) and borings placed on site previously (Ref. 6a). The groundwater table is relatively flat with a predominant groundwater flow toward the harbor. However transient flow directions inland may occur due to periodic seiche (lake tide) periods (Ref. 4d).

Regional aquifer: Fractured bedrock (crystalline gabbro and basalt of the Duluth Complex and North Shore Volcanic Group) is the primary regional aquifer (Ref. 2b-2d). Potable water supplies in the area are taken from the surface waters of Lake Superior (Ref. 2d, 4b).

IV. Municipal Information/Utility Service to Property

Results from Local Government Interviews

Water Supply

Municipal water supply and intake location(s): Duluth's municipal water supply is from a surface water intake in Lake Superior located about 6 miles northeast of the Property (Ref. 4b).

Property potable/process water supply: See above. Water is not supplied to the Property, although municipal water lines are located adjacent along Railroad Street (Ref. 4d).

Years of service for the current potable water supply for the Property:

Water lines are shown on early 1900's Sanborn Maps (Ref. 1c).

Have other potable water supplies serviced the Property? If yes, describe:

None known.

Sanitary Service

Type of sanitary service for the Property:

Sanitary service is not supplied to the Property, although municipal sewer lines are located adjacent along Railroad Street (Ref. 4d).

Evidence of onsite septic systems or drainfields:

None evident.

Have other methods of sanitary service been used at the Property? Unknown.

Is the Property serviced by storm drains? The City does not have any active storm drains (Ref. 4a), although there is one manhole on-site on Parcel B behind the former building slab with unknown discharge.

Zoning: The Property is zoned DWMX-D (downtown waterfront mixed use-design review district) from 5th to 8th Avenue and M1 (manufacturing district) from 8th to 10th Avenue (Ref. 5b).

Fire and Code Compliance Departments: The fire marshal was contacted and interviewed for information and City records were searched (Ref. 4c and 5a). Based on the conversation with the fire marshal (Ref. 4c), an underground storage tank was removed from 800 Railroad Street in July 1997 and a storage tank leak was reported for a UST at 7th Avenue W and Railroad Street (Leak # 7597). A review of the MPCA UST leak site database for Leak # 7597 (Ref. 5c) indicated that a leak site registered to Northland Constructors was reported in August 1991 with a site assessment conducted and closure granted on June 23, 1992. Further review of the database

indicated that a gasoline tank at the “foot of 8th Avenue West and Waterfront” was removed and a leak reported (Leak # 2094), registered to Food Service of America. The file for the site was reviewed from the MPCA (Ref. 6a) and it was noted that the tank had been removed, 457 cubic yards of soil were removed for treatment, and a follow-up remedial investigation was performed. Site closure was granted for Leak # 2094 on August 22, 1995 with some remaining soil contamination in place.

The review of the city engineering file for realignment of Railroad Street in 1998 (Ref. 5a) indicated that petroleum and PAH-contaminated soil was encountered during the realignment process near the 13th Avenue intersection. Soil in that area required sampling for soil management and worker protection issues. The area is located about 3 blocks west of the Property.

V. Property, Adjacent, and Surrounding Area Regulatory Status

Regulatory database summary and supporting information is in the Environmental Data Resources, Inc. (EDR) Reports located in Appendix C. A description of the acronyms used in the following section is included in the EDR Reports.

| Name | Address (with Map ID) | ASTM Listing(s) | Distance & Direction From Property | Do Issues Related to the ASTM Listing Indicate the Potential for Impacts to Soil and/or Groundwater at the Property? |
|------------------------------------|-------------------------------------|------------------------|---|---|
| Headquarters Fire Hall | 602 West 2 nd Street (8) | LUST | ¼ - ½ mile northwest | No. The site was closed by the MPCA 5/29/1996 as recommended by the MPCA. (Ref. 3a) |
| The Depot and Duluth Art Institute | 506-508 W. Michigan Street (10) | RCRIS-SQG, FINDS | <¼ mile northwest | No. The site is outside of the ASTM impact zone for RCRIS-SQG's (i.e. not adjacent) and no violations were listed for the generator status. (Ref. 3a) |
| Lenox Place | 701 W. Superior Street (11) | RCRIS-SQG, FINDS | <¼ mile northwest | No. The site is outside of the ASTM impact zone for RCRIS-SQG's (i.e. not adjacent) and no violations were listed for the generator status. Two other sites are erroneously identified with this Map ID; Saint Rose Catholic School in Proctor, MN and Gateway Tower at 600 W. Superior Street. Neither is within the ASTM impact zone for the Property. (Ref. 3a) |

| Name | Address (with Map ID) | ASTM Listing(s) | Distance & Direction From Property | Do Issues Related to the ASTM Listing Indicate the Potential for Impacts to Soil and/or Groundwater at the Property? |
|-------------------------|------------------------------|------------------------|---|--|
| Food Service of America | 800 Railroad Street (14) | UST | On Parcel A | The site is only listed as a UST in the EDR report however the interview with Duluth Fire department discovered that this was a leak site. The leaking tank is discussed in the interview section of this report and below in the Property ASTM regulatory status (Ref. 3a). |

The “orphan” sites (i.e. sites that could not be located by EDR) identified in the EDR Report were positively located as part of this investigation. Many of the listings were duplicates of listings already identified on the search map. The orphan sites were found to be either outside of the search area or their location posed no risk of environmental impacts to the Property (Ref. 3a).

Property ASTM regulatory status:

| ASTM List | Listing Status | Potential for Release to Soil or Groundwater | Does Property Have a Documented Release to Soil/Groundwater? |
|------------------|-----------------------|---|---|
| UST | Closed | Yes. The Food Service of America UST was removed but was classified as a LUST (Leak # 2094) and described in the ASTM Listing under LUST below. | Yes (Ref. 5c and 6a) |
| LUST | Closed | Yes. | Yes (Ref. 5c and 6a) |

VI. Previous Environmental Investigations

Relevant portions of previous investigation reports are reproduced with the MPCA file review information in Appendix D. An investigation was completed for the former Food Service of America UST/LUST area on Parcel A of the Property. The following table gives a general summary of the previous investigation’s activities and findings. The investigation is described according to their specific reference number, as denoted in the Information Resources section. During completion of the Assessment, another investigation was concurrently occurring at the Property.

| REF. # | Investigation Summary | Findings |
|-----------|--|---|
| 6a | The investigations consisted of a tank removal with removal of soil from the excavation and a follow-up remedial investigation where 5 soil borings were placed through and around the former tank basin area to document the remaining soil and groundwater conditions. | It was noted that the tank had been removed, 457 cubic yards of soil were removed for treatment, and the follow-up remedial investigation noted the presence of remaining petroleum impacts to the soil within the former tank basin area. Site closure was granted for Leak # 2094 on August 22, 1995 with some remaining soil contamination in place. |

II. Property and Nearby Property Land-Use History

Property Land-use History

Original Property development (year/use):

The Property is primarily composed of fill material. The fill was initially imported to create the piers and slips and as shoring under the docks, wharfs, rails and roadways extending into the Duluth Harbor of St. Louis Bay (Ref 1a, 1b, 1c). Parcel A was the first land created and was partially filled by 1888 for the slips at the current extensions of 6th and 7th avenues. The land between the extensions of 5th to 6th Avenues was filled between 1961 and 1972. The land comprising the former Slips #1 (east of the extension of 7th Ave.) and #4 (between the extensions of 9th and 10th Avenues on Parcel B) were filled after 1972, although half of Slip #4 was filled between 1955 and 1961. (Ref. 1a, 1b, 1c, 1d).

The land comprising Parcel B was not created until sometime between 1908 and 1936 and completely filled except for current Slip #3 as noted above. (Ref. 1a, 1b, 1c, 1d).

The Property has been used historically for materials and freight handling and transportation including loading and unloading of ships, railcar loading, truck transport and loading, dockage, and other related activities. Materials and freight loaded and warehoused on the Property include but are not limited to coal, dry goods, scrap metal, grain, and construction materials including paint, steel, cement, lumber and stone. Light and heavy industry were also present on both parcels of the Property including various service industries (i.e. truck servicing, printing, a cooperage), and manufacturing including a Western Electric equipment manufacturing facility on Parcel B (Ref. 1a, 1b, 1c, 1d).

Details for the site land-use are supplied on the table below.

| Land-use/Owner | Structures | Dates Observed | Relation to Property | Do Issues Related to the property/condition Indicate the potential for Impacts to Soil and/or Groundwater at the Property? |
|---|---|-----------------------|---|---|
| Various owners and land-use | Docks, piers, slips and rails | Pre 1988-present | Parcel A and Parcel B | Yes. The land forming the piers and slips are primarily composed of fill materials and the sources for these materials are unknown. Historically fill materials would range came from many sources including dredging spoils, wood, metal and construction debris, municipal waste as well as clean fill from construction activities. The rails may have had fuel and lubricant drippage and potential spills of loose loaded materials. (Ref. 1a, 1b, 1c, 1d) |
| Duluth Boat Club | Club house, boathouse and equipment sheds | Pre 1888-pre 1938 | Parcel A | No. This was a rowing and athletic club and no impacts are anticipated to be associated with this use. (Ref. 1a, 1b, 1c, 1d) |
| Northern Pacific Railway | Rails, warehouses, out buildings, coal shed | Pre 1888-pre 1939 | Parcel A (7 th Ave. pier) | Yes, drippage from locomotives and coal and related product spillage over this period may be incorporated in local fill materials and potentially impact soil and groundwater. (Ref. 1a, 1b, 1c, 1d) |
| Various owners/coal loading | Coal loading docks and coal sheds | Pre 1888 | Parcel A (6 th Ave. pier) | No, the coal loading and storage solely is not a potential impact to groundwater or soils. (Ref. 1a, 1b, 1c, 1d) |
| Various owners / freight transportation and warehousing | Warehouses and storage sheds | Pre 1888-present | Parcel A (7 th and 8 th Avenue piers) and Parcel B (10 th Avenue pier) | No. Except as noted for drippage from rails, the majority of freight handling and warehousing is not anticipated to impact soil or groundwater at the Property. (Ref. 1a, 1b, 1c, 1d) |

| Land-use/Owner | Structures | Dates Observed | Relation to Property | Do Issues Related to the property/condition Indicate the potential for Impacts to Soil and/or Groundwater at the Property? |
|--|--------------------------|-----------------------|---|--|
| Northern Scrap Iron and Metal / scrap metal storage and processing | Unknown (not located) | 1930-1935 | Parcel B and Property between Parcels A and B 802 Railroad Street | Yes. Although the property was not located on Sanborn maps or aerial photos, the address indicates it was to the north of the Cutler-Magner property. No evidence exists to show that scrap metal processing occurred on the property but waste oil and other contaminants are often associated with scrap metal operations. (Ref. 1a, 1b, 1c, 1d) |
| Honigman Printing | Unknown (not located) | 1930-1946 | Parcel B 824-902 Railroad Street | No. The property structure(s) were not noted in the Sanborn maps and so is not likely to have generated sufficient waste ink or other waste materials to significantly impact soil or groundwater at the site, especially as it has been out of business since 1946 (Ref. 1b, 1c, 1d). |
| Viscosity Oil | Oil storage, building(s) | 1930-1956 | Parcel A (702 Railroad Street) | Yes. Sanborn maps show an oil storage warehouse present on the 9 th Avenue pier which may be associated with this listing. It is not known if any leaks or releases occurred but it cannot be ruled out as a potential source of impacts to soil or groundwater at the Property. (Ref. 1b, 1c, 1d) |

| | | | | |
|--|-------------------------------|------------------------------------|---|---|
| Valvoline Oil | Oil storage, buildings | 1946-1966 | Parcel A (702 Railroad Street) | Yes. Sanborn maps show an oil storage warehouse present on the 9 th Avenue pier which may be associated with this listing. It is not known if any leaks or releases occurred but it cannot be ruled out as a potential source of impacts to soil or groundwater at the Property. (Ref. 1b, 1c, 1d) |
| Sherwin Williams Paint | Paint warehouse (not located) | 1935-1940 | Parcel A (702 Railroad Street) | No, although the exact location is not known, there is no evidence this was a paint manufacturing facility, so it is unlikely to have caused impacts to soil or groundwater. (Ref. 1b, 1c, 1d) |
| Northern Cold Storage | Warehouses | Pre 1939-1963 | Parcel A (at 7 th Avenue pier) | No. The site appears to have been primarily used for warehousing refrigerated goods. No potential impacts to groundwater or soil are anticipated. (Ref. 1a, 1b, 1c, 1d) |
| Western Electric Co. / telephone equipment manufacturing | Shop buildings | Pre 1950 (as early as 1939) – 1955 | Parcel B | Yes. During the period of manufacturing, PCB-containing electrical equipment was common and PCB, solvents, plating activities and other potential impacts to soil or groundwater are possible. (Ref. 1b, 1c) |
| Duluth Terminal and Cold Storage | Warehouses | Pre 1939-1972 | Parcel A (at 7 th Avenue pier) | No. The site appears to have been primarily used for warehousing refrigerated goods. After 1955 it appears to have expanded to the adjoining Western Electric property described above. No potential impacts to groundwater or soil are anticipated. (Ref. 1a, 1b, 1c, 1d) |

| Land-use/Owner | Structures | Dates Observed | Relation to Property | Do Issues Related to the property/condition Indicate the potential for Impacts to Soil and/or Groundwater at the Property? |
|--|-------------------|-----------------------|---|--|
| Food Service of America warehousing and transport of goods | UST, Warehouses | 19-1986 | Parcel A (East side of 8 th Avenue Pier) | Yes. The site was primarily used for warehousing wholesale foods, groceries and fruit; beer distributing; dairy processing; cold storage and other related uses. The potential for impacts is from the former 1000 gallon UST (now removed) on the site. (Ref. 1a, 1b, 1c, 1d) |

- **Chronology of Property use/ownership:** Detailed information on property transfer and ownership of all of the parcels comprising the Property were not available and not included in the scope of this Phase I Investigation except as noted in the Property Structures and Land-use section above

Historical Property Structures and Demolitions

Detailed information regarding historical structures and demolitions were not available for all of the parcels comprising the Property and not included in the scope of this Phase I Investigation except as noted in the Property Structures and Land-use section above (Ref. 4a, 4c).

Current Property Structures

There are three current permanent structures and two current temporary structures that will be described in the following sections:

- Storage garage on Parcel B
- Two semi-trailers on Parcel B (temporary structures)
- Two warming house/entertainment buildings at the northeast corner of Parcel A which were under construction (now completed)

No renovations or building additions have occurred on the current Property structures (Ref. 4c).

Nearby Property Land-Use History

The Property is bound to the south by the Duluth Harbor/St. Louis Bay at the mouth of the St. Louis River. The adjacent and nearby property (i.e. within 500 feet) to the north and east has been roadway and railways serving the slips historically and to the present time (Ref. 1a, 1b). Details for the property in between Parcel A and Parcel B as well as known information for the property nearby and adjacent to the west are supplied below.

| Land-use/Owner | Structures | Dates Observed | Relation to Property | Do Issues Related to the property/condition Indicate the potential for Impacts to Soil and/or Groundwater at the Property? |
|--|---|-----------------------|---|---|
| Cutler-Magner then LaFarge | Lime kiln, storage bins, warehouses and sheds | 1939-present | Property between Parcel A and Parcel B | No. There is no evidence of any activities that would potentially impact soil or groundwater at the Property. The lime kilns were removed some time after 1972. (Ref. 1a, 1b, 1c, 1d) |
| Kelley Island Lumber and Transport yard | Lumber mill and storage warehouse | 1908-pre 1950 | Property between Parcel A and Parcel B | No. There is no evidence of any activities that would potentially impact soil or groundwater at the Property. (Ref. 1a, 1b, 1c, 1d) |
| Northern Scrap Iron and Metal / scrap metal storage and processing | Unknown | 1930-1935 | Property between Parcels A and B | Yes. No evidence exists to show that scrap metal processing occurred on the property but waste oil and other contaminants are often associated with scrap metal operations. This operation may have lapped over into Parcels A and B. (Ref. 1a, 1b, 1c, 1d) |
| Cutler-Magner | Salt refinery, warehouses and salt storage | 1939-after 1972 | Property adjacent to west of Parcel B | No. There is no evidence of any activities that would potentially impact soil or groundwater at the Property. (Ref. 1a, 1b, 1c, 1d) |
| Santerre Service Trucking | Warehouse and truck repair shop | 1966-1976 | Adjacent to southwest of Parcel B, 1002 Railroad Street | No. There is no evidence of any significant fuel storage or fueling activities and any incidental spills would not be likely to impact soil or groundwater at the Property. (Ref. 1b, 1c, 1d) |
| Gopher State Oil Co. | Unknown | 1956-1961 | Adjacent to southwest of Parcel B, 1002 Railroad Street | Yes. Although there is no evidence in the Sanborn maps or aerial photos that oil was stored or loaded at this location, it should be included as a potential source of impacts pending further investigation. (Ref. 1b, 1c, 1d) |

| Land-use/Owner | Structures | Dates Observed | Relation to Property | Do Issues Related to the property/condition Indicate the potential for Impacts to Soil and/or Groundwater at the Property? |
|--|-------------------|-----------------------|---|---|
| Phil A. Nelson Co. Oils and Greases | Unknown | 1940-1951 | Adjacent to southwest of Parcel B, 1002 Railroad Street | Yes. Although there is no evidence in the Sanborn maps or aerial photos that oil or greases were stored or loaded at this location, these activities should be included as a potential source of impacts pending further investigation. (Ref. 1b, 1c, 1d) |

VIII. Property Inspection

Existing Property features are shown in the Property layout on Figure 2. Photographs obtained during the Property inspection are in Appendix D.

Dates of inspection: October 13 and November 11, 2003

Name of environmental professional: Michael Carnes

Weather information: Cold, sunny to partly cloudy.

Features of Current Property Structure(s)

The following tables summarize the current Property structures and features. See Appendix D for photographs of Property structures.

Interior Observations

| Permanent Property Structure: Storage Garage – Parcel B | |
|--|--|
| Use(s): | The structure is a storage garage, with minimal use. The garage was essentially empty during the site visit in October except for minor woodworking materials. |
| Construction Information: | One-story garage with rafters (no attic) and slab-on-grade, 30 feet x 50 feet. |
| Fuel Source for Heating and Cooling: | Not heated. |

| Permanent Property Structure: Storage Garage – Parcel B | |
|---|--|
| Roof/Wall Exhaust Vents Associated with Current or Former Process Equipment: | None observed. |
| Current or Former Roof Chemical Storage and Roof Drains or Discharge Points: | No roof storage was observed, and the roof drains to the ground. |
| Floor Drains (#, locale, condition, discharge points) | None observed. |
| Floor Type and Condition (cracking, staining): | Floor was concrete, in good condition, without staining. |
| Transformers: | None observed. |
| Electrical or Hydraulic Equipment: | None observed. |
| Sumps or Pools Containing Liquids: | None. |
| Parts Washers: | None. |
| Chemical and Waste Storage: | No wastes were stored in the garage. |
| USTs or ASTs (interior to building): | None observed. |

The two new on-site buildings which were under construction during the site visits, located at the northeast end of Parcel A adjacent to PlayFront and the entrance to the Bayfront Park were not inspected. The buildings are block construction with slab on grade floors based on the observed construction underway at that time. The buildings are complete as of the publishing of this report and have been used for winter entertainment/warming for the skating park.

Concrete slab remnants of former buildings are also present at the south end center of Parcel B (former Geno's foods) and at the south end of Parcel A (Former food Service of America), between the slip and 8th Avenue. Floor drains and some below-slab piping was apparent beneath the slabs on Parcel A.

Two mobile structures were observed on the Property along the southeast side of the former building slab in Parcel B. These structures are semi-truck trailers that the City allows an entertainment contractor to store on-site. The structures were not accessible during the inspections.

Interior and Exterior USTs and ASTs

No USTs or ASTs were observed.

Exterior Observations

Access to the Property (vehicular access and restrictions to public access): Vehicular access is via Railroad Street. Parcel A is entirely accessible to pedestrians and vehicle traffic off Railroad Street or 8th Avenue. Parcel B is entirely fenced with one locked access gate at 9th Avenue.

Ground surface cover (paved, gravel, grass): Most of the Property is covered with gravel and grasses. Parts of Parcel B, around the former building slab, has old weathered asphalt paved drive areas. The area between Railroad Street and the former building concrete slab at the south end of Parcel A is also paved.

Visible evidence of filling, excavation, vegetative stress, burned areas: The unearthed fill material for the new building foundations at the northeast end of Parcel A contained miscellaneous brick, concrete, and minor debris within it of unknown origin. Filling of the former slip on Parcel B was also apparent with some minor debris (concrete, brick, and railroad ties) visible at the surface.

Pits, ponds, lagoons, and standing surface water: Standing surface water was noted to be present in shallow puddles at the southeast end of Parcel B. No pits or ponds were present.

Stained soil or pavement: Soil and pavement staining were not apparent except for the salt-staining on the gravel surface over much of the southeast end of Parcel B. Salt-stains were ubiquitous over that area between the former building slab and the waterfront.

Wastewater, stormwater, and other liquid discharge into a drain, ditch, stream or adjacent property: No discharges were noted. The topography is essentially flat, with slight grades toward the waterfront. An erosion swale is located at the southeast end of Parcel B at the waterfront edge. One catch basin is present on Parcel B, on the southeast side of the former building slab. All runoff appears to discharge to the harbor.

Indications of past uses of the Property likely to involve the use, treatment, storage, disposal or generation of hazardous substances or petroleum products: There were little indications of past uses of the Property that may have involved petroleum or chemical usage. Buried railroad ties and a pipe of unknown use were apparent at the southeast end of Parcel A at the waterfront. Two 1 to 2-inch diameter pipes (unknown use or origin) were noted to be present in the concrete adjacent to the slip wall at the northwest end of the slip in Parcel B. A sump or drain of unknown use was present at the south corner of the remaining slab for the former building between the slip and 8th Avenue in Parcel A.

Nonpotable/process wells: None were noted.

Pipelines: None were observed on the Property although signs for buried gas lines are present in the right of way along Railroad Street.

Rail lines: There are no current railroads on the Property.

Transformers: Four pad-mounted transformers and a set of pole-mounted transformers were noted to be present on or directly adjacent to the Property, all on Parcel A. One pad-mounted transformer and the pole-mounted transformers are present along the 8th Avenue edge of Parcel A. Two pad-mounted transformers are present at the northwest corner of the gravel drive area of Parcel A at the intersection of 7th Avenue and Railroad Street. A pad-mounted transformer was also located at the northeast corner of Parcel A near 5th Avenue. All transformers appeared in good condition.

Outdoor Chemical Storage Areas: There are no outdoor chemical storage areas on the Property. The only storage on the Property is on Parcel B, at the south corner of the former building slab. Piles of pallets and barrels are stored there. The drums are all clean and empty, painted light blue for use as barricades or garbage containers. There is some spray paint over-spray on the concrete around the barrels, indicating that they were painted at that location.

IX. Current Property Waste Management

There is currently little or no waste generated on the Properties as most of the Property is vacant and unused. The small winter skating park under construction in the northeast corner of Parcel A at the time of the site visit would generate only incidental trash.

X. Property Interviews

Relevant information from the interviews is included and documented throughout the Assessment report.