

**Phase I Environmental Site Assessment Update  
700-1000 West Railroad Street Property  
Bayfront Lots C and D  
Duluth, Minnesota**

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# 1.0 Introduction

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Barr Engineering Co. (Barr) was retained by the Duluth Economic Development Authority (DEDA) to complete a Phase I Environmental Site Assessment Update (Assessment) of a property owned by DEDA and used for seasonal storage of snow and road sweepings, as well as overflow parking for Bayfront events. This property is located in a waterfront industrial area. The property is located south of Railroad Street, between 700 and 1000 blocks west, *Section 34, T50N, R14W, in Duluth, St. Louis County, Minnesota.* (Property). The Property location is shown on Figure 1. This Assessment updates the previous Assessment noted in Section 1.1.

This report summarizes the findings, opinions, and conclusions of the Assessment. Detailed descriptions of the Property setting, utility information, land-use history, regulatory history, and current Property conditions and features are presented in the Phase I documentation in Appendix A. Informational resources are described in Section 5 of this report and are assigned unique reference numbers, which are used throughout the report and Appendix A.

Barr has performed this Assessment in conformance with ASTM, International (ASTM) Practice E 1527-05 and the federal All Appropriate Inquiries rule (40 CFR Part 312). Together the procedures and methods set forth in these documents constitute the requirements under which this Assessment was performed. Hereafter, ASTM Practice E 1527-05 combined with the additional requirements of 40 CFR Part 312 will together be referred to as the Practice. No intentional deviations from the Practice were made in performing this Assessment except as described in Section 1.4.

## 1.1 Purpose

The purpose of the Assessment is to identify recognized environmental conditions (RECs) in connection with the Property as defined by the Practice and discussed in the findings and opinions section of the report. This report also updates a previous 2004 Phase I Assessment conducted by Barr for the City of Duluth (Ref. 1g) in order to provide an up dated Assessment of the Property, in support of Phase II work plan review by the Minnesota Pollution Control Agency. The Assessment also may satisfy one of the requirements for the User to qualify for a landowner liability protection defense under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

## 1.2 Scope of Services

The Assessment involved completion of the following four components described in Section 7 of the Practice: records review, site reconnaissance, interviews, and reporting. The following tasks were completed during the Assessment. The details of each task are described below and in Appendix A.

### Records Review

- A Regulatory Database Report was obtained and federal, state, and readily available tribal records databases were reviewed. Orphan site listings were reviewed for relevance to the Property by using reverse directories, online mapping programs, and the Minnesota Pollution control Agency's "What's in My Neighborhood" web-based geographical information system (Ref. 5e).
- Listed sites were cross-checked with the MPCA and EPA websites for closure status.
- USGS topographic maps were reviewed and used to determine physical setting information (Ref. 2a).
- Discretionary physical setting sources including Minnesota Department of Health well and boring records for wells in the Property vicinity and (a) published geological report(s) were reviewed and used to determine physical setting information (Ref. 2b, 2c, 2d, 2e).
- Historical aerial photographs; historical maps; reverse city directories; zoning, and tax assessor's records; and a plat map were reviewed for the Property and surrounding land (Ref. 1a, 1c, 1d, 1e, 1f, 5h).
- A fire insurance map search was conducted and maps were reviewed (Ref. 1b).
- Five previous investigation reports relevant to the Property were reviewed (Ref. 1g, 1h, 1i, 1j, 1k, 5b).

### Site Reconnaissance

- A visual inspection was conducted of the building interiors and exterior features on the Property. Current conditions with respect to land use; chemical and waste storage, use, and disposal; facility operations and equipment; utilities; and evidence of potential releases of petroleum products or hazardous substances were documented, if observed. Evidence of historical uses or conditions, if encountered, was also documented. Current land-use and occupants of neighboring properties were documented during the site visit.
- The Property was inspected for evidence of use, production, or disposal of controlled substances (as defined by 21 CFR Part 802) or associated materials. The Property exterior area and surroundings were observed for evidence of use, production, or disposal of controlled substances (as defined by 21 CFR Part 802) or associated materials by visual observation from the exterior areas accessed during the site visit.

### Interviews

- Interviews were conducted with Property owner representative and the City of Duluth engineering and fire departments. The planning department was contacted, but no information was received (Ref. 4b, 4c).
- The Manager of Business Resources was interviewed regarding whether there has been evidence of past or current activities suggestive of controlled substances production on or near the Property (Ref. 4a).

### Evaluation and Report Preparation

- This report was prepared to document the resources used during completion of the Update and to describe the findings, opinions, and conclusions of the Update.

### 1.3 Significant Assumptions

The following significant assumptions were made to complete the Assessment:

- The detailed history of ownership and land-use to satisfy the requirements and purpose of the Assessment was determined from the activities listed in Section 1.2, Scope of Work, and a title review was not needed. Lack of a title review is not a significant data gap.
- Property boundaries were assumed to be the same as those defined in earlier investigations, however the specific area assessed for this Update is shown on Figures 1 and 2.
- The building's interior was in similar condition to that described in the Barr Engineering Phase I ESA performed in March 2004 (Ref. 1g).
- Groundwater flows to the Property from the upland (an area north and northwest of the Property- see Appendix A, Figure A-1).

### 1.4 Limitations and Exceptions

The following limitations and exceptions are associated with this Assessment:

- Gaps of greater than five years in historical documentation are present, and are summarized in the following table.

<b>Date Range</b>	<b>Property Changes</b>
Prior to 1880	Historical documentation was not readily ascertainable; therefore, changes in general Property land-uses are unknown. The early waterfront development including filling to create piers and docks is shown to have begun on additional historical maps, which were reviewed from this year (Ref. 1f). Additional filling and development is documented on subsequent maps or photographs. This is not a significant data gap.
1895-1908	Gaps greater than five years in historical documentation are present; however, general Property land-uses did not change during this time period. This is not a significant data gap.
1910-1927	Gaps greater than five years in historical documentation are present; however, general Property land-uses did not change during this time period. This is not a significant data gap.
1940-1946	Gaps greater than five years in historical documentation are present; however, general Property land-uses did not change during this time period. This is not a significant data gap.

- Certain areas of the Property were not accessible or inspected during the site visit due to inaccessibility. These areas include:
  - No building roof areas were accessed or observed, except as observable indirectly by reviewing the exterior site photographs

- Former boat slips 2 and 3 were not part of the Property area and were therefore not assessed.
- Some of the ground surface was obscured by snow, ice or ponded water.
- Vegetation was dormant due to seasonal conditions; therefore, vegetative stress could not be determined.
- No title review was conducted for the Update. However, the detailed history of ownership and land-use to satisfy the requirements and purpose of the Assessment Update were determined from the activities listed in Section 1.2, Scope of Work. Therefore, a title review was not needed. Lack of a title review is not a significant data gap.
- The interiors of the two semitrailers parked on Lot D were not accessible and were not viewed.

## 1.5 Special Terms and Conditions

The Assessment was conducted in accordance with an Agreement between Barr and DEDA.

The scope of the Assessment did not involve the collection and analysis of any type of sample. The Assessment did not involve completion of any surveys or the offering of any opinions or advice with respect to structural engineering matters, asbestos-containing materials, radon, lead-based paint, lead in drinking water, wetlands, compliance with environmental regulations, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality (e.g., vapor intrusion), biological agents, mold, or other conditions that are beyond the scope of the Practice.

Barr has performed its work in a manner consistent with the care and skill ordinarily exercised by members of the environmental profession under similar budget and time constraints. Within this context, Barr assumes responsibility for its own observations, along with its interpretation of the information gathered. No other warranty is made or intended.

Because Barr was not retained to verify information, Barr assumes no responsibility for the accuracy of information that it obtained from other sources including, without limitation, regulatory and government agencies, persons interviewed about the Property, and vendors of public data. Performance of the Practice is intended to reduce, but will not eliminate uncertainty regarding the presence of recognized environmental conditions on the Property. To the extent that Barr does not identify recognized environmental conditions on the Property, Barr's opinions in the report are not representations that the Property is free of such conditions. Under no circumstances can Barr represent or warrant that releases of hazardous substances or petroleum products do not exist on the Property.

## 1.6 User Reliance

The Assessment has been prepared for the exclusive use of **DEDA**, herein referred to as the “User(s)”. No others may rely on the Assessment without obtaining a formal authorization in the form of a reliance letter from Barr. Barr will provide reliance letters for additional parties only if authorized by the User(s).

## 2.0 Site Description

### 2.1 Location and Legal Description

The Property is located south of Railroad Street, between 700 and 1000 blocks west, *Section 34, T50N, R14W, in Duluth, St. Louis, Minnesota* (hereafter referred to as “Property”). The Property is generally rectangular, excluding the water filled slips, and in total measures approximately 13 acres. The City of Duluth Assessor’s office identifies the following parcels as comprising the Property (see table). The approximate Property boundaries are shown on Figure 2. Appendix A includes additional information about the property legal description and dimensions.

#### Bayfront Lots C and D - parcel details

Plat - Bay Front Division of Duluth

PID #	Lot C or D	Area ft2
010 0200 00970	C	8,500
010 0200 01020	C	750
010 0200 01030	C	875
010 0200 01040	C	875
010 0200 01050	C	3,440
010 0200 01060	C	3,440
010 0200 01090	C	1,425
010 0200 01100	C	40,448
010 0200 01160	C	17,152
010 0200 01190	C	22,016
010 0200 01220	C	35,584
010 0200 01490	D	150,000
010 0210 00010	D	107,030
010 0210 00220	D	20,000
010 0210 00300	D	2,500
010 0210 00340	D	51,704
Former Slip 4	D	103,408
		<b>569,147</b>

*Approximately  
13 acres*

### 2.2 Property Setting and Land Use

The topography of the Property is level. Shallow groundwater flow direction at the Property is considered to be toward the Duluth Harbor based on the topographic maps and a site visit (Ref. 2a).



The Property is currently unoccupied and is zoned Waterfront/Mixed Use and Heavy Manufacturing. The only building on the Property is a small garage, and there are remnant building footings and foundations located on the Property. Two gated entrances lead to each of Lot C and Lot D. The Property is variably covered by pavement or gravel. Drinking water is provided by the City water supply and sanitary service is provided by the City at Railroad Street. Historically the Property has been used for commercial and industrial activities. Historical buildings including warehouses, food packaging, scrap yard, rail services, and manufacturing were previously located on the Property and have been demolished. City water and sewer serviced historical buildings.

The current and past use of the area surrounding the Property is industrial port land. The current use of adjoining properties includes occupied and vacant industrial port land, and railway property.

Additional descriptions of the Property setting and land-use are presented in Appendix A.

## **2.3 User-Provided Information**

As detailed in Section 6 of the Practice, the User has responsibilities associated with identifying possible recognized environmental conditions in connection with the Property. Barr interviewed the User on March 3, 2010 to facilitate gathering information required by the Practice. The completed User Questionnaire is included in Appendix F.

The User has no knowledge of any environmental liens or activity and use limitations against the Property, nor any specialized knowledge or experience that is material to identifying recognized environmental conditions in connection with the Property. Since no sale is pending or imminent, no information was provided to the environmental professional regarding the relationship between a potential purchase price and fair market value. Property valuation is not part of the scope of this Assessment. The User did not report conditions indicative of releases or threatened releases, any obvious indicators that point to the presence or likely presence of contamination at the Property, or specialized knowledge about the Property related to the items listed in Section 6 of the Practice (Ref. 4a, Appendix F).

## 3.0 Findings and Opinions

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This section summarizes observations regarding the presence of hazardous substances or petroleum products on the Property (findings) and discusses the basis for concluding if a finding is or is not a recognized environmental condition.

### 3.1 Definitions

*Finding* – For the purpose of this Assessment, a finding is an observation regarding the presence of hazardous substances or petroleum products on the Property which may be considered a recognized environmental condition, a historical recognized environmental condition, or de minimis condition.

*Recognized environmental condition (REC)* - For the purpose of this Assessment, a REC is the presence or likely presence of any hazardous substances, pollutants, contaminants, petroleum and petroleum products, or controlled substances (as defined in 21USC 802) on a property under conditions that indicate an existing release, a past release or a material threat of a release into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not recognized environmental conditions.

*Historical recognized environmental condition (HREC)* - An HREC is defined by the Practice as “an environmental condition which in the past would have been considered a REC, but which may or may not be considered a REC currently.” An HREC may or may not be considered a REC depending on the status of the HREC and its potential current or future impact on the property.

*De minimis conditions* – As defined by the Practice, conditions determined to be “de minimis” generally do not present a threat to human health or the environment and generally would not be subject of an enforcement action if brought to the attention of appropriate governmental agencies. De minimis conditions are not considered RECs.

### 3.2 Findings and Opinions

Barr has identified findings and developed opinions regarding the findings, as summarized in the following table.

Finding ID #	Description of Finding	Opinion with Respect to Finding	REC ID #
1	<p><b>Fill Materials-</b> Presence of fill of unknown origin is documented by a number of different sources of information including:</p> <p>a) the Railroad Street VP 9540 Utility Project site listing indicates fill with documented impacts from polynuclear aromatic hydrocarbons and the presence of debris beneath Railroad Street adjoining the Property;</p> <p>b) historical review sources, including Ref. 1a, 1b, 1d, 1f, 1g, 1i, and 3b, indicated historical filling of the Property and surrounding areas in association with the industrial development of the Property and surrounding area;</p> <p>c) previous investigations confirm fill materials are present, including borings documenting fill exceeding 15 feet below ground surface (Ref. 3b and 5b);</p> <p>d) fill soil was observed at multiple locations on the Property during the reconnaissance visit; including a stockpile of fill soil which was removed during a utility excavation on the Property in fall 2009. The fill soil stockpile was located on the northwest end of Slip 2 near the 7<sup>th</sup> Avenue easement (Appendix A and Appendix B, Photograph 41). Additional fill observation locations are shown in Appendix B photographs and on Figure 2.</p>	<p>The past Property history of industrial uses, soil boring information, and recent site observations confirm that fill is present on the Property and it is of unknown origin. The adjoining VP 9540 site identified impacts associated with fill. It is likely that similar fill extends beneath the Property. For these reasons this finding is a REC.</p>	1

<b>Finding ID #</b>	<b>Description of Finding</b>	<b>Opinion with Respect to Finding</b>	<b>REC ID #</b>
2	<p><i>Food Service of America closed LUST site #2094-</i> Petroleum impacts to soil were documented to remain at the Former Food Service of America site-located on the Property in the Lot C area at the foot of S. 8<sup>th</sup> Avenue West as shown on Figure 2. The petroleum release was reported 1989 and the site was closed in 1995 (Appendix D).</p>	<p>A former underground storage tank leak was discovered in 1989, investigated and remediated. Closure of the site was granted in 1995. Reportedly some residual soil impacts were not removed (Ref. 5c and 5d). This listing potentially remains as an impact to soil or groundwater on the Property, although not necessarily above levels of regulatory concern under the current land use, since the MPCA closed the LUST site in 1995.</p> <p>Under the current site conditions and land use, this finding is <i>de minimis</i>. However, future development, a change in land use, and/or soil disturbance in the vicinity of the former LUST will likely require evaluation and management of petroleum soil contamination and/or soil vapor risks. When taking future redevelopment plans into consideration, this finding is a REC.</p>	2
3	<p><i>Former Northern Scrap Iron and Metal Facility on western Lot C-</i> There is evidence of the historical presence of a former scrap facility on the Property (Ref. 1d and 1g)</p>	<p>The historical presence of a former scrap facility on the Property (Ref. 1d and 1g) is a concern since, based on experience, it is possible that petroleum, metals or other organic compound soil and/or groundwater contamination concerns could be present. Although one soil boring was advanced in the vicinity of this former facility which indicated no significant soil contamination, it is possible that impacts may be present that adversely affect the Property.</p> <p>Under the current site conditions and land use, this historical finding is <i>de minimis</i>; since impacts, if present, are not likely to rise to the concern of regulatory entities if left undisturbed. However, future development, a change in land use, and/or soil disturbance in this historical use area will likely require evaluation and management – especially in light of the Minnesota Pollution Control Agency’s fill soil management guidance. When taking future redevelopment plans into consideration, this historical use on the western side of the Property is a REC.</p>	3

Finding ID #	Description of Finding	Opinion with Respect to Finding	REC ID #
4	<p><i>Various Former Oil Companies-</i> Based on the historical review, several small oil companies were formerly present in warehouses on the Property (Parcel C) as well as on the adjacent property to the southwest along the waterfront. There may have been some oil storage or handling associated with these past operations (Ref. 1b, 1d, 1f)</p>	<p>Petroleum products may have been handled or stored at the former oil company warehouse operations, with the potential to have adversely affected soil or groundwater, if released on the Property. Based on the results of the Phase II investigation work completed in 2004 (Ref. 5b), no impacts were identified associated with the former oil company warehouse past use (in locations sampled).</p> <p>Under the current site conditions and land use, this historical finding is <i>de minimis</i>; since impacts, if present, are not likely to rise to the concern of regulatory entities if left undisturbed. However, future development, a change in land use, and/or soil disturbance in this historical use area will likely require evaluation and management – especially in light of the Minnesota Pollution Control Agency’s fill soil management guidance. When taking future redevelopment plans into consideration, this finding is a REC.</p>	4
5	<p><i>Former Western Electric Company-</i> A telephone equipment manufacturing facility was located on the 9<sup>th</sup> Avenue Pier in Parcel C from before 1936 to between 1955 and 1963. (Ref. 1b, 1d, 1f).</p>	<p>Waste materials, hazardous materials or petroleum products were likely associated with this operation. Electrical equipment manufacturing may have occurred and may have including handling of heavy metals-containing materials or oil containing materials (i.e. dielectric fluids for transformers). It is possible that spills or disposal of these materials may have occurred at this former facility. Based on the results of the Phase II investigation work completed in 2004 (Ref. 5b), no impacts were identified associated with the former Western Electric Company past use (in locations sampled).</p> <p>Under the current site conditions and land use, this historical finding is <i>de minimis</i>; since impacts, if present, are not likely to rise to the concern of regulatory entities if left undisturbed. However, future development, a change in land use, and/or soil disturbance in this historical use area will likely require evaluation and management – especially in light of the Minnesota Pollution Control Agency’s fill soil management guidance. When taking future redevelopment plans into consideration, this finding is a REC.</p>	5

<b>Finding ID #</b>	<b>Description of Finding</b>	<b>Opinion with Respect to Finding</b>	<b>REC ID #</b>
6	<i>Former Rail lines and rail staging areas-</i> Rail lines at one time accessed the majority of the Property. Staging areas for loading bulk materials such as coal, lime, cement and other materials including oil products, scrap or wastes may have been present (Ref. 1a, 1b, 1d, 1f, 1g, 1i).	The materials handling, storage or transfers associated rail spurs or rail yards often resulted in spills of hazardous materials or petroleum associated with rail lines in an industrial warehouse/waterfront setting such as at the Property. Because releases may be associated with rail lines in this setting, this finding is a REC.	6
7	<i>Small quantity generators-</i> Two small quantity generators are located within the ASTM search area for the Property.	No violations have been found for these generators and the sites are not located immediately adjacent to the Property (Ref. 5b), these listings are not a REC.	-
8	<i>Former Paint warehouse-</i> A Sherwin Williams paint warehouse was present on Parcel C from 1935 to 1940 (Ref. 1b, 1d, 1f).	Paint chemicals, metals or petroleum products may have been handled or stored at the former paint warehouse, with the potential to have adversely affected soil or groundwater, if released on the Property. Based on the results of the Phase II investigation work completed in 2004 (Ref. 5b), no impacts were identified associated with the former paint warehouse past use (in locations sampled).  Under the current site conditions and land use, this historical finding is <i>de minimis</i> ; since impacts, if present, are not likely to rise to the concern of regulatory entities if left undisturbed. However, future development, a change in land use, and/or soil disturbance in this historical use area will likely require evaluation and management – especially in light of the Minnesota Pollution Control Agency’s fill soil management guidance. When taking future redevelopment plans into consideration, this finding is a REC.	7

Finding ID #	Description of Finding	Opinion with Respect to Finding	REC ID #
9	<p><i>Former Cold Storage Warehouse-</i> Several cold storage operations were located on Lots C and D. These would have handled ice or refrigerated goods such as perishable foodstuffs (Ref. 1b, 1d, 1f). Use of refrigerant chemicals and/or various foam or other insulation materials may have occurred.</p>	<p>Materials associated with these former processes or buildings may remain as potential impacts to the fill soil or groundwater on the Property. Based on the results of the Phase II investigation work completed in 2004 (Ref. 5b), no impacts were identified associated with the former cold storage warehouse past uses (in locations sampled).</p> <p>Under the current site conditions and land use, this historical finding is <i>de minimis</i>; since impacts, if present, are not likely to rise to the concern of regulatory entities if left undisturbed. However, future development, a change in land use, and/or soil disturbance in these historical use areas will likely require evaluation and management – especially in light of the Minnesota Pollution Control Agency’s fill soil management guidance. When taking future redevelopment plans into consideration, this finding is a REC.</p>	8
10	<p><i>Transformers-</i> Several electrical transformers were noted next to Parcel C and D during the property inspection.</p>	<p>None of the transformers were leaking, and they all appeared to be in good condition (Appendix A and B). Based on these observations, this finding is not a REC.</p>	-
11	<p><i>Batteries-</i> Two exposed lead acid batteries are attached to one of the stored trailers on Parcel D (Appendix B).</p>	<p>Although the batteries are in poor condition and should be removed and properly disposed, the batteries and potential impacts to the ground beneath the batteries, are of sufficiently small size and volume that this concern is not likely to rise to a high level of regulatory concern. Therefore, this finding is a <i>de minimis</i> condition.</p>	-

Finding ID #	Description of Finding	Opinion with Respect to Finding	REC ID #
12	<p><i>Debris and Surface Depressions-</i> Debris piles and empty drums were observed on Lot D in the vicinity of the former cold storage warehouse foundation. Debris piles containing steel drum carcasses, wood, soil, apparent landscape fabric and apparent foam insulation similar to the insulation observed beneath the former warehouse slab were present on the western portion of Lot D (Appendix B, Photographs 15, 16, 19). Overhead door assemblies from the former cold storage warehouse were observed stored on the ground beside the western edge of Lot D (Appendix B, Photograph 17). Numerous apparently empty steel drums were stored on the ground beside the eastern side of the former cold storage warehouse foundation on Lot D (Appendix B, Photographs 9 and 10). Two semi-trailer units were parked on Lot D, the contents of which are unknown (Appendix B, Photographs 12 and 14).</p> <p>Surface depressions were noted along the southwest side (in-board side) of the Slip 2 dock wall on Lot C, as well as behind the dock wall of Slip 3 at its northwestern end (Appendix B, Photographs 28, 38, and 39).</p>	<p>The visible surface of the debris piles and their moderate size did not suggest that significant quantities of potential hazardous materials or petroleum products were present. Observed materials appeared to be limited to metal pipes, wood, metal siding, landscape fabric, and apparently empty steel drum carcasses. Considering the field observations and the current use of the property as a vacant industrial property, the debris piles are a <i>de minimis</i> condition.</p> <p>The overhead door assemblies were intact and appeared to be stored on the ground for possible salvage. The foam insulation appeared to be intact within each door unit. Considering the field observations and the current use of the property as a vacant industrial property, the door assemblies are a <i>de minimis</i> condition.</p> <p>The numerous steel drums appeared to be empty and stored for future salvage or for use as trash receptacles. Considering the field observations and the current use of the property as a vacant industrial property, the stored drums are a <i>de minimis</i> condition.</p> <p>Based on the location and the observations, the depressions appear to be associated with wash-out of fill soil and or settlement of fill behind the dock walls of Slips 2 and 3. The most significant depressions are at the western end of Slip 2 on Lot C. There was no evidence of debris or a release of hazardous materials or petroleum associated with the depressions. This area was fenced-off with a temporary fence. The depressions appeared to reflect physical processes affecting the condition of portions of the dock walls in the two slips. For these reasons this finding is not a REC.</p>	-



<b>Finding ID #</b>	<b>Description of Finding</b>	<b>Opinion with Respect to Finding</b>	<b>REC ID #</b>
13	<i>Temporary Storage of Snow</i> - The Lot D area is periodically used for winter snow storage for snow removed from city streets (Ref. 4a). Some sand and minor trash (i.e. paper, plastic, glass) was observed on and within the snow stockpile.	The storage of snow on the site results in the deposition of road sand and minor trash picked-up by snow plows during winter snow plowing. The snow melts and infiltrates into the ground or drains into the on-site storm drains. Considering the field observations and the current use of the property as a vacant industrial property, the seasonal storage of snow is a <i>de minimis</i> condition.	-

### 3.3 Data Gaps

Data gaps encountered during the preparation of this assessment Update are discussed in the following table:

<b>Potentially Significant Data Gap</b>	<b>Sources of Information Consulted to Address Data Gap</b>	<b>Opinion on Significance of Data Gap</b>
Data failure. The reasonably ascertainable standard historical sources likely to be useful were searched, however the property's first developed use prior to ~1880, could not be determined.	The early waterfront development included filling to create piers and docks and is shown to have begun in approximately 1880 on additional historical maps, which were reviewed from this year (Ref. 1f). Additional filling and development is documented on subsequent maps or photographs.	Filling and development of piers or docks is documented on additional maps that were obtained for review. This is not a significant data gap.
Certain areas of the Property were not accessible or inspected during the Property inspection. These areas include: • No building roof areas were accessed.	The roof of the garage building was indirectly observed from exterior side photographs. No equipment or storage of materials was detected.	Based on the indirect observation information and the nature of the building construction, this is not a significant data gap.
Some of the ground surface was obscured by snow, ice or ponded water.	The interviews and prior assessments have not indicated observations or evidence of potential releases at the surface (Ref. 1g, 1i, 4a, 4b).	Based on the readily ascertainable information, this is not a significant data gap. See the recommendations section below.
Vegetation was dormant due to seasonal conditions; therefore, vegetative stress could not be determined.	No additional sources of information were available to further evaluate vegetative conditions on the Property.	This data gap may be significant. See the recommendation section below.
The interiors of the two semitrailers parked on Lot D were not accessible and were not viewed.	No additional information regarding the contents (if any) of the trailers was available.	Because the trailers are in fair condition (with the exception of the two batteries noted in Findings) and are raised above the ground with no evidence of leakage or spillage from the trailer compartments, this data gap is not significant.

<b>Potentially Significant Data Gap</b>	<b>Sources of Information Consulted to Address Data Gap</b>	<b>Opinion on Significance of Data Gap</b>
<p>The stored steel drum piles were too wide and the drums too numerous to allow access for individual observation or inspection.</p>	<p>Previous reports (Ref. 1g) and interviews (Ref. 4a) provided information and the peripheral drums were inspected and assumed to be representative of the majority.</p>	<p>It was noted that the history of the drum storage was that drums were obtained for use as trash receptacles (Ref. 1g). Most drums appeared to be stored upside-down and most were in good condition. Many of the drums had been painted, reportedly for use as trash receptacles for special events. All drums that were accessible for inspection were found to be empty. Based on the information provided and the observations that were made, this data gap is not significant.</p>

### 3.4 Additional Investigation

Based on the results of the Update we have the following recommendations for additional evaluation of the Property:

- If future site development is planned, a supplemental Phase II investigation should be considered to further evaluate the Recognized Environmental Conditions for evidence of a release of hazardous substances or petroleum. The scope of the investigation should also seek to evaluate fill soil conditions and potential groundwater quality to assist in planning proper management of soil or water that may be disturbed during future construction work.
- The nature of, or risks posed by, potential site impacts may depend on the planned development and site uses. As noted in Section 3.2, the nature of potential impacts and whether a finding is a Recognized Environmental Condition, may depend upon the planned uses of the Property. Therefore, future site uses should be considered when evaluating further assessment plans or investigation results for the Property.
- Depending on the results of additional Property investigation activities, future development work may benefit from planning for environmental conditions that may be encountered during construction or other site activities. This may take the form of a project-specific response action plan or an environmental construction contingency plan, or both.
- If future development of the Property includes work within the former boat slips (Slips 2 and 3), assessment of conditions within the slips should be conducted to inform development planning. This may include sediment sampling and bathymetric surveying. Assessment of conditions within the slips was not part of the scope of this Assessment.

- There are two automotive-type batteries mounted on a semitrailer on Lot D. These are likely lead-acid batteries. The batteries are exposed to the elements and are in poor condition. They should be removed and properly disposed or recycled.
- The debris piles, drums, semi trailers and other structures, if not needed for future Property uses, should be removed and properly recycled or disposed. The debris piles and drums should be inspected by qualified professionals, during or prior to, removal to confirm no hazardous materials, petroleum products or other hazardous conditions exist requiring management.

## 4.0 Conclusions

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527 of *Bayfront Lots C and D, 700-1000 West Railroad Street*, the Property. Any exceptions to, or deletions from, this Practice are described in Section 1.4 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the Property except for the following:

REC #	Recognized Environmental Condition
1	<b>Fill Materials-</b> The presence of fill of unknown origin is documented by a number of different sources.
2	<b>Food Service of America closed LUST site #2094-</b> Petroleum impacts to soil were documented to remain at the Former Food Service of America site- located on the Property in the Lot C area at the foot of S. 8 <sup>th</sup> Avenue West as shown on Figure 2.
3	<b>Former Northern Scrap Iron and Metal Facility on western Lot C-</b> There is evidence of the historical presence of a former scrap facility on the Property.
4	<b>Various Former Oil Companies-</b> Based on the historical review, several small oil companies were formerly present in warehouses on the Property (Parcel C) as well as on the adjacent property to the southwest along the waterfront. There may have been some oil storage or handling associated with these past operations.
5	<b>Former Western Electric Company-</b> A telephone equipment manufacturing facility was located on the 9 <sup>th</sup> Avenue Pier in Parcel C from before 1936 to between 1955 and 1963.
6	<b>Former Rail lines and rail staging areas-</b> Rail lines at one time accessed the majority of the Property. Staging areas for loading bulk materials such as coal, lime, cement and other materials including oil products, scrap or wastes may have been present.
7	<b>Former Paint warehouse-</b> A Sherwin Williams paint warehouse was present on Parcel C from 1935 to 1940.
8	<b>Former Cold Storage Warehouse-</b> Several cold storage operations were located on Parcel C. Use of refrigerant chemicals and/or various foam or other insulation materials may have occurred.

(note- there were 13 findings and 8 RECs)

See the Findings and Opinions section for additional details. Appendix A includes detailed site inspection and setting information. Additional detailed information and documentation is provided in the remaining Appendices.

### 4.1 Deviations

There were no deletions, deviations from, or additions to the Practice associated with the Assessment other than the limitations and exceptions listed in Section 1.4.

### 4.2 Additional Services

No additional services were part of the scope of the Update.

## 5.0 References

The following resources are numbered for use as references.

REF#	Resource	Years Covered or Item Date
<b>Standard Historical Resources</b>		
1a	Aerial Photographs – Appendix C	1939, 1953, 1961, 1972, 1975, 1981, 1991, 1997, 2003, 2008
1b	Historical Fire Insurance Maps - Appendix C	1884, 1885, 1892, 1902, 1908, 1924, 1949, 1955, 1963, 1969
1c	City of Duluth Assessor’s Records - Appendix A	2010
1d	Reverse City Directories - Appendix C	1930, 1935, 1940, 1946, 1951, 1956, 1961, 1966, 1971, 1976, 1981, 1986, 1991, 1996, 2001, 2006
--	Building or City Inspection Department Records	Not reviewed
1e	Zoning/Land Use Records - City of Duluth Planning Dept Website. City of Duluth Comprehensive Plan, 2006- future land uses map. Appendix A	2006
1f	Other Historical Source <i>Historical Summary: Bayfront Property Area, 500-1000 Railroad Street, Duluth, Minnesota.</i> Prepared by Barr Engineering Company for the City of Duluth Brownfield Assessment Grant Project, March 2008. Appendix E	2008
1g	Prior Assessment <i>Phase I Environmental Property Assessment: City of Duluth Waterfront Properties, 500-1000 Railroad Street, Duluth, Minnesota.</i> Prepared by Barr Engineering Company March 2004 for the City of Duluth. Appendix E	2004
1i	Prior Assessment: <i>Limited Phase I Assessment (Historical Records Review), Bayfront Property, Duluth, Minnesota.</i> Prepared by Barr Engineering Company for the Duluth Economic Development Authority, April 1992. Appendix E	1992
<b>Physical Setting Sources</b>		
2a	U.S. Geological Survey Topographic Maps – Appendix C	1895, 1953, 1969, 1975, 1993
2b	Minnesota Department of Health <i>County Well Index</i> Appendix A	2010

REF#	Resource	Years Covered or Item Date
2c	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.	1982
2d	Published Geologic Report: G.B. Morey. 1996. <i>Geologic Map of Minnesota, Bedrock Geology</i> . Minnesota Geological Survey, University of Minnesota.	1996
2e	Published Geologic Report: Olcott, P.G., et al. 1978. <i>Water Resources of the Lake Superior Watershed Northeastern Minnesota</i> . USGS Hydrologic Investigation Atlas HA-582. U.S. Geological Survey.	1978
<b>Standard Environmental Record Sources</b>		
3a	Tribal Records (EDR)	Not Updated- except as noted in Ref. 3b
3b	Vendor Report- Environmental Data Resources (EDR)	Report obtained 2/25/2010. See EDR report for dates of databases reviewed
<b>Interviews</b>		
4a	Property Owner/User Representative: <i>Heidi Timm-Bijold, Manager – Business Resources City of Duluth, 218-730-5324</i>	3/3/2010
4b	Public Works/City Engineering: <i>Bill Bergstrom, Senior Engineering Technician, 218-730-5076</i>	3/5/2010
-	Planning/Development Authority: <i>John Judd, Sr. Planner, 218-730-5301</i>	-
4c	Fire Department Inspector: <i>Marnie Grondahl, Deputy Fire Marshall, 218-730-4398</i>	3/5/2010
4d	Grandma's Inc./ETOR <i>Ron Anderson, property manager 218-727-2250</i>	3/8/2010
<b>Supplemental Resources</b>		
5a	Minnesota Dept. of Health. June 2002. <i>City of Duluth, Minnesota Source Water Assessment: Lakewood Water Treatment Plant.</i>	2002 Appendix A

REF#	Resource	Years Covered or Item Date
5b	Previous Investigation Report: <i>Phase II Environmental Site Assessment Report, Duluth Waterfront Property, Duluth, MN.</i> Prepared by Barr Engineering Company for the City of Duluth. August 2004.	2004 Appendix E
5c	Previous Investigation Report: Minnesota Pollution Control Agency LEAK file #2094- Partial copy of J&D Tank Services Excavation Report. November 1990.	1990 Appendix E
5d	Previous Investigation Report: Minnesota Pollution Control Agency LEAK file #2094- Partial copy of American Engineering and Testing, Inc. report. 1994.	1994 Appendix E
5e	Minnesota Pollution Control Agency- " <i>What's in My Neighborhood</i> " web-based geographic information system on-line database review tool at <a href="http://www.pca.state.mn.us/wimn/index.cfm">http://www.pca.state.mn.us/wimn/index.cfm</a>	2010
5f	Additional Map <i>Utility Map</i>	2009
5g	Additional Historical Map <i>Historical View of Duluth, MN</i>	1883, Appendix C
5h	Additional Historical Review <i>City of Duluth, Bayfront History and Planned Development.</i>	2010
5i	Additional Historical Maps <i>St. Louis County Assessor's Office Bayfront Division Plat Maps</i>	Available on website

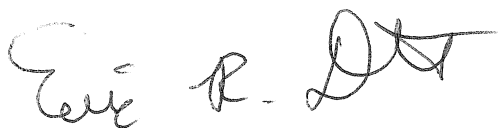


## 6.0 Signature and Qualifications of Environmental Professional

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I declare that, to the best of my professional knowledge and belief, I meet the definition of *Environmental Professional* as defined in §312.10 of 40 CFR 312. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Barr performed this Assessment in conformance with the ASTM, International (ASTM) Practice E 1527-05. Special terms, conditions, limitations, and exceptions that apply to the Assessment are described throughout this Report and in the Appendices



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Eric Dott, P.G. Minnesota

Environmental Professional (April 7, 2010)

Qualifications of the Environmental Professional are summarized in Appendix G.