3.19 Contaminated Sites

Existing Conditions

Contaminated sites can be encountered during the construction and operation of public projects. Without proper treatment, removal, and containment, these materials may present a danger to human health and the environment. The identification of known and potential contaminated sites is important because it can reduce the possibility of exposure.

For more information, refer to the Initial Site Assessment in Appendix J.

To identify known or potential contamination, an Initial Site Assessment (ISA) of the study area was conducted (Shannon & Wilson 2004). An addendum was added in October 2005 to provide additional information about the potential environmental impacts associated with the sites identified in the ISA. The ISA included records review, environmental database review, site visits, and personal interviews. Records review included aerial photographs, lease histories, utility history, and the 1991 site assessment of the ARRC headquarters building. The databases reviewed included the Underground Storage Tank (UST) Database, the Leaking Underground Storage Tank (LUST) Database, and the Contaminated Sites Database as well as the EPA Databases and the Anchorage Fire Department Hazardous Conditions List.

Potentially Contaminated Sites

Three contaminated sites are known to exist within the proposed project ROW. The sites are listed in Table 3.12 and shown in Figure 3.**52**~~51~~.

Table 3.12. Contaminated Sites

Site Number	Property
1	6400 Rovenna Street
2	6800 Arctic Blvd
3	6831 Arctic Blvd.

Source: Shannon & Wilson 2005

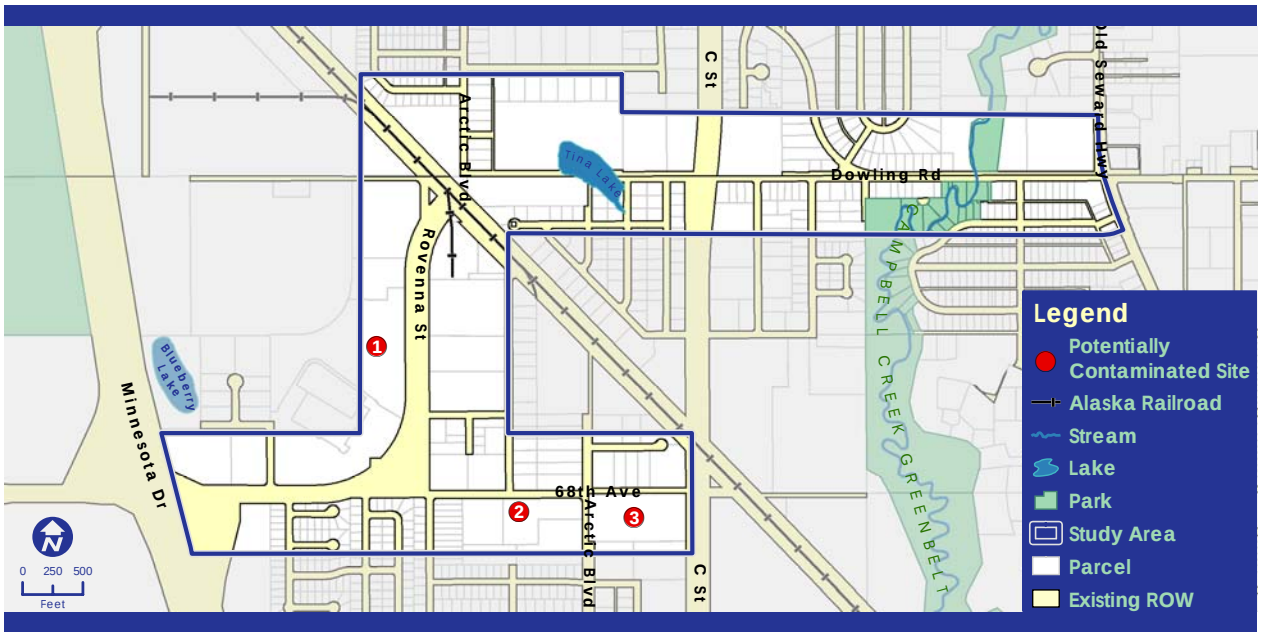

Figure 3.**52**~~51~~ Potentially Contaminated Sites

Site 1 is the former Alaska Seafood International property. Petroleum hydrocarbon, solvent, or both contaminants were found in one or more of the soil, surface water, and groundwater. ADEC has not closed the site and considers the cleanup and assessment of the site to be ongoing. The affected soil has been excavated and removed from the site. Recent borings/wells also indicate that affected groundwater and soils are no longer present (Shannon & Wilson 2005).

Site 2 has contaminated soils associated with diesel, leaded gasoline, and unleaded gasoline tanks. The affected soil was excavated and stockpiled onsite. Sampling of the stockpile indicated that the contaminant concentrations are less than the applicable cleanup levels. The site has been given "Site Closure" status by ADEC (Shannon & Wilson 2005).

Site 3 has contaminated soil associated with a 5,000-gallon diesel tank. The affected soil is no longer present, and ADEC has given the tank site a "No Further Action" status. As a result, it is unlikely that this release would affect the proposed project. Contaminated soil was also encountered during the removal of a heating oil tank. Groundwater samples contained diesel-range

organics (DRO), benzene, or both in excess of the applicable cleanup levels. The groundwater flow direction is to the south, and it is unlikely that this contaminated site would affect the proposed project (Shannon & Wilson 2005).

Three other sites in the study area are known to contain USTs and LUSTs. Figure 3.**53**~~52~~ shows these site locations.

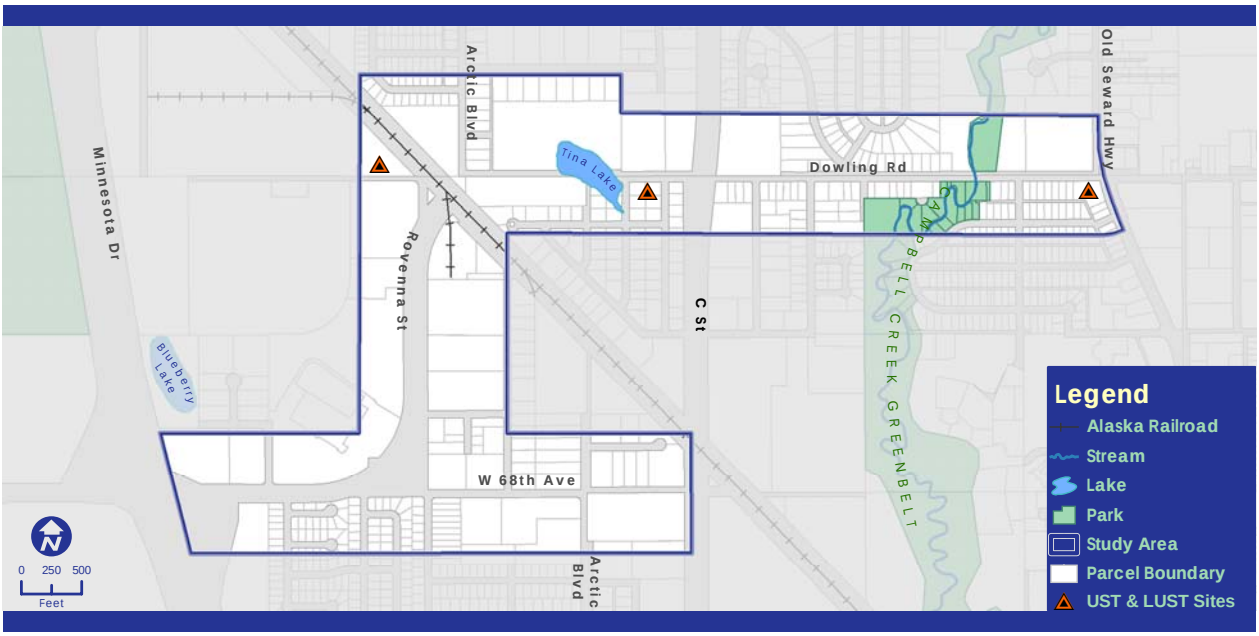

Figure 3.**53**~~52~~ UST and LUST Sites

The Tesoro station, at 6010 Old Seward Highway is known to have two 12,000-gallon gasoline USTs. This location is also a LUST site. Groundwater contamination has been documented migrating off-site into the ROW and onto the parcel to the north. Groundwater samples taken in March 2005 indicate that the groundwater affected with DRO, gasoline range organics, and aromatic volatile organics is present south of Dowling Road, within the ROW. Groundwater affected with residual range organics (RRO) is also present west of Old Seward Highway in the ROW area. In this area, groundwater is generally between 17 and 28 feet below the surface.

The World Equipment, Inc., site, formerly known as Denali Fuel, is located at 6029 McKay Street. According to ADEC records, this location is a UST site. An 8,000-gallon diesel UST was reported to have been removed in 1992. However, the UST was

What is a Residual Range Organic?
According to 18 AAC 78/995, RRO is a heavy-range petroleum product, which may include lubricating oil. RRO products cover petroleum hydrocarbon compounds corresponding to an alkaline range from the beginning of n-pentacosane (C25) to the beginning of n-hextriacontaine (C36) and having a boiling point range between approximately 400 and 500 degrees Centigrade.

not properly registered or decommissioned with ADEC. Information regarding tank closure of site assessment activities was not available (Shannon & Wilson 2005).

Alaska Steel, located at 1200 West Dowling Road, is listed as a UST site. One 1,000-gallon diesel UST was removed from the site in 1998. ADEC records do not indicate whether site assessment activities were conducted during the UST closure activities (Shannon & Wilson 2005).

Because the study area is located in an industrial area, unknown contaminated sites may exist.

Hazardous Materials in Tina Lake

Because Tina Lake is surrounded by industrial land uses, hazardous material in the lake has been identified as a potential concern. In September 2005, two sediment samples (S1 and S2) and two surface water samples (W1 and W2) were taken from Tina Lake. Table 3.13 summarizes the contamination found in Tina Lake. The sediment samples revealed that the arsenic and chromium levels were present in levels above the applicable cleanup levels. These concentrations are within the range of naturally occurring levels within Anchorage. At one site, low levels of petroleum hydrocarbons were detected. There is potential for higher levels of petroleum hydrocarbons in the fill material on the northern side of the lake.

One surface water sample contained an RRO concentration level that is greater than the applicable cleanup level.

Table 3.13 Summary of Contamination in Tina Lake

		Sample Number			
Contaminant	**Cleanup Level (ppm) Soil/Water**	**S1**	**S2**	**W1**	**W2**
RRO – ppm	11,000/1.1	117	1,030	0.701	**2.39**
Arsenic - ppm	2/0.05	**2.23**	**2.55**	N/A	N/A
Chromium – ppm	26/0.1	**27.5**	**28.5**	N/A	N/A

Source: Shannon & Wilson 2005
ppm = parts per million
Bold text indicates a level above the applicable cleanup level.

Environmental Consequences

No known contaminated sites would be affected by the No Action Alternative.

The three known contaminated sites in the study area are unlikely to be affected the Proposed Action. These known contaminated sites have already been cleaned up enough so that they are not anticipated to be affected by the Proposed Action (Shannon & Wilson 2005).

The Proposed Action would acquire a small amount of ROW along the northern edge of the Tesoro property (approximately 0.02 acre). No relocation of the USTs is anticipated. Although possible, it is unlikely that the Proposed Action would encounter affected soil, groundwater, or both at this site (Shannon & Wilson 2005).

Under the Proposed Action, acquisition of any ROW from the World Equipment, Inc., or the Alaska Steel properties is not anticipated. Therefore, any potential contamination should not affect the Proposed Action.

For many years, several properties adjacent to Tina Lake have been used for industrial purposes, including car storage. It is expected that fluids such as gasoline, oil, or battery fluids have leaked from the junk cars into the soil. There are established procedures for the remediation of automobile salvage yards. The cleanup cost is approximately $4,100 per vehicle. Approximately 250 cars would need to be removed. It is believed that removal of the vehicles and vehicle parts along with the excavation, treatment, and disposal of affected soil~~ed~~ would be sufficient to obtain an ADEC "No Further Action" designation (Shannon & Wilson 2006).

Because no excavation activities are planned for Tina Lake, the need to clean up the affected water is not anticipated for the Proposed Action.

What is a Site Investigation?
A Site Investigation evaluates a property for potential contamination and to assess the potential liability for contamination on the site.

The investigation would include interviews with property owners, a review of historical documents, regulatory agency consultation, and complete site inspection.

The estimated cost to clean up hazardous material found in the proposed ROW is $ 1.1 million.

Construction

Construction activities associated with the Proposed Action would not affect any known hazardous waste sites. Sites recognized as potential hazardous waste sites within the construction ROW would be investigated before construction and any hazardous waste found would be addressed in accordance with state and federal regulations.

Hazardous materials that would be used, transported, or stored within the project ROW as part of the construction activities could adversely affect the environment if not properly handled and contained. Materials would include asphalt, concrete, cable lubricants, and equipment fuel and lubricants.

To minimize and prevent spills or leakage of hazardous materials during construction, standard spill-prevention measures would be implemented during construction. To mitigate ~~the effect of~~ ~~for~~ potential hazardous materials spills, spill clean-up equipment (such as oil-absorbent pads) would be available onsite during construction **and construction personnel would be trained in their use**.

Mitigation and Authorizations

The location and extent of the release from the LUSTs would be determined before construction.

A Hazardous Waste Site Investigation would be conducted before property acquisition. If necessary, an ADEC corrective action plan would be developed and implemented to handle any known contamination within the construction limits.

The construction contractor would be required to prepare and implement a Hazardous Materials Control Plan to prevent and limit contamination and unintended contaminant releases.

If contaminated materials were encountered unexpectedly, all work in the area of contamination would be stopped and ADEC would be contacted. All contaminated material would be handled and disposed of in compliance with an ADEC-approved corrective action plan.

Further investigation into possible contamination would be conducted before property acquisition. In the event contamination is encountered during construction, it would be addressed in accordance with applicable state and federal regulations.

Hazardous materials used during project construction would be stored and handled according to **local,** state and federal regulations. **If required, a SPCC plan would ~~will~~ be prepared and implemented by the construction contractor to address storage of fuels on-site.** Material Safety Data Sheets would be available for all hazardous materials on the site. A hazardous material control plan would be developed for the selected alternative. Construction vehicles would contain spill prevention kits in case of minor hazardous materials or chemical spills during construction.

- Construction plans would include measures to contain potential contaminants.
- Standard spill-prevention measures would be implemented during construction. Spill cleanup equipment (such as oil-absorbent pads) would be available onsite during construction **and construction personnel would be trained in their use**.

A Section 404 permit and a Section 401 Water Quality Certificate would be required before placing any fill in Tina Lake.