

## 13.3 Hazardous Materials and Waste Sites

This section identifies sites in the proposed Port MacKenzie Rail Extension project area known to be or that might have been contaminated by hazardous materials, identifies sites that are regulated hazardous waste facilities, and describes the potential impacts of constructing and operating the proposed rail line on or near known hazardous materials and waste sites. Section 13.3.1 describes the regulations governing hazardous materials and waste sites, Section 13.3.2 describes the study area, Section 13.3.3 describes the analysis methodology, Section 13.3.4 describes the affected environment (existing conditions), and Section 13.3.5 describes potential environmental consequences (impacts). Chapter 11 (Transportation) addresses issues related to hazardous materials during rail line operations (e.g., spills or leaks from railcars, incidents related to materials carried by the railcars).

A hazardous materials waste site is an area that has been affected by spills of oil or other releases of hazardous substances, by the migration of hazardous substances from a separate source, by disposal of hazardous substances in a manner once considered acceptable practice, or by use of a hazardous substance at a site in a manner once considered acceptable. Hazardous substances affecting a site might also have been disposed illegally or in an unauthorized manner. A regulated hazardous waste facility is a facility approved for handling (e.g., generating, transporting, treating, storing, and disposing of) hazardous wastes in accordance with Federal and state regulations.

Combined, these sites are where known hazardous materials, substances, or petroleum products are present under conditions that indicate an existing release, past release, or a potential release into soil, groundwater, or surface water; or that constitute other hazards to human health or the environment (such as unexploded ordnance).

There could be environmental consequences during project construction if contaminated groundwater was disturbed or contaminated soil was disturbed or removed and relocated or used elsewhere as fill. Removal by excavation or dewatering could expose contaminants and other hazardous substances, which could increase risks to human health or the environment.

### 13.3.1 Regulatory Setting

Table 13.3-1 lists and summarizes relevant Federal and state regulations and oversight programs concerning hazardous materials sites and facilities.

<b>Regulation or Law</b>	<b>Agency</b>	<b>Oversight Program</b>
<b>Federal</b>		
Comprehensive Environmental Response, Compensation and Liability Act of 1976 and Superfund Amendments and Reauthorization Act of 1986	USEPA	Superfund program compels responsible parties to clean up or reimburse the Federal Government for USEPA-led cleanups of abandoned hazardous waste sites.

**Table 13.3-1  
Applicable Environmental Regulations, Agencies, and Oversight Programs<sup>a</sup> (page 2 of 3)**

<b>Regulation or Law</b>	<b>Agency</b>	<b>Oversight Program</b>
<b>Federal (continued)</b>		
The Resource Conservation and Recovery Act of 1976	USEPA	Resource Conservation and Recovery Act program focuses on active facilities containing or handling (i.e., generating, transporting, treating, storing, disposing of) hazardous waste and cleanup of releases.
Amendments to the Resource Conservation and Recovery Act in 1984	USEPA	Resource Conservation and Recovery Act amendments address prevention and cleanup of petroleum underground storage tank releases.
Safe Drinking Water Act and National Primary Drinking Water Regulations (40 Code of Federal Regulations 141)	USEPA	Under the Safe Drinking Water Act, the USEPA Region 10 Drinking Water Program sets standards for the quality of drinking water and oversees states, localities, and water suppliers.
Federal Water Pollution Control Act Amendments (Clean Water Act) of 1972, 1977, and 1984; and National Pollutant Discharge Elimination System	USEPA	National Pollutant Discharge Elimination System permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States.
Summary of the Emergency Planning and Community Right-to-Know Act of 1986	USEPA	Alaska State Emergency Response Commission helps local communities protect public health, safety, and the environment from chemical hazards.
Federal Insecticide, Fungicide, and Rodenticide Act of 1996	USEPA	This Act mandates Federal control of pesticide distribution, sale, and use.
The Toxic Substances Control Act of 1976	USEPA	This Act gives the USEPA the ability to track the 75,000 industrial chemicals currently produced in or imported to the United States.
<b>State of Alaska</b>		
Alaska Drinking Water Regulations, Section 18, Chapter 80 of the Alaska Administrative Code (18 AAC 80)	ADEC, Division of Water Quality	The ADEC, Division of Water Quality, establishes maximum contaminant concentrations for organic and inorganic contaminants in public water systems.
Alaska Water Quality Standards (18 AAC 70)	ADEC, Division of Water Quality	Water Quality Standards Assessment and Reporting Program establishes criteria for protected classes of water use for groundwater and surface water.
Oil and Hazardous Substances Pollution Control (18 AAC 75)	ADEC, Division of Spill Prevention and Response	Contaminated Sites Program protects human health and the environment by managing the cleanup of contaminated soil and groundwater in Alaska.
Underground Storage Tanks (18 AAC 78)	ADEC, Division of Spill Prevention and Response	Contaminated Sites Program, Underground Storage Tank staff of the Industry Preparedness Program provides technical and regulatory assistance on underground storage tank systems.
Alaska Solid Waste Management Regulations (18 AAC 60)	ADEC, Division of Environmental Health	Solid Waste Program manages solid waste (including hazardous waste) to prevent violation of the Alaska water quality standards (18 AAC 70).

**Table 13.3-1  
Applicable Environmental Regulations, Agencies, and Oversight Programs<sup>a</sup> (page 3 of 3)**

Regulation or Law	Agency	Oversight Program
<b>Joint Federal/State of Alaska Programs</b>		
Alaska Hazardous Waste Management Regulations (18 AAC 62)	ADEC and USEPA	Regulations apply to hazardous waste generators, transporters, owners/operators of treatment, storage, and disposal facilities. Although hazardous waste regulations are promulgated for Alaska, the USEPA is the primary enforcement agency for hazardous waste management in Alaska under the Federal Resource Conservation and Recovery Act regulations.
Defense Environmental Restoration Act	ADEC, Division of Spill Prevention and Response, Contaminated Sites Program	Congress passed the Defense Environmental Restoration Act in 1986 to clean up U.S. Department of Defense hazardous materials sites. The ADEC is responsible for oversight of cleanup activities on Department of Defense hazardous materials sites.
Defense State Memorandum of Agreement	ADEC, Division of Spill Prevention and Response, Contaminated Sites Program; USEPA (Comprehensive Environmental Response, Compensation and Liability Act )	In 1991, Alaska and the U.S. Department of Defense agreed to cooperatively work on cleaning up Department of Defense hazardous materials sites (1,200 individual sites at approximately 200 facilities).
Statewide Management Action Plan on Cleanup of Formerly Used Defense Sites	ADEC, USEPA, and U.S. Army Corps of Engineers	In 2002, ADEC, U.S. Army Corps of Engineers, and USEPA signed a Statewide Management Action Plan on cleanup of Formerly Used Defense Sites in Alaska. The Plan describes the Formerly Used Defense Sites program and the State of Alaska and Federal oversight roles.
Military Munitions Response Program	ADEC, Division of Spill Prevention and Response, Contaminated Sites Program; USEPA	The Military Munitions Response Program addresses Department of Defense sites containing munitions constituents or munitions and explosives of concern. Under this program, the Army Corps of Engineers is performing environmental response activities at Formerly Used Defense Sites for the U.S. Army (Department of Defense executive agent for Formerly Used Defense Sites). ADEC and USEPA are responsible for oversight.

<sup>a</sup> AAC = Alaska Administrative Code; ADEC = Alaska Department of Environmental Conservation; USEPA = U.S. Environmental Protection Agency.

### 13.3.2 Study Area

The study area includes lands within 0.5 mile of the centerline of each rail line segment. Proposed rail line construction and operations would not be likely to affect or be affected by hazardous materials sites more than 0.5 mile from the rail line.

### 13.3.3 Analysis Methodology

Known hazardous materials sites and regulated sites within 0.5 mile of the centerline of each alternative segment were identified through searches of site records in Federal and state of Alaska databases and interviews with regulatory program staff. This Environmental Impact Statement (EIS) evaluates those sites for risks and potential impacts related to proposed rail line construction and operations.

Environmental Data Resources, Inc., supplied initial data and facilities information on the known hazardous materials sites. This included a list of three identified known sites and 416 “orphan sites” (sites for which there is not enough information about their exact locations) that could be within 1 mile of the alternative segments. Additional records were then reviewed and several regulatory program managers interviewed to assist in identifying orphan sites in the study area.

Results of the search and interviews further clarified that 2 of the 416 orphan sites are within 0.5 mile of the alternative segment centerlines. Appendix N of this EIS lists the Federal and state databases searched.

Based on available information regarding location, proximity to proposed rail line segment rights-of-way (ROWs), hazardous material or contaminant characteristics, and regulatory status, hazardous materials sites were evaluated to assess potential risks to human health and environmental impacts to lands, surface water, and groundwater that could result from proposed rail line construction and operations.

Regulatory status includes “open” and “closed” sites. Open sites are hazardous materials sites where remediation is ongoing. Closed sites are sites where contamination remains but institutional controls are in place, or sites where remediation activities are complete and have included removal of contaminated soil or groundwater or other hazardous materials. Rail line construction and operations on or near closed sites would not be likely to result in adverse environmental consequences or would pose almost negligible risk. Therefore, closed sites are considered low-risk sites. In contrast, open sites could result in adverse environmental consequences and pose a higher risk. Open sites of concern that would present greater risk during rail line construction and operations include:

- Sites within 0.5 mile of the rail line where land use or local zoning and institutional controls (deed or regulatory restrictions) do not prohibit borrow pit development.
- Sites within 500 feet of the rail line ROW that could be excavated or otherwise disturbed by intrusive actions associated with rail line construction.

### 13.3.4 Affected Environment

Five known sites within 0.5 mile of the rail line segments were identified for further evaluation of potential impacts that could result from proposed rail line construction and operations. Figures 13.3-1 through 13.3-3 show the locations of the five known sites, from north to south. Four of the sites have specific locations. Site 5, shown on Figure 13.3-3, is the former Susitna Flats Gunnery Range and covers a large area. Of the five sites, three (Sites 1, 3, and 5) are within 500 feet of rail line segment ROWs. Table 13.3-2 describes the five sites.

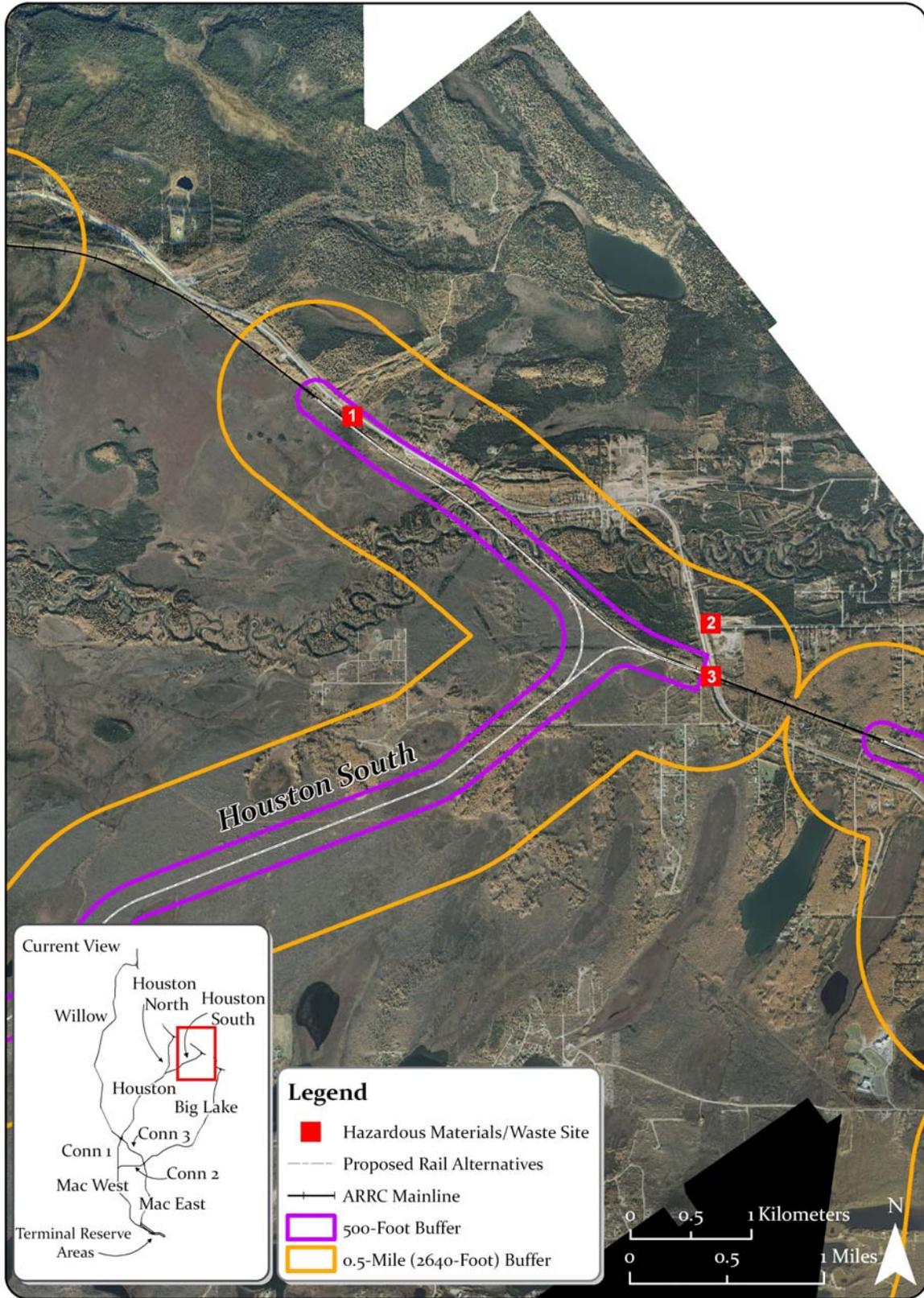


Figure 13.3-1. Hazardous Materials/Waste Sites along the Northern Section of the Houston-South Segment, Sites 1 through 3

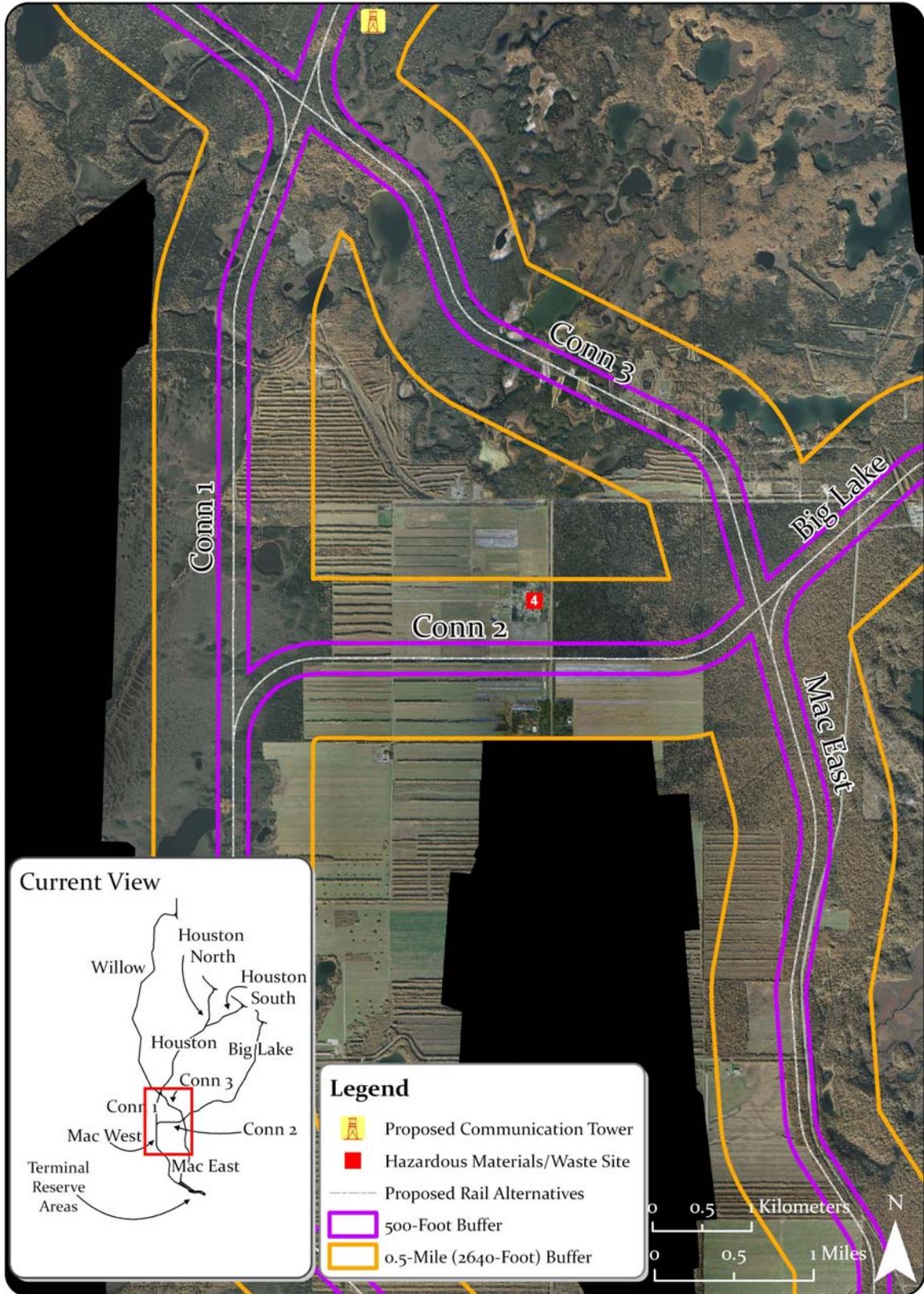
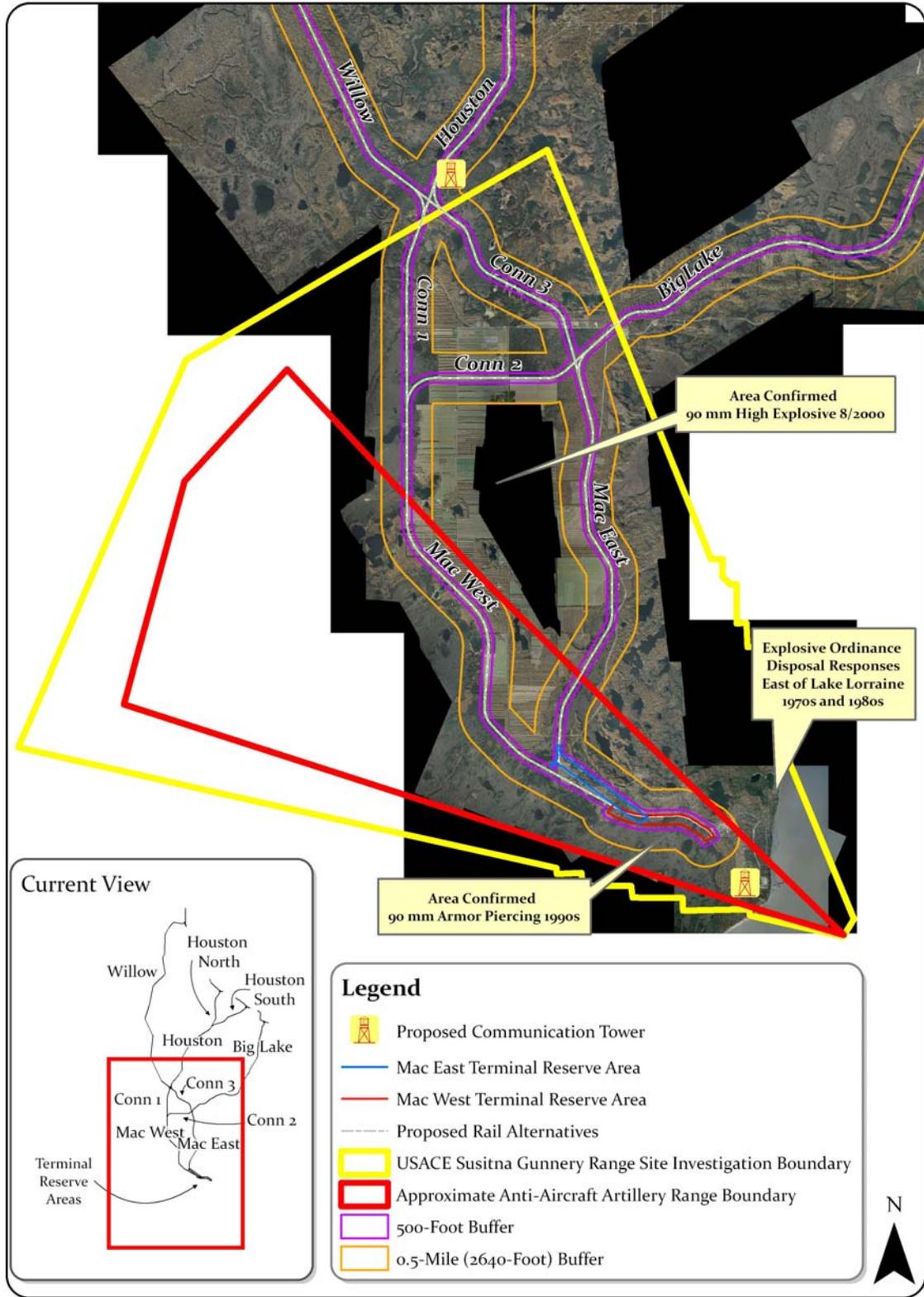


Figure 13.3-2. Hazardous Materials/Waste Sites along the Northern Section of Connector 2 Segment, Site 4



**Figure 13.3-3. Area Encompassing Susitna Gunnery Range Hazardous Materials/Waste Sites along the Mac West, Mac East, Connector 1, Connector 2, Connector 3, and Big Lake Segments, Site 5**

**Table 13.3-2  
Known Hazardous Material Sites and Regulated Facilities of Concern (page 1 of 2)**

Site No.	Name (ROW Location)	Address	Longitude/ Latitude	Notes	Status
<b>Figure 13.3-1 (Hazardous Materials/Waste Sites Along the Northern Section of the Houston South Segment)</b>					
1	Houston Landfill (within right-of-way)	Mile Post 59, Parks Highway, Houston, Alaska, 99694	61.636954°/- 149.852272°	Leachate containing several solvents was being generated at site and allowed to flow out of the facility. The site was subsequently capped and groundwater monitored for more than 5 years, starting in 1992. By 1997, no volatile organic compounds were detected in groundwater and metals were below regulated maximum allowable contaminant levels for groundwater.	Closed, Cleanup Complete (Low Risk)
2	QAP Houston Generator Spill (900 feet north of the proposed segment right-of-way)	Mile Post 57.3, Parks Highway, Houston, Alaska, 99694	61.622778°/- 149.798611°	About 3 gallons of diesel fuel was spilled from a generator staged at construction headquarters in support of the construction of the separated grade crossing at Mile Post 56.3. Fuel was cleaned up and release was reported to the Alaska Department of Environmental Conservation.	Closed, Cleanup Complete (Low Risk)
3	ARRC MP 56 Parks Highway (within existing Alaska Railroad Corporation mainline right-of-way, and within proposed segment right-of-way)	Mile Post 56.4, Parks Highway, Near Railside Drive, Houston, Alaska 99694	61.622778°/- 149.798611°	Petroleum (aviation jet fuel) contamination in soil related to 1972 train derailment encountered during excavation associated with Parks Highway road construction to widen road and build a railroad overpass (separated grade crossing). About 10,000 cubic yards of contaminated soil was excavated and stockpiled in four stockpiles within the Alaska Railroad Corporation right-of-way next to the site. Remaining contaminated soil was capped with 3 to 6 feet of clean fill. In 2000, the Alaska Department of Environmental Conservation approved alternative cleanup levels for this site based on site-specific conditions; institutional controls also were established (no removal of stockpiled soil without prior Department of Environmental Conservation approval). The Alaska Railroad Corporation also proposed spreading the soil within the right-of-way, and the Department of Environmental Conservation approved a "no further remedial action planned" conditional closure.	Closed, Cleanup Complete, Institutional Controls (Low Risk)
<b>Figure 13.3-2 (Hazardous Materials/Waste Sites Along the Northern Section of Connector 2 Segment)</b>					
4	Point MacKenzie Rehabilitation Center (960 feet north of the proposed segment right-of-way boundary)	Mile Post 0.6, 13690 S. Guernsey Road, Wasilla, Alaska 99687	61.417302°/- 150.080278°	Sampling after underground storage tank removal found petroleum-contaminated soil above maximum contaminant levels remaining in place. Vertical and lateral extent of contamination has not yet been defined.	Open (Low Risk)

**Table 13.3-2  
Known Hazardous Material Sites and Regulated Facilities of Concern (page 2 of 2)**

Site No.	Name (ROW Location)	Address	Longitude/Latitude	Notes	Status
<b>Figure 13.3-3 (Susitna Gunnery Range Hazardous Materials/Waste Sites Along the Mac West, Mac East, Connector 1, Connector 2, Connector 3, and Big Lake Segments)</b>					
5	Susitna Gunnery Range (encompasses both rights-of-way and areas within 1 mile of the Mac West, Mac East, Connector 1, Connector 2, and Connector 3 segments, and a small portion of the Big Lake Segment)	Range 16N/Township 5W (T16N/R5W), Seward Meridian: Sections 1-5, 9-12, 13-18, 22-27, and 34-36; T16N/R4W: Sections 31-32; T15N/R5W: Sections 1-3, 10-12, 14-15, 22-23, 26-27, and 35-36; T15N/R4W: Sections 4-6, 7-8, 17, 20, 28-29, and 32-33; T14N/R5W: Sections 1, 12-13; T14N/R5W: Sections 5, 7-8, 17-18, 20-23, and 26-27.	Not applicable	The former Susitna Gunnery Range comprises 86,570 acres that extend approximately 17 miles from the firing point to beyond the Little Susitna River. The U.S. Army used the range in the 1950's and early 1960's as an impact area and safety zone for training anti-aircraft artillery troops in firing long-range weapons. A site investigation has been completed. No munitions were identified during the site investigation field effort. However, 90-millimeter projectiles (high explosive and armor piercing) were encountered during previous site activities.  Due to the historical confirmation of munitions at the anti-aircraft range and the potential for munitions and munitions debris to be discovered in areas that have not been inspected by the Army, it was recommended that further investigations be performed. It was also recommended that areas of concern previously identified but then omitted from site investigation be reconsidered for further investigation. This includes areas where munitions and munitions debris were previously discovered.	Open (High Risk)

## 13.3.5 Environmental Consequences

### 13.3.5.1 Proposed Action

#### Common Impacts

##### Construction Impacts

There could be safety or environmental impacts during such construction activities as grubbing, filling, excavating, or related dewatering operations in areas of contaminated soils or groundwater within the rail line ROW and other work areas during rail line construction.

##### Operations Impacts

Routine rail line operations would not be expected to result in adverse impacts from hazardous materials sites. Chapter 11 (Transportation) addresses issues related to hazardous materials during rail line operations (e.g., spills or leaks from railcars, incidents related to materials carried by the railcars).

##### Southern Segments

###### *Mac West, Mac East, Connector 1, Connector 2, and Connector 3 Segments*

Site 5, the former Susitna Gunnery Range, is an open site composed of 86,570 acres. All areas within 0.5 mile of the Mac West, Mac East, Connector 1, Connector 2, and Connector 3 segment ROWs would be within the former Susitna Gunnery Range (see Figure 13.3-3). The Army used the range in the 1950's and early 1960's as an impact area and safety zone for training anti-aircraft artillery troops in firing long-range weapons (Parsons Brinckerhoff, 2008).

The Susitna Gunnery Range is no longer owned or leased for government/military purposes; it is now designated as a Formerly Used Defense Site. Rail line construction and operations activities in the area could result in environmental or safety impacts due to the potential presence of munitions constituents<sup>1</sup> or munitions and explosives of concern.<sup>2</sup>

There could be safety or environmental impacts if munitions and explosives of concern or munitions constituents were encountered during grubbing, filling, excavating, and related dewatering operations within the rail line ROW, adjacent areas, and borrow areas during rail line and road construction.

The U.S. Army Corps of Engineers and the Alaska Department of Environmental Conservation (ADEC) disagree regarding the need to further evaluate the former range for presence of

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<sup>1</sup> Munitions constituents are any materials originating from unexploded ordnance, discarded military munitions, or other military munitions, including explosive and nonexplosive materials, and emission, degradation, or breakdown elements of such ordnance or munitions.

<sup>2</sup> Munitions and explosives of concern are military munitions that might pose unique safety risks. These include unexploded ordnance, discarded military munitions, or munitions constituents present in high enough concentrations to pose an explosives or other health hazard.

munitions constituents and munitions and explosives of concern. The Corps of Engineers is responsible for cleaning up Formerly Used Defense Sites to ADEC standards and satisfaction. At present, the Corps of Engineers plans to conduct an investigation of five potential development sites in the Point MacKenzie area in the summer of 2010, which would include sites in the vicinity of the proposed rail line. The Corps of Engineers has indicated that further investigation, if any, would depend on the results of the summer 2010 investigation (Anchorage Daily News, 2010).

In addition to Site 5, there is one known low-risk site along Connector 2 Segment (see Figure 13.3-2). Site 4 (Point MacKenzie Rehabilitation Center) is an open site with petroleum-contaminated soil that remains after removal of an underground storage tank. Impacts from rail line construction would be unlikely because the site is not within 500 feet of the proposed rail line and is within a developed industrial area that would not likely be used as a source of gravel or ballast.

### **Northern Segments**

#### *Willow, Houston, and Houston North Segments*

There are no known sites of concern that present a potential for environmental consequences resulting from rail line construction activities along these segments.

#### *Big Lake Segment*

The south end of the Big Lake Segment would be within the former Susitna Gunnery Range (Site 5). Potential impacts associated with rail line construction within the area of the former gunnery range are described above under southern segments.

#### *Houston South Segment*

There are three known low-risk sites along the Houston South Segment (see Figure 13.3-1). Site 1, Houston Landfill, was closed with solid waste capped in place. The solid waste cap would not be disturbed as a result of rail line construction. Subsequent to capping the site, groundwater monitoring for more than 5 years found no detectable volatile organic compounds or metals.

Site 2 (QAP Houston Generator Spill) and Site 3 (ARRC MP 56 Parks Highway) are known to have contained petroleum-contaminated soils prior to cleanup and closure. Site 2 is 900 feet north of the proposed ROW; therefore, construction would not likely affect any possible residual areas of *de minimis*-contaminated soils. Contaminated soil from the cleanup of Site 3 remains stockpiled north of the site within the existing Alaska Railroad Corporation main line ROW. *De minimis*-contaminated soil might remain in place at the site, but it is capped with 3 to 6 feet of clean fill and is within the Parks Highway ROW. Construction of the proposed rail line would not be likely to disturb the stockpiled contaminated soils north of the existing main line.

### **13.3.5.2 No-Action Alternative**

Under the No-Action Alternative, ARRC would not construct and operate the proposed Port MacKenzie Rail Extension, and there would be no impacts to hazardous materials and waste sites from the project.