

13.4 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 13.4.1 describes the regulations governing hazardous materials and waste sites, Section 13.4.2 describes the study area, Section 13.4.3 describes the analysis methodology, Section 13.4.4 describes the affected environment (existing conditions), Section 13.4.5 describes potential environmental consequences (impacts), and Section 13.4.6 describes unavoidable environmental consequences of the proposed action to hazardous materials and waste sites. Chapter 11 (Transportation) addresses issues related to hazardous materials during rail line operation (such as, spills or leaks from rail cars and incidents related to materials carried by the rail cars).

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 of illegally or in an unauthorized manner. A regulated hazardous waste facility is a facility approved for handling (including, 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 (1) indicate an existing release, past release, or a potential release into soil, groundwater, or surface water or (2) 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 if 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.

13.4.1 Regulatory Setting

Table 13.4-1 lists and summarizes relevant Federal and state regulations and oversight programs concerning hazardous materials sites and facilities.

13.4.2 Study Area

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

**Table 13.4-1
Applicable Environmental Regulations, Agencies, and Oversight Programs^a (page 1 of 2)**

Regulation or Law	Agency	Oversight Program
Federal		
Comprehensive Environmental Response Compensation and Liability Act of 1980 and Superfund Amendments and Reauthorization Act of 1986, 42 U.S.C. § 9601	USEPA	The superfund program compels responsible parties to clean up or reimburse the Federal government for USEPA-led cleanups of abandoned hazardous waste sites.
The Resource Conservation and Recovery Act of 1976, 42 U.S.C. § 6901	USEPA	The 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, 42 U.S.C. §§ 6907(a), 6912(a), 6921, 6924, 6925 and 6944	USEPA	The 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 [C.F.R.] part 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.
Summary of the Emergency Planning and Community Right-to-Know Act of 1986, 42 U.S.C. § 11000	USEPA	The 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, 7 U.S.C. § 136	USEPA	This Act mandates Federal control of pesticide distribution, sale, and use.
The Toxic Substances Control Act of 1976, 15 U.S.C. § 2601	USEPA	This Act gives the USEPA the ability to track the 75,000 industrial chemicals currently produced in or imported to the United States.
State of Alaska		
Alaska Drinking Water Regulations, Section 18, Chapter 80 of the Alaska Administrative Code (Alaska Admin. Code 18 § 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 (Alaska Admin. Code 18 § 70)	ADEC Division of Water Quality	The 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 (Alaska Admin. Code 18 § 75)	ADEC Division of Spill Prevention and Response	The Contaminated Sites Program protects human health and the environment by managing the cleanup of contaminated soil and groundwater in Alaska.
Underground Storage Tanks (Alaska Admin. Code 18 § 78)	ADEC Division of Spill Prevention and Response	The 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 (Alaska Admin. Code 18 § 60)	ADEC Division of Environmental Health	The Solid Waste Program manages solid waste (including hazardous waste) to prevent violation of the Alaska water quality standards (Alaska Admin. Code 18 § 70).

**Table 13.4-1
Applicable Environmental Regulations, Agencies, and Oversight Programs^a (page 2 of 2)**

Regulation or Law	Agency	Oversight Program
Joint Federal/State of Alaska Programs		
Alaska Hazardous Waste Management Regulations (Alaska Admin. Code 18 § 62)	ADEC and USEPA	These 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, 10 U.S.C. § 2701	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).
Federal Water Pollution Control Act Amendments (Clean Water Act) of 1972, 1977, and 1984, 33 U.S.C. § 1251; and National Pollutant Discharge Elimination System (33 U.S.C. § 1342)	USEPA	The National Pollutant Discharge Elimination System permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. The USEPA has granted authority for administration of the NPDES to ADEC, which has established the APDES program. See Section 4.1 of the NPDES program under Federal regulations.
Statewide Management Action Plan on Cleanup of Formerly Used Defense Sites	ADEC, USEPA, and USACE	In 2002, the ADEC, USACE, 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 Federal and state 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 USACE is performing environmental response activities at Formerly Used Defense Sites for the U.S. Army (the Department of Defense executive agent for Formerly Used Defense Sites). The ADEC and USEPA are responsible for oversight.

^a ADEC = Alaska Department of Environmental Conservation; USEPA = U.S. Environmental Protection Agency; USACE = U.S. Army Corps of Engineers.

13.4.3 Analysis Methodology

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

Environmental Data Resources, Inc. supplied initial data and facilities information on the known hazardous materials sites. This included a list of 3 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 proposed rail line segments. Additional records were then reviewed and several regulatory program managers were 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 proposed rail line segment centerlines. Appendix N of this EIS lists the Federal and state databases searched.

Based on available information regarding location, proximity to the proposed rail line segment 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 land, surface water, and groundwater that could result from construction and operation of the proposed rail line.

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 where remediation activities are complete and have included removal of contaminated soil, groundwater, or other hazardous materials. Proposed rail line construction and operation 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 operation 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.

13.4.4 Affected Environment

Five known sites within 0.5 mile of the proposed rail line segments were identified for further evaluation of potential impacts that could result from proposed rail line construction and operation. Figures 13.4-1 through 13.4-3 show the locations of the 5 known sites, from north to south. Four of the sites have specific locations. Site 5, shown on Figure 13.4-3, is the former Susitna Flats Gunnery Range and covers a large area. Of the 5 sites, 3 (Sites 1, 3, and 5) are within 500 feet of proposed rail line segment ROWs. Table 13.4-2 describes the 5 sites.

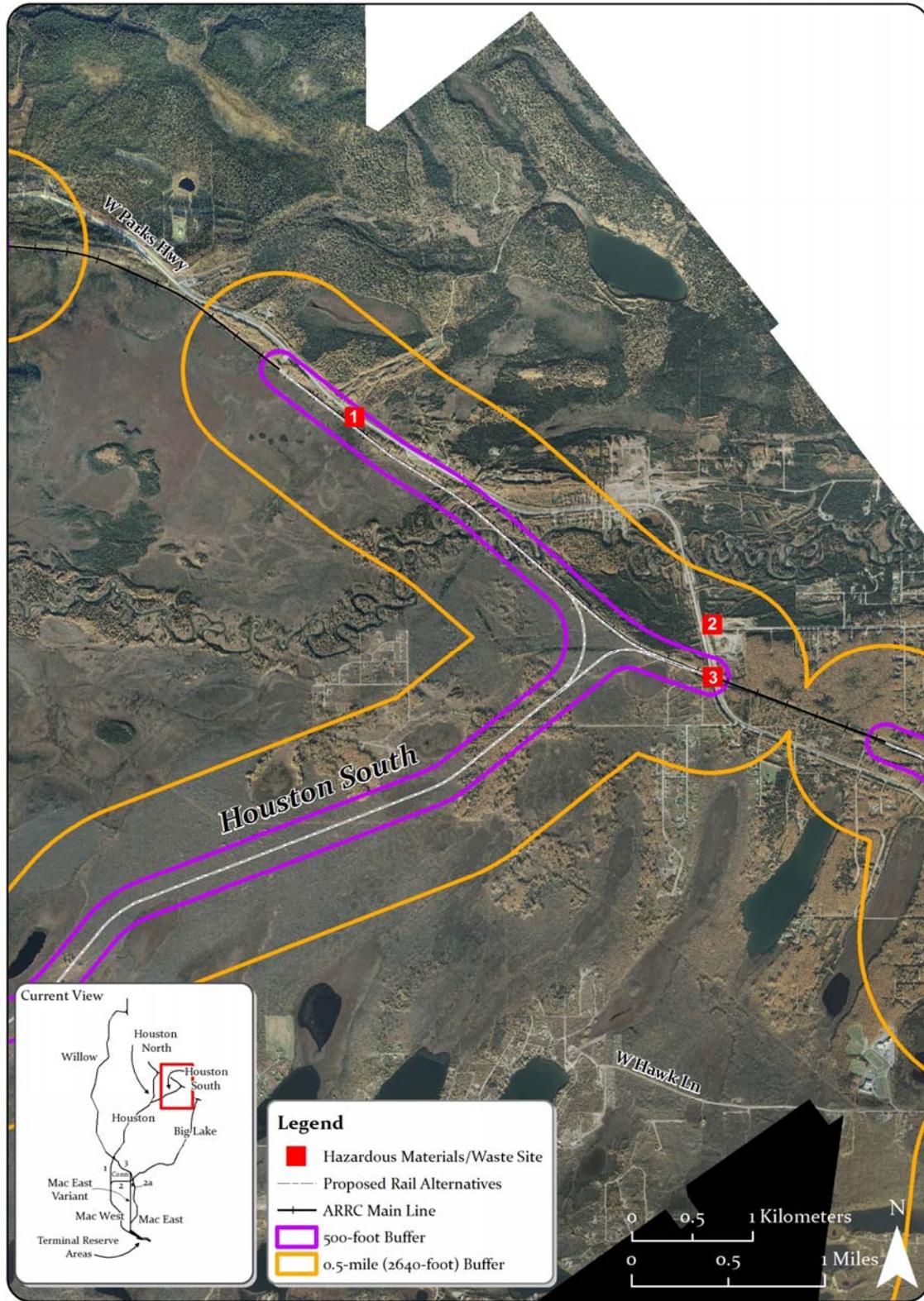


Figure 13.4-1. Hazardous Materials/Waste Sites along the Northern Section of the Houston South Segment, Sites 1 through 3

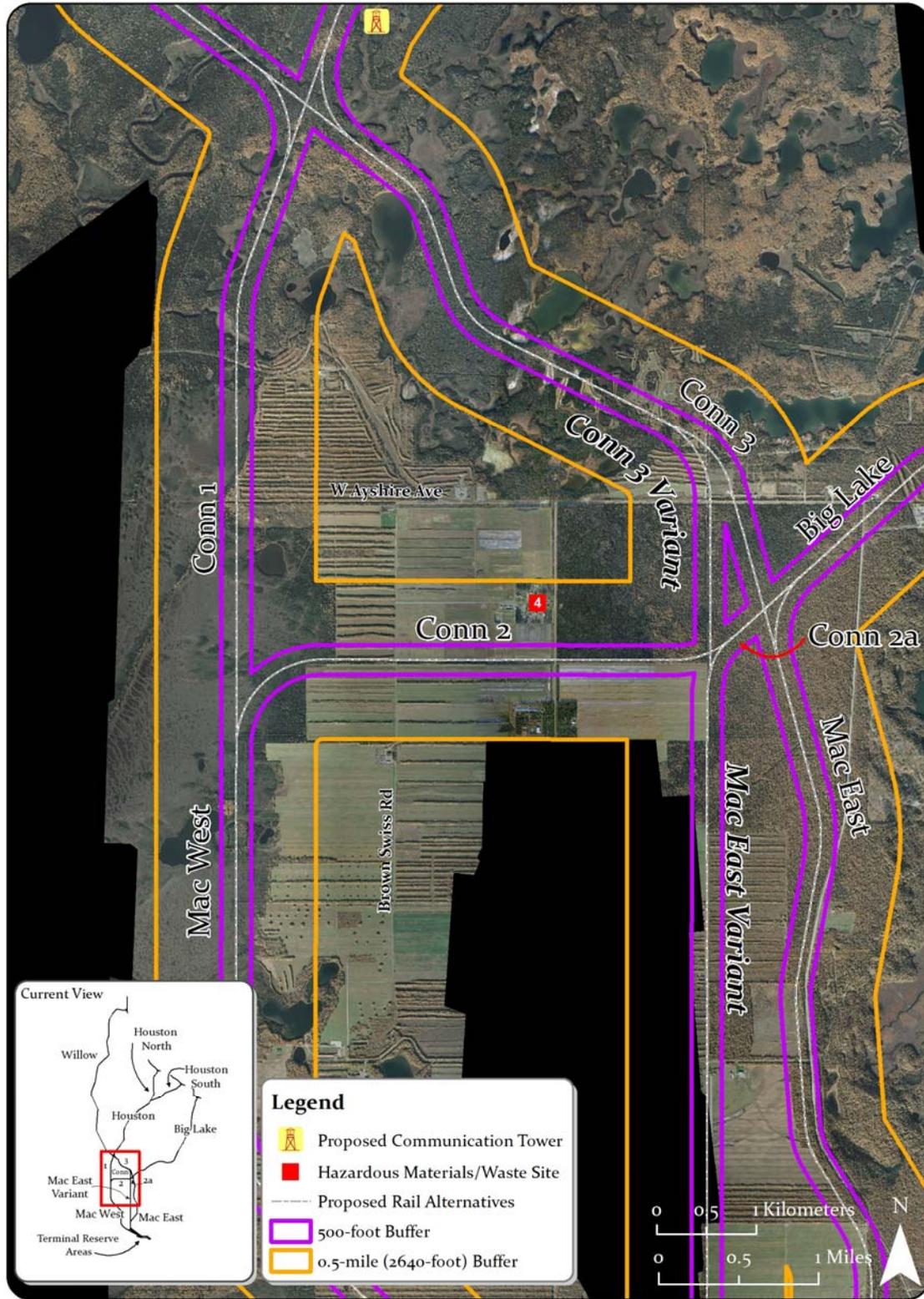


Figure 13.4-2. Hazardous Materials/Waste Sites along the Northern Section of the Connector 2 Segment, Site 4

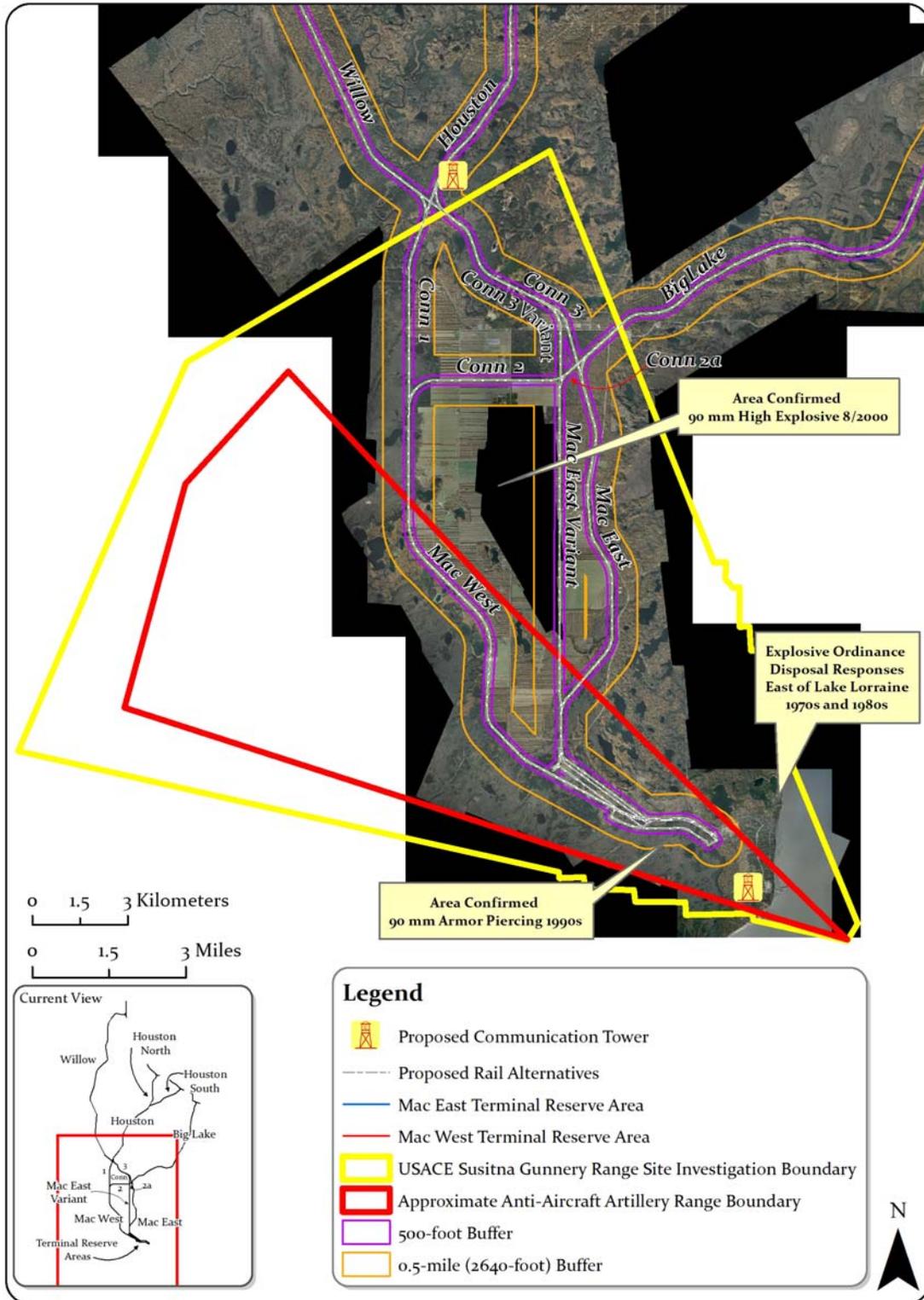


Figure 13.4-3. Area Encompassing Susitna Gunnery Range Hazardous Materials/Waste Sites along the Mac West, Mac East, Mac East Variant, Connector 1, Connector 2, Connector 3, Connector 2a, Connector 3 Variant, and Big Lake Segments, Site 5

**Table 13.4-2
Known Hazardous Material Sites and Regulated Facilities of Concern (page 1 of 2)**

Site No.	Name (ROW Location)	Address	Longitude/ Latitude	Notes	Status
Figure 13.4-1 (Hazardous Materials/Waste Sites Along the Northern Section of the Houston South Segment)					
1	Houston Landfill (within ROW)	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 ROW)	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 grade separated crossing at Mile Post 56.3. Fuel was cleaned up and release was reported to the ADEC.	Closed, Cleanup Complete (Low Risk)
3	ARRC MP 56 Parks Highway (within existing ARRC mainline ROW, and within proposed segment ROW)	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 4 stockpiles within the ARRC ROW next to the site. Remaining contaminated soil was capped with 3 to 6 feet of clean fill. In 2000, the ADEC approved alternative cleanup levels for this site based on site-specific conditions; institutional controls also were established (no removal of stockpiled soil without prior ADEC approval). ARRC 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)
Figure 13.4-2 (Hazardous Materials/Waste Sites Along the Northern Section of Connector 2 Segment)					
4	Point MacKenzie Rehabilitation Center (960 feet north of the proposed segment ROW 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 13.4-2
Known Hazardous Material Sites and Regulated Facilities of Concern (page 2 of 2)**

Site No.	Name (ROW Location)	Address	Longitude/Latitude	Notes	Status
Figure 13.4-3 (Susitna Gunnery Range Hazardous Materials/Waste Sites Along the Mac West, Mac East, Mac East Variant, Connector 1, Connector 2, Connector 3, Connector 2a, Connector 3 Variant, and Big Lake Segments)					
5	Susitna Gunnery Range (encompasses both ROW and areas within 1 mile of the Mac West, Mac East, Mac East Variant, Connector 1, Connector 2, Connector 3, Connector 2a, and Connector 3 Variant 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, and 28-33; T14N/R5W: Sections 1, 12-13; T14N/R5W: Sections 5, 7-8, 17-18, 20-23, and 26-27. T14N/R4W: Sections 4-6, 7-8, 17-23, and 26-27	Not applicable	<p>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.</p> <p>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 U.S. 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. USACE is currently conducting investigations at 5 priority areas.</p>	Open (High Risk)

13.4.5 Environmental Consequences

13.4.5.1 Proposed Action

Common Impacts

Construction Impacts

There could be safety or environmental impacts during construction activities, such 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.

Operation Impacts

Routine rail line operation 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 operation (such as spills or leaks from rail cars or incidents related to materials carried by the rail cars).

Southern Segments

Mac West, Mac East, Mac East Variant, Connector 1, Connector 2, Connector 3, Connector 2a, and Connector 3 Variant 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, Mac East Variant, Connector 1, Connector 2, Connector 3, Connector 2a, and Connector 3 Variant segment ROWs would be within the former Susitna Gunnery Range (see Figure 13.3-3). 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 (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 operation activities in the area could result in environmental or safety impacts due to the potential presence of munitions constituents¹ or munitions and explosives of concern.²

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 operation within the rail line ROW, adjacent areas, and borrow areas during rail line and road construction.

¹ 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.

² 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.

The USACE and the ADEC disagree regarding the need to further evaluate the former range for the presence of munitions constituents and munitions and explosives of concern. The USACE is responsible for cleaning up Formerly Used Defense Sites to ADEC standards and satisfaction. At present, the USACE is conducting an investigation of 5 potential development sites in the Point MacKenzie area, which includes sites in the vicinity of the proposed rail line. The USACE 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 1 known low-risk site along the Connector 2 Segment (see Figure 13.4-2). Site 4 (Point MacKenzie Rehabilitation Center) is an open site with petroleum-contaminated soil that remains from the 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 under the southern segments.

Houston South Segment

There are 3 known low-risk sites along the Houston South Segment (see Figure 13.4-1). 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 ARRC 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 likely disturb the stockpiled contaminated soils north of the existing main line.

13.4.5.2 No-Action Alternative

Under the No-Action Alternative, the 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.

13.4.6 Unavoidable Environmental Consequences of the Proposed Action

To avoid or minimize the potential environmental impacts from hazardous materials and waste sites from the proposed rail line as described above in Section 13.4.5.1, OEA is recommending that the Board impose 5 mitigation measures, including 3 voluntary measures proposed by the Applicant (see Section 19.9). These measures include requiring: development of a spill prevention, control, and countermeasure plan and/or a response plan for hazardous materials; notification to appropriate agencies in the event of a hazardous materials release; notification to the fire departments, FEMA, and MSB Emergency Operations Department of the construction schedule and an emergency telephone number; contractor training for the identification of hazardous materials, including unexploded ordnance; and observation of the findings and recommendations of the USACE investigation into contamination at the former Susitna Gunnery Range.

Notwithstanding the recommended mitigation measures, there still would be potential unavoidable impacts from hazardous materials and waste sites along the proposed rail line. Potential safety or environmental impacts that cannot be reasonably mitigated include the risk of disturbing contaminated soils, contaminated groundwater, and unexploded ordnance during rail line construction. OEA does not believe additional mitigation to hazardous materials and waste sites is warranted or reasonable.