

3.6 Hazardous Materials

Hazardous materials are substances that could affect the safety of the natural environment. There are risks in using, storing, and transporting hazardous materials. If a hazardous material is released into the environment, it can contaminate the surrounding area and expose people and the environment to harm.

This section describes hazardous materials in the study area. Impacts related to hazardous materials that could occur as a result of construction and operation of the Proposed Action or under the No-Action Alternative are also discussed, as well as measures identified to mitigate impacts resulting from the Proposed Action.

3.6.1 Regulatory Setting

Laws and regulations relevant to hazardous materials are summarized in Table 3.6-1.

Table 3.6-1. Regulations, Statutes, and Guidelines for Hazardous Materials

Regulation, Statute, Guideline	Description
Federal	
Comprehensive Environmental Response, Compensation, and Liability Act (42 USC 103)	Regulates former and newly discovered uncontrolled waste disposal and spill sites identified on the National Priority List of contaminated sites and under the Superfund cleanup program.
Superfund Amendment and Reauthorization Act (40 CFR 302)	Amended CERCLA and requires reporting for emergency response, emergency release, and hazardous and toxic chemical releases.
Federal Resource Conservation and Recovery Act (42 USC 6901 et seq.)	Governs the generation, storage, and transportation of hazardous waste and waste management activities for hazardous waste treatment, storage, and disposal facilities. This is a delegated Washington State program under the Washington Hazardous Waste Management Act.
Toxic Substances Control Act (15 USC 2601–2629)	Tracks industrial chemicals in the United States and regulates intrastate and interstate commerce.
Clean Water Act (33 USC 1342, 1344; 40 CFR 230)	Regulates the placement of fill material in waters of the United States, including fill placement below ordinary high water elevation or within navigable waters or wetlands.
Department of Transportation Hazardous Materials Regulations (49 CFR 100–185)	Protect against the risks to life, property, and the environment and apply to all interstate, intrastate, and foreign transport of hazardous materials in commerce.
National Emission Standards for Hazardous Air Pollutants (40 CFR 61–71)	Set standards regulating the emission of these pollutants with EPA and the state implementing and enforcing them. Hazardous air pollutants are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects.
Safe Drinking Water Act (42 USC 300f et seq.)	Requires the protection of groundwater and groundwater sources used for drinking water. Requires every state to develop a wellhead protection program.

Regulation, Statute, Guideline	Description
Occupational Safety and Health Act (29 USC 651 et seq.)	Enacted to “assure safe and healthful working conditions for working men and women.” Sets standards and enforces inspections to ensure that employers are providing safe and healthful workplaces.
State	
Washington Water Pollution Control Permit Program	Requires that all releases to waters of the state of a reportable quantity must be reported to Ecology as soon as possible, but no later than 24 hours after discovery.
Model Toxics Control Act and its implementing regulations (RCW 70.105D and WAC 173-340)	Requires potentially liable persons to assume responsibility for cleaning up contaminated sites. Requires reporting hazardous substance releases if they constitute a threat to human health or the environment.
State Water Pollution Control Law (RCW 90.48)	Provides Ecology with the jurisdiction to control and prevent the pollution of streams, lakes, rivers, ponds, inland water, salt waters, watercourses, and other surface and groundwater in the state.
Oil and Hazardous Substance Spill Prevention and Response (RCW 90.56)	Established to prevent the release of oil and other hazardous substances to the navigable waters of the state. Intended to prevent spills and promote programs that reduce the risk of spills.
Underground Storage Tank Regulations (RCW 90.76 and WAC 173-360)	Ensure that underground storage tanks are installed, managed, and monitored in a manner that prevents releases to the environment.
Water Quality Standard for Surface Waters of the State of Washington (WAC 173-201A)	Establishes water quality standards for surface waters in Washington State. Ecology is the responsible agency.
Sediment Management Standards (WAC 173-204)	Establish numerical standards for the protection of benthic invertebrates in marine sediments.
Washington Hazardous Waste Management Act (RCW 70.105, and WAC 173-303)	State equivalent of RCRA; requires designation of dangerous and extremely hazardous waste, and proper handling, storage, transport, and disposal of such wastes. Governs and establishes regulations for hazardous waste treatment, storage, and disposal facilities.
Washington Administrative Code (WAC 173-340-300)	Requires reporting hazardous substance releases if they constitute a threat to human health or the environment.
Washington Solid Waste Handling Standards (WAC 173-350)	Set standards for the proper handling and disposal of solid waste originating from residences, commercial, agricultural, and industrial operations and other sources.
General Occupational Health Standards (WAC 296-62)	Protect the health of employees and help create a healthy work place by establishing requirements to control health hazards including chemical hazard communication and exposure programs.
Hazardous Waste Operations (WAC 296-843)	Applies to facilities that have workers handling hazardous waste at a treatment, storage, or disposal facility and are required to have a permit under RCRA.

Regulation, Statute, Guideline	Description
Safety Standards for Construction Work (WAC 296-155)	Apply to work places where construction, alteration, demolition, related inspection, and/or maintenance and repair work, including painting and decorating, is performed. Set minimum safety requirements with which all industries must comply when engaged in these types of work.
Notes: USC = United States Code; CFR = Code of Federal Regulations; CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act; EPA = U.S. Environmental Protection Agency; WAC = Washington Administrative Code; Ecology = Washington State Department of Ecology; RCW = Revised Code of Washington; RCRA = Resource Conservation and Recovery Act	

3.6.2 Study Area

The study area for direct impacts is defined as the project area, which includes a portion of the former Reynolds Metals Company facility (Reynolds facility).

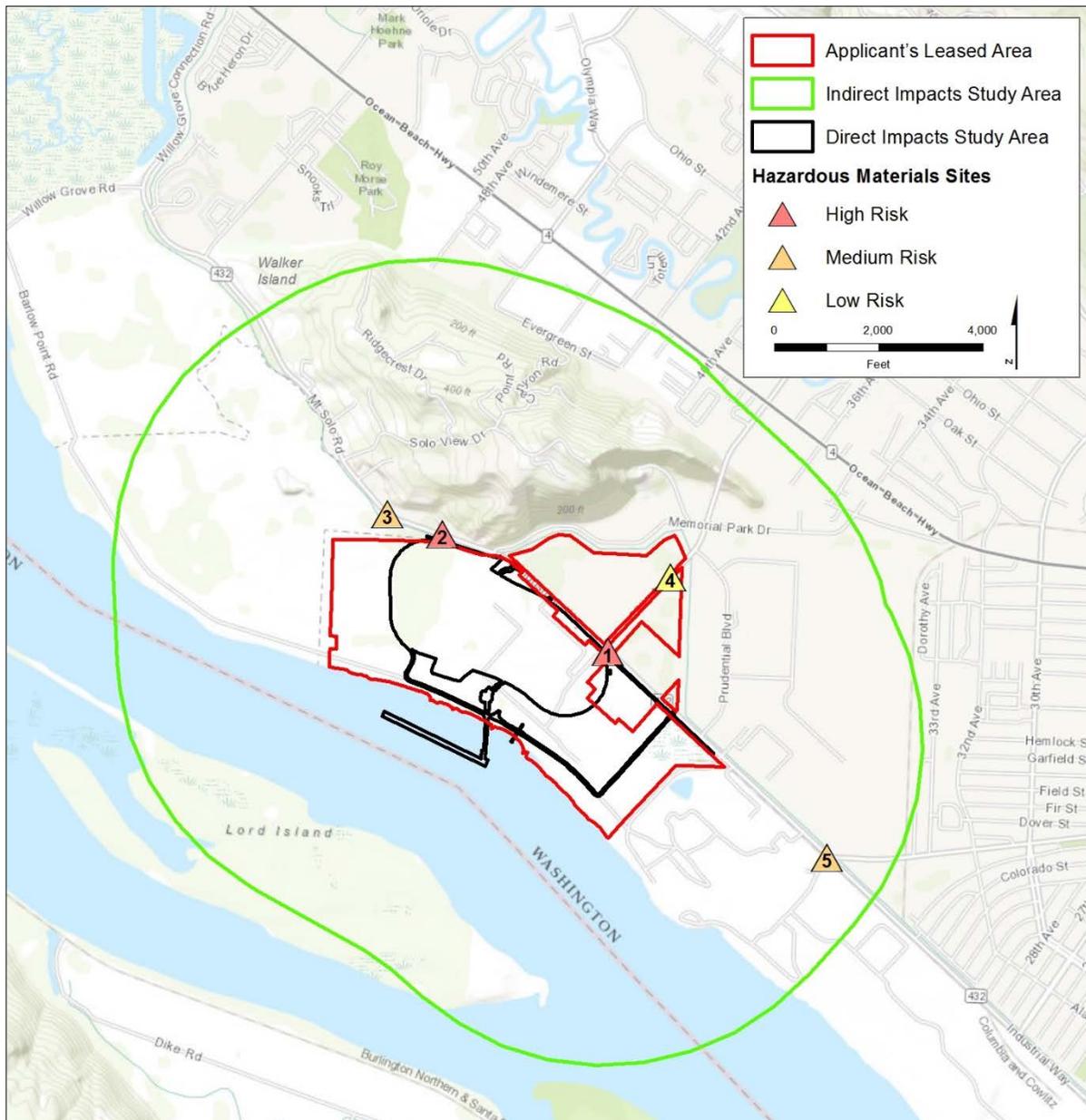
The study area for indirect impacts is defined as the area within 1 mile of the project area, as well as the rail line within 1 mile of the project area. It also includes the former Reynolds facility and the existing bulk product terminal in the Applicant’s leased area.

Additionally, the nearest hazardous materials sites with a high potential to cause environmental impacts, such as Superfund sites, landfills, or large-quantity generators of hazardous waste, were identified and evaluated, even if located outside the study area. The nearest federal Superfund site is the Hamilton-Labree Roads site, which is 33 miles north of the study area. Due to its distance from the study area, this site was not further evaluated and is not included in this Draft EIS. In addition, the nearest landfill was identified as the Cowlitz County Landfill, which is approximately 4 miles east of the study area. This site was not further evaluated in this Draft EIS due to its distance from the project area and because groundwater at this site flows away from the project area. Furthermore, a no further action (NFA) has been issued for the landfill site, further reducing its potential to affect or be affected by construction or operation of the Proposed Action.

Figure 3.6-1 shows the study areas for direct and indirect impacts, as well as the hazardous materials sites identified in the study area. Sites in the study area were ranked as being high-, medium-, or low-risk¹ regarding whether hazardous materials could affect or be affected by construction or operation of the Proposed Action (Section 3.6.3.3, *Data Screening*).

¹ *High-risk sites* include sites where both soil and groundwater have been affected by hazardous materials releases, and groundwater flow is predominantly toward the project area; the site is partially closed (e.g., soil cleanup has been completed) but has ongoing groundwater-focused remedial or monitoring activities planned; and the site is located within 500 feet of the project area. *Medium-risk sites* include sites where both soil and groundwater have been affected by hazardous materials releases and groundwater flow is predominantly toward the project area; the site is partially closed (e.g., soil cleanup has been completed) but has ongoing remedial or monitoring activities planned; and the site is located within 500 to 1,000 feet of the project area. *Low-risk sites* include sites where only soil has been affected by hazardous materials releases and groundwater has not been affected; the site has been closed by an oversight agency with a status of NFA or no further remedial action is planned; and the site is located more than 1,000 feet from the project area but within the study area.

Figure 3.6-1. Hazardous Materials Sites and Study Area



3.6.3 Methods

This section describes the sources of information and methods used to evaluate the potential impacts related to hazardous materials associated with the construction and operation of the Proposed Action and No-Action Alternative.

3.6.3.1 Hazardous Materials Definition

In this Draft EIS, *hazardous materials* refers to various types of contaminated or hazardous media, including contaminated environmental media, dangerous waste, solid waste, hazardous substances, and petroleum products.

- Contaminated environmental media includes soil, sediment, groundwater, surface water, or vadose zone air that have been contaminated by a release of a hazardous material, hazardous or dangerous waste, or hazardous substance. Sites with contaminated environmental media could be regulated under the federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) or Resource Conservation and Recovery Act (RCRA), or under the state Model Toxics Control Act (MTCA).
- Dangerous waste is solid waste designated in Washington Administrative Code (WAC) 173-303-070 through 173-303-100 as dangerous, or extremely hazardous or mixed waste. Dangerous waste includes all federal hazardous waste, plus certain wastes exhibiting specific criteria based on toxicity and persistence.
- Solid waste is defined slightly differently in state and federal regulations. State regulations define solid waste as solid and semisolid wastes including, but not limited to, garbage, rubbish, ashes, industrial wastes, swill, sewage sludge, demolition and construction wastes, abandoned vehicles or parts thereof, and recyclable materials. Federal regulations define solid waste as any garbage, refuse, or sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility, and other discarded material that includes solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations and from community activities. Solid waste includes hazardous and problem wastes.
- Hazardous substances are defined under CERCLA Section 9601(14). A list of more than 600 CERCLA hazardous substances is provided in 40 Code of Federal Regulations (CFR) 302.4. CERCLA Section 9601(33) defines pollutants or contaminants in terms of their negative impact on people and the environment.
- Hazardous substances are also defined under the state MTCA. The term means any dangerous or extremely hazardous waste as defined in Revised Code of Washington (RCW) 70.105.010 (5) and (6), or any dangerous or extremely dangerous waste as designated by rule under RCW 70.105; any hazardous substance as defined in RCW 70.105.010(14) or any hazardous substance as defined by rule under RCW 70.105; any substance that, on the effective date of this section, is a hazardous substance under Section 101(14) of the federal cleanup law, 42 U.S.C., Sec. 9601(14); petroleum or petroleum products; and any substance or category of substances, including solid waste decomposition products, determined by the director by rule to present a threat to human health or the environment if released into the environment.

The term *hazardous substance* does not include any of the following when contained in an underground storage tank from which there is not a release: crude oil or any fraction thereof or petroleum, if the tank is in compliance with all applicable federal, state, and local laws.

3.6.3.2 Information Sources

The following sources of information were used to identify the potential impacts of the Proposed Action and No-Action Alternative related to hazardous materials in the study area.

- *DataMap Area Study for the On-Site Alternative* (Environmental Data Resources 2014)

- *Millennium Coal Export Terminal Longview, Washington Hazardous Materials Resource Report* (URS Corporation 2014)
- *Final Remedial Investigation and Feasibility Study* (Anchor QEA 2015)
- Washington State Department of Ecology (Ecology) (2014a) regulatory files

The *DataMap Area Study for the On-Site Alternative* (Environmental Data Resources 2014) investigated all sites in the study area that use hazardous materials. The study included a search of federal, state, local, and other appropriate databases to obtain information on facilities that use, store, transport, or generate regulated and potentially hazardous substances. The database search results used in support of this analysis were reported in accordance with the ASTM Standard Practice for Environmental Site Assessments, E 1527-13. The *SEPA Hazardous Materials Technical Report* (ICF International 2016a) contains a complete list of searched databases.

3.6.3.3 Data Screening

The *DataMap Area Study for the On-Site Alternative* (Environmental Data Resources 2014) identified 24 sites within 1 mile of the project area. Eight of these sites are associated with historical and current operations in the Applicant's leased area (i.e., the 540-acre industrial site currently leased by the Applicant). Ten orphan sites² were identified; however, nine of these ten sites were determined to be outside the study area and were eliminated from further evaluation (Environmental Data Resources 2014). The one remaining orphan site within the study area was also eliminated from further consideration because no known releases have been reported for the site.

The remaining sites located outside the Applicant's leased area but within the study area were then screened to determine if they should be eliminated or carried forward for analysis. Screening criteria are listed below.

- Sites where hazardous materials are stored and used in compliance with laws and regulations (e.g., RCRA), including large- and medium-quantity generators and underground storage tank sites, were assumed to have negligible risks of being affected by or having an impact on the Proposed Action. Thus, these types of sites were excluded from further analysis.
- Other sites were also eliminated from further analysis, including closed sites or NFA sites where remediation (e.g., contaminated soil removal or groundwater cleanup) had been completed.

Sites that were retained based on the screening criteria listed above were subsequently ranked as being high-, medium-, or low-risk with regard to whether hazardous materials could affect or be affected by construction or operation of the Proposed Action. The ranking criteria considered the environmental media contaminated (soil or groundwater), the direction of groundwater flow, the status of remediation (site partially closed or closed with status of NFA), and distance between the hazardous materials site and the project areas.

Based on these criteria, five sites were identified in the study area: two sites were categorized as high risk, two as medium risk, and one as low risk. The remaining five sites in the study area are listed below.

² Orphan sites are hazardous materials sites where the polluter could not be identified or held accountable, and/or the address/location information is incomplete.

- **Site 1.** U.S. Department of Energy, Bonneville Power Administration, Longview Substation (high risk)
- **Site 2.** McCall Trucking (high risk)
- **Site 3.** Schill Brothers Asphalt & Paving/American Asphalt (medium risk)
- **Site 4.** GT Metals and Salvage (low risk)
- **Site 5.** Weyerhaeuser Chlor-Alkali Facility (medium risk)

These five hazardous materials sites are presented in Figure 3.6-1 and described in Section 3.6.5.1, *Proposed Action*.

3.6.3.4 Impact Analysis

Hazardous materials in the study area were assessed to determine the potential impacts of the Proposed Action and No-Action Alternative on hazardous materials, and the potential impacts of hazardous materials on these alternatives.

3.6.4 Existing Conditions

This section describes the existing conditions in the study area related to hazardous materials that could be affected by the construction and operation of the Proposed Action and the No-Action Alternative.

3.6.4.1 Contaminated Sites

This section summarizes the history of contamination and remedial actions in the Applicant's leased area, which includes the project area itself and the Applicant's leased area outside of the project area. The discussion also identifies chemicals of concern and final cleanup options or actions that could take place under a cleanup action plan. The boundary of the Applicant's leased area and the project area in relation to existing and former facilities is shown in Figure 3.6-2. For more information relative to past activities in the project area and in the Applicant's leased area, including remedial actions and further information, refer to the *Remedial Investigation/Feasibility Study* (Anchor QEA 2015).

Project Area

Contaminated sites in the project area include aluminum production facilities and former cable plant operations.

Aluminum Production Facilities

Initial industrial operations at the former Reynolds facility began in 1941 when the eastern portion of the project area was developed as an aluminum reduction plant for aluminum smelting and casting operations. These operations were expanded in 1967 when the western portion of the former Reynolds facility was developed for additional aluminum production; this area was known as the North Plant.

Smelter operations required an extensive dry-materials handling system for raw materials, such as alumina ore (transported by rail or ocean-going vessel), petroleum coke, coal tar pitch, anthracite coal, cryolite, and aluminum fluoride (transported by rail and truck). Liquid coal tar was unloaded from rail cars and transferred into on-site storage tanks, which were connected to the greenmill by distribution lines. At the greenmill, pitch (which contains polycyclic aromatic hydrocarbons [PAHs]) was used as a raw material for anode and cathode fabrication. Pitch was also stored on the ground near the rail unloading area. Elevated concentrations of fluoride in soils have been associated with historical smelter operations at the former Reynolds facility.

Figure 3.6-2 shows the location of the aluminum manufacturing facilities. The potline buildings and cast houses lie within the boundaries of the project area, while the alumina storage silos lie outside the project area's southern boundary.

Former Cable Plant Operations

The cable plant was constructed in the late 1960s. It was located west of the aluminum production facilities and within the boundaries of the project area. The cable plant produced electrical cable products, including aluminum wire, rods, and insulated (polyethylene and polyvinyl) low- and medium-voltage cable. The cable plant received molten aluminum from the aluminum production facilities and processed it in three furnaces: a continuous ingot caster, a rolling mill, and wire drawers. Ancillary structures associated with the cable plant included office buildings, a parking lot, and an on-site sanitary wastewater treatment plant.

The cable plant ceased production in 1992 and all assets were removed from the buildings. Since the mid-1990s, the facility has been mostly inactive and used only sporadically for storage. In addition, with approval from Ecology, successfully treated soil from the fuel island cleanup area was used for fill in former equipment concrete pits in the cable plant warehouse floor (Section 3.6.4.2, *Remediation History*).

Applicant's Leased Area

Contaminated sites on the Applicant's leased area, outside of the project area, include a cryolite recovery plant, industrial landfills, the closed Black Mud Pond (BMP) facility, and other historical uses after closure of the former Reynolds facility.

Cryolite Recovery Plant

The cryolite recovery plant was constructed in 1953 in the former Reynolds facility East Plant area, east of the cast houses and outside the project area boundary. It was used as a *spent potliner* (SPL) recovery and recycling facility for both the former Reynolds facility and other northwest aluminum reduction plants. SPL is a byproduct of the aluminum manufacturing process. It contains fluoride and PAH compounds and, potentially, varying levels of cyanide. The cryolite recovery plant also recovered reusable fluoride compounds, called *underflow solids*, which were eventually used to control air emissions that occurred during the aluminum manufacturing process. The underflow solids were collected in clarifiers at two locations on the former Reynolds facility.

The cryolite recovery process involved multiple steps, resulting in *black mud*, a black carbon liquid, which was disposed in several fill deposits on the former Reynolds facility. The fill deposits were closed in the 1960s and 1970s and were subsequently capped with clean soil. The cryolite recovery process also required lime to produce a sodium hydroxide solution. Circa 1980, the spent lime

facility, which was constructed as part of the original cryolite recovery plant for the cryolite recovery process, was combined and managed with the residual carbon facility.

With the increase in regulatory requirements associated with SPL stockpiling and handling in the 1980s, Reynolds began to bury and cover the stockpiled SPL. Groundwater monitoring wells were installed to assess and monitor potential impacts on groundwater.

In May 1990, the cryolite recovery plant ceased operation. The SPL generated during aluminum manufacturing was removed and shipped to permitted treatment, storage, and disposal facilities. The cryolite recovery plant facilities were removed in May 1990; the land in that area is now vacant. No deposits of SPL are known to remain within the former Reynolds facility.

Carbon was generated as a by-product of operation of the on-site cryolite recovery process. Residual carbon from this process typically includes calcium carbonate, alumina, fluoride compounds, sodium, iron, and sulfate. Test results from groundwater monitoring wells indicated that shallow groundwater at the former cryolite plant contained elevated concentrations of fluoride, with high alkalinity as a result of the cryolite plant's operations. Additional investigations, findings, and cleanup of the residual carbon deposits are discussed in Section 3.6.4.2, *Remediation History*.

Industrial Landfills

Three historical landfills are located in the Applicant's leased area but outside the project area (Figure 3.6-2). These include the floor sweeps landfill (Landfill 1), east of the former cryolite recovery plant; the industrial landfill (Landfill 2) on the southwest side of the former Reynolds facility West Plant area; and the construction debris landfill (Landfill 3), between the Consolidated Diking Improvement District (CDID) #1 levee and the Columbia River.

The floor sweeps landfill (Landfill 1) received dry materials gathered from floors in the potline buildings, including alumina, bath, cryolite, and aluminum fluoride. By the mid-1970s, the floor sweeps landfill was no longer in use, and the industrial landfill (Landfill 2) began operation. The industrial landfill was used primarily for management of inert wastes, including scrap coke, ore, cryolite, aluminum fluoride, bath, brick, concrete, and debris from miscellaneous maintenance activities. The construction debris landfill (Landfill 3) contains concrete debris and other plant wastes, similar to those of the industrial landfill. Standard practices included not placing liquids in the landfills.

Closed Black Mud Pond (BMP) Facility

As discussed under the former cryolite recovery plant operations, a byproduct of the cryolite recovery process was black mud, which was disposed of in several fill deposits. One such pond was located in the West Plant area near Landfill 2 (Figure 3.6-2). The 33-acre BMP impoundment, which was formally closed in 1992, has been subject to an approved ongoing maintenance and monitoring program overseen by Ecology. Since implementation, the closed BMP facility has continued to meet the requirements of the maintenance and monitoring program. Details on closure, post-closure, and maintenance and monitoring can be found in the *Millennium Coal Export Terminal Longview, Washington Hazardous Materials Resource Report* (URS Corporation 2014). No further remedial activities related to the closed BMP facility are required in the final cleanup action plan.

Historical Uses after Closure of the Reynolds Facility

Aluminum production operations at the former Reynolds facility ceased in 2001 at the time of the facility's closure. Between 2004 and 2011, Chinook Ventures, Inc. (Chinook Ventures) operated a terminal for the import, handling, and export of dry bulk materials, such as alumina, coal, green petroleum coke, cement, fly ash, slag, and other materials. During this time, Chinook Ventures decommissioned the majority of the facilities associated with aluminum manufacturing operations and recycled materials from smelters, which were being decommissioned throughout the northwest region of the United States. These activities included the removal and disposal or recycling of alumina, electrolyte bath, coal, and carbon products. In 2011, Chinook Ventures sold its assets to the Applicant. The Applicant subsequently removed most of the structures that were constructed by Chinook Ventures and continued facility decommissioning, removal, and cleanup activities.

3.6.4.2 Remediation History

Remediation history for the study area is presented in Appendix H, *Hazardous Materials Remediation History*. In 2007, Northwest Alloys and the Applicant signed an agreed order with Ecology to complete a remedial investigation and feasibility study (RI/FS). The purpose of the RI/FS was to investigate the nature and extent of impacts at the site and identify cleanup options. From 2011 through 2014, the Applicant tested soils and completed laboratory analyses as part of the RI/FS. In May 2014, Northwest Alloys submitted a second RI/FS, detailing over 18,000 chemical measurements of soil, surface water, groundwater and sediment along with extensive testing and engineering to support possible cleanup alternatives.

Ecology held a public comment period from June 2 through August 1, 2014, which included several public workshops and a formal hearing. Following the public comment period, Ecology prepared a Responsiveness Summary in January 2015, and has developed a draft cleanup action plan. Ecology will then select cleanup standards and points of compliance in the final cleanup action plan. A cleanup action plan is typically prepared after the RI/FS has been finalized and a preferred remedial alternative has been selected. The plan is based on information and technical analyses generated during the RI/FS and consideration of public comments and community concerns.

A draft cleanup action plan and draft consent decree was released in 2016 for a 60-day public comment period (Washington State Department of Ecology 2016). The comment period ended March 18, 2016. A responsiveness summary will be prepared to address public comments and then the reports will be finalized. Likely remedial technologies will include a combination of, but not necessarily all of, the following: removal, consolidation, capping, groundwater treatment, and monitored natural attenuation treatments. Property owner Northwest Alloys, Inc. (a subsidiary of Alcoa, Inc.) and the Applicant are legally responsible for the cleanup, including paying for and performing the work.

Appendix H, *Hazardous Materials Remediation History*, provides an overview of the remedial action process, screening levels by media, remediation activities prior to the RI/FS, remediation of the project area, remediation of the Applicant's leased area, chemicals of concern, and final remedial actions.

3.6.4.3 Hazardous Materials Sites in the Study Area

This section discusses environmental conditions related to hazardous materials sites outside of the Applicant's leased area but in the study area for hazardous materials. Data screening identified five

hazardous materials sites in the Proposed Action study area that require further evaluation (Section 3.6.3.3, *Data Screening*). These sites, shown in Figure 3.6-1, are described in Table 3.6-2.

3.6.5 Impacts

This section describes the potential direct and indirect impacts related to hazardous materials that would result from construction and operation of the Proposed Action and the No-Action Alternative.

3.6.5.1 Proposed Action

This section describes the potential impacts that could occur in the study area as a result of construction and operation of the Proposed Action. Construction-related activities for the Proposed Action would occur in two stages and include the activities identified below.

Construction Activities

Stage 1	Stage 2
<ul style="list-style-type: none"> • Construction staging • Demolition of existing structures • Site preparation • Preloading • Rail loop construction • Dredging, trestle, and dock construction • Installation of coal export terminal equipment • Construction of berms • Construction of stackers and reclaimers • Construction of buildings 	<ul style="list-style-type: none"> • Construction of any remaining rail storage tracks (for a total of eight rail storage tracks) • Construction of two remaining berms (for stackers and reclaimers) (for a total of five berms) • Construction of two additional stackers and reclaimers • Construction of additional conveyors, buffer bins, and transfer towers, including 26,200 linear feet of conveyors, of which 17,900 linear feet would be open conveyors and 8,300 linear feet would be enclosed • Construction of one shiploader on Dock 3 • Construction of additional support structures, electrical transformers, switchgear and equipment, buildings, process control equipment

Table 3.6-2. Hazardous Materials Sites in the Study Area

Site	Business Name	Distance from Project Area	Case Summary	Reason for Risk Class	Risk Class
1	U.S. DOE BPA Longview Substation/Longview Substation	33 feet from project area	<ul style="list-style-type: none"> • Site contains registered underground storage tanks • Site is a registered small-quantity generator of hazardous waste. • A site discovery/release was first reported in 1992. • Groundwater is suspected to be contaminated with nonhalogenated organics and petroleum/diesel. • Groundwater is confirmed to have benzene and petroleum/gasoline contamination above cleanup levels. • Soils are suspected to be contaminated with benzene, nonhalogenated organics, and petroleum/gasoline. • Soils are confirmed to be below cleanup levels for petroleum/diesel. • A site hazard assessment was conducted in June 2013. Cleanup of leaking underground storage tanks has started, and rest of the site is awaiting cleanup. 	<ul style="list-style-type: none"> • Located 33 feet east of the project area for the Proposed Action. • Groundwater contamination has been confirmed for benzene and petroleum/gasoline. • Soils suspected to be contaminated with benzene, nonhalogenated organics, and petroleum/gasoline. • Case is still active and cleanup is in process for leaking underground storage tanks. • Other identified contamination is awaiting cleanup. 	High

Site	Business Name	Distance from Project Area	Case Summary	Reason for Risk Class	Risk Class
2	McCall Trucking	127 feet from project area	<ul style="list-style-type: none"> Initial site investigation occurred in 1994. Groundwater, surface water, and soils are suspected to be contaminated with halogenated organics, metals, solvents, and petroleum products. Soil has been confirmed above cleanup levels for petroleum products. Case is still active and site is awaiting cleanup. 	<ul style="list-style-type: none"> Located 127 feet northwest of the project area for the Proposed Action. Groundwater, surface water, and soils are suspected to be contaminated with various contaminants. Site is awaiting cleanup. 	High
3	Schill Brothers Asphalt & Paving/American Asphalt ^a	722 feet from project area	<ul style="list-style-type: none"> The site was first inspected in 1990 and then removed from the Washington HSL in 1995. The site was reopened in 2008 and again in 2013. Groundwater, surface water, soil, and air were all contaminated with various organic and inorganic materials, metals, petroleum products, and phenolic compounds. All media has been remediated with the exception of soil, which still contains petroleum products above cleanup levels. Site is still awaiting cleanup. 	<ul style="list-style-type: none"> Located 722 feet northwest of the project area for the Proposed Action. Groundwater and soil have been impacted, requiring further cleanup. 	Medium

Site	Business Name	Distance from Project Area	Case Summary	Reason for Risk Class	Risk Class
4	GT Metals and Salvage (formerly Longview Auto Wrecking)	1,902 feet from project area	<ul style="list-style-type: none"> An initial site assessment was performed in June 2004. Soils were confirmed to be above cleanup levels for petroleum products. Case is still active and site is awaiting cleanup. 	<ul style="list-style-type: none"> Located 1,902 feet northeast of the project area for the Proposed Action. Soil has been affected. 	Low
5	Weyerhaeuser Chlor-Alkali Facility	2,953 feet from project area	<ul style="list-style-type: none"> Stores hazardous chemicals; site being cleaned up under state regulations. In October 1991, Ecology issued an agreed order for remedial action at the site. Mercury contamination was found in soils and groundwater after demolition of an on-site facility. In December 1995 an RI/FS was completed for the facility. In August 1995 the site was listed on Washington HSL as a Rank 1 site. 	<ul style="list-style-type: none"> Located 2,953 feet southeast of the project area for the Proposed Action. Both soil and groundwater have been affected. Cleanup activities are complete. Institutional controls are in place and long-term groundwater monitoring continues. 	Medium

Notes:

^a The Schill Brothers Asphalt & Paving/American Asphalt 1 site is located adjacent to and partially atop the inactive Mount Solo Landfill, which was classified as a limited-purpose landfill that disposed of mainly wood-wastes and construction and demolition waste between about 1966 and 1992. The landfill was closed in 1993 under WAC 173-304 Minimum Functional Standards for Solid Waste Handling. According to information received from the Cowlitz County Health Department, Environmental Health Unit (EHU), the current environmental status of the Mount Solo Landfill is unknown. According to the EHU, the last annual report was received in 2008 and the last post closure permit was issued that same year. The landfill has not been actively monitored since then (Long pers. comm.).

Sources: Washington State Department of Ecology 2014b-2014o; ICF International 2016a.

U.S. DOE = U.S. Department of Energy; BPA = Bonneville Power Administration; Ecology = Washington State Department of Ecology; HSL = Washington Hazardous Sites List; RI/FS = remedial investigation/feasibility study; WAC = Washington Administrative Code

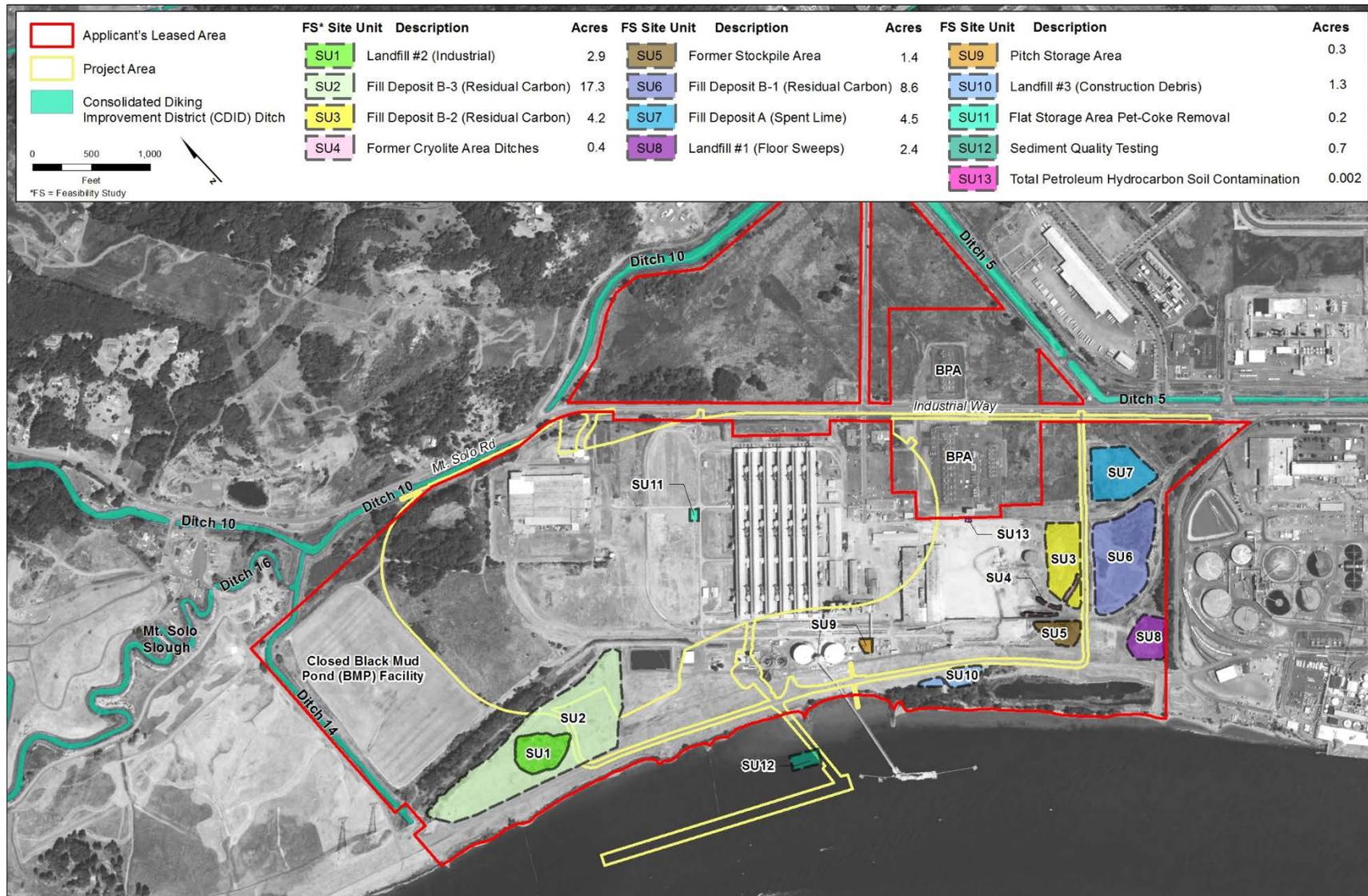
Construction—Direct Impacts

Construction-related activities associated with the Proposed Action could result in direct impacts as described below. As explained in Chapter 2, *Project Objectives, Proposed Action, and Alternatives*, construction-related activities include demolishing existing structures and preparing the site, constructing the rail loop and dock, and constructing supporting infrastructure (i.e., conveyors and transfer towers). Construction equipment would include heavy machinery to prepare foundations and footings for the new facility, associated services, and utilities. This equipment would likely include cranes, wheel loaders, dozers, dump trucks, excavators, graders, rollers, compactors, drill rigs, pile-driving equipment, portable ready-mix batch plant, ready-mix trucks, concrete pumps, elevated work platforms, forklifts, rail track laying equipment, welders, water pumps, and other similar machinery. Waste typically generated or encountered during construction activities could consist of contaminated soils; contaminated sediments; contaminated groundwater generated from excavation, drilling, and dewatering activities; and existing on-site building materials containing lead or asbestos. Demolition activities could result in exposing these substances.

Encounter Hazardous Materials during Construction

Construction of the Proposed Action could encounter hazardous materials in the project area that could pose risks to human health and the environment through contact with contaminated soil, contaminated groundwater, and inhalation of toxic vapors. However, with the exception of two small areas on the eastern corner of the flat storage area and the northeastern portion of Fill Deposit B-3 (SU11 and SU2 in Figure 3.6-3), the Proposed Action would be constructed in the project area where remedial action mandated as part of the final cleanup action plan is not required, either because hazardous materials do not occur in these areas or because hazardous materials have been previously remediated. For the two areas where overlap would occur, construction of the Proposed Action and remediation of the project area would be coordinated to avoid and minimize conflicts and potential exposure to construction personnel and the environment. Furthermore, Northwest Alloys and the Applicant would be required to follow the final cleanup action plan, comply with applicable state and federal laws and regulations, and provide for compliance monitoring to ensure cleanup actions comply with the cleanup plan. Therefore, remedial actions are expected to remove or isolate all hazardous materials and ensure that any remaining hazardous materials are below thresholds established by federal, state, and local regulations, thereby avoiding the potential for construction personnel or the environment to be exposed to hazardous materials. Construction activities associated with the Proposed Action could encounter possible lead- and asbestos-containing materials, chemically treated wood, and polychlorinated biphenyls (PCBs) during demolition of existing structures. Releases of these materials could migrate to the air, soil, surface water, or groundwater and affect the health and safety of construction personnel and others. Exposure to these contaminants are described in the following sections.

Figure 3.6-3. Feasibility Study Site Units in the Applicant's Leased Area and the Project Area



Lead and Asbestos

Buildings and structures that have lead- or asbestos-containing materials would require proper abatement procedures prior to demolition, renovation, or repair activities to reduce potential impacts. The use of asbestos in buildings and structures was common prior to 1980. The U.S. Environmental Protection Agency (EPA) issued a ban and phase-out rule for asbestos in 1989. Most of the structures in the project area were built prior to 1980 and are planned for demolition as part of the Proposed Action. Both asbestos-containing materials and materials that contain lead (such as some types of paint) must be handled carefully during demolition and must be recycled or disposed of at an approved site as required by the Washington Hazardous Waste Management Act (RCW 70.105), and the Washington Dangerous Waste Regulations, (WAC 173-303). Asbestos surveys were performed for all existing on-site buildings (PBS Engineering and Environmental 2014). A lead paint survey was performed on the south plant only; lead surveys for the remaining buildings would be conducted prior to demolition activities. Abatement and management would be conducted prior to demolition, renovation, and/or repair for lead and asbestos as required by Washington Hazardous Waste Management Act and Washington Dangerous Waste Regulations.

Buildings identified in the surveys as having asbestos-containing materials include the main office, maintenance and weld shop, cast house (expansion), North Plant compressor, cable plant, and potline building. Details regarding quantities, types of construction materials, etc. can be found in the December 2014 Subset of Previous Asbestos Survey Reports Millennium Bulk Terminals (PBS Engineering and Environmental 2014).

Chemically Treated Wood

The State of Washington has dangerous waste exclusions for treated wood; these exclusions are outlined in WAC 173-303-071(3)(g)(i) for arsenical-treated wood and in WAC 173-303-071(3)(g)(ii) for wood treated with other preservatives (most commonly pentachlorophenol and creosote). Arsenical-treated wood, and in particular copper chromate arsenic (CCA)-treated wood is most often used for (but is not limited to) outdoor building materials and is often referred to as “pressure-treated wood.” Pentachlorophenol (PCP) and creosote-treated wood is most often used for poles, pallets, marine piling and timbers, and railroad crossties. It should be noted that the dangerous waste exclusion for CCA-treated wood only applies to treated wood that fails the toxicity characteristic leaching potential for the applicable constituents.

If CCA-treated wood is encountered, and it meets the exclusion requirements described above, disposal options include the following.

- Disposal in a permitted municipal solid waste landfill (providing local regulation allows).
- Disposal/processing at a permitted treatment, storage, and disposal facility.
- Reuse by others.

If wood treated with other preservatives, as defined in WAC 173-303-071(3)(g)(ii), is encountered during demolition activities it could be disposed of as follows.

- Wood designated as “state”-only may be disposed in a municipal solid waste landfill provided the landfill is equipped with a leachate detection system.
- Wood that is designated as a “listed” waste or fails the toxicity characteristic leaching potential test may be sent to a non-permitted facility for treatment or recycling.
- Creosote-treated wood may be sent to a permitted treatment, storage, and disposal facility, i.e., burned in a regulated furnace or boiler for energy production.

Caulking and Sealants

PCBs were widely used in caulking and elastic sealant materials from the 1950s through the 1970s. These materials were primarily used in or around windows, door frames, stairways, building joints, masonry columns, and other masonry building materials. Prior to demolition, caulking would be sampled to determine if PCBs exist. If PCBs were found in on-site structures, remediation and disposal of these materials would be conducted under the Toxic Substances Control Act’s PCB regulations at 40 CFR 761 and using Ecology’s *Draft PCB Chemical Action Plan*.

Demolition of former Reynolds facility buildings and structures would require adherence to all applicable standards and regulations. The applicable agencies and regulations would provide oversight and prevention techniques. Thus, lead- and asbestos-containing material, treated wood debris, and caulking waste (containing PCBs) would be managed properly and disposed of at off-site facilities, thereby avoiding and minimizing potential impacts on human health and the environment.

Project area preparations would involve preloading and installing vertical wick drains to consolidate low-consistency silt and low-density sand. These activities could take place adjacent to areas where known groundwater contamination exists and the contaminated groundwater could potentially penetrate these areas. According to the RI/FS (Anchor QEA 2015), fluoride transport in groundwater is limited due to the solubility of fluoride. Furthermore, the permeability of the earth materials used for preloading would be relatively low and would not be particularly susceptible to the infiltration of contaminated groundwater. As described in Chapter 4, Section 4.4, *Groundwater*, once preloading is complete and the vertical drains are removed, the drains would be tested and characterized for the presence of dangerous waste prior to disposal. This work would be regulated and coordinated under the project-specific National Pollutant Discharge Elimination System (NPDES) permit.

Introduce New Sources of Hazardous Materials during Construction

Construction of the Proposed Action would involve the routine transport, use, storage, and disposal of hazardous materials such as fuels, solvents, paints, oils, concrete-curing compounds, and grease. Hazardous materials likely to be transported, used, stored, and disposed of in the project area during construction would be materials typical of construction projects and would generally be used and handled in relatively small quantities (less than 5 gallons). Impacts from releases would likely be localized and short-term in nature although spills could reach and affect

the Columbia River. Fuel spills could range from less than 50 gallons up to a worst-case maximum spill from a fuel truck of approximately 4,000 gallons.³

The transport, use, storage, and disposal of hazardous materials would be compliant with applicable federal, state and local regulations such as the RCRA, U.S. Department of Transportation Hazardous Materials Regulations, and other regulations identified above under Section 3.6.1, *Regulatory Setting*. The enforcement of construction and demolition standards, including best management practices by appropriate local and state agencies (i.e., Ecology, Longview Fire Department, Cowlitz County Public Works), would further minimize the potential for a spill, release, or explosion, and would ensure a timely cleanup response.

The Applicant would be required to obtain and comply with the NPDES Construction Stormwater General Permit, which requires controls to protect surface water and groundwater. The permit would require the preparation of a construction stormwater pollution prevention plan and implementation of best management practices to avoid and minimize the risk of pollutants entering surface waters and groundwater. Moreover, the best management practices identified under Section 3.6.6, *Required Permits*, would be implemented during construction and operation of the Proposed Action to further avoid and minimize risks of exposure on surface waters.

Construction—Indirect Impacts

Construction-related activities associated with the Proposed Action could result in indirect impacts as described below. As explained in Chapter 2, *Project Objectives, Proposed Action, and Alternatives*, construction-related activities include demolishing existing structures and preparing the site, constructing the rail loop and dock, and constructing supporting infrastructure (i.e., conveyors and transfer towers).

Encounter Hazardous Materials during Construction

The following sections describe impacts related to encountering hazardous materials on the Applicant's leased area and hazardous materials sites in the study area during construction of the Proposed Action.

Applicant's Leased Area

Construction of the Proposed Action is not expected to encounter hazardous materials in the Applicant's leased area outside the limits of disturbance for the project area. The chemicals of concern occurring in the Applicant's leased area include fluoride and PAHs in soils associated with the landfills and fill deposits (Figure 3.6-3). These areas are contained by soil caps, and ongoing soil and groundwater monitoring show that fluoride has limited mobility under existing conditions and is not affecting down-gradient groundwater or surface water quality. The final cleanup action plan would include remediation of these areas along with those identified in the project area. Therefore, although groundwater and soils are contaminated in the Applicant's leased area, it is to be expected that they would be remediated during project construction and operations.

³ The capacity for fuel trucks used during construction and operations is discussed in Chapter 4, Section 4.9, *Energy and Natural Resources*.

Hazardous Materials Sites in the Study Area

Construction of the Proposed Action is not expected to encounter hazardous materials that could pose risks to human health and the environment from any of the five hazardous materials sites identified in the study area (Section 3.6.4.3, *Hazardous Materials Sites in the Study Areas*). This is because soil contaminants associated with these sites would not come into contact with construction activities, and groundwater contamination has either not been reported, or groundwater flows away from the project area.

Introduce New Sources of Hazardous Materials during Construction

The following sections describe impacts related to introducing new sources of hazardous materials on the Applicant's leased area and hazardous materials sites in the study area during construction of the Proposed Action.

Applicant's Leased Area

Construction activities associated with the Proposed Action would be limited to the project area and no activities would occur in the Applicant's leased area outside the limits of disturbance for the project area; however, construction vehicles could move through the Applicant's leased area when traveling to and from the project area. When in transit, vehicles transporting hazardous materials could introduce new sources of hazardous materials to the Applicant's leased area that could pose risks to human health and the environment.

As described above for direct construction impacts, construction of the Proposed Action would involve the routine transport, use, storage, and disposal of hazardous materials such as fuels, solvents, paints, oils, concrete-curing compounds, and grease. Hazardous materials likely to be transported through the Applicant's leased area during construction would be materials typical of construction projects and would generally be used and handled in relatively small quantities (less than 5 gallons). Impacts from releases would likely be localized and short term in nature, although fuel spills could reach and affect the Columbia River. Fuel spills could range from less than 50 gallons up to a worst-case maximum spill from a fuel truck of approximately 4,000 gallons. Any spills that could occur would require the Applicant reporting and responding as required by federal, state, and local laws.

The transport of hazardous materials would be compliant with applicable federal, state and local regulations such as the RCRA, U.S. Department of Transportation Hazardous Materials Regulations, and other regulations identified above under Section 3.6.1, *Regulatory Setting*. Furthermore, best management practices enforced by appropriate local and state agencies (i.e., Ecology, Longview Fire Department, Cowlitz County Public Works), would further minimize the potential for a spill, release, or explosion, and would ensure a timely cleanup response.

Hazardous Materials Sites in the Study Area

Construction of the Proposed Action would not cause impacts on the five documented hazardous materials sites in the study area that could pose new risks to human health and the environment. Although hazardous materials sites are located in the study area, construction activities would be limited to the boundaries of the project area, and would not affect hazardous materials sites outside of the project area.

Operations—Direct Impacts

Operation of the Proposed Action would result in the following direct impacts. Operations-related activities are described in Chapter 2, *Project Objectives, Proposed Action, and Alternatives*.

The following hazardous materials are expected to be used during normal operations of the Proposed Action.

- Diesel fuel, gasoline, oils, greases, hydraulic fluids, antifreeze/coolants, and solvents used for equipment operation and maintenance.
- Sulfuric acid, calcium hydroxide, flocculants, lime, and antiscalants used for water treatment.
- Chemicals used in the on-site laboratory (generally in small quantities of 5 gallons or less) could include methylene chloride, toluene, acetone, and 2-butanone.
- Wastes classified as hazardous and nonhazardous waste and sanitary sewer waste.
- Coal handled during facility operations and during transportation.

These materials would be stored on site and all necessary collection and containment measures would be located in the on-site laboratory for immediate response to any spill. Furthermore, as the Proposed Action would not include refueling activities for rail or vessels, no fuel for rail or vessels would be stored on site; therefore, there would be no increased risks of spills associated with refueling activities. As described in Chapter 5, Section 5.4, *Vessel Transportation*, no bunkering would take place as part of the Proposed Action; therefore, there would be no increased risks of oil spills associated with vessel transfers associated with the Proposed Action. Information regarding the impacts from potential coal spills as a result of transport and operations is provided in Chapter 4, Sections 4.5, *Water Quality*; 4.6, *Vegetation*; 4.7, *Fish*; and 4.8, *Wildlife*. The Proposed Action would also generate hazardous waste in small quantities.

Operation of the Proposed Action would result in the following direct impacts.

Encounter Hazardous Materials during Operations

Operation of the Proposed Action is not expected to encounter hazardous materials in the project area that could pose risks to human health and the environment. Operation of the Proposed Action would occur concurrently with, but would be independent of, environmental remediation and monitoring as required in the final cleanup action plan for the former Reynolds facility. The remedial and monitoring activities associated with the former Reynolds facility would be carried out in accordance with all applicable regulations and would be coordinated to avoid contact and exposure to operations personnel and the environment. Furthermore, remedial and monitoring activities associated with the final cleanup action plan would result in bringing previously contaminated soils and groundwater to levels that are protective of human health and the environment, thereby reducing the potential for exposure for sensitive receptors.

Introduce New Sources of Hazardous Materials during Operations

Operations of the Proposed Action could introduce new sources of hazardous materials such as fuel, oil, grease, lubricants, hydraulic fluids, solvents, and acids and would generate small quantities of hazardous waste. Locomotives (with fuel capacity of approximately 5,000 gallons) and fuel trucks (with fuel capacity of up to approximately 4,000 gallons) would travel to and from the project area could also release fuel during operations. Some of these materials can be

classified as hazardous; however, these hazardous material products would generally be stored and used in small quantities. The Applicant is responsible for reporting and responding as required by federal, state, and local laws.

Design features of the Proposed Action that would avoid and minimize the potential release of hazardous materials during operations include enclosures for all belt conveyors and transfer points moving coal to and from the rail unloading facilities to the stockyard or shiploading facilities. The stockpile pads and berms located in the stockyard would be made of low-permeability engineered material to reduce the potential for runoff from entering subsurface soil or groundwater and allow for the collection, conveyance, treatment, and reuse of dust suppression water and precipitation. The stockyard and berms would be graded to allow water to drain and be collected for treatment at the on-site water treatment plant for reuse. Solids collected in the treatment systems considered acceptable product for reuse would be placed back in the stockyard for shipment to customers. Solids not acceptable for reuse would be collected and disposed of at approved and appropriate off-site disposal sites by the Applicant.

In addition, the Proposed Action involves coal loading by conveyor onto ocean-going vessels at two new docks on the Columbia River for export. As discussed in Section 3.1, *Land and Shoreline Use*, the Proposed Action would include activities within the shoreline jurisdiction regulated by the Cowlitz County Shoreline Master Program. The Proposed Action would also incorporate best management practices to prevent, reduce, or eliminate the discharge of pollutants to the stormwater system or watercourses from material delivery and storage. See Chapter 4, Section 4.5, *Water Quality*, for more information on discharge of pollutants to surface runoff.

As with construction, the transport, use, storage, and disposal of hazardous materials would be compliant with applicable federal, state and local regulations such as the RCRA, U.S. Department of Transportation Hazardous Materials Regulations, and other regulations identified in Section 3.6.1, *Regulatory Setting*. The Applicant would follow regulations governing the storage of hazardous materials and the separation of hazardous materials in designated storage areas. Water quality would be protected from polluted stormwater runoff as a result of the Applicant complying with the requirements of the NPDES Industrial Stormwater Permit.

Operations—Indirect Impacts

Operation of the Proposed Action would result in the following indirect impacts. Operations-related activities are described in Chapter 2, *Project Objectives, Proposed Action, and Alternatives*.

As listed under *Operations—Direct Impacts*, several hazardous materials are expected to be used during normal operations of the Proposed Action. These materials would be stored on site and all necessary collection and containment measures would be located in the on-site laboratory and other locations for immediate response to any spill. The Proposed Action would also generate hazardous waste in small quantities.

The increase in rail traffic (up to 240 unit trains arriving and 240 unit trains departing per month with three locomotives per train) on the Reynolds Lead, BNSF Spur, and BNSF main line could also result in indirect impacts related to hazardous materials, which are described below. Further information on rail transportation is provided in the Chapter 5, Section 5.1, *Rail Transportation*. Indirect impacts associated with increased vessel traffic are addressed in Chapter 4, Section 4.5, *Water Quality*, and Chapter 5, Section 5.4, *Vessel Transportation*.

Encounter Hazardous Materials during Operations

The following sections describe impacts related to encountering hazardous materials on the Applicant's leased area and hazardous materials sites in the study area during operation of the Proposed Action.

Applicant's Leased Area

Operation of the Proposed Action is not expected to encounter hazardous materials in the Applicant's leased area that could pose risks to human health and the environment. Operations of the Proposed Action would occur within the boundaries of the project area and would not result in impacts on the larger Applicant's leased area. Implementation of the final cleanup action plan for the former Reynolds facility would result in bringing previously contaminated soils and groundwater to levels that are protective of human health and the environment, thereby reducing the potential for exposure for sensitive receptors.

Hazardous Materials Sites in the Study Area

Operation of the Proposed Action is not expected to encounter hazardous materials from any of the five hazardous materials sites identified in the study area that could pose risks to human health and the environment (Section 3.6.4.3, *Hazardous Materials Sites in the Study Area*). Operation of the Proposed Action would occur within the boundaries of, and would not affect sites outside of, the project area. Impacts would be the same as those discussed above for the Applicant's leased area.

Introduce New Sources of Hazardous Materials during Operations

The following sections describe impacts related to introducing new sources of hazardous materials on the Applicant's leased area and hazardous materials sites in the study area during operation of the Proposed Action.

Applicant's Leased Area

Operational activities associated with the Proposed Action would be limited to the boundaries of the project area, and no activities would occur within the larger Applicant's leased area. However, vehicles and trains used during operations could move through the Applicant's leased area when traveling to and from the project area. When in transit, vehicles and trains could introduce new sources of hazardous materials to the Applicant's leased area that could pose risks to human health and the environment. Impacts would be similar to those described above for indirect construction impacts in the Applicant's leased area and could include releases of hazardous substances or fuels. Any spills that could occur would likely be short term with the Applicant reporting and responding as required by federal, state, and local laws.

As with construction, the transport of hazardous materials would be compliant with applicable federal, state and local regulations such as the RCRA, U.S. Department of Transportation Hazardous Materials Regulations, and other regulations identified above under Section 3.6.1, *Regulatory Setting*. Furthermore, best management practices enforced by appropriate local and state agencies would further minimize the potential for a spill, release, or explosion, and would ensure a timely cleanup response.

Hazardous Materials Sites in the Study Area

Operation of the Proposed Action would not introduce new sources of hazardous materials that could pose risks to human health and the environment to the five documented hazardous materials sites in the study area. Although hazardous materials sites exist in the study area, Proposed Action operations would occur within the boundaries of the project area, and would not affect hazardous materials sites outside of the project area.

Release Hazardous Materials during Day-to-Day Rail Operations

There is the potential for indirect impacts related to the release of hazardous materials during rail operations. Similar to direct impacts, day-to-day rail operations could increase the potential for hazardous materials (e.g., fuel, oil, grease, lubricants, hydraulic fluids) to be released into the environment through leaks and spills from the locomotives and rail cars along the Reynolds Lead, BNSF Spur, and BNSF main line. These materials would be used to maintain adequate operations and maintenance of the locomotives and rail cars and would not be the main cargo. Some of these materials can be classified as hazardous. Locomotives and rail cars are assumed to be maintained, and leaks would be avoided by timely repairs by the train and railroad operators, thereby avoiding and minimizing the potential for a leak. Spills of petroleum hydrocarbons or hazardous materials during day-to-day rail operations could occur, but the frequency and magnitude of spills cannot be predicted.

Release Hazardous Materials during Collision or Derailment

Fuel spills could occur if any of the trains or rail cars collide or derail. Potential public safety and environmental risks of a fuel spill by collision or derailment would include fires or explosions, wildfires, water contamination, air quality impacts, impacts on tribal treaty resources, and impacts on wildlife, vegetation and fish. If a release of hazardous materials in the project area were to result from a collision or derailment, emergency response and cleanup measures would be implemented as required by the federal and state law, including Washington State regulations under RCW 90.56.

3.6.5.2 No-Action Alternative

Under the No Action Alternative, the Applicant would not construct the Proposed Action and impacts related to construction and operation of the Proposed Action would not occur. The Applicant would continue with current and future increased operations in the project area. The project area could be developed for other industrial uses, including an expanded bulk product terminal or other industrial uses. The Applicant has indicated that, over the long term, it would expand the existing bulk product terminal and develop new facilities to handle more products such as calcine petroleum coke, coal tar pitch, and cement.

Because previous Reynolds facility operations have resulted in cleanup actions throughout the Applicant's leased area, new development or expansion of existing uses could encounter similar impacts during construction and operation as those discussed for the Proposed Action. However, all potential impacts could be minimized through remedial actions carried out in the cleanup action plan and compliance with federal, state, and local regulations as well as implementation of best management practices. Therefore, impacts related to hazardous materials are expected to be similar to the Proposed Action.

3.6.6 Required Permits

The following permits related to hazardous materials would be required for the Proposed Action.

- **National Pollutant Discharge Elimination System Construction Stormwater General Permit—Washington State Department of Ecology.** The quality of surface water and groundwater would be protected as a result of the Applicant obtaining and following the NPDES Construction Stormwater General Permit issued by Ecology. The permit would require preparation of a construction stormwater pollution prevention plan and implementation of best management practices to avoid and minimize the risk of pollutants entering surface waters and groundwater.

As part of the NPDES Construction Stormwater General Permit, a stormwater pollution prevention plan will be required by Ecology. A stormwater pollution prevention plan is a site-specific, written document that identifies potential sources of stormwater pollution at the construction site; describes practices to reduce pollutants in stormwater discharges from the construction site (reduction of pollutants is often achieved by controlling the volume of stormwater runoff, e.g., taking steps to allow stormwater to infiltrate into the soil); and identifies procedures the operator will implement to comply with the terms and conditions of a construction general permit.

The following best management practices identified by the Applicant would likely be conditions of the stormwater pollution prevention plan under this permit.

- **BMP C153.** Material delivery, storage, and containment would be used to prevent, reduce, or eliminate the discharge of pollutants to the stormwater system or watercourses from material delivery and storage.
 - Storage of hazardous materials on site would be minimized to the extent feasible.
 - Materials would be stored in a designated area, and secondary containment would be installed where needed.
 - Refueling would occur in designated areas with appropriate spill control measures.
- **BMP C154.** Concrete waste and washout waters would be either disposed of off -site or in a designated facility on site designed to contain the waste and washout water.
 - The contractor will apply typical construction best management practices for working over, in, and near water, including checking equipment for leaks and other problems that could result in discharge of petroleum-based products, hydraulic fluid, or other material to the Columbia River.
 - The contractor will inspect fuel hoses, oil or fuel transfer valves, and fittings on a regular basis for drips or leaks in order to prevent spills into the surface water.
 - The contractor will keep, store, handle, and use all fuel and chemicals in a fashion which avoid entry into the water.
 - The contractor will have a spill containment kit, including oil-absorbent materials, on site to be used in the event of a spill or if any oil product is observed in the water.
- **National Pollutant Discharge Elimination System Industrial Stormwater Permit—Washington State Department of Ecology.** The quality of surface water and groundwater

would be protected as a result of the Applicant obtaining and following the NPDES Industrial Stormwater Permit issued by Ecology. The permit would require the preparation of a stormwater pollution prevention plan and implementation of best management practices to avoid and minimize the risk of pollutants entering surface waters and groundwater.

As part of the NPDES Industrial Stormwater Permit, a stormwater pollution prevention plan will be required by Ecology. A stormwater pollution prevention plan is a site-specific, written document that identifies potential sources of stormwater pollution from operations; describes practices to reduce pollutants in stormwater discharges (reduction of pollutants is often achieved by controlling the volume of stormwater runoff, e.g., taking steps to allow stormwater to infiltrate into the soil); and identifies procedures the operator will implement to comply with the terms and conditions of an industrial stormwater permit.

The following best management practices identified by the Applicant would likely be conditions under this permit.

- **BMP C153.** Material delivery, storage, and containment would be used to prevent, reduce, or eliminate the discharge of pollutants to the stormwater system or watercourses from material delivery and storage.
 - Storage of hazardous materials on site would be minimized to the extent feasible.
 - Materials would be stored in a designated area, and secondary containment would be installed where needed.
 - Refueling would occur in designated areas with appropriate spill control measures.
- **BMP C154.** Concrete waste and washout waters would be either disposed of off-site or in a designated facility on site designed to contain the waste and washout water.
 - The operator will apply typical operational best management practices for activities which take place over, in, and near water, including checking equipment for leaks and other problems that could result in discharge of petroleum-based products, hydraulic fluid, or other material to the Columbia River.
 - The operator will inspect fuel hoses, oil or fuel transfer valves, and fittings on a regular basis for drips or leaks in order to prevent spills into the surface water.
 - The operator will keep, store, handle, and use all fuel and chemicals in a fashion which avoid entry into the water.
 - The operator will have a spill containment kit, including oil-absorbent materials, on site to be used in the event of a spill or if any oil product is observed in the water.
- **Clean Water Act, Section 401 Water Quality Certification—Washington State Department of Ecology.** The Proposed Action would result in the construction and operation of a facility that could discharge into navigable waters and would require a Clean Water Act, Section 401, water quality certification.

The following best management practice identified by the Applicant would likely be a condition under the Section 401 water quality certification.

- Construction contractors and the facility operator conducting in-water and over-water work, including demolition, will be familiar with implementation of best management practices and permit conditions typical of working in the aquatic environment.

3.6.7 Potential Mitigation Measures

This section describes the mitigation measures that would reduce impacts related to hazardous materials from construction and operation of the Proposed Action. These mitigation measures would be implemented in addition to project design measures, best management practices, and compliance with environmental permits, plans, and authorizations that are assumed as part of the Proposed Action.

3.6.7.1 Applicant Mitigation

The Applicant will implement the following measure to mitigate impacts related to hazardous materials. The following mitigation measure is also presented in Section 4.5, *Water Quality*.

MM WQ-1. Locate Spill Kits Near Main Construction and Operations Areas

The Applicant will locate spill response kits throughout the project area during construction and operations. The spill response kits will contain response equipment and personal protective equipment appropriate for hazardous materials that will be stored and used during construction and operations. Site personnel will be trained in the storage, inventory, and deployment of items in the spill response kits. Spill response kits will be checked a minimum of four times per year to ensure proper/functioning condition, and will otherwise be maintained and replaced per manufacturer recommendations. Should a spill response kit be deployed, the Applicant will notify Cowlitz County and Ecology immediately. The Applicant will submit a map indicating the types and locations of spill response kits to Cowlitz County and Ecology for approval prior to beginning construction and operations.

3.6.8 Unavoidable and Significant Adverse Environmental Impacts

Compliance with laws and implementation of the measures and design features described above would reduce impacts related to hazardous materials. There would be no unavoidable and significant adverse environmental impacts.