

3.5 HAZARDOUS MATERIALS

This section describes known hazardous materials conditions on the site and discusses the potential for hazardous materials impacts from implementation of the Proposed Actions and alternatives. This section summarizes analyses contained in the *Site Summary and Proposed Cleanup Action Report* (Farallon Consulting, 2004), included as Appendix G to this Draft EIS.

3.5.1 Affected Environment

Existing land uses on the 498-acre site include a mix of low-density office, warehouse, industrial, residential, recreational (driving range) and agricultural uses. The site was historically in agricultural use. Areas of potential hazardous materials on the Tukwila South site include several known locations of underground storage tanks (USTs) listed by the Department of Ecology (Ecology) and a former sand and gravel borrow pit, located on 17.5 acres of undeveloped land that lies north and east of the intersection of S 200th Street and Orillia Road, in unincorporated King County. Refer to Figure 2 in Appendix G for a map of the boundaries of the former borrow pit site.

The following describes the known areas of potential hazardous materials and site investigations of these areas, and summarizes the remedial steps that would be required in the future, based on future development under the Tukwila South Master Plan.

Underground Storage Tanks

Known locations of existing underground storage tanks (USTs) are concentrated in two areas of the site. One is located at 18801 Southcenter Parkway and includes 11 USTs; the other is located at 5811 Segale Park Drive C and includes two USTs. Figure A at the end of Appendix G shows known locations of existing USTs.

At the 18801 Southcenter Parkway location, six of the 11 tanks were permanently closed in place due to their location under an existing building. A Closure and Site Assessment Notice was filed with the Department of Ecology (Ecology) in 1999 for these six tanks, which included storage for gas, oil and waste oil. The remaining five tanks are currently licensed and operational, and include storage for oil, gas and diesel fuel. Two of these will be removed as part of the Southcenter Parkway extension (see Section 3.5.2, Impacts, below).

The two USTs at 5811 Segale Park Drive C are currently licensed and operational, and include storage for diesel fuel and gas.

Former Sand and Gravel Borrow Pit

A former sand and gravel borrow pit consists of approximately 17.5 acres of undeveloped land located north and east of the intersection of South 200th Street and Orillia Road in Planning Area G of the Tukwila South site (refer to Figure 2-3 in Chapter 2). Land uses surrounding the former borrow pit currently include undeveloped land to the north, agricultural fields to the east and south, and Orillia Road and Interstate-5 to the west and northwest.

The former borrow pit was operated from the late 1960s through the early 1980s, and was subsequently backfilled from the 1980's until the early 1990's with construction debris from

numerous facilities in the Puget Sound region. A topsoil conditioning facility was also operated at this location from the late 1970's to the early 1980's. The fill consists of predominantly silty sand, and, to a lesser extent, debris that includes concrete, metal, wood, asphalt, bricks, plastic, possible kiln dust, and other materials. The fill ranges in thickness from 3 feet to 71 feet and is underlain by native sand. The area of fill is bounded to the north, west, and east by native material (Farallon Consulting, 2004). A subsurface, gravel-filled drainage sump located on the west side of the former borrow pit is tightlined to a 24-inch diameter concrete drainpipe, which discharges at the southeast corner of the former borrow pit site.

Summary of Site Investigations

A *Site Summary and Proposed Cleanup Action Report* (Farallon Consulting, 2004) was prepared and submitted to Ecology to provide a summary of the soil and groundwater quality, determine the extent of hazardous substances in soil and groundwater, and describe the proposed cleanup action. The former borrow pit has been enrolled in Ecology's Voluntary Cleanup Program (VCP). The proposed cleanup action is being conducted as an independent remedial action under the VCP, in accordance with the Model Toxics Control Act (MTCA) Cleanup Regulation (Chapter 173-340). MTCA Method A cleanup levels for unrestricted land uses (e.g., commercial, residential) will be applied to the site. In general, Method A cleanup levels are designed for cleanups that are relatively straightforward and involve only a few hazardous substances (refer to Appendix G for further discussion of the Method A cleanup levels). A groundwater compliance monitoring program approved by Ecology has been initiated. Following completion of the compliance monitoring, a No Further Action (NFA) determination will be requested from Ecology and a detailed Cleanup Action Plan will be prepared. Implementation of the Cleanup Action Plan will apply to future construction and/or development activities on the former borrow pit site and will be designed to mitigate potential risks to human health or the environment. The following summarizes the results of investigations regarding the former borrow pit site that occurred in 2001 through 2004.

2001/2002 Site Investigations

The scope of the 2001 subsurface investigation (GeoEngineers) at the former borrow pit included: collection of soil samples from 23 test pits; collection of soil and groundwater samples from seven groundwater monitoring wells; and, collection and analysis of a water sample from the outfall of the drainage pipe tightlined to the subsurface drainage sump installed at the base of the fill material. Additional sampling from the monitoring wells and the outfall for the drainage sump was conducted by GeoEngineers in 2002.

The 2001 soil samples collected from the fill were analyzed for Total Petroleum Hydrocarbons (TPH), metals, volatile organic compounds (VOCs), semi-volatile compounds (SVOCs), and polychlorinated biphenyls (PCBs). Groundwater samples collected from the monitoring wells and the drainage sump were also analyzed for TPH as gasoline-range-organics (GRO), diesel-range-organics (DRO), and oil-range-organics (ORO); volatile petroleum constituents, such as benzene, toluene, ethylbenzene and xylenes (BTEX); metals; VOCs; SVOCs; and PCBs.

2003/2004 Site Investigations

Additional investigations were conducted in 2003 and 2004. An additional monitoring well was installed down-gradient of the southeast corner of the former borrow pit by Associated Earth Sciences, Incorporated (AESI). Surface water was additionally sampled from the stormwater

ditch (Stream C; see Figure 3.2-1) located directly downstream (south) of the monitoring point for the drainage pipe that discharges at the southeast corner of the former borrow pit.

A site reconnaissance was also performed to locate potential seeps or springs emanating from the base of the slope down-gradient of the fill area (other than the drainage pipe at the southeast corner), and to evaluate any potential for groundwater to discharge to surface water both on and off of the former borrow pit site. A reconnaissance of the up-gradient portions of the site was performed to evaluate the potential for recharge from surface water to the fill area. No additional seeps or springs were identified either down-gradient or up-gradient of the fill area, which was consistent with the observations made by GeoEngineers in 2001.

Farallon Consulting collected groundwater samples from all monitoring wells and the drainage pipe outfall in 2003 and 2004; samples were analyzed for GRO, DRO, ORO, BTEX, and total and dissolved metals, including arsenic, cadmium, and lead. A surface water sample collected from Stream C was also analyzed for total and dissolved metals, including arsenic, cadmium, and lead.

Results of the Site Investigation Analyses

Soil Samples. The results of the subsurface investigation conducted in 2001 indicate that concentrations of TPH as GRO, DRO, ORO; benzene; arsenic; cadmium; and lead exceed the MTCA Method A cleanup levels in soil in limited and discrete areas of the former borrow pit. The analytical results of soil samples collected from the fill indicate that the contamination is limited in extent. The results of the analysis are summarized in greater detail in Section 2.7 of Appendix G.

Groundwater. The analytical results of groundwater samples collected in June 2001 and December 2002 also detected concentrations of GRO, DRO and arsenic that were above the respective MTCA Method A cleanup levels in limited locations at the site of the former borrow pit. The samples analyzed for VOCs, SVOCs, and PCBs were either “non-detect” or below the respective MTCA Method A or B cleanup levels.

The analytical results of groundwater samples collected in October 2003 and March 2004 also detected concentrations of arsenic above the MTCA Method A cleanup levels; however, concentrations of GRO, DRO, ORO and BTEX, and various metals were “non-detect” or below the MTCA Method A cleanup levels.

Surface Water. The analytical results of the water samples collected in August 2003 from Stream C, which is downstream of the drainage pipe discharge, show that none of the constituents analyzed were detected above the MTCA Method A cleanup levels for groundwater in any of the samples.

The available data for the former borrow pit indicate that only limited migration of petroleum hydrocarbons and/or metal contamination has occurred from localized areas within the fill to groundwater beneath the former borrow pit, and that no “offsite” migration of the identified chemical constituents in soil, groundwater, or surface water has occurred. The concentrations of chemicals detected in the soil and groundwater do not present an immediate threat to human health or the environment. As described above, a groundwater compliance monitoring program approved by Ecology has been initiated. The compliance monitoring will be conducted at three monitoring locations for a total of four quarters to confirm that chemicals of concern in the fill are

not migrating beyond the conditional point of compliance at the borrow pit "site" boundary at concentrations above the regulatory cleanup levels.

Following completion of four quarters of compliance monitoring, and assuming the analytical results for the compliance groundwater samples meet the cleanup levels for the chemicals of concern, Ecology will issue a No Further Action (NFA) determination for the site, which will include restrictive covenants for soil and groundwater use at the site. A detailed Cleanup Action Plan will be prepared following completion of the four quarters of compliance monitoring, which will incorporate the plans for future development of the site.

Following is a summary of the preliminarily proposed components of the Cleanup Action Plan that would be applied to the former borrow pit site. The Cleanup Action Plan would apply to future construction activities and/or development at this location within the overall Tukwila South site. Refer to Section 4.0 of Appendix G for a more detailed discussion of the proposed cleanup action plan.

Preliminary Cleanup Action Plan Components

- **Engineered Controls.** Engineered controls could include physical barriers such as soil cover/landscape areas, asphalt and concrete parking areas, and/or building structures that would cover discrete areas of contamination and prevent exposure to plants and animals. Institutional controls would be implemented to govern the handling of potentially contaminated soil during construction and for maintenance of the physical barriers. It is anticipated that the implementation of these controls would be sufficient to reduce the threat to human health or the environment by eliminating the exposure pathway (Farallon Consulting, 2004).
- **Institutional Controls.** An institutional control would be implemented in the form of a property deed restriction, which would be placed on the property to ensure long term maintenance of the risk management procedures (WAC 173-340-440). Deed restrictions would prohibit domestic use of groundwater beneath the property, and provide for physical barrier maintenance. In addition, a construction contingency plan would be developed to govern the handling of potentially contaminated fill during construction activities.

3.5.2 Impacts

Alternatives 1 and 2

Infrastructure Development Phase

Under Alternatives 1 and 2, the major infrastructure components, including mass grading, would be accomplished as part of a comprehensive earthwork program at the outset of the project. A Surface Water Pollution Prevention Plan (SWPPP) would be prepared that would identify control measures and procedures to address the potential for accidental hazardous materials spills (e.g. fuels, oil, or hydraulic fluid) that could occur during construction activities. Refer to Section 3.2, Water Resources and Appendix C for additional detail.

The former borrow pit site lies within Planning Area G, a portion of which is proposed for grading during the infrastructure development phase. Refer to the Preliminary Master Drainage Plan,

(Appendix B to this EIS) for a description of the grading plan. As described above, a construction contingency plan will be developed to govern the handling of potentially contaminated media, including soil and/or groundwater, during construction/grading activities, as part of the Cleanup Action Plan for the former borrow pit.

The plan would specify measures that would be taken to manage potentially hazardous materials in order to prevent any significant impact to human health or the environment. These would include protocols for managing potentially contaminated media (e.g., soil, bulk solid waste and/or contaminated groundwater) that may be encountered during infrastructure construction and/or future development activities at the former borrow pit. Although known or suspected areas with potential environmental concerns have been investigated to the extent practicable, the potential exists for limited areas of uncharacterized soil contamination to be encountered during development activities. The purpose of the plan would be to:

- Provide guidance for the identification of potentially contaminated media, including soil and/or groundwater;
- Describe procedures for the segregation and storage of potentially contaminated soil pending confirmation of contamination and, if warranted, off-site disposal to an appropriate transport, storage, and disposal (TSD) facility;
- Provide protocols for the sampling and analysis of potentially contaminated media;
- Describe disposal options for confirmed contaminated media, including soil, bulk solid waste, and/or groundwater; and,
- Present the requirements for documentation of the contaminated media, sampling, analysis, and disposal of contaminated media, should it be encountered during the site construction and/or development activities.

In the event that contaminated media is encountered in any other area of the Tukwila South site, they would be analyzed and remediated in accordance with state and/or federal regulations.

Underground Storage Tanks

Construction of the Southcenter Parkway extension as identified under Alternatives 1 and 2 would require the removal of two underground storage tanks (USTs) used for storing gas and diesel fuels. Removal of these USTs would be performed in compliance with Washington State's Underground Storage Tank Regulations (WAC 173-360-385). A site assessment would be performed, consistent with WAC 173-360-390, to determine whether there has been any leakage of fuels. If leakages are detected, cleanup of the contaminated soils would occur in accordance with Model Toxics Control Act (MTCA) Cleanup Regulations (WAC 173-340). During mass site grading and construction of infrastructure other underground storage tanks and/or soil or water contamination associated with tanks could be encountered in unknown locations. In the event that other underground storage tanks are discovered, the procedures described above would be implemented and removal and possibly cleanup (as necessary) would comply with WACs 173-360-385 and 173-340).

Demolition of Existing Buildings

Under Alternatives 1 and 2, existing residences on site (identified as 11 separate structures) would be demolished. Building demolition could result in discovery of asbestos-containing materials or lead from paint or plumbing fixtures, for example. Contaminated materials would be removed and disposed of in accordance with applicable regulations.

Full Buildout

Types of uses assumed under Alternatives 1 and 2 include campus research and office uses, as well as commercial, retail, and residential uses. As described above in Affected Environment, remediation of the former sand and gravel borrow pit will meet MTCA Method A soil and groundwater cleanup levels. Method A cleanup levels are for unrestricted land uses and include the uses assumed under Alternatives 1 and 2. The Cleanup Action Plan will identify appropriate engineering and institutional controls that will apply to the former borrow pit site; the controls will be designed to protect human health and the environment and mitigate any significant risks of exposure to hazardous substances at this location. Deed restrictions will prohibit domestic use of groundwater beneath the former borrow pit site. No significant operational impacts related to hazardous materials would occur.

Research uses under Alternatives 1 and 2 could include emerging technology uses such as biotechnology and bioscience. Such businesses could involve the shipping, storage and/or processing of certain hazardous materials, as part of their normal operations, and could produce some hazardous and biological wastes. Depending on the specific nature of these materials, the uses and handling of hazardous materials would be regulated by the City of Tukwila and/or the State of Washington. All emerging technology businesses would be required to follow applicable local and state laws and procedures to protect public safety and the environment.

Under Alternatives 1 and 2, it is assumed that the existing Segale Business Park, as well as the portions of the site that contain other uses such as Atlas Van Lines and Seattle Tractor, would be redeveloped in the future. Building demolition and site preparation/development activities could result in discovery of certain contaminated materials that are typical of such uses; any contaminated materials would be analyzed and remediated in accordance with applicable regulations.

Indirect/Cumulative

With implementation of the Ecology-approved Cleanup Action Plan for the former borrow pit, no indirect or cumulative impacts to human health or the environment from potential hazardous materials would be anticipated.

No Action Alternative

Under the No Action Alternative, the infrastructure development phase at the outset of the project (as defined in Chapter 2, Description of the Proposed Action and Alternatives, of this EIS) would not occur. Future grading of areas on the site, including Planning Area G, would likely occur at the time specific development was proposed. Similar to Alternatives 1 and 2, procedures for managing and disposing of contaminated soils associated with the former borrow pit will be specified in a construction contingency plan that will be part of the overall Cleanup Action Plan.

Under the No Action Alternative, the types of uses assumed in Planning Area G include big box retail, service retail and industrial uses (refer to Figure 2-3 in Chapter 2). As described for Alternatives 1 and 2, Method A cleanup levels are for unrestricted land uses and include those uses assumed under the No Action Alternative. Implementation of the Cleanup Action Plan will be designed to prevent any potential hazardous materials impacts during construction activities or long-term use of the former borrow pit site. Similar to Alternative 1, deed restrictions will prohibit domestic use of groundwater beneath the former borrow pit site.

Potential hazardous materials impacts associated with future building demolition or potential removal of USTs would be the same as described under Alternatives 1 and 2. However, it is assumed that the Segale Business Park would not be redeveloped under this Alternative.

Indirect/Cumulative

As described for Alternatives 1 and 2, no indirect or cumulative impacts to human health or the environment from potential hazardous materials would occur under the No Action Alternative as part of the Clean Action Plan for the former borrow pit.

3.5.3 Mitigation Measures

The proposed Cleanup Action Plan for the former sand and gravel borrow pit is being conducted as an independent remedial action under Ecology's Voluntary Cleanup Program (VCP), in accordance with the Model Toxics Control Act Cleanup Regulation (Chapter 173-340). Based on the application of MTCA Method A cleanup levels (for unrestricted land uses) and the implementation of a detailed Cleanup Action Plan to be approved by Ecology, no additional mitigation measures would be warranted for development assumed under Alternatives 1, 2, and 3 in this area of the site.

- Removal of underground storage tanks would be performed in compliance with state regulations (WAC 173-360-385). If any other areas of contaminated soil or groundwater are detected during infrastructure construction and/or long-term buildout, investigation and cleanup (if necessary) would be conducted consistent with state MTCA regulations.

3.5.4 Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts would be anticipated as a result of the Proposed Actions or development alternatives.