

## Exhibit D

### **Scope of Work**

### **Cleanup Action**

### **Alaska Street Texaco**

### **3901 SW Alaska Street, Seattle, WA**

Soil and groundwater beneath the Alaska Street Texaco property (also known as SKS Shell) contains concentrations of gasoline-range petroleum hydrocarbons; diesel-range petroleum hydrocarbons; benzene, toluene, ethylbenzene, and xylenes at concentrations exceeding the applicable cleanup levels. Petroleum contamination extends partially into the Fautleroy Way Southwest and Southwest Alaska Street right-of-way immediately adjacent to the property.

Excavation of on-property soil with right-of-way (ROW) dewatering, chemical oxidation, and compliance monitoring is the preferred alternative for the Site. Excavation of petroleum-impacted soil will be integrated with a shored excavation for a five story retail/apartment development that will include a two-level underground parking garage. The cleanup will be conducted in accordance with the Department of Ecology's Model Toxics Control Act (MTCA) regulation (Chapter 173-340 WAC).

The Scope of Work for site cleanup includes the following tasks to be conducted by SoundEarth Strategies, Inc.:

#### **Right of Way Dewatering**

The dewatering system will be comprised of eight to nine vertical remediation wells installed on the northeast portion of the Site on approximate 15-foot centers to an approximate depth of 40 feet. The dewatering system would operate prior to excavation and for the duration of excavation activities (or approximately 3 to 4 months) and would remove approximately three pore volumes, or 50,000 gallons of groundwater from the northeast corner of the SKS Shell Property and adjacent ROWs. The extracted water will be pumped to a main discharge header and transferred to a temporary storage tank for off-site treatment at a licensed facility.

#### **Fuel System Removal**

All underground storage tanks (USTs) and associated fuel lines on the property will be decommissioned and a UST site assessment will be conducted under the oversight of a Washington State-certified UST site assessor, and the USTs will be removed in accordance with the *Guidance for Site Checks and Site Assessment for Underground Storage Tanks* (Ecology 2003), and *Underground Storage Tank Regulations* (WAC 173-360).

#### **Contaminated Soil Excavation and Sampling**

Approximately 13,000 tons of petroleum contaminated soil will be excavated to depth of 25 to 30 feet and disposed of at a Subtitle D landfill. SoundEarth will use a soil management grid, which breaks the

entire Remedial Excavation Area into 10-foot by 10-foot grid cells, to readily identify and classify each grid cell for proper off-Site disposal. Soil will be visually inspected for staining, sheen, and odor. In addition to physical observations, a photo-ionization detector will be used to quantitatively measure VOCs in the soil. Samples of petroleum contaminated soil (PCS) will be periodically collected and submitted to a laboratory for analysis of chemicals of concern (COCs) for characterization and documentation purposes. As the excavation proceeds vertically downward, the soil nail wall will be extended in accordance with the shoring wall design. The excavation will be coordinated to first address the contaminated soil along the northeast corner of the SKS Shell Property due to the deeper extent of PCS. When performance samples show that all of the PCS has been removed from the identified remedial excavation area, the larger redevelopment excavation and soil screening will resume. The removal of affected soil will be conducted in accordance with the *Guidance for Remediation of Petroleum Contaminated Sites* (Ecology 2011).

### **Installation of Membrane Barrier**

In order to prevent recontamination of on-property soil and groundwater from the residual impacts that will remain beneath the adjacent Fauntleroy Way Southwest and Southwest Alaska Street ROWs, a spray-on vapor and water membrane will be applied on the interior face of the shoring wall. A protective liner will be laid on top of the membrane before pouring the concrete walls and foundation. The contaminant barrier will limit potential vapor intrusion and the migration of COCs that could leach from off-property soil and groundwater.

### **Chemical Oxidant Injection**

A solution of sodium persulfate activated by hydrogen peroxide will be injected into each of the remediation wells to address residual soil and groundwater contamination beneath the ROW. Approximately 300 gallons will be injected into each well. The chemical oxidant will oxidize the COCs and provide an oxygen source to stimulate aerobic biodegradation of COCs. A second contingency injection is proposed if COCs in compliance monitoring wells remain above the MTCA Method A cleanup levels after two years.

### **Compliance Monitoring**

Upon completion of the excavation of on-property petroleum-impacted soil, right-of-way dewatering, and chemical oxidation injection, the Site groundwater will be monitored for approximately five years. The existing network of groundwater monitoring wells around the perimeter of the SKS Shell Property will be monitored as well as three proposed monitoring wells/compliance points to be installed in the finished parking garage. The compliance wells will be sampled quarterly or semi-annually for 5 years to evaluate the reduction of dissolved phase petroleum hydrocarbons in groundwater across the Site.

## Alaska Street Texaco (SKS Shell)

### Tentative Cleanup Action Plan and Schedule

Cleanup Plan Task	Tentative Date
Install Dewatering System in ROW (8 wells)	August 2013
Operate Dewatering System	September-December 2013
UST System removal (during shored mass excavation)	November –December 2013
Contaminated Soil Excavation and Sampling	November – January 2014
Backfill Excavation and install membrane barrier	January- February 2014
Chemical Oxidant Injection (ChemOx)	February 2014
First Quarter Post Cleanup Monitoring	February - March 2014
Cleanup Action Report	March – April 2014
Groundwater Monitoring and Contingent ChemOx	April 2014 – March 2015
Groundwater Monitoring (as necessary)	2015 to 2020