THE STATE of ALASKA
GOVERNOR BILL WALKER

Department of Environmental Conservation

DIVISION OF SPILL PREVENTION AND RESPONSE
Contaminated Sites Program

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File: 2100.26.095

August 25, 2016

Mr. Perry Pineda
Shell Oil Products
20818 44th Ave. West
Lynnwood, Washington 98036

Re: Decision Document: Texaco #50
Cleanup Complete Determination

Dear Mr. Perry Pineda:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the Texaco #50 at 601 Muldoon Road in Anchorage, Alaska. Based on the information provided to date, it has been determined that the contaminant concentrations remaining on site do not pose an unacceptable risk to human health or the environment and no further remedial action will be required unless new information becomes available that indicates residual contaminants may pose an unacceptable risk.

This Cleanup Complete determination is based on the administrative record for the Texaco #50, which is located in the ADEC office in Anchorage, Alaska. This decision letter summarizes the site history, cleanup actions and levels, and standard site closure conditions that apply.

Site Name and Location:
Texaco #50
601 Muldoon Road
Anchorage Alaska 99504

Name and Mailing Address of Contact Party:
Mr. Perry Pineda
Shell Oil Products
20818 44th Ave. West
Lynnwood, Washington 98036

DEC Site Identifiers:
File No.: 2100.26.095
Hazard ID.: 24008

Regulatory Authority for Determination:
18 AAC 78 and 18 AAC 75

Site Description and Background

A total of seven underground storage tanks (USTs) and their associated piping were installed at the Texaco service station site in 1964/1965. The USTs included four 4,000-gallon gasoline tanks, one 6,000-gallon gasoline tank, one 550-gallon used oil tank, and one-550 gallon fuel oil tank. In 1989 these tanks were removed and five replacement tanks were installed. Soil and groundwater contamination was identified during the UST removals and the excavated contaminated soil was transported off-site for thermal

treatment. When the service station was closed in 2008 the five replacement USTs, their associated piping and two hydraulic hoists inside the demolished service station building were removed. Some additional contamination was identified during this closure.

Contaminants of Concern
During the site investigation and cleanup activities at this site, samples were collected from soil and groundwater and they were analyzed for gasoline range organics (GRO), diesel range organics (DRO), residual range organics (RRO), benzene, toluene ethylbenzene, xylenes (BTEX), polycyclic aromatic hydrocarbons (PAH), volatile organic compounds (VOC), metals, and polychlorinated biphenyls (PCB). Based on these analyses, the following contaminants were detected above the applicable cleanup levels and are considered Contaminants of Concern at this site:

- Residual Range Organics (RRO)
- Diesel Range Organics (DRO)
- Gasoline Range Organics (GRO)
- Benzene
- Toluene
- Ethylbenzene
- Xylenes
- Tetrachloroethylene (PCE)
- Lead
- Cadmium
- Chromium

Cleanup Levels
Applicable soil cleanup levels are established in 18 AAC 75.341 (d), Table B1 and B2. Applicable groundwater cleanup levels are established in 18 AAC 75.345 (b) (1), Table C.

- Residual Range Organics (RRO): soil 10,000 mg/kg, groundwater 1.1 mg/l
- Diesel Range Organics (DRO): soil 250 mg/kg, groundwater 1.5 mg/l
- Gasoline Range Organics (GRO): soil 300 mg/kg, groundwater 2.2 mg/l
- Benzene: soil 0.025 mg/kg, groundwater 0.005 mg/l
- Toluene: soil 6.5 mg/kg, groundwater 1.0 mg/l
- Ethylbenzene: soil 6.9 mg/kg, groundwater 0.7 mg/l
- Xylenes: soil 63 mg/kg, groundwater 10 mg/l
- Tetrachloroethylene (PCE) : soil 0.024 mg/kg, groundwater 0.005 mg/l
- Lead: soil 400 mg/kg, groundwater 0.015 mg/l
- Cadmium: soil 5.0 mg/kg, groundwater 0.005 mg/l
- Chromium: soil 25 mg/kg, groundwater 0.10 mg/l

Characterization and Cleanup Activities
Soil and groundwater contamination was discovered during service station facilities upgrades in 1989 when seven underground storage tanks were removed and five replacement tanks were installed. Gasoline and diesel constituents, and trace amounts chlorinated solvents were identified in soil in the used oil tank

excavation. Up to 2,080 mg/kg GRO, 1,990 mg/kg DRO, 7.5 mg/kg benzene, and 0.144 mg/kg PCE were detected in the samples collected from the excavations. 738 tons of contaminated soil was excavated and thermally treated and three groundwater monitoring wells were installed. Groundwater is about 20 feet below the surface with seasonal flow direction that varies from northwest to southwest.

A water well survey in 1990 identified two drinking water wells in the area which were sampled and found to be free from petroleum contamination. Two more monitoring wells were installed in 1990.

Groundwater sampling was conducted quarterly in 1990, and 1991, then annually in 1992, 1993, 1995, and 2000. Based on the groundwater concentrations declining to cleanup levels groundwater sampling was suspended in 2000 with the understanding that soil confirmation samples would be collected when the active underground storage tank system is removed.

In January 2008 six soil borings were sampled as part of a Phase II assessment and two of the boreholes were completed as groundwater monitoring wells. Benzene was detected up to 0.030 mg/kg. PAHs, PCBs, GRO, DRO, and RRO were not detected in the soil samples. Up to 2.06 mg/l DRO, 874 ug/l lead, 24.2 ug/l cadmium, and 2,940 ug/l chromium were detected in groundwater samples. PCBs were not detected and GRO and PAHs were not detected above cleanup levels.

In July 2008 the five remaining underground storage tanks, their associated piping and two hydraulic hoists were removed. Soil contamination above cleanup levels was found at three of the tanks. One of the three tank areas (the used oil tank) was cleaned up after excavating additional contaminated soil, but some benzene soil contamination was left at gasoline tank #1 (0.0325 mg/kg) and gasoline tank #4 (0.0296 mg/kg). Seven site monitoring wells were decommissioned in 2008 during site redevelopment.

In May 2010 an additional monitoring well was installed to help define the extent of the groundwater contamination at this site.

In October 2011 additional release investigation work was conducted to evaluate current contaminant concentrations in soil at locations where contaminants had been detected above cleanup levels the site during previous investigations. The soil samples collected did not contain contaminants above cleanup levels.

In October 2012 three monitoring wells were decommissioned and a replacement monitoring well MW-3R was installed and sampled to replace the damaged monitoring well MW-3. The initial groundwater sampling of the replacement monitoring well MW-3R had 1.62 mg/l DRO, but subsequent groundwater samples did not contain contaminants above cleanup levels.

The contaminants of concern noted above were detected above cleanup levels during the initial tank excavation in 1989 or during the tank excavation work conducted in 2008, however these contaminants were not detected above cleanup levels after additional cleanup activities and monitoring were conducted at the site.

Though de-minimis soil contamination likely remains at the site, the Contaminated Sites Program has determined that sufficient site characterization has been completed and indicates that contaminants in soil have achieved a steady-state equilibrium and will not migrate to groundwater.

Cumulative Risk Evaluation
Pursuant to 18 AAC 78.600(d), when detectable contamination remains on-site following a cleanup, a cumulative risk determination must be made that the risk from hazardous substances does not exceed a cumulative carcinogenic risk standard of 1 in 100,000 across all exposure pathways and does not exceed a cumulative noncarcinogenic risk standard at a hazard index of one across all exposure pathways.

Based on a review of the environmental record, ADEC has determined that residual contaminant concentrations meet the human health cumulative risk criteria for residential land use.

Exposure Pathway Evaluation
Following investigation and cleanup at the site, exposure to the remaining contaminants was evaluated using ADEC's Exposure Tracking Model (ETM). Exposure pathways are the conduits by which contamination may reach human or ecological receptors. ETM results show all pathways to be one of the following: De-Minimis Exposure, Exposure Controlled, or Pathway Incomplete. A summary of this pathway evaluation is included in Table 2.

Table 2 – Exposure Pathway Evaluation

Pathway	Result	Explanation
Surface Soil Contact	De-Minimis Exposure	Contamination remains in surface soil (0 to 2 feet below ground surface), but is below direct contact cleanup levels.
Sub-Surface Soil Contact	De-Minimis Exposure	Contamination remains in the sub-surface, but is below direct contact cleanup levels.
Inhalation – Outdoor Air	De-Minimis Exposure	Contamination remains in the sub-surface, but is below inhalation cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	De-Minimis Exposure	Contaminants in groundwater are below vapor intrusion target levels.
Groundwater Ingestion	De-Minimis Exposure	Contaminants in groundwater are below cleanup levels.
Surface Water Ingestion	Pathway Incomplete	Surface water is not used as a drinking water source in the vicinity of the site.
Wild and Farmed Foods Ingestion	Pathway Incomplete	No nearby wild or farmed food.
Exposure to Ecological Receptors	Pathway Incomplete	No nearby ecological receptors.

Notes to Table 2: "De-Minimis Exposure" means that in ADEC's judgment receptors are unlikely to be adversely affected by the minimal volume or concentration of remaining contamination. "Pathway Incomplete" means that in ADEC's judgment contamination has no potential to contact receptors. "Exposure Controlled" means there is an institutional control in place limiting land or groundwater use and there may be a physical barrier in place that prevents contact with residual contamination.

ADEC Decision

Soil and groundwater contamination at the site have been cleaned up to concentrations below the approved cleanup levels suitable for residential land use. This site will receive a "Cleanup Complete" designation on the Contaminated Sites Database, subject to the following standard conditions.

Standard Conditions

1. Any proposal to transport soil or groundwater off-site requires ADEC approval in accordance with 18 AAC 78.600(h). A "site" as defined by 18 AAC 78.995(134) means an area that is contaminated, including areas contaminated by the migration of hazardous substances from a source area, regardless of property ownership.

2. Movement or use of contaminated material in a manner that results in a violation of 18 AAC 70 water quality standards is prohibited.

3. Groundwater throughout Alaska is protected for use as a water supply for drinking, culinary and food processing, agriculture including irrigation and stock watering, aquaculture, and industrial use. Contaminated site cleanup complete determinations are based on groundwater being considered a potential drinking water source. In the event that groundwater from this site is to be used for other purposes in the future, such as aquaculture, additional testing and treatment may be required to ensure the water is suitable for its intended use.

This determination is in accordance with 18 AAC 78.276(f) and does not preclude ADEC from requiring additional assessment and/or cleanup action if future information indicates that contaminants at this site may pose an unacceptable risk to human health, safety, or welfare or to the environment.

Appeal

Any person who disagrees with this decision may request an adjudicatory hearing in accordance with 18 AAC 15.195 – 18 AAC 15.340 or an informal review by the Division Director in accordance with 18 AAC 15.185. Informal review requests must be delivered to the Division Director, 555 Cordova Street, Anchorage, Alaska 99501-2617, within 15 days after receiving the department's decision reviewable under this section. Adjudicatory hearing requests must be delivered to the Commissioner of the Department of Environmental Conservation, 410 Willoughby Avenue, Suite 303, P.O. Box 111800, Juneau, Alaska 99811-1800, within 30 days after the date of issuance of this letter, or within 30 days after the department issues a final decision under 18 AAC 15.185. If a hearing is not requested within 30 days, the right to appeal is waived.

If you have questions about this closure decision, please feel free to contact me at (907) 269-7525, or email at robert.weimer@alaska.gov.

Sincerely,

Robert Weimer
Project Manager

cc: Spill Prevention and Response, Cost Recovery Unit