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 No: 2100.26.591

June 28, 2017

Fred Meyer Stores Inc.
Attn: Mr. Daniel Hermann
Environmental Department, 23E, Fuel Stops
P.O. Box 42121
Portland, OR 97242-2121

Re: **Decision Document: Fred Meyer Fuel Stop #656**
Cleanup Complete Determination

Dear Mr. Hermann:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the Fred Meyer Fuel Stop #656 site located at 2300 Abbott Road, in Anchorage, AK. 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 Fred Meyer Fuel Stop #656, 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:
Fred Meyer Fuel Stop # 656
2300 Abbott Road
Anchorage, AK

Name and Mailing Address of Contact Party:
Fred Meyer Stores Inc.
Environmental Department, 23 E, Fuel Stops
Portland, OR, 97242-2121

DEC Site Identifiers:
File No: 2100.26.591
Hazard ID: 26449

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

Site Description and Background
The Fred Meyer Fuel Stop #656 is a gas station associated with the Fred Meyer store at 2300 Abbott Road in Anchorage, Alaska. The facility includes two regulated underground storage tanks (USTs); a 20,000 gallon gasoline UST and a 20,000 gallon diesel UST, and eight fuel dispenser islands. The tanks were installed in 2001, and were constructed with double-walled fiberglass reinforced plastic. Tanks are equipped with piping and tank release detection, overfill, spill, and cathodic protection. Petroleum contamination in soil was

encountered in August 2015 during system improvements and reconfiguration at the site which included the replacement of the piping, dispensers, and other fuel station components.

Contaminants of Concern

During the course of the investigation and cleanup, summarized below in the Characterization and Cleanup Activities section of this decision letter, soil and groundwater samples were analyzed for gasoline range organics (GRO), diesel range organics (DRO), residual range organics (RRO), and volatile organic compounds (VOCs), including benzene, toluene, ethylbenzene, and xylenes (BTEX). In addition select groundwater samples were also analyzed for polyaromatic hydrocarbons (PAHs). Based on these analyses, the following contaminants of concern were identified in surface and subsurface soil.

- Benzene
- Ethylbenzene
- Xylenes

Cleanup Levels

Benzene, Ethylbenzene, and Xylenes, were detected in soil above migration to groundwater cleanup levels. Soil cleanup levels for this site are established in 18 AAC 75.341, Tables B1 and B2 for the migration to groundwater pathway. Cleanup levels for groundwater at this site are established in 18 AAC 75.345, Table C.

Table 1 – Approved Cleanup Levels

Contaminant	Soil (mg/kg)	Groundwater (mg/L)
Benzene	0.022	0.0046
Ethylbenzene	0.13	0.015
Xylenes	1.5	0.19

mg/kg = milligrams per kilogram
mg/L = milligrams per liter

Characterization and Cleanup Activities

In August 2015, piping, dispensers, and the oil water separator associated with one 20,000 gallon gasoline UST and one 20,000 gallon diesel UST were removed and replaced at the Fred Meyer Fuel Stop #656 in Anchorage. The visible portion of the tanks were inspected at this time, and no holes were observed in either tank. Impacted soil was encountered immediately after concrete was removed in close proximity to the in-place 20,000 gallon diesel UST, and to the northwest and southwest of the fuel dispenser canopy.

Soil surrounding the fuel canopy was excavated and tested in stages, due to a limited capacity to stockpile soil on site. Soil was segregated into "clean" and "potentially impacted" stockpiles, based on photoionization detector (PID) measurements. Approximately 2,720 cubic yards of soil were removed from the site. Contaminated soils were taken to Alaska Soil Recycling for thermal remediation and non-contaminated soils were taken to a private property for reuse with ADEC approval. The excavation was then brought back to grade with clean fill after analytical soil samples were collected.

Analytical soil samples were collected from the excavation base and sidewalls upon completion of each phase of the excavation. Confirmation soil samples collected at the northwest corner of the fuel canopy at a depth of 2.0 to 3.5 feet bgs contained benzene up to 0.157 mg/kg, ethylbenzene up to 0.774 mg/kg, and xylenes up to 7.2 mg/kg.

To evaluate the potential impacts to soil and groundwater, two soil borings were advanced north of the in place USTs and completed as monitoring wells and two historic on-site observation wells were sampled. A total of four soil samples collected during monitoring well installation did not contain contaminant concentrations above cleanup levels. A total of five groundwater samples collected from the monitoring wells and observation wells did not contain contaminant concentrations above ADEC cleanup levels.

The monitoring wells were decommissioned in accordance with ADEC standards on May 3, 2017.

Cumulative Risk Evaluation

Pursuant to 18 AAC 75.325(g), 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 non-carcinogenic risk standard at a hazard index of one across all exposure pathways.

Cumulative risk at this site was calculated assuming a residential land use and using the most recently detected concentrations of contaminants in all of the soil samples collected in 2016.

Based on a review of the environmental record, ADEC has determined that residual contaminant concentrations do not pose a cumulative human health risk.

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	Pathway Incomplete	Contamination in surface soil was removed from the site and replaced with clean fill
Sub-Surface Soil Contact	De-Minimis Exposure	Contamination in sub-surface soil is de-minimis in volume and the remaining contaminant concentrations are below human health cleanup levels
Inhalation – Outdoor Air	De-Minimis Exposure	Contaminant concentrations in soil are below human health cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	De-Minimis Exposure	Groundwater samples did not contain detectable concentrations of volatile contaminants above ADEC vapor intrusion target levels for groundwater.

Groundwater Ingestion	De-Minimis Exposure	The soil data indicates the remaining contamination above migration to groundwater cleanup levels is confined to the property. Groundwater samples did not contain contaminants above cleanup levels. Groundwater is not used as a drinking water source in this area.
Surface Water Ingestion	Pathway Incomplete	Surface water is not used as a drinking water source in this area.
Wild Foods Ingestion	Pathway Incomplete	The affected area is a paved gas station. Contaminants of concern do not have the potential to bioaccumulate in plants or animals.
Exposure to Ecological Receptors	Pathway Incomplete	Ecological receptors are not likely to come into contact with subsurface contamination remaining at the site.

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 contamination remains onsite at concentrations above the applicable cleanup levels, however sufficient characterization has been completed and ADEC has made a determination that the remaining contaminants in soil have achieved steady-state equilibrium will not migrate to groundwater. 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 (the site is shown in the attached figure) requires ADEC approval in accordance with 18 AAC 75.325. A "site" [as defined by 18 AAC 75.990 (115)] 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.

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 this site may pose an unacceptable risk to human health or 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, 410 Willoughby Avenue, Suite 303, Juneau, Alaska 99811-1800, 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, 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) 269-7522 or email at Chelsy.Passmore@alaska.gov.

Sincerely,

Chelsy Passmore
Environmental Program Specialist

cc: Spill Prevention and Response, Cost Recovery Unit