



THE STATE
of **ALASKA**
GOVERNOR MIKE DUNLEAVY

**Department of
Environmental Conservation**

DIVISION OF SPILL PREVENTION AND RESPONSE
Contaminated Sites Program

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File: 2245.26.002

June 28, 2019

Mr. Brad Fisher
Fisher Fuels Inc.
P.O. Box 520209
Big Lake, AK 99652

Re: **Decision Document: Palmer Tesoro AKA Tesoro Fisher Wholesale Tanks
Cleanup Complete Determination**

Dear Mr. Fisher:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the Palmer Tesoro AKA Tesoro Fisher Wholesale Tanks (Palmer Tesoro) located at 174 West Arctic Boulevard and the Glenn Highway in Palmer, 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 Palmer Tesoro, 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:

Palmer Tesoro AKA
Tesoro Fisher Wholesale Tanks
174 West Arctic Avenue
Palmer, AK 99645

Name and Mailing Address of Contact Party:

Mr. Brad Fisher
Fisher Fuels Inc.
P.O. Box 520029
Big Lake, AK 99652

DEC Site Identifiers:

File No.: 2245.26.002
Hazard ID.: 23764

Regulatory Authority for Determination:

18 AAC 78 and 18 AAC 75

Site Description and Background

The property has been used as a fueling station and/or automotive service center since approximately 1949, when the property was occupied by Westside Service. The former location of the Westside Service underground storage tanks (USTs) and fueling system components is unknown, but were removed prior to Fisher Fuels purchasing the property in 1970.

Fisher Fuels operated six USTs at the facility:

- Tank 1- 12,000-gallon diesel UST removed in 1996
- Tank 2- 12,000-gallon diesel UST removed in 1996
- Tank 3- 12,000-gallon gasoline UST removed in 2012
- Tank 4- 12,000-gallon gasoline UST removed in 2012
- Tank 5- 5,000- gallon diesel tank removed in 2012
- Tank 6- 2,000-gallon Used oil UST removed in 1996

ADEC records indicate petroleum contamination was first identified in soil and groundwater at the site during a 1989 property assessment. The presence of petroleum contamination is attributed to leaks and spills from the USTs systems during normal operations.

Contaminants of Concern

During the site characterization and cleanup activities at this site, samples were collected from soil and groundwater and analyzed for diesel range organics (DRO), gasoline range organics (GRO), residual range organics (RRO), volatile organic compounds (VOCs) including benzene, toluene, ethylbenzene, and xylenes (BTEX), polycyclic aromatic hydrocarbons (PAHs), and lead. Based on these analyses, the following contaminants were detected above the applicable cleanup levels and are considered contaminants of concern at this site:

- diesel range organics (DRO)
- gasoline range organics (GRO)
- benzene
- toluene
- ethylbenzene
- xylenes
- 1,2,4-trimethylbenzene
- 1,3,5-trimethylbenzene
- naphthalene

Cleanup Levels

Contaminant concentrations in soil at the site were compared to Method Two, migration to groundwater cleanup levels found in 18 AAC 75.341 until 2016, when Method Three cleanup levels for DRO, GRO, benzene, ethylbenzene, and toluene developed in accordance with 18 AAC 75.340 were approved for the site as noted below. Groundwater cleanup levels are found in 18 AAC 75.345 Table C.

Table 1 – Approved Cleanup Levels

Contaminant	Soil (Method Two) (mg/kg)	Soil (Method Three) (mg/kg)	Groundwater (mg/L)
DRO	NA	600	1.5
GRO	NA	680	2.2
benzene	NA	0.35	0.0046

toluene	NA	88	1.1
ethylbenzene	NA	94	0.015
xylene	1.5	NA	0.190
1,2,4-trimethylbenzene	0.61	NA	0.056
1,3,5-trimethylbenzene	0.66	NA	0.060
Naphthalene	0.038	NA	0.0017

mg/kg = milligrams per kilogram

mg/L = milligrams per liter

NA- not applicable

Characterization and Cleanup Activities

A Site Assessment was conducted in 1989 and included the excavation and sampling of six test holes. Petroleum contamination was noted to be present in four of the test holes and benzene was detected up to 3.15 mg/kg in one sample. Groundwater samples collected from the test holes contained benzene up to 0.449 mg/l. Toluene, ethylbenzene, and xylenes were also detected in groundwater above the cleanup level. Three groundwater monitoring wells (MW) were then installed and sampled in 1990. Benzene was detected above the cleanup level in MW3 along the southern downgradient edge of the property along Arctic Ave.

Tanks 1, 2, and 6 were removed from the ground in 1996. Tank 1 & 2 (12,000-gallon diesel USTs) were located in the northwest portion of the property as shown on the attached figure and were removed from a common excavation. Tank 6 was located just north of tanks 1 & 2. The piping and dispensers associated with tanks 1 & 2 was not addressed as part of this effort. Excavation at the USTs was limited along the western edge by the Glenn Highway right-of-way. Confirmation soil samples from the limits of the excavation at tanks 1 & 2 contained DRO up to 8,230 mg/kg in a sample collected 13 feet below ground surface. Confirmation soil samples from the limits of the excavation at tank 6 contained DRO up to 9,920 mg/kg, GRO up to 438 mg/kg, and benzene up to 0.898 mg/kg. Approximately 300 cubic yards (cy) of contaminated soil was placed into a passive aeration cell along the north side of the property.

Further investigation and cleanup activities were not conducted at the site until approximately 2008, when ADEC requested evaluation of the soil in the treatment cell. Soil samples collected from the treatment cell in 2011 contained DRO up to 5,950 mg/kg and benzene up to 0.0752 mg/kg.

The facility ceased operations in 2011 and planning began for the removal of the remaining USTs, piping, and dispensers. In preparation for future soil treatment, a fenced, on-site landfarm was established in 2012 with the 300 cy of contaminated soil from the former treatment cell.

Tanks 3, 4, and 5 were removed in 2012. Tanks 3 & 4 (12,000-gallon gasoline USTs) were located just south of the former location of tanks 1 & 2. Tank 5 (5,000-gallon diesel UST) was located along the eastern edge of the property. The piping and dispensers associated with tanks 1-5 was also removed at this time. None of the confirmation soil samples collected from the limits of the excavations at the USTs contained contaminants above cleanup levels. Soil samples from the piping and dispenser areas however contained GRO up to 23,000 mg/kg near the dispensers and up to 2,990 mg/kg along the piping run just west of the dispensers. Benzene, ethylbenzene, toluene, and xylenes were also detected above cleanup levels. A soil sample from the decommissioned treatment cell contained DRO at 735 mg/kg, so approximately 460 cy of

contaminated soil from the UST excavations was placed into two stockpiles for future landfarming in the on-site landfarm area. The tank 5 diesel stockpile (140 cy) was eventually sampled and determined to be below cleanup levels, so this soil was approved for use as backfill in the dispenser excavation.

A groundwater investigation was conducted in 2015. Two new groundwater monitoring wells were installed: well FM was installed across Arctic Ave in the parking area for the Fed Meyer fuel station and well SE was installed along the property boundary near Arctic Ave. Groundwater samples were collected from the new wells and also from well SW located near the southwest corner of the property. Benzene and GRO were detected above the cleanup level in well SE and benzene was above the cleanup level in well FM. Well SW did not contain contaminants above cleanup levels. Monitoring well FM was re-named FM-1 and well FM-2 was installed in 2017 to delineate the extent of groundwater impacts.

In 2016, following the approval of Method Three alternative cleanup levels, an effort was made to remove the remaining contaminated soil in the vicinity of the former dispensers and piping where contaminants above cleanup levels were detected in 2012. Approximately 1,800 cy of contaminated soil was excavated to a depth of approximately 15-18 feet below ground surface (bgs). Confirmation soil samples from the limits of the excavation indicated benzene remained above the Method 3 cleanup level at several locations with a maximum detected concentration of 9.13 mg/kg in a sample from 18 feet bgs. Toluene, xylenes, and GRO were also detected above the Method Three cleanup level in this same sample. In general, the 2016 excavation removed the vast majority of contaminated soil from the area near the former dispensers.

Due to the limited space available for landfarming at the Palmer Tesoro site, the on-site landfarm was decommissioned in 2017 and all remaining contaminated soil was transported to another contaminated site owned by Mr. Brad Fisher, Sutton Hilltop (File #2257.26.006). The soil has been landspread across a large area and will be managed under that site.

Groundwater monitoring continued at the site until 2019 at which point groundwater samples from all monitoring wells had demonstrated contaminant concentrations below the cleanup levels for at least two consecutive events. Although soil contamination remains at the site at concentrations exceeding the migration to groundwater cleanup level, ADEC has made a determination that contamination in soil is at steady-state equilibrium and will not migrate to groundwater. The groundwater monitoring wells associated with this site were decommissioned in accordance with ADEC guidance in April, 2019.

Stockpile sampling, contaminated soil excavation and limited delineation was conducted during re-development activities in 2019. Stockpiles and excavated soils that contained contaminants above DEC cleanup levels and hauled to the Sutton Hilltop Landfarm for treatment. Confirmation samples from the base and sidewalls of the excavation contained petroleum contaminants at concentrations consistent with historical data. Contaminant concentration exceeded the migration to groundwater cleanup levels in several locations but were below human health cleanup levels. At the location with the highest results, a test pit was excavated an additional 6 feet below the base of the excavation to evaluate the vertical extent of contamination. A soil sample from the test pit did not contain detectable concentrations of contaminations. This data, along with the existing groundwater data from the site indicates contaminants detected at the base of the excavation are not a risk to groundwater, therefore no further action will be required in these areas.

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.

Cumulative risk at this site was calculated using the highest contaminant concentrations remaining at the site following the 2016 excavation activities at the piping and dispenser area. 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	Pathway Incomplete	Contamination is not present in surface soil (0 to 2 feet below ground surface).
Sub-Surface Soil Contact	De-Minimis Exposure	Contamination remains in the sub-surface, but is below human health cleanup levels.
Inhalation – Outdoor Air	De-Minimis Exposure	Contamination remains in the sub-surface, but is below human health cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	De-Minimis Exposure	The presence of clean soil near the surface will mitigate exposure via this pathway.
Groundwater Ingestion	De-Minimis Exposure	Groundwater at the site no longer exceeds the applicable 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	Contaminants of concern do not have the potential to bioaccumulate in plants or animals.
Exposure to Ecological Receptors	Pathway Incomplete	Ecological receptors are not present 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 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 from a site that is subject to the site cleanup rules or for which a written determination from the department has been made under 18 AAC 75.380(d)(1) that allows contamination to remain at the site above method two soil cleanup levels or groundwater cleanup levels listed in Table C requires DEC 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. (See attached site figure.)
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 20 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 907-269-3057, or email at bill.oconnell@alaska.gov.

Sincerely,


Bill O'Connell
Project Manager

cc: Spill Prevention and Response, Cost Recovery Unit