



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: 130.26.007

September 26, 2016

Mr. David Young
Young's Chevron
P.O. Box 167
Tok, AK 99780

Re: Decision Document: Chevron-Young's Service
Cleanup Complete Determination

Dear Mr. Young:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the Chevron-Young's Service contaminated site located at Mile 1314 of the Alaska Highway in Tok, 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 Chevron-Young's Service site, 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:

Chevron- Young's Service
Mile 1314 Alaska Highway
Tok, Alaska 99780

Name and Mailing Address of Contact Party:

Mr. David Young
Young's Chevron
P.O. Box 167
Tok, Alaska 99780

DEC Site Identifiers:

File No.: 130.26.007
Hazard ID.: 23351

Regulatory Authority for Determination:

18 AAC 78 and 18 AAC 75

Site Description and Background

The site is a former service station with five 10,000-gallon underground storage tanks (UST) and five pump islands. Two of the USTs contained unleaded gasoline, one contained diesel, one contained premium unleaded and one UST contained regular leaded gasoline. The USTs were permanently closed in place in 1995 and the piping and dispensers were removed from the property.

Prior to the closure of the tanks, an in-place assessment was conducted in 1993 with additional investigation conducted during the UST system removal in 1995. Petroleum contamination was identified in soil at several locations including Dispenser A, Dispenser E, and a 90-degree piping bend associated with tanks 3, 4, and 5. These areas are shown on Figure 1.

This property and the property to the east are served by a common drinking water well. Groundwater at the site is located at approximately 55 feet below ground surface (bgs).

Contaminants of Concern

During the site investigation 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), polynuclear aromatic hydrocarbons (PAHs), benzene, toluene, ethylbenzene, and xylenes (BTX) 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

Cleanup Levels

Applicable soil cleanup levels are established in 18 AAC 75.341(c), Table B1, and 18 AAC 75.341 (d), Table B2. Applicable groundwater cleanup levels are established in 18 AAC 75.345 Table C as shown below in Table 1.

Table 1 – Approved Cleanup Levels

Contaminant	Soil (mg/kg)	Groundwater (mg/L)
DRO	250	1.5
GRO	300	2.2
Benzene	0.025	0.005
Toluene	6.5	1.0
Ethylbenzene	6.9	0.7
Total Xylenes	63	10

mg/L = milligrams per liter

ug/L = micrograms per liter

Characterization and Cleanup Activities

Soil samples collected during the UST closure assessment in 1995 identified petroleum contamination in three locations including Dispenser A, Dispenser E, and a 90-degree piping bend associated with tanks 3, 4, and 5. At Dispenser A, GRO was detected at 540 mg/kg and benzene was detected at 2.54 mg/kg. At Dispenser E, GRO was detected up to 33,000 mg/kg, benzene up to 370 mg/kg, toluene up to 5,300 mg/kg, ethylbenzene up to 990 mg/kg and xylenes up to 4,500 mg/kg. At the 90-degree piping bend, DRO

was detected up to 520 mg/kg, GRO up to 2,200 mg/kg, benzene up to 5.4 mg/kg, toluene up to 170 mg/kg, ethylbenzene up to 95 mg/kg and xylenes up to 600 mg/kg. Approximately 32 cubic yards of petroleum contaminated soil was excavated and treated on site. A passive ventilation system was installed at the most contaminated areas to facilitate in-situ remediation at the site.

To evaluate the extent of contamination in soil, 19 soil borings were advanced and sampled in 2014 and 2015 in the areas identified as contaminated during previous sampling events. These investigations successfully delineated the horizontal extent of contamination and confirmed that soil contamination was limited to the immediate vicinity of the piping and dispensers. DRO was detected up to 1,000 mg/kg, but only exceeded the cleanup level in one sample. GRO was detected up to 807 mg/kg, benzene up to 0.0644 mg/kg, ethylbenzene up to 9.75 mg/kg and xylenes up to 172.2 mg/kg. Toluene was not detected above the cleanup level. The highest concentrations of contaminants were detected in the vicinity of former Dispenser E. Soil contamination above cleanup levels was present up to 56 feet bgs with saturated soil located at 58 feet bgs, suggesting that groundwater may have been contaminated from releases at the site.

A groundwater investigation was conducted in 2015. Four monitoring wells were installed at the site and samples were collected in 2015 and 2016. Contaminants were not detected above cleanup levels during either sampling event and the wells were decommissioned in accordance with ADEC guidance in August 2016.

The drinking water well located on the adjacent property to the east has been sampled on numerous occasions. Sample results indicate the well was never impacted by releases from the UST system associated with this site.

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 non-carcinogenic risk standard at a hazard index of one across all exposure pathways.

Cumulative risk at the site was calculated using the highest contaminant concentrations detected in soil and groundwater during the investigations conducted between 2014 and 2016. The results indicate a cumulative carcinogenic risk of 2 in 1,000,000 and a non-carcinogenic risk of 0.4 across all exposure pathways, therefore cumulative risk is not a concern at the site.

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 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	Due to the distance between contaminated areas and occupied structures, exposure via this pathway is considered de minimis.
Groundwater Ingestion	De-Minimis Exposure	Contaminant concentrations in groundwater are below cleanup levels and groundwater that is currently used as a drinking water source has not contained contaminants above regulatory levels during any of the sampling events.
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

Notes to Table 2: “De-Minimis Exposure” means that in ADEC’s judgment receptors are unlikely to be 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 on site, however sufficient site characterization has been completed and the Contaminated Sites Program has determined that contaminants in soil have achieved steady-state equilibrium and 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 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. (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.

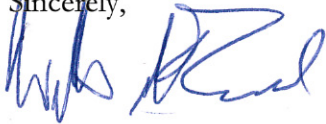
This determination is in accordance with 18 AAC 78.276(f) and does not preclude ADEC from requiring additional assessment and/or cleanup action if future information indicates that contaminants at this site may pose an unacceptable risk to human health, safety, or welfare or to the environment.

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 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) 269-3057 or email at bill.oconnell@alaska.gov.

Sincerely,



Bill O'Connell
Environmental Program Manager

cc: Spill Prevention and Response, Cost Recovery Unit

Figure 1- Site Plan

