



THE STATE  
of **ALASKA**  
GOVERNOR MIKE DUNLEAVY

**Department of Environmental  
Conservation**

DIVISION OF SPILL PREVENTION AND RESPONSE  
Contaminated Sites Program

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1517.38.012

May 27, 2020

*Sent via electronic mail only*

Dave Creighton  
Phoenix Logging Company  
P.O. Box 5758  
Ketchikan, Alaska 99801

Re: Decision Document: Phoenix Truck Stop  
Cleanup Complete Determination

Dear Mr. Creighton

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the Phoenix Truck Shop located on Klawock Island. 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 contamination poses an unacceptable risk.

This Cleanup Complete determination is based on the administrative record for the Phoenix Truck Shop 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:**

Phoenix Truck Shop  
Klawock Island  
Klawock, AK 99925

**Name and Mailing Address of Contact Party:**

Dave Creighton  
Phoenix Logging Company  
P.O. Box 5758  
Ketchikan, Alaska 99801

**ADEC Site Identifiers:**

File No.: 1517.38.012  
Hazard ID: 2006

**Regulatory Authority for Determination:**

18 AAC 75

**Site Description and Background**

In 1993, petroleum contamination was encountered at the Phoenix Logging maintenance shop and equipment storage yard. The maintenance shop was constructed in 1981 for Sealaska and used for equipment and truck maintenance for logging operations. Phoenix Logging operated the shop and equipment yard from 1985 until 2017 when logging operations ceased. The shop building currently remains on the site along with a shed which contains

an inactive water well. Reportedly, this well was historically used as a source of non-potable water. A logging road runs north to south separating the maintenance shop to the east and the storage yard to the west.

### Contaminants of Concern

During the site investigations, soil and groundwater samples were collected and analyzed for gasoline range organics (GRO), diesel range organics (DRO), residual range organics (RRO), volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), dioxins, and metals. Based on these analyses, the following contaminants of concern were identified at the site:

- DRO
- RRO
- Pentachlorophenol (PCP)

### ADEC Cleanup Levels

The default groundwater cleanup levels for this site are established in 18 AAC 75.345 Table C Groundwater Cleanup Levels. The default soil cleanup levels for this site are established in 18 AAC 75.341, Method Two, *Over 40 Inch Zone* for the migration to groundwater pathway level listed in Tables B1 and B2. Site-specific Method Three, *Over 40 Inch Zone* soil cleanup levels for the migration to groundwater pathway have also been calculated for DRO and RRO at this site. The approved cleanup levels are listed in the table below.

**Table 1- Approved Cleanup Levels**

Contaminants of Concern	Soil (mg/kg)	Groundwater (ug/L)
DRO	2,300*	1,500
RRO	8,300*	1,100
Pentachlorophenol (PCP)	0.0043	0.41

**Note to Table 1:**

mg/kg = milligrams per kilogram

ug/L = micrograms per liter

\* Method 3 cleanup level for residential use based on the migration to groundwater pathway.

### Characterization and Cleanup Activities

In 1993, samples were collected from the maintenance shop area east side of the road to characterize initial site conditions. Areas of concern included the generator shack area with associated non-potable water well, used oil dump/burn pile, barrel rack and gasoline/diesel above ground storage tank (AST) areas, aboveground heating oil tank (HOT) area, southern corner of the maintenance shop, and the equipment area. Six soil samples collected 0.9 to 4.0 feet below ground surface (bgs) contained total petroleum hydrocarbons (TPH) up to 32,000 mg/kg, DRO up to 7,280 mg/kg, benzene up to 1.16 mg/kg, ethylbenzene up to 0.33 mg/kg, toluene up to 8.7 mg/kg, and xylenes up to 36.9 mg/kg. A grab groundwater sample collected at the burn area (below 1 centimeter of floating black oil with strong odor) at 4 feet bgs contained petroleum constituents above Table C cleanup levels. A groundwater sample collected from the non-potable water well did not contain detectable concentrations of contaminants.

In 1994, additional characterization was conducted at the maintenance shop area east of the road. Soil samples were collected from six areas of concern including: southern corner of maintenance shop, barrel rack and gasoline/diesel ASTs, chemical storage containers, used oil dump/burn pile, between oil dump/burn area and drum storage yard, and the above ground HOT. Soil samples were collected from these six areas of concern: two from the surface and four from a depth of 1.0 to 1.5 feet bgs. Groundwater at the oil dump/burn pile area contained petroleum free product. All soil samples collected contained contaminant concentrations above cleanup levels with TPH up to 41,000 mg/kg, DRO up to 34,000 mg/kg, and ethylbenzene up to 0.2 mg/kg. It was noted that bedrock was encountered several feet beneath the ground surface.

In 2006, debris was removed and contaminated soil was excavated from the logging camp, however workplans were not submitted nor was ADEC coordinated with prior to this field work. Reportedly, the City of Klawock landfill received 20,000 pounds of contaminated soil and debris including: burnt boards, hydraulic filters, crushed barrels, tires, and oil filters from the "Phoenix Logging Sort Yard". The oil filters were excavated from the "oil filter dump" behind the shop. Reportedly, the excavator dug to a depth of 2.5 feet bgs where it was limited by bedrock.

In 2017, both the maintenance shop area and the equipment storage yard were investigated. At the equipment storage yard, located west of the road, contamination was observed including: burnt debris mixed with metal; oil stained areas; log skid with up to six large batteries, six barrels and potentially contaminated gravels; and light oil sheens on surrounding ponds. No analytical soil samples were collected at the equipment storage yard. At the maintenance shop area east of the road, 22 testpits were dug to various depths down to 4 feet bgs and 23 soil samples were collected. These soil samples contained DRO up to 42,650 mg/kg and RRO up to 82,600 mg/kg. These 23 soil samples were also analyzed for total organic carbon (TOC). The results were entered into ADEC's method three calculator which resulted in DRO and RRO migration to groundwater cleanup levels of 2,300 mg/kg and 8,300 mg/kg, respectively.

In 2018, further assessment activities and contaminated soil excavations were conducted. Three excavation efforts were conducted in June, September, and November at both the maintenance shop and equipment storage yard. These excavation efforts were sometimes limited by shallow bedrock and perched groundwater. Approximately 355 cubic yards of soil were put into four biocells in the storage yard and amended with fertilizer. After these removal actions, three areas of concern remained including an exploratory trench, the former oil dump/burn pile, and the barrel rack/fueling site. At the exploratory trench, advanced within the equipment storage yard, soil samples collected contained DRO up to 2,330 mg/kg from a sample collected 1 foot bgs. At the former oil dump/burn pile area east of the shop, groundwater with free product was encountered at 5.5 feet bgs above the bedrock interface at 7.0 feet bgs. However, soil samples collected to a depth of 6 feet bgs were below approved ADEC cleanup levels. At the barrel rack/fueling area located west of the shop, DRO up to 5,620 mg/kg and RRO up to 20,700 mg/kg was found in soil samples collected 5 to 6 feet bgs at the groundwater interface. Additional soil was excavated at this location to a depth of 7.5 to 8 feet bgs. However, a confirmation soil sample was not collected at this depth due to advancing groundwater and the presence of bedrock. A monitoring well installed in the excavation and sampled in September contained DRO up to 2,550 ug/L and RRO up to 6,100 ug/L. This monitoring well sampled again in November contained DRO up to 750 ug/L, and RRO up to 1,520 ug/L.

In February 2019, further assessment of the oil water separator area was conducted and exploratory trenches were advanced to further characterize the site. Approximately three cubic yards of soil was removed from an exploratory trench advanced adjacent at the former oil/water separator and added to the biocell. A soil sample collected from 2 feet bgs at this trench contained DRO at 2,320 mg/kg. At the oil water separator, a soil sample collected at the bedrock interface at 6.6 feet bgs contained PCP up to 0.064 mg/kg. Five exploratory trenches were also advanced west of the shop adjacent to the road. Soil samples were collect from four of five trenches to a depth of 13.5 feet bgs. Only two of these trenches contained contaminant concentrations above ADEC approved cleanup levels with DRO at 2,860 mg/kg and 6,430 mg/kg (see attached site figure). These trenches encountered bedrock as shallow as 4 feet bgs and as deep at 15 feet bgs. Groundwater was encountered in two of these trenches at bedrock and was limited in quantity. In addition to the historic monitoring well located at the bulk oil/fueling site, another monitoring well was installed at the oil dump burn pile area where historic oily water had been observed in 2018. Both of these monitoring wells contained contaminant concentrations above Table C cleanup levels with DRO up to 1,790 ug/L and RRO up to 1,100 ug/L.

In October 2019, performance soil samples were collected from the onsite four biocells and groundwater samples were collected from the two onsite monitoring wells. The biocell had been fertilized and tilled at least six times from 2018 to 2019. A total of 47 soil samples collect 1 foot into the 1.5 foot biocells contained DRO up to 1,410 mg/kg and RRO up to 3,130 which was below the ADEC approved cleanup levels. Three groundwater samples collected from the two monitoring wells were below table C groundwater cleanup levels.

In February 2020, groundwater samples were collected again from the two monitoring wells and from the inactive non-potable water well in the shed. The monitoring well samples were below ADEC Table C cleanup levels. The shed's well water samples did not contain detectable concentrations of contaminants. The shed well depth is estimated to be 60 feet deep. The inactive pump for this non-potable water well had to be hotwired with a generator to obtain the water samples.

In May 2020, the two onsite monitoring wells and the four biopiles were decommissioned. The biopile berms were used to fill the one remaining open excavation known as PL-33. The four biocell soils were then spread 6 inches thick across the western portion of the storage yard (see attached site figure).

### 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 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	Any remaining surface soil contamination is below human health and ingestion cleanup levels
Sub-Surface Soil Contact	De-Minimis Exposure	Any remaining subsurface soil contamination is below human health and ingestion cleanup levels
Inhalation – Outdoor Air	De-Minimis Exposure	Any remaining surface soil contamination is below human health and inhalation cleanup levels
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	Any remaining contaminant concentrations in soil are considered de minimis for vapor intrusion
Groundwater Ingestion	De-Minimis Exposure	The last two monitoring well sampling events were below Table C groundwater cleanup levels. A groundwater sample collected at approximately 60 feet bgs from the non-potable water well in 2020 did not contain detectable concentrations of contaminants.
Surface Water Ingestion	De-Minimis Exposure	The last two monitoring well sampling events were below Table C groundwater cleanup levels. A groundwater sample collected from the non-potable well 60 feet bgs in 2020 did not contain detectable concentrations of contaminants. Surface water is not a known 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	De-Minimis Exposure	Ecological receptors are not expected to encounter site contamination

**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**

Remaining contaminant concentrations in groundwater are below table C cleanup levels. All remaining contaminant concentrations in soil are below human health and ingestion and inhalation cleanup levels. This site will receive a "Cleanup Complete" designation on the Contaminated Sites Database, subject to the following 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 75.325(i) or 18 AAC 78.600(h)]. A "site" [as defined by 18 AAC 75.990 (115) or 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 75.380 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) 269-8685 or email at [grant.lidren@alaska.gov](mailto:grant.lidren@alaska.gov).

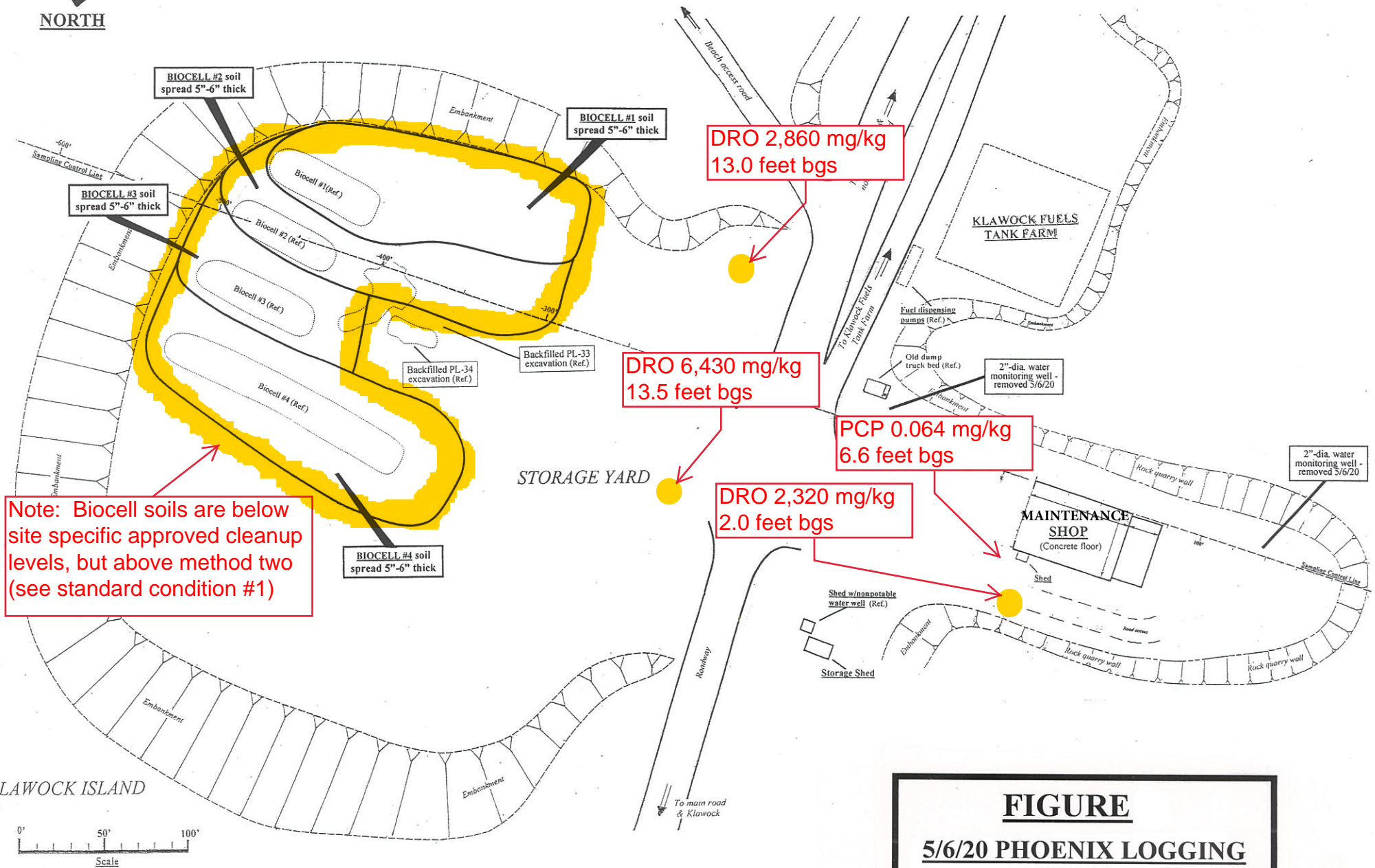
Sincerely,



Grant Lidren  
Project Manager

Electronic Copy: Mary Edenshaw, Klawock Heenya Corporation

NORTH



Note: Biocell soils are below site specific approved cleanup levels, but above method two (see standard condition #1)

**FIGURE**  
**5/6/20 PHOENIX LOGGING**  
**SHOP & STORAGE YARD**  
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Klawock Island; Klawock, Alaska