



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: 2325.38.003

December 20, 2017

Rosemarie Hotch
Klukwan, Inc.
PMB 160 2440 East Tudor Road
Anchorage, AK 99507

Re: **Decision Document: Klukwan Forest Products
Cleanup Complete Determination**

Dear Ms. Hotch:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the Klukwan Forest Products located off Oilwell Road, Ninilchik. 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 Klukwan Forest Products, 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:

Klukwan Forest Products
Latitude: 60.013358
Longitude: -151.433691

Name and Mailing Address of Contact Party:

Rosemarie Hotch
Klukwan, Inc.
PMB 160 2440 East Tudor Road
Anchorage, AK 99507

DEC Site Identifiers:

File No.: 2325.38.003
Hazard ID.: 1271

Regulatory Authority for Determination:

18 AAC 75

Site Description and Background

Surface stained soils, stressed vegetation, and a pit containing partially buried drums were observed during a field inspection at the Klukwan Forest Products site (a former logging area). Several surface soil samples were collected from the stained soils in 1991 to characterize the contamination present. Results of the characterization revealed that total petroleum hydrocarbons (TPH); arsenic; 1,1,1-trichloroethane; and trichloroethylene were all present in the surface soils above ADEC cleanup levels. In 1993, the stained soil was excavated and stockpiled. No sampling was performed in the excavation footprint or soil stockpiles to characterize site conditions.

In April 2016, analytical samples were collected from four former removal areas as well as the former treatment cell. The samples were analyzed for gasoline range organics (GRO), diesel range organics (DRO), residual range organics (RRO), benzene, toluene, ethylbenzene and total xylenes (BTEX), volatile organic compounds (VOCs), and polycyclic aromatic hydrocarbons (PAHs). DRO and RRO concentrations exceeded ADEC cleanup levels at the former treatment cell and reached a maximum of 18,700 and 95,100 milligrams per kilogram (mg/kg) respectively. Based on sample results, the contamination did not appear to be migrating vertically below 2.5 feet below ground surface (bgs), however the horizontal extent of contamination was not bounded. In an effort to delineate the horizontal extent of contamination, seven additional soil samples were collected in September 2016.

Excavation and removal of the contaminated soils at the former treatment cell (Area 5) took place in August 2017. Soil was initially excavated in an area measuring 14 feet by 13 feet by 2 feet deep. Field screening samples were taken using a photoionization detector (PID), and readings in two locations on the excavation floor indicated the need for further excavation. Additional soils were excavated to a depth of 3 feet below ground surface (bgs). Excavated soils totaling 15.35 tons were taken to Alaska Soil Recycling in Anchorage for disposal.

A total of eight confirmation soil samples, including one field duplicate, were taken from the floor and sidewalls of the final excavation and were analyzed for DRO and RRO. The highest contaminant concentrations remaining onsite were detected in one location on the Northwest sidewall at a maximum of 1230 mg/kg for DRO and 7550 mg/kg for RRO. Based on the sampling described above, the extent of contamination has been bounded and is not migrating vertically to groundwater. There is a pocket of contamination remaining at the treatment cell, however all results are below the human health risk based cleanup levels.

Contaminants of Concern

During the site characterization and cleanup activities at this site, samples were collected from soil and analyzed for GRO, DRO, RRO, BTEX, VOCs, and PAHs. 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)
- Residual Range Organics (RRO)

Cleanup Levels

The more restrictive of either the human health or migration to groundwater cleanup levels established in 18 AAC 75.341 (c), Table B2, apply to this site.

Table 1 – Approved Soil Cleanup Levels

Contaminant	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)
DRO	10,250	12,500	250
RRO	10,000	22,000	11,000

mg/kg = milligrams per kilogram

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. However, the department does not require that gasoline, diesel and residual range petroleum hydrocarbon fractions be included in cumulative risk calculations, since selected individual compounds from the fractions are accounted for in Table B1 and Table C. Because the only COCs at this site are DRO and RRO, ADEC evaluated this site using the Method Two Table B2 cleanup levels.

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 ingestion cleanup levels.
Sub-Surface Soil Contact	De-Minimis Exposure	Contamination remains in the sub-surface soils, but is below ingestion cleanup levels.
Inhalation – Outdoor Air	De-Minimis Exposure	Contamination is below inhalation cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	Volatile contaminants are not present.
Groundwater Ingestion	Pathway Incomplete	Analytical data shows that contaminants are not migrating to groundwater.
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	Wild foods are not collected at this site.
Exposure to Ecological Receptors	Pathway Incomplete	Low level DRO and RRO contamination remains in the surface and subsurface soils at this site. Terrestrial and/or aquatic exposure routes are not likely affected.

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 at the site has been cleaned up to concentrations below the approved human health cleanup levels suitable for residential land use. Contamination remaining onsite appears to be small in volume and is not migrating vertically toward groundwater; this contamination is considered De-Minimis. 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 75.325(i). 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.
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) 269-7691, or email at Joshua.Barsis@alaska.gov.

Sincerely,



Sammi Castle
Environmental Program Technician



Joshua Barsis
Environmental Program Specialist

cc: Spill Prevention and Response, Cost Recovery Unit