



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

**Department of Environmental
Conservation**

DIVISION OF SPILL PREVENTION AND RESPONSE
Contaminated Sites Program

555 Cordova St
Anchorage, AK 99501
Main: 907-269-7552
Fax: 907-269-7687
www.dec.alaska.gov

File No: 2102.38.067

May 23, 2016

Donald R. Aide
AFCEC/CZOP
10471 20th Street, Ste 317
JBER, AK 99506-2201

Re: Cleanup Complete Determination for JBER-Richardson SA034 Powerline Drum Site

Dear Mr. Aide:

The Alaska Department of Environmental Conservation (ADEC) has reviewed the environmental records for the referenced site. This decision document memorializes the site history, cleanup actions, cleanup complete determination, and standard conditions for long-term site management for CS DB Hazard ID 25904 and file number 2102.38.067.

Site Name and Location

JBER-Ft. Rich SA034 Powerline Drum Site
next to a powerline easement located north of
Otter Lake and approximately 1,800 feet
east of TA-416 Road on JBER, Alaska 99505

Regulatory Authority for Determination: 18 AAC 75

Site Description and Background

Site SA034 is the location of previously abandoned drums on JBER-R. SA034 was discovered in 2002, and is situated within a heavily wooded area that was cleared in 2012 for drum removal.

Contaminants of Concern

Diesel Range Organics (DRO)

Cleanup Levels

The cleanup level for soils at SA034 containing DRO contamination is 4,540 mg/kg in the Under 40-inch Zone based on the ingestion pathway within the 0 to 15' interval below ground surface (bgs). Modeling using the Hydrocarbon Risk Calculator, in accordance with Method Three under 18 AAC 75.340, successfully demonstrated that residual petroleum contaminants in soil at SA034 do not pose a migration to groundwater risk/concern.

Characterization and Cleanup Activities

In October and November of 2012, 166 drums removed from SA034, 56 drums contained residual liquid. Eleven drums contained more than 1 inch of residual liquid, and 45 drums contained less than 1 inch of residual liquid (classified as “empty” in accordance with RCRA). After residual liquids were either stabilized or emptied from the recovered drums, the drums were crushed and recycled. More than 6 tons of metal drum debris were recycled.

In November 2012, a preliminary assessment and site inspection was conducted. 25 surface soil samples were collected and analyzed for gasoline-range organics (GRO), DRO, and residual-range organics (RRO); volatile organic compounds (VOCs); semivolatile organic compounds (SVOCs); polychlorinated biphenyls (PCBs); insecticides; herbicides; and metals. The only contaminant above 18 AAC 75 Table B2 migration to groundwater cleanup levels was diesel range organics (DRO). DRO was detected at 22,000 mg/kg, 4,540 mg/kg and 4,050 mg/kg all from 0-1' bgs. VOCs, SVOCs, insecticides, and herbicides were detected above EPA screening levels, but not above current soil cleanup levels (18 AAC 75 May 8, 2016).

In 2014, a preliminary source evaluation 2 was completed to further characterize DRO, VOCs, SVOCs, insecticides, and herbicides identified during the PA/SI above screening levels, determine whether measured herbicide concentrations represent background concentrations, evaluate potential risks to human health and the environment, and determine whether further action is necessary to advance the site toward site closure.

The insecticides and herbicides were determined to represent background intended use concentrations. DRO was detected in one location in a surface soil sample location above ingestion and maximum allowable concentrations. The PAHs' [benzo(a)pyrene and dibenz(a,h)anthracene] higher detection limits skewed the HRC calculations for hypothetical residential exposure. Dioxin was raised as an issue by EPA at SA034 due to detection of 2,3,7,8-TCDD in soil.

In 2015, fieldwork included hand augering and sampling of surface soil to 2 feet bgs, to address the data gaps raised by the 2014 PSE 2 work (DRO, PAHs, dioxins). DRO was resampled to define the lateral extent and immediately adjacent to the 2012 location above maximum allowable concentration for DRO. The MAC location detected DRO at 335 mg/kg and one other location detected DRO at 2,650 mg/kg (which are below ingestion and inhalation cleanup levels). PAHs and dioxins were below Table B1 Method Two soil cleanup levels. The historical high DRO level is no longer believed to be present based on the resampling efforts at the same location. No stained soil was observed during sampling. Dioxins did not exceed EPA site-specific groundwater protection screening levels or ecological screening levels or HQ of 1 and do not pose a risk to human health or the environment.

Groundwater was not encountered at the 50' maximum depth drilled as part of the 2012, 2014 or 2015 investigations. However, groundwater depth is assumed to be approximately 110 feet bgs based on the surface elevation of Otter Lake located 0.3 mile southeast of the site. The closest drinking water well is 0.4 mile south of SA034 (crossgradient).

Cumulative Risk Evaluation

The HRC was used to evaluate risk from petroleum contamination at SA034. The HRC is designed for sites with petroleum contamination—specifically the petroleum fractions, BTEX, PAHs, and other compounds dissolved in petroleum—with the intention and purpose of assessing human health risk from this type of contamination.

The estimated rounded cumulative cancer risk at SA034 for the current industrial and hypothetical residential exposure scenarios, across all exposure pathways, (1×10^{-7} and 4×10^{-7} respectively), is below the regulatory risk standard of 1×10^{-5} for petroleum hydrocarbons.

The estimated cumulative noncancer HI at SA034 for the current industrial and hypothetical residential exposure scenarios, across all exposure pathways, (0.00049 and 0.0016 respectively) is below the regulatory risk standard of 1. SA034 meets the ADEC risk criteria [18 AAC 75.325(g)] for petroleum hydrocarbons. The risk posed by the DRO aromatic and aliphatic surrogate fractions meets the risk standard for each exposure pathway, assuming a residential land use scenario.

An ecoscoping form was completed for SA034 and no observed surface soil staining, no impacted vegetation, no surface water or sediment runoff from the site. The ecoscoping form indicates that a more in-depth risk evaluation is not needed and that the SA034 site conditions are protective of the environment.

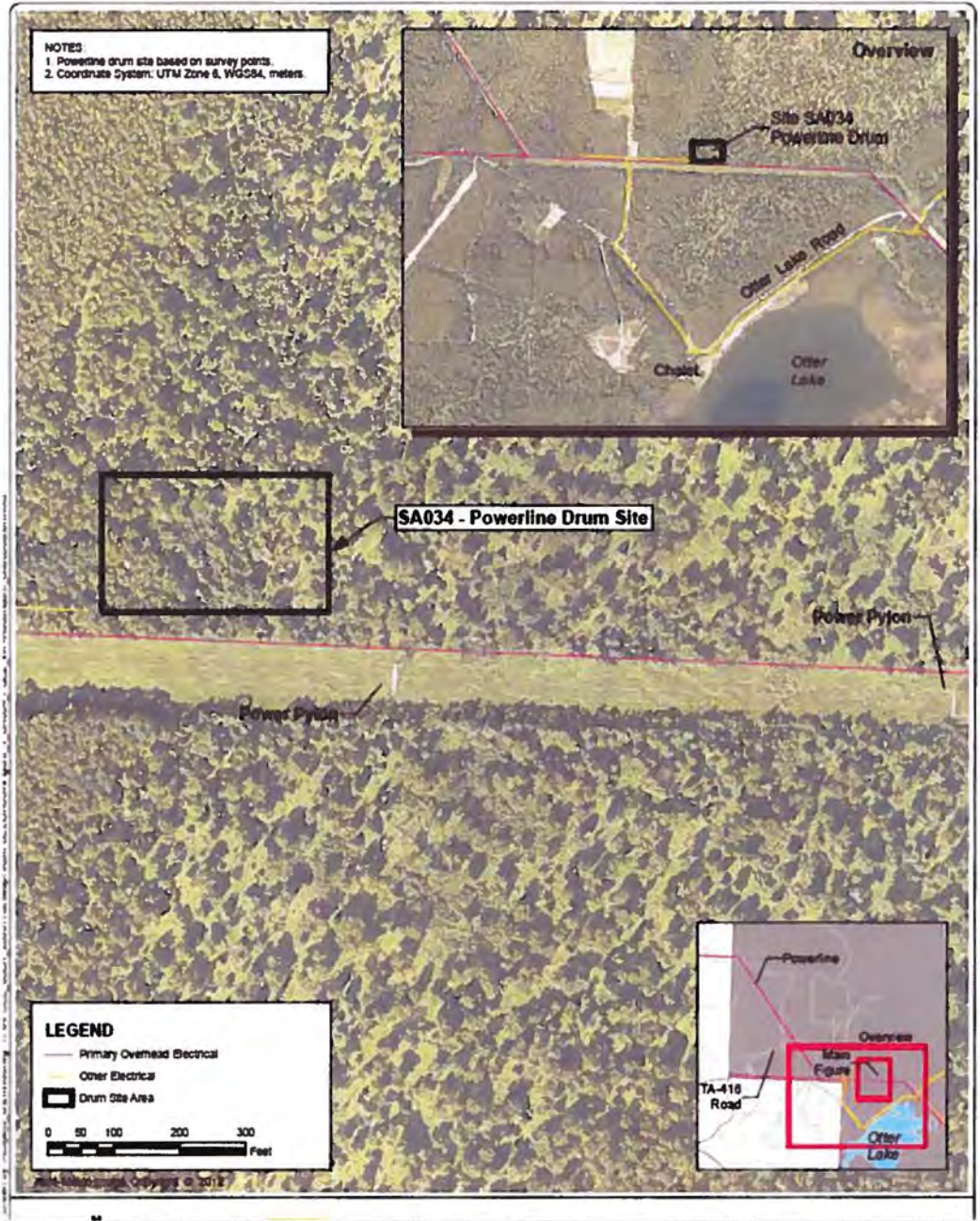
Pathway	Result	Explanation
Direct Contact with Surface Soil	Pathway Incomplete	Contamination present in surface soil but is below direct contact and ingestion levels
Direct Contact with Subsurface Soil:	De Minimus Exposure	No contamination is present in subsurface soil
Outdoor Air Inhalation:	Pathway Incomplete	Contamination remains in the surface soil, but is below inhalation cleanup levels and poses no vapor intrusion risk to future buildings.
Groundwater Ingestion:	Pathway Incomplete	Groundwater is not used as a drinking water source in the vicinity of the site.
Surface Water Ingestion:	Pathway Incomplete	Surface water is not present at the site.
Wild or Farmed Foods Ingestion:	Pathway Incomplete	Contaminants of concern do not have the potential to bioaccumulate in plants or animals.
Indoor Air Inhalation (Vapor Intrusion):	Pathway Incomplete	No soil or groundwater contaminants exceed VI screening criteria or cumulative risk levels
Ecological:	Pathway Incomplete	No visible surface staining, no distressed plants, no sediment transport to surface water.

ADEC Decision

Based on a review of the environmental records, ADEC has determined that SA034 has been adequately characterized and has achieved the applicable requirements under the site cleanup rules. ADEC is issuing this written determination that cleanup is complete, subject to a future department determination that the cleanup is not protective of human health, safety, welfare, or of the environment [18 AAC 75.380(d)]. A "cleanup complete" designation will be entered for SA034 in 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. 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 (see figure below).



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. Notations of these requirements shall be made on the Environmental Restoration map/ Base General Plan which will show up during a dig permit review/work clearance request process.

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, 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 Louis Howard at (907) 269-7552 or email him at louis.howard@alaska.gov.

Sincerely,

A handwritten signature in blue ink that reads "Kim DeRuyter". The signature is written in a cursive style.

Kim DeRuyter
Environmental Program Manager

cc: Kim DeRuyter via email
Louis Howard via email