



THE STATE  
of **ALASKA**  
GOVERNOR BILL WALKER

**Department of  
Environmental Conservation**

DIVISION OF SPILL PREVENTION AND RESPONSE  
Contaminated Sites Program

555 Cordova Street  
Anchorage, AK 99501  
Phone: 907-269-7503  
Fax: 907-269-7687  
www.dec.alaska.gov

File: 2100.38.083

June 22, 2018

Renee Huntman  
HSE Manager  
Halliburton Energy Services, Inc.  
6890 Arctic Boulevard  
Anchorage, AK 99518

Re: **Decision Document: Halliburton Energy Soil Disposal site  
Cleanup Complete Determination**

Dear Ms. Huntman:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the Halliburton Energy Soil Disposal site located at 6890 Arctic Boulevard, Anchorage, 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 Halliburton Energy Soil Disposal 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:**

Halliburton Energy Soil Disposal  
6890 Arctic Boulevard  
Anchorage, AK 99518

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

Renee Huntman  
Halliburton Energy Services, Inc.  
6900 Arctic Boulevard  
Anchorage, AK 99518

**ADEC Site Identifiers:**

File No.: 2100.38.083  
Hazard ID.: 3310

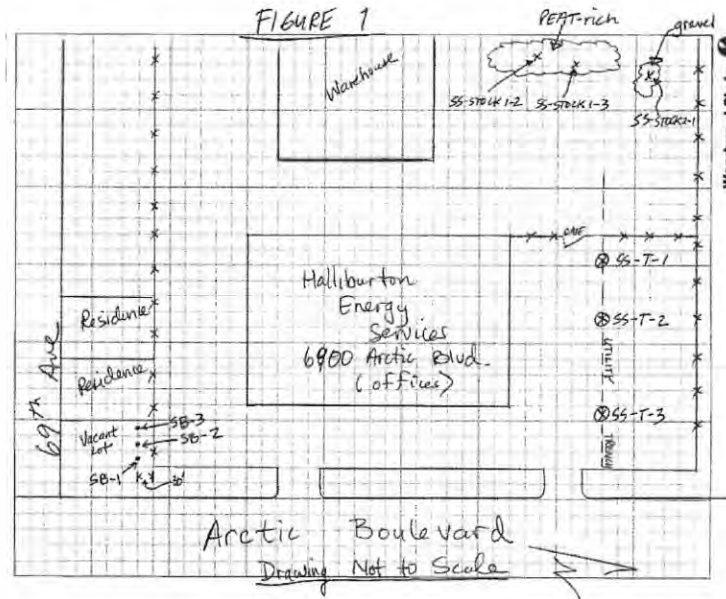
**Regulatory Authority for Determination:**

18 AAC 75

**Site Description and Background**

On September 7, 2000 ADEC received a spill notification from URS consultants that a construction contractor installing underground storm drain laterals at Halliburton's 6900 Arctic Boulevard property in Anchorage, Alaska encountered contaminated soil. The contaminated soil was excavated from trenches on

the north end of the property and stockpiled in two locations in the northwest corner of the property, just north of the warehouse. One stockpile contained 75 cubic yards of peat-rich soil and the other 25 cubic yards of gravelly soil. Both stockpiles were placed on and covered with polyethylene sheeting.



**Contaminants of Concern**

During the site characterization and cleanup activities at this site, samples were collected from soil and analyzed for gasoline range organics (GRO), diesel range organics (DRO) and residual range organics (RRO) using Alaska Methods 101, 102 and 103, respectively. Additionally, volatile organic compounds (VOCs), lead, chromium, arsenic, and cadmium were analyzed. 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**

DRO and RRO were detected in soil above the most stringent migration to groundwater (mg/kg) and ingestion (mg/kg) cleanup levels for under-40 inch precipitation zone established in 18 AAC 75.341 (d), Table B2. Cleanup levels for this site were approved in March 2017.

**Table 1 – Approved Cleanup Levels**

Contaminant	Soil (mg/kg)
DRO	250
RRO	11,000

mg/kg = milligrams per kilogram

### **Characterization and Cleanup Activities**

Characterization and cleanup activities conducted under the regulatory authority of the Contaminated Sites Program began in 2000. These activities are described below:

On September 11, 2000 soil field screening of the excavated trench and two subsequently generated stockpiles was conducted using a photoionization detector (PID). No significant PID readings were measured at the excavated area or the two stockpiles. Two soil samples were collected from the peat-rich stockpile, one soil sample was collected from the gravelly soil stockpile and three soil samples were collected from the eastern portion of the excavated trench at a depth of approximately 2.5 feet below ground surface (bgs). All soil samples were analyzed for DRO, RRO and GRO. Analytical sampling results of the trench and the two soil stockpiles indicated concentrations of RRO and DRO exceeded 2000 ADEC Category A cleanup levels. URS suggested that naturally occurring organics was the source of the detected hydrocarbons in the trench and peat rich stockpile.

On October 17, 2000 sampling was conducted to determine background concentrations of DRO, RRO, and GRO in the soil near the site to distinguish between potential site-related contamination and naturally occurring organics causing inflated laboratory values. Three hand auger borings were taken in a vacant parcel adjacent to the southeast corner of the site to collect background samples. Per the Municipality of Anchorage (MOA)'s request, an additional sample from the gravelly soil stockpile was also collected and analyzed for volatile organic compounds (VOCs), lead, chromium, arsenic, and cadmium. None of the samples analyzed reported detectable concentrations of GRO. DRO concentrations in the trench and stockpile samples ranged from 239 to 258 mg/kg and 200 to 636 mg/kg, respectively. RRO concentrations in the trench and stockpile samples ranged from 3,980 mg/kg to 4,330 mg/kg and 2,110 mg/kg to 5,530 mg/kg. Consequently, background samples of DRO were approximately three to five orders of magnitude greater than the trench and stockpile samples and background samples of RRO were approximately three orders of magnitude greater than the trench and stockpile. However, results are not comparable since the September 11, 2000 trench and stockpile sampling was analyzed with silica gel and the background determination sampling completed on October 17, 2000 did not use silica gel. As a result of the background sampling, URS requested no further action status for the site contamination and proposed alternative cleanup levels for the site of 1,500 mg/kg DRO and 14,500 mg/kg RRO. Due to ADEC's concerns about inconsistent use of silica gel for analyses, ADEC did not approve the alternative cleanup levels or grant no further action status.

On a July 25, 2001 site visit, ADEC met with a Halliburton Energy Services representative on site to view stockpiled material deemed by URS to contain naturally occurring organic interference causing inflated DRO and RRO laboratory values without silica gel cleanup. Staff observed stockpiled soil; there was no observable visual or olfactory evidence of contamination.

On August 2, 2001 ADEC approved the transport and disposal of stockpiled soils (100 tons) to the Municipality's Highland Road landfill. The Municipality also approved the disposal of the soil into the landfill.

On March 26, 2013 ADEC issued a letter requesting information on deposition of stockpiled soil at the site dating back to 2000 as no documentation of disposal at the Municipality of Anchorage Regional Landfill is on file.

On April 11, 2013 URS responded to Halliburton that they did not have information regarding activities that were conducted in August 2001, but that ADEC has approved of spreading the soil on site.

On June 21, 2018 ADEC spoke with a Halliburton representative to confirm the soil had been hauled off to the landfill. No receipts of the disposal were available. The Halliburton representative was uncertain when the soil was disposed of, but indicated it was probably sometime in August 2001 in accordance with URS' April 11, 2013 letter.

### 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 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 is present in surface soil (0 to 2 feet below ground surface), but is below Method Two cleanup levels.
Sub-Surface Soil Contact	De-Minimis Exposure	Contamination remains in the sub-surface, but is below Method Two cleanup levels.
Inhalation – Outdoor Air	Pathway Incomplete	Contamination remains in the soil, but is below Method Two cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	Contamination remains in the soil, but is below Method Two cleanup levels. Groundwater was not impacted by contamination.
Groundwater Ingestion	Pathway Incomplete	Groundwater was not impacted by contamination.
Surface Water Ingestion	Pathway Incomplete	Surface water was not impacted by contamination.
Wild and Farmed Foods Ingestion	Pathway Incomplete	The site is in an urban area where land use is fairly high-density residential and commercial/industrial.
Exposure to Ecological Receptors	Pathway Incomplete	There is no evidence of ecological receptors being impacted by 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

### **ADEC Decision**

Soil contamination at the site has 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 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. (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.

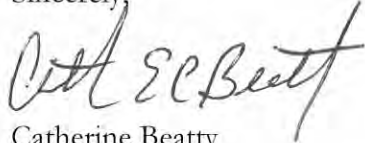
This determination is in accordance with 18 AAC 75.380 and does not preclude ADEC from requiring additional assessment and/or cleanup action if future information indicates that contaminants at this site may pose an unacceptable risk to human health, safety, or welfare or to the environment.

### **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 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) 269-7527, or email at [catherine.beatty@alaska.gov](mailto:catherine.beatty@alaska.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Catherine Beatty". The signature is written in a cursive, flowing style.

Catherine Beatty  
Project Manager

cc: Spill Prevention and Response, Cost Recovery Unit  
Kara Kusche, ADEC