



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: 1508.38.027

September 15, 2016

Via electronic mail

Ms. Bev Niemann
Delta Western Inc.
PO Box 79018
Seattle, WA 98119

Re: Decision Document: Delta Western Tank Farm 1 Haines
Cleanup Complete Determination

Dear Ms. Niemann,

The Alaska Department of Environmental Conservation, Contaminated Sites Program (DEC) has completed a review of the environmental records associated with the Delta Western Tank Farm 1 Haines located in Haines, 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 Delta Western Tank Farm 1 Haines, which is located in the DEC office in Juneau, Alaska. This decision letter summarizes the site history, cleanup actions and levels, and standard site closure conditions that apply.

Site Name and Location:

Delta Western Tank Farm 1 Haines
2249 Lutak Road
Haines, AK 99827

Name and Mailing Address of Contact Party:

Ms. Bev Niemann
Delta Western Inc.
PO Box 79018
Seattle, WA 98119

DEC Site Identifiers:

File No.: 1508.38.027
Hazard ID.: 26402

Regulatory Authority for Determination:

18 AAC 75

Site Description and Background

During a routine fuel transfer in April, 2016, the operator spilled approximately 150 gallons of aviation Jet A fuel while filling a pup trailer at the truck rack located at the Lutak Dock. The initial remedial effort included recovery of 25 gallons of free product and excavating the grossly contaminated soil from the spill zone. Delta Western estimated the volume at 7.5 cubic yards (CY) of contaminated soil that was placed between liners and stored on site at the facility. Confirmation samples were not taken prior to backfilling the excavation to allow facility operations to resume. Delta Western stated that the depth to groundwater in the fill over intertidal land at the Site fluctuates between three and five feet below ground surface (BGS) due to tidal influence. Initially, the spill case was handled by the Spill Prevention and Response and the case was later transferred to the Contaminated Sites Program.

Contaminants of Concern

During the site investigation and cleanup activities at this Site, samples were collected from soil and were analyzed for GRO, DRO, and RRO, and volatile and semi-volatile hydrocarbon compounds. 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)

Cleanup Levels

Title 18 Alaska Administrative Code (AAC) 75.340 authorizes DEC to set soil cleanup levels for this site. The truck rack facility is constructed on fill over intertidal land. Groundwater was not encountered during the site investigation but it is apparently present at a depth estimated at between four and five feet below ground surface at the Site. It is influenced by the tides, is considered non-potable, and due to the minor quantity of contamination and a low permeability of the fill material, groundwater was not investigated.

The most stringent levels of ingestion, direct contact, and inhalation pathways under Method Two soil cleanup levels for the over 40-inch precipitations zone, established in 18 AAC 75.341(c), Table B1, and 18 AAC 75.341 (d), Table B2 apply to the Site.

Table 1 – Approved Cleanup Levels

Contaminant	Soil (mg/kg)
DRO	8,250
GRO	1,400

mg/kg = milligrams per kilogram

Characterization and Cleanup Activities

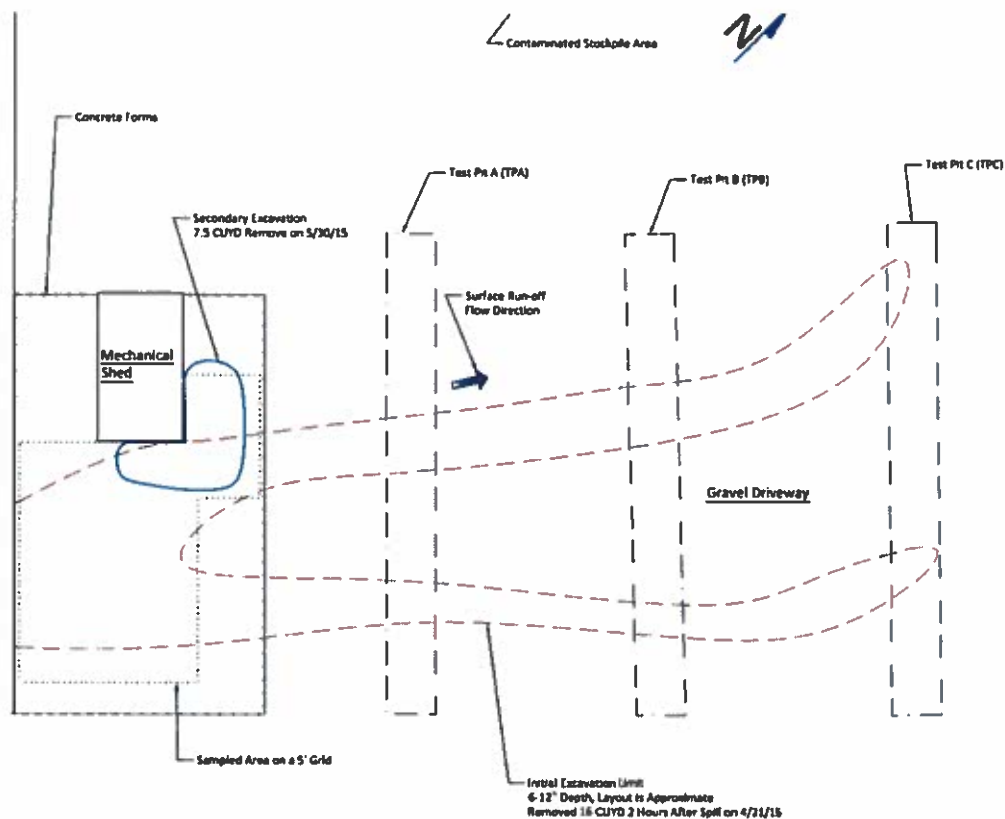
Characterization and cleanup activities conducted under the regulatory authority of the Contaminated Sites Program began in May, 2015. These activities are described below.

In order to clarify site specific requirements, ChemTrack field personnel (Imre Manyoky) met with the DEC Contaminated Sites Project Manager (Bruce Wanstall) at the Site to discuss details regarding the work plan. During the site visit, clarifications to the work plan were noted and were later submitted to DEC via

electronic mail. The spill area where contaminated soil was removed is a driveway adjacent to a mechanical shed. The discharge point of the spill was considered the most highly impacted area. Soil conditions of the site consist of a granular layer of fractured road base material overlaying dense silty sand with gravel. It was initially planned that the trenches would be a minimum depth of two feet but because of the two distinct soil types, the vertical extent of the excavation was determined by the depth of the interface between soil types.

Delta Western personnel confirmed that the initial excavation was not significantly deeper than the interface between soil types and also that the initial excavation was backfilled with imported crushed aggregate. This confirms that the floor samples were collected from the original ground and not from clean backfill from the initial removal phase. The sidewall samples were focused on the granular material directly above the interface between the soil types.

Confirmation sampling of the low permeability soil in this area indicated that the petroleum did not significantly penetrate the soils. Instead the oil migrated laterally over the interface between the upper and lower soil types. Test trenches confirmed that the layer of soil with low permeability is consistent over the entire spill area. Based on these findings, it was determined that further groundwater investigation was not necessary.



Because this area was backfilled after the initial excavation and then later graded to construct the subgrade for a concrete pad, a more intensive sampling frequency was needed to clear the area. ChemTrack collected samples with hand tools by digging 12-15 inches into the subgrade between the rebar grids. Laboratory samples were collected on a grid with 5 foot centers in the area most likely to contain contamination. The results for DRO and GRO, volatile and semi-volatile compound contamination were below instrument detection or cleanup levels except for a sample and its' duplicate taken near the shed. Sample 3D and 3D1

had DRO concentrations of 860 mg/kg and 720 mg/kg and GRO of 180 mg/kg and 900 mg/kg respectively. The laboratory sample results for sample 3D indicated elevated levels of petroleum contamination, the contaminated soil in this area was removed and was packaged in 1 CY bulk bags.

Three test pits were excavated outside of the concrete forms; the test pits were 40 feet long shallow trenches which were excavated across the approximate spill area. In each test pit, nine sidewall and four floor samples were collected for field screening; 4-5 laboratory samples were submitted from each test pit, laboratory samples were selected based on field screening locations and results.

Sampling points were field screened with a combination of evaluating photoionization (PID) readings, visual, and odor detection. The PID results corresponded well with the laboratory results. Soil samples were screened during excavation to guide the process, once field screen samples indicated that no further excavation was required, confirmation samples were collected and the excavation was backfilled.

Confirmation sample results indicate that most of the area was clean but some contamination migrated under the foundation of the shed and could not be accessed. The remaining contaminated soil is confined between the shed foundation and the layer of low permeable soil, the volume of remaining contaminated soil is estimated to be approximately 1-2 CY and is characterized by the laboratory results of sample SC3 (see Table 2). Table 2 displays the highest levels detected in soil remaining at the site, the sample depth, and the applicable soil cleanup levels.

Table 2 the greatest levels of analytes detected in remaining soil at the site.

Hydrocarbon range and compounds of concern	Greatest level in soil mg/kg	Sample name and depth below the surface	Cleanup Levels mg/kg
GRO	1,000	SC3 at 3 feet	1,400
DRO	1,100	SC3 at 3 feet	8,250



The liner on which the temporary stockpile was constructed did not meet standard specifications so the area was characterized by confirmation sampling methods. A total of six samples were collected for field screening and three samples were submitted for laboratory analysis. Petroleum contamination was not detected in these samples. Samples C1 and 3D were submitted for laboratory sampling to characterize the contaminated soil removed from the site (the respective quality control duplicates correspond to C100 and 3D1).

The contaminated soil was packaged in 1 CY bulk bags and then loaded into two twenty foot-long open top, shipping containers for marine transport. Waste Management assumed custody of the material once it was loaded into the shipping containers and staged at the Alaska Marine Lines shipping terminal in Haines, AK.

The shipping containers arrived at the Columbian Ridge Disposal Facility in Arlington, OR. The material was scheduled to be disposed of by incorporating the material into layers of the landfill.

No discreet point discharge for sampling is present and no sheen along the intertidal waters has been observed or reported. As a result, residual soil contamination is unlikely to migrate in groundwater at levels that will affect the quality of off-site surface water.

Results of the site investigation were conclusive and indicate that the spill in question was remediated to below cleanup levels with the only remaining contamination contained beneath the shed foundation. The remaining contaminated soil is estimated to be a minimal quantity (1-2 CY) and the surrounding area has also been capped with a concrete slab making the contamination inaccessible to future workers.

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

Based on a review of the environmental record, DEC 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 3.

Table 3 – Exposure Pathway Evaluation

Pathway	Result	Explanation
Surface Soil Contact	De Minimis Exposure	Final characterization/confirmation sample results indicate surface soil meets the direct contact cleanup levels.
Sub-Surface Soil Contact	De Minimis Exposure	Final characterization/confirmation sample results contained a maximum DRO concentration of 1,100 milligrams per kilogram, which is below the direct contact cleanup level. Furthermore, this soil is under a shed and is not be accessible.
Inhalation – Outdoor Air	De Minimis Exposure	Contamination remains under the building and is below inhalation cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	De-Minimis Exposure	No occupied buildings are present
Groundwater Ingestion	Pathway Incomplete	Groundwater is not a potential drinking water source due to proximity to marine surface water.
Surface Water Ingestion	Pathway Incomplete	Surface water is present around the Site but it is not used as a drinking water source.
Wild and Farmed Foods Ingestion	Pathway Incomplete	Contaminants of concern do not have the potential to bioaccumulate in plants and animals.
Exposure to Ecological Receptors	Pathway Incomplete	The site is used for industrial purposes so the terrestrial pathway is incomplete. The de-minimis volume of residual petroleum contaminated soil beneath the shed does not pose a migration to surface water risk.

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.

DEC Decision

Soil contamination at the site has been cleaned up to concentrations below the approved cleanup levels. 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.

This determination is in accordance with 18 AAC 75.380 and does not preclude DEC 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 contact the DEC project manager, Bruce Wanstall at (907) 465-5210.

Sincerely,



Bruce Wanstall
Remedial Project Manager
Contaminated Sites Program

cc: Brad Ryan, Haines Borough Public Works Director, via email
Sally Schlichting, DEC Unit Manager, CS Program, via email
DEC SPAR Cost Recovery, via email

