THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

**Department of Environmental Conservation**

SPILL PREVENTION & RESPONSE
Contaminated Sites Program
PO BOX 111800
Juneau, AK 99811
Main: 907.451.2185
Fax: 907-465-5245
www.dec.alaska.gov

July 12, 2024

File: 2542.38.013
Hazard ID: 3067

*Electronic Delivery Only*
Taylor Borgfeldt
Project Manager, FUDS Program Section
US Army Corps of Engineers, Alaska District
PO Box 6898, JBER, AK 99506-0898

***Re: Decision Document: Dutch Harbor-Humpy Cove Dispensary UST Cleanup Complete Determination***

Dear Ms. Borgfeldt,

The Alaska Department of Environmental Conservation, Contaminated Sites Program (DEC) has completed a review of the environmental records associated with the Dutch Harbor-Humpy Cove Dispensary UST, located on Summer Bay Road in Unalaska, 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 information becomes available that indicates residual contaminants may pose an unacceptable risk.

This Cleanup Complete determination is based on the administrative record for the Dutch Harbor-Humpy Cove Dispensary UST, which is located in the DEC 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:**
Dutch Hbr-Humpy Cove Dispensary UST
Summer Bay Road Mile 8
Unalaska, AK, 99685

**Name and Mailing Address of Contact Party:**
Taylor Borgfeldt
USACE, Alaska District
PO Box 6898
JBER, AK 99506-0809

**DEC Site Identifiers:**
File No.: 2542.38.013
Hazard ID.: 3067

**Regulatory Authority for Determination:**
18 AAC 78 and 18 AAC 75

**Site Description and Background**
The Humpy Cove Dispensary UST was associated with the remnants of a former latrine located on mile 8 of Summer Bay Road in Unalaska, Alaska. During a remedial investigation (RI) and interim removal actions (IRA) in 1998, the single-walled steel 680-gallon UST with heavy corrosion was located and removed. The excavation encountered groundwater at a depth of thirteen feet below ground surface (bgs) and 430 square feet of soil was excavated. Diesel range organics contaminated soil extended to base of the excavation with the highest concentration measured being 7,100 mg/kg at approximately 13 feet bgs. Heating oil or diesel fuel was presumed to have been stored in the UST.

**Contaminants of Concern**
During the site characterization and cleanup activities at this site, samples were collected from soil and groundwater at the site and analyzed for DRO, residual range organics (RRO), benzene, toluene, ethylbenzene, and xylenes (BTEX), and polycyclic aromatic hydrocarbons (PAHs). Based on these analyses, the following contaminant was detected above the default DEC cleanup levels and is considered a Contaminant of Concern at this site:

- DRO

**Cleanup Levels**
The applicable cleanup levels at the site are the calculated method three site-specific alternative cleanup level (ACL) under 18 AAC 75.340 (e). A site-specific organic carbon content of soil (foc) value of 0.034 grams per gram (g/g) was used in the Petroleum Cleanup Level Calculator, as opposed to the default Method Two foc value of 0.001 g/g. The resulting applicable cleanup level is the alternative migration to groundwater cleanup level.

**Table 1 – Approved Cleanup Levels**

| Contaminant | Soil[1] (mg/kg) | Groundwater (µg/L) |
|---|---|---|
| DRO | 7,500 | 1500 |

[1] Alternative Cleanup Level based on approved site-specific soil data and the equations set out in the department's *Procedures for Calculating Cleanup Levels,* dated February 1, 2018. The most stringent ACL value for DRO is the Human Health Ingestion Cleanup Level.
mg/kg = milligrams per kilogram

**Characterization and Cleanup Activities**
In the mid 1990's, the Formerly Used Defense Sites (FUDS) program conducted site inspections in Unalaska to find and dispose of remaining debris, USTs, and other potential contaminant sources. During the 1998 RI/IRA, the single-walled steel 680-gallon UST with heavy corrosion

and six feet of piping, buried at 1.8 feet below ground surface (bgs), was located and removed. There were no dispensers associated with this UST; however, six feet of piping were removed with the tank. During excavation, approximately 90 cubic yards (cy) of clean overburden were placed to the side of the excavation for use as backfill. The final excavation was 1,250 square feet in area and 13 feet deep. Approximately 430 cy of impacted soils were transported offsite for thermal treatment. The soils encountered around the UST consisted of silts, from the ground surface to about five feet bgs, and sandy silt, from approximately 5-8 feet bgs, and sandy gravel from approximately 8 feet bgs to 13 feet bgs at the bottom of the excavation. Several boulders were encountered in the excavation. Ground water was encountered at the base of the excavation.

Nine project soil samples were collected: five from the excavation, three from the segregated, stockpiled soil, and one from the ground surface. Of the five excavation samples, three were collected from the base and two were collected from the sidewalls. The one ground surface sample was collected about 5 feet east of the excavation limit. Three samples were collected from the segregated, stockpiled soil, approximately 1.5 feet below the stockpile surface. DRO exceeded DEC Method Two Soil Cleanup Levels in two soil samples collected from the base of the excavation, at concentrations of 1,600 mg/kg and 7,100 mg/kg, respectively. Sample locations are shown in Figure 1.

Because the impacted soil extended to groundwater in the excavation, fertilizer was added to the bottom of the excavation in an effort to promote biodegradation of contaminants. In August 1998, 44 pounds of high nitrogen fertilizer were hand-spread and blended, using a backhoe, with the bottom three feet of backfilled soil. After blending, backfill activities were completed using thermally treated soils, the 90 cy of clean soil stockpiled beside the excavation; and 65 cy of clean soil from a separate Humpy Cove project site.

Three well points were installed around the excavation to characterize potential impacts to groundwater. Well Point 1 (HCD-WP1) was installed to the west of the excavation, and Well Points 2 (HCD-WP2) and 3 (HCD-WP3) were installed to the east and south of the excavation, respectively. Groundwater concentrations in all wells were significantly below DEC Table C cleanup levels, however, measurements taken from the well points indicate that the groundwater flow is towards the southwest and none of the wells were located directly downgradient of the UST. Because none of the well points appeared to be directly downgradient from the source area, subsequent work was recommended in 2000.

In August 2000 during a follow up Island wide SI and IRA was conducted at the project site. One soil boring was drilled at the former Dispensary location and met refusal at bedrock at 11 feet bgs. The boring (HCD-MW1) did not detect any soil contamination and did not encounter groundwater. A second boring was offset five feet from the first boring and drilled to refusal at

approximately 11 feet bgs. The auger flights were left in both borings, and both borings were rechecked for groundwater in September of 2000. A joint decision was made by the Unted State Corps of Engineers, DEC, and the field crew on 5 September to abandon both borings without installing a monitoring well.

In 2009, due to the 1998 DRO concentrations remaining above default soil cleanup levels, site-specific total organic carbon (toc) data was collected from the Humpy Cove area to calculate a Method Three Alternative Cleanup Level. The revised fraction of organic carbon (foc) value of 0.034 g/g was used to calculate an alternative migration to groundwater cleanup level of 7,500 mg/kg. Remaining soil contaminant concentrations at the site are below this Method Three Cleanup Level, therefore the site was recommended for no further action. The Method Three Alternative Cleanup Level calculations are shown in Figure 2.

**Cumulative Risk Evaluation**
Pursuant to 18 AAC 78.600(d), 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, 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 DEC'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 is present in surface soil (<2 ft) but is below the most stringent DEC cleanup levels. |
| Sub-Surface Soil Contact | De Minimis Exposure | Contamination remains in the sub-surface (>2 ft bgs) but is below the approved alternative DEC cleanup level. |

| | | |
|---|---|---|
| Inhalation – Outdoor Air | De Minimis Exposure | Contaminants in soil are volatile but are present at very low levels below the inhalation cleanup level. |
| Inhalation – Indoor Air (vapor intrusion) | Pathway Incomplete | There are no occupied buildings at the site. |
| Groundwater Ingestion | De Minimis Exposure | Site is underlaid by bedrock and intermittent groundwater was below Table C or not present during subsequent sampling events. Groundwater in the vicinity of the site is not currently used as a drinking water source. |
| Surface Water Ingestion | De Minimis Exposure | Contaminants in groundwater are below the Table C cleanup levels for the site and contamination is not expected to migrate to surface water. Small drainages and ponds are located 300 to 400 feet from the site. |
| Wild and Farmed Foods Ingestion | Pathway Incomplete | Contaminants of concern have the potential to bioaccumulate in plants or animals but are not located where they would have the potential to be taken up by biota. Soil contamination is present at nine feet bgs in soil and at concentrations an order of magnitude below the most stringent soil cleanup level. Groundwater was not encountered, therefore unlikely to migrate to groundwater and to surface water 300 feet away. |
| Exposure to Ecological Receptors | Pathway Incomplete | Contaminants of concern have the potential to bioaccumulate in plants or animals but are not located where they would have the potential to be taken up by biota. Soil contamination is present > 11 feet bgs in soil and at concentrations an order of magnitude below the most stringent soil cleanup level. Groundwater was not encountered, therefore unlikely to migrate to groundwater and to surface water 300 feet away. |

**Notes to Table 2**: "De Minimis Exposure" means that in DEC's judgment receptors are unlikely to be adversely affected by the minimal volume or concentration of remaining contamination. "Pathway Incomplete" means that in DEC's judgment contamination has no potential to contact receptors.

**DEC Decision**

Soil contamination at the site have 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 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 78.600(h). A "site" [as defined by 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 78.276(f) and does not preclude DEC from requiring additional assessment and/or cleanup action if information indicates that contaminants at this site may pose an unacceptable risk to human health, safety, or welfare or to the environment.

**Informal Reviews and Adjudicatory Hearings**

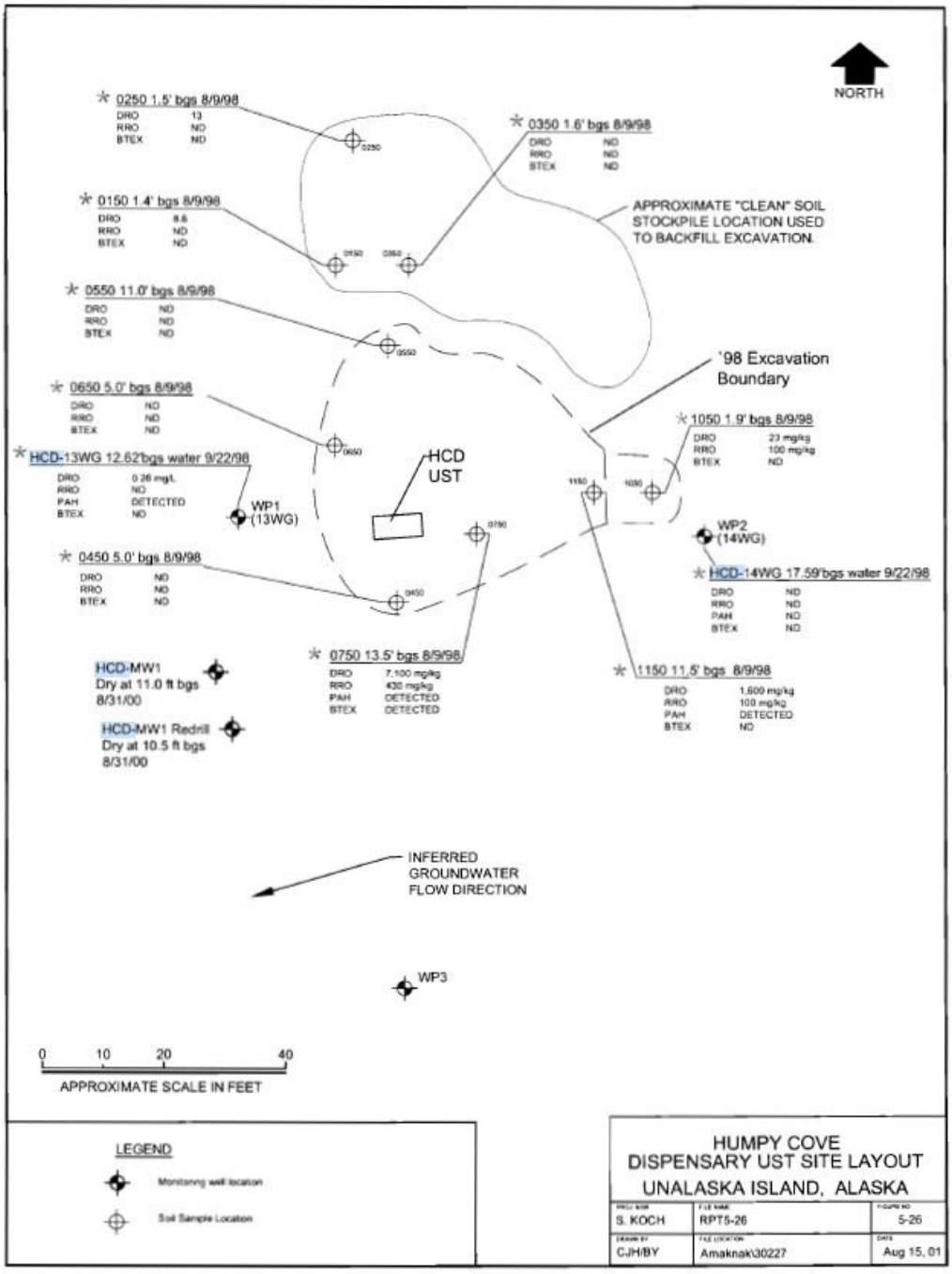
A person authorized under a provision of 18 AAC 15 may request an informal review of a contested decision by the Division Director in accordance with 18 AAC 15.185 and/or an adjudicatory hearing in accordance with 18 AAC 15.195 – 18 AAC 15.340. See DEC's "Appeal a DEC Decision" web page https://dec.alaska.gov/commish/review-guidance/ for access to the required forms and guidance on the appeal process. Please provide a courtesy copy of the adjudicatory hearing request in an electronic format to the parties required to be served under 18 AAC 15.200. Requests must be submitted no later than the deadline specified in 18 AAC 15.

If there are any questions, please contact me by phone at (907) 451-2185, or by email at kathleen.iler-galau@alaska.gov.

Sincerely,

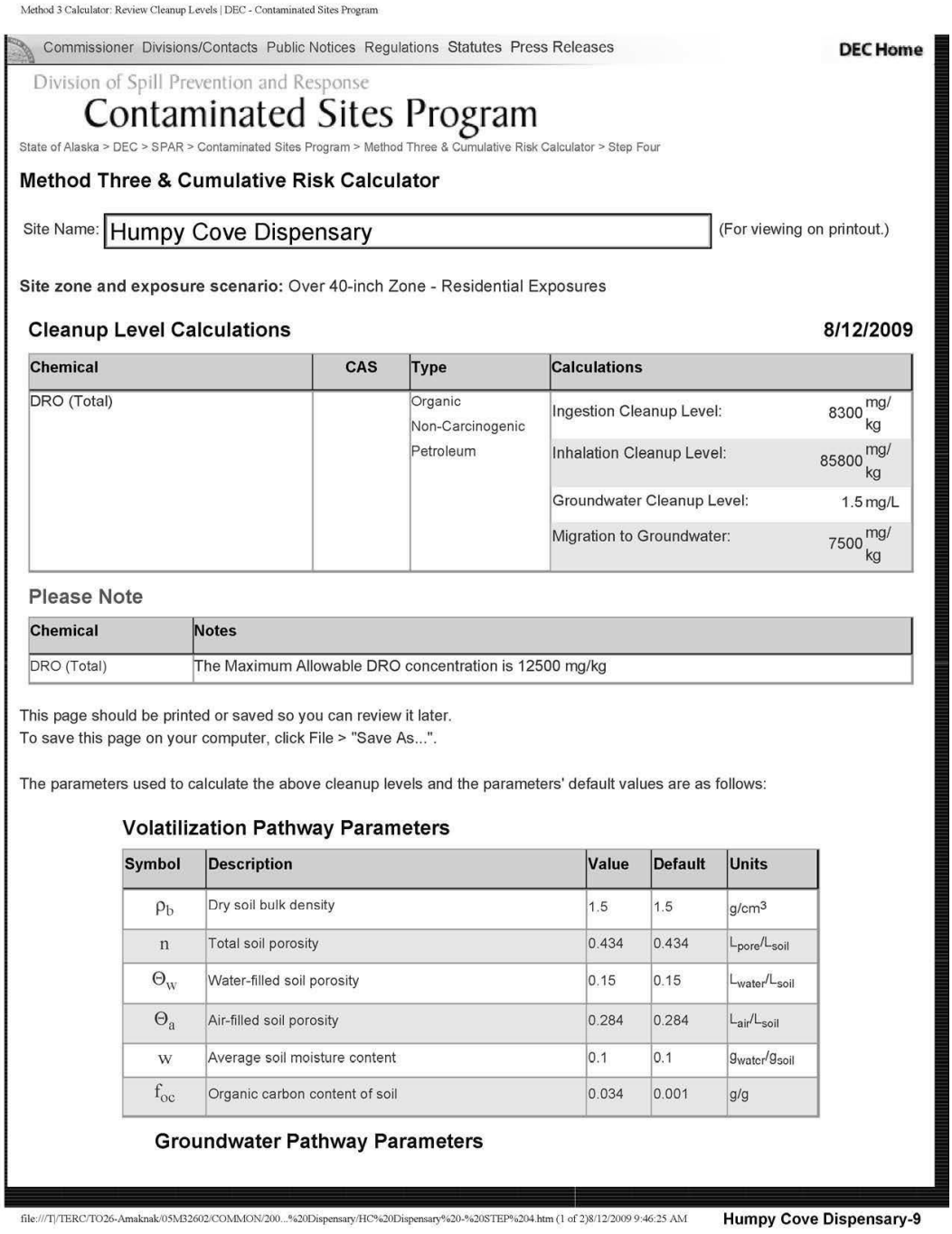
Kathleen Iler-Galau
Environmental Program Specialist

Cc: Sarah Bernhardt, DEC
Dennis Shepard, DEC




5-104

*Figure 1 -Site figure of sampling locations and results from the 1998 and 2000 Interim Removal Actions and sampling.*



Method 3 Calculator: Review Cleanup Levels | DEC - Contaminated Sites Program

Commissioner Divisions/Contacts Public Notices Regulations Statutes Press Releases DEC Home

Division of Spill Prevention and Response

Contaminated Sites Program

State of Alaska > DEC > SPAR > Contaminated Sites Program > Method Three & Cumulative Risk Calculator > Step Four

**Method Three & Cumulative Risk Calculator**

Site Name: Humpy Cove Dispensary (For viewing on printout.)

**Site zone and exposure scenario:** Over 40-inch Zone - Residential Exposures

**Cleanup Level Calculations** **8/12/2009**

| Chemical | CAS | Type | Calculations | |
|---|---|---|---|---|
| DRO (Total) | | Organic<br>Non-Carcinogenic<br>Petroleum | Ingestion Cleanup Level: | 8300 mg/kg |
| | | | Inhalation Cleanup Level: | 85800 mg/kg |
| | | | Groundwater Cleanup Level: | 1.5 mg/L |
| | | | Migration to Groundwater: | 7500 mg/kg |

**Please Note**

| Chemical | Notes |
|---|---|
| DRO (Total) | The Maximum Allowable DRO concentration is 12500 mg/kg |

This page should be printed or saved so you can review it later.
To save this page on your computer, click File > "Save As...".

The parameters used to calculate the above cleanup levels and the parameters' default values are as follows:

**Volatilization Pathway Parameters**

| Symbol | Description | Value | Default | Units |
|---|---|---|---|---|
| $\rho_b$ | Dry soil bulk density | 1.5 | 1.5 | $g/cm^3$ |
| n | Total soil porosity | 0.434 | 0.434 | $L_{pore}/L_{soil}$ |
| $\Theta_w$ | Water-filled soil porosity | 0.15 | 0.15 | $L_{water}/L_{soil}$ |
| $\Theta_a$ | Air-filled soil porosity | 0.284 | 0.284 | $L_{air}/L_{soil}$ |
| w | Average soil moisture content | 0.1 | 0.1 | $g_{water}/g_{soil}$ |
| $f_{oc}$ | Organic carbon content of soil | 0.034 | 0.001 | g/g |

**Groundwater Pathway Parameters**

file:///T|/TERC/TO26-Amaknak/05M32602/COMMON/200...%20Dispensary/HC%20Dispensary%20-%20STEP%204.htm (1 of 2)8/12/2009 9:46:25 AM Humpy Cove Dispensary-9

*Figure 2 – Humpy Cove Dispensary site Method 3 Alternative Cleanup Level calculations. A site-specific foc of 0.034 g/g was used to calculate an alternative Migration to Groundwater cleanup level of 7,500 mg/kg.*