THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Environmental Conservation

DIVISION OF SPILL PREVENTION AND RESPONSE
Contaminated Sites Program

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File: 108.38.079

March 7, 2022

Electronic Delivery Only
Department of the Army
Directorate of Public Works
ATTN: AMIM-AKP-E (K. DePalma)
Fort Wainwright, AK 99703

Re: **Cleanup Complete Determination: Fort Wainwright (2P) Gaffney Rd POL - Condensate Line Trench (North Refueling)**

Dear Ms. DePalma,

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the Fort Wainwright (2P) Gaffney Rd POL - Condensate Line Trench (North Refueling) site located at the southwest corner of Gaffney Road and Ketcham Road, Fort Wainwright, 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 Fort Wainwright (2P) Gaffney Rd POL - Condensate Line Trench (North Refueling), which is located in the ADEC office in Fairbanks, Alaska. This decision letter summarizes the site history, cleanup actions and levels, and standard site closure conditions that apply.

Site Name and Location:
Fort Wainwright (2P) Gaffney Rd POL – Condensate Line Trench (North Refueling)
South of Gaffney Road
Fort Wainwright, Alaska 99703

Name and Mailing Address of Contact Party:
Department of the Army
Directorate of Public Works
ATTN: Seth Reedy
Fort Wainwright, AK 99703

DEC Site Identifiers:
File No.: 108.38.079
Hazard ID.: 3826

Regulatory Authority for Determination:
18 AAC 75

Site Description and Background
The Condensate Line Trench site is located within the North Refueling site, in the vicinity of Building 1510 at the northeast end of the Ladd Airfield. In September 2001, construction workers detected a petroleum odor while excavating soil around an existing condensate line immediately south of Gaffney Road. Elevated PID readings were collected and laboratory analysis revealed Diesel Range Organics (DRO) exceeded the Alaska Department of Environmental Conservation (ADEC) Cleanup Level in one sample. A review of historical aerial photos did not indicate a possible contaminant source, and the condensate line release was attributed to an old underground release of unknown origin.

Contaminants of Concern
During the site characterization and cleanup activities at this site, samples were collected from soil and groundwater and analyzed for DRO, Gasoline Range Organics (GRO), Residual Range Organics (RRO), and benzene, toluene, ethylbenzene, and total xylenes (BTEX). 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)

Cleanup Levels
The most stringent values in Table B2, Method Two – Petroleum Hydrocarbon Soil Cleanup Levels Under 40 Inch Zone apply to the site. DRO was detected in soil above the Migration to Groundwater (MTGW) cleanup levels established in 18 AAC 75.341 (d), Table B2.

Table 1 – Approved Cleanup Levels

Contaminant	Soil (mg/kg)
DRO	250

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 2001. These activities are described below.

In September 2001, construction workers detected a petroleum odor while excavating soil around an existing condensate line immediately south of Gaffney Road. Upon detection, Fort Wainwright Department of Public Works (DPW) was notified. The Directorate of Public Works (DPW) contracted field screening measurements and elevated PID readings were observed. The trench was 10 feet deep with a four to five foot base and 15 feet wide at the surface. Three soil samples were collected for laboratory analysis at approximately 6 feet below ground surface (bgs) on the sidewalls. The soil samples were submitted for analysis of GRO, DRO, RRO, and BTEX. Laboratory analysis revealed DRO exceeded the ADEC MTGW in one sample at a concentration of 1,860 mg/kg. At the time, the contamination was believed to be part of the existing Two-Party site, Building 1514 source area. After receiving laboratory results that indicated the contamination was from a separate, new source, ADEC was then notified. A review of historical aerial photos did not indicate a possible contaminant source,

and the condensate line release was attributed to an old underground release of unknown origin. 1800 cubic yards (cy) of soil was excavated and disposed, and the trench was backfilled with clean soil.

In 2002, three borings were drilled in the vicinity of the previous DRO CUL exceedance. No elevated PID results were observed during drilling activities. A total of seven soil samples for laboratory analysis were collected from the borings at depths ranging between 4.5 and 16.5 feet bgs (groundwater was encountered between 19.5 and 21.5 feet bgs at the time of drilling). The soil samples were submitted for the analysis of GRO, DRO, RRO, and BTEX. No results exceeded the most stringent of the ADEC CULs that were current at the time of sampling. No groundwater samples were collected.

The 2020 preliminary source evaluation 2 (PSE 2) included two soil borings and installation of one temporary monitoring well in the Condensate Line Area. Four primary soil samples were collected, along with groundwater samples from the temporary well. Soil and groundwater samples were submitted for laboratory analysis of DRO and volatile organic compounds (VOCs). Trace detections of DRO were observed in the soil samples, with concentrations significantly below ADEC CULs. Similar results were observed in the groundwater samples, with trace concentrations of DRO. The extent of soil contamination is delineated horizontally by clean sample results from 2001, and clean soil borings from 2002 and 2020. The location of the 2001 MTG exceedance at 6 ft bgs was bound vertically by clean soil results at 13-14 ft bgs, indicating the contamination was not migrating through the subsurface or to groundwater (see Figure 1).

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, 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	Pathway Incomplete	Surface soil excavated in 2001 and replaced with clean fill.
Sub-Surface Soil Contact	De Minimis Exposure	Contamination may remain in the sub-surface but is below ingestion cleanup levels. MTG exceedance at 6 ft bgs in 2001 was bound by 2020 sampling results of clean soil at 13-14 ft.

Inhalation – Outdoor Air	Pathway Incomplete	Contamination may remain in the sub-surface but is below inhalation cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	No buildings located at the site.
Groundwater Ingestion	Pathway Incomplete	GW samples from this location indicate contamination has not exceeded Table C groundwater cleanup levels or significantly affected groundwater.
Surface Water Ingestion	Pathway Incomplete	Nearest surface water is the Chena River located 900 feet from the site. Groundwater has not been contaminated, so migration to surface water is not a complete pathway.
Wild and Farmed Foods Ingestion	Pathway Incomplete	Site is located adjacent to an active runway and is not considered a reasonable source of wild or farmed foods.
Exposure to Ecological Receptors	Pathway Incomplete	Site is located adjacent to an active runway and is not reasonably accessed by ecological acceptors.

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

The extent of soil contamination at the site has been adequately bound horizontally and vertically by soil and groundwater results below ADEC CULs. The sampling results indicate the remaining contamination in the subsurface is de-minimus in quantity and does not pose a significant exposure to human health or the environment. 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 75.325(i). A "site" 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 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) 451-2181 ###-or email at cascade.galasso-irish@alaska.gov.

Sincerely,

Cascade Galasso-Irish
Alternate Remedial Project Manager

cc: Spill Prevention and Response, Cost Recovery Unit

Attachments: Figure 1

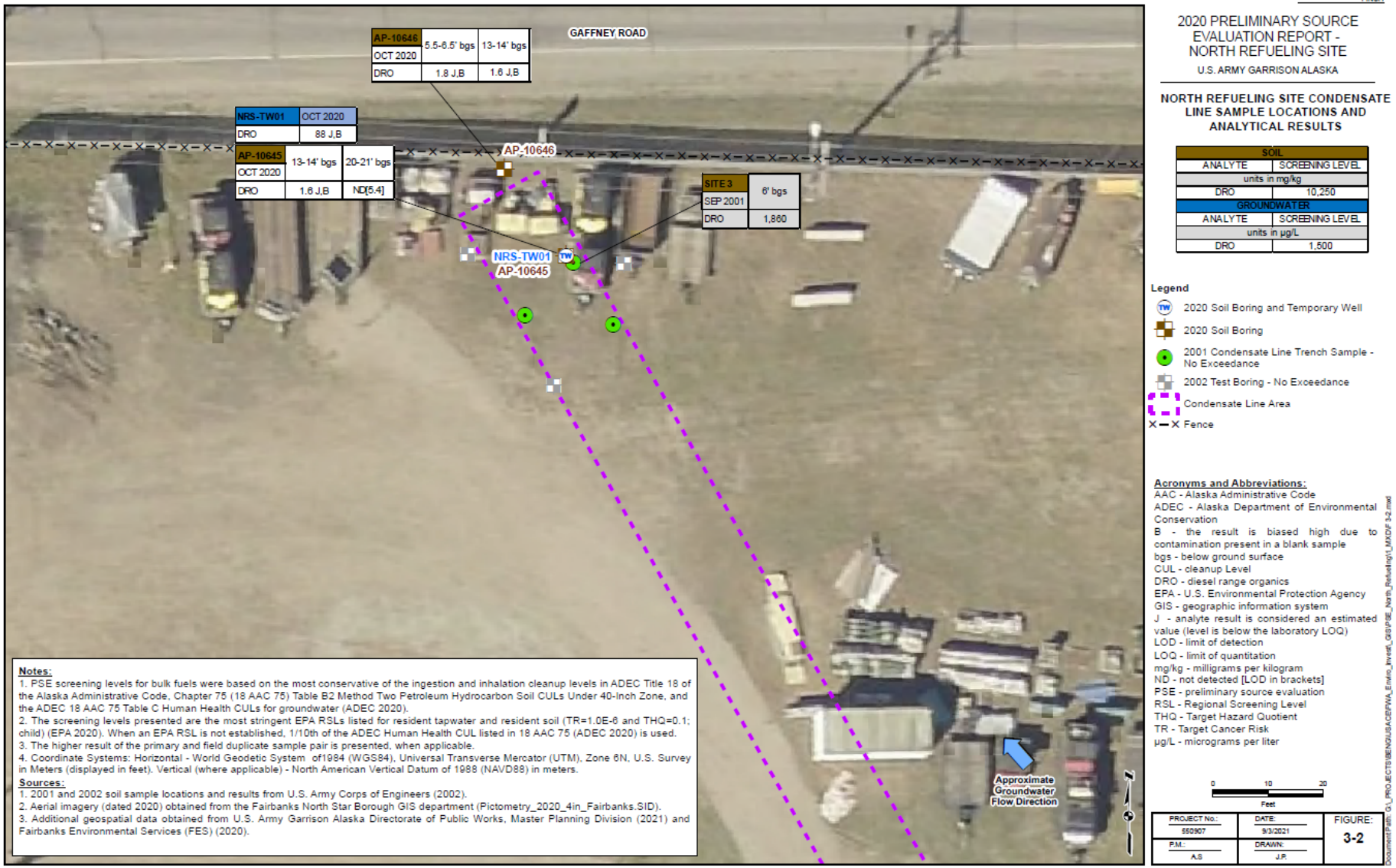

Figure 1- 2001, 2002, and 2020 sampling locations and results.