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 No: 630.38.003

August 13, 2015

Andrea Elconin
USACE
P.O. Box 6898
Elmendorf AFB, 99506-6898

Re: Decision Document; Unalakleet Air. Warning – Generator Hill
Cleanup Complete Determination

Dear Ms. Elconin:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (DEC) has completed a review of the environmental records associated with Unalakleet Air. Warning – Generator Hill Site located at Unalakleet, Alaska. Based on the information provided to date, the DEC has determined that the contaminant concentrations remaining on site do not pose an unacceptable risk to human health or the environment, and this site will be closed.

This decision is based on the administrative record for Unalakleet Air. Warning – Generator Hill, which is located in the offices of the DEC in Fairbanks, Alaska. This letter summarizes the decision process used to determine the environmental status of this site and provides a summary of the regulatory issues considered in the Cleanup Complete Determination.

Site Name and Location:
Unalakleet Air. Warning – Generator Hill
Unalakleet D-4, T18S, R11W, Sec 23
Unalakleet, Alaska 99684

Name and Mailing Address of Contact Party:
Andrea Elconin
USACE
P.O. Box 6869
JBER, AK 99506-6869

Database Record Key and File Number:
ADEC Reckey: 199332X115202
File: 630.38.003
Hazard ID: 4296

Regulatory Authority for Determination:
DERP, US Code Title 10, Section 2701, et seq., and
18 AAC 75

Background
During World War Two (WWII), an aircraft runway was constructed near Unalakleet to support the transfer of aircraft to the Soviet Union under the Lend-Lease Agreement. Following WWII the US Air Force (Air Force) constructed the Unalakleet Air Force Station as part of their defense network of aircraft warning and communication relay systems. The Generator Hill site (Site 22) is located north-northwest of the former main Aircraft Control and Warning (AC&W) station complex (Site 25), at the top of and along the northern slope of Generator Hill. This site consisted of a Generator Building and fuel storage tank at the top of the hill, in addition to 34 discarded 55-gallon military fuel drums and an empty 1,125-gallon storage tank scattered on the northern hillside. Further, an aboveground fuel line extended from the Generator Building to the Composite Building at the main complex of the AC&W station. The Site was characterized during removal actions in 1993 and 2005. Soil samples were analyzed for total petroleum hydrocarbons (TPH), Polychlorinated biphenyls (PCBs) in 1993. TPH were detected at estimated concentrations between 76 and 1,600 mg/kg; PCBs were not detected. Diesel range organics (DRO) and residual range organics (RRO) were detected above soil cleanup levels at concentrations of 6,300 mg/kg and 100,000 mg/kg, respectively in 2002. During 2005 excavations were sampled and analyzed for benzene, ethylbenzene, toluene, and total xylenes (BTEX), DRO, RRO, gasoline range organics (GRO), Polynuclear aromatic hydrocarbons (PAHs), Polychlorinated biphenyls (PCBs), pesticides, and RCRA metals. DRO and the metals arsenic and chromium were detected in the soil north of the former building at concentrations above their respective migration to groundwater cleanup levels. DRO was detected at concentrations between 550 and 7,100 mg/kg, arsenic was detected at concentrations between 4.53 and 5.91 mg/kg; and chromium was detected at concentrations between 32.9 and 41.4 mg/kg. Groundwater was not encountered at the site. A decision document was finalized in 2009 and selected excavation and offsite disposal of DRO contaminated soil as the site remedy.

Contaminants of Concern
During the investigations at this site, diesel range organics (DRO) were detected above cleanup levels. The metals arsenic and chromium were also detected at levels slightly above method two, migration to groundwater cleanup levels; however, the levels detected are reasonable levels for background in this area. Based on these analyses and knowledge of the source area, the following Contaminant of Concern was identified:

- Diesel Range Organics (DRO)
- Residual Range Organics (RRO)

Cleanup Levels

The default soil cleanup levels for this site are established in 18 AAC 75.341, Method Two, Table B2, Migration to Groundwater.

Contaminant	Site Cleanup Level (mg/kg)
DRO	250
RRO	11,000

Clean Up Activities

Diesel contaminated soil was found associated with a day tank in the mid 1990s during building demolition. During removal actions (RAs) in 1993 and 2005, the Generator Building, storage tanks, and aboveground fuel line were demolished; the military drums were removed; and approximately 678 cubic yards of contaminated soil was excavated from the site. Excavation during the 2005 RA also remediated the 100,000 mg/kg RRO concentration detected during the 2002 preliminary assessment. RRO was not detected above the cleanup level in confirmation samples. Site characterization in 2005 documented that DRO contaminated soil remains above Method 2 cleanup levels (up to 7,100 mg/kg). Additional soil excavation and confirmation sampling was conducted in 2010. The following list of activities summarizes 2010 RA at Site 22.

- Used test pits and a PID to field screen for DRO contaminated soil;
- Correlated field screening data with off-site laboratory data;
- Excavated 436 tons of DRO contaminated soil, reaching bedrock;
- Screened excavated material using a 2-inch screen plant to segregate debris and large rocks from the contaminated soil;
- Collected 10 side-wall confirmation samples (plus one duplicate sample) for off-site analysis for DRO; and
- Surveyed, backfilled, and graded excavated areas.

Only one of the 10 confirmation soil samples contained DRO at concentrations above cleanup levels. Sample GB-11-2.5-SO contained 262 mg/kg of DRO at a depth of 2.5 ft bgs. All other analytical samples were below the most stringent cleanup levels.

To assess whether the residual contamination poses a potential risk, the UCL95 was calculated for analytical results for the 10 confirmation samples. The UCL95 for the DRO data set is 143 mg/kg.

Although no groundwater was encountered onsite, down-gradient groundwater seeps and residential groundwater wells were sampled in 2010-2011 and no contaminants of concern were identified.

All of the requirements listed in the DEC Memorandum on Site Closure (dated 24 July 2009) have been met:

- Free product has not been detected at the site.
- Surface staining is not present at the site.
- Cumulative risk standards have been achieved.
- Residual contaminant concentrations will not require institutional controls.

- Groundwater contaminant plumes are not present.
- Residual contamination will not cause a violation of 18 AAC 70.

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 1.

Table 1 – Exposure Pathway Evaluation

Pathway	Result	Explanation
Surface Soil Contact	De-Minimis exposure	Site DRO contamination has been excavated to bedrock (2.5 - 8feetbgs). Of 10 confirmation samples, only one sample was above the migration to groundwater cleanup level (262 mg/kg). This result is well below direct contact of 10,250 mg/kg
Sub-Surface Soil Contact	De-Minimis exposure	Site DRO contamination has been excavated to bedrock (2.5 - 8feetbgs). Of 10 confirmation samples, only one sample (262 mg/kg) was above the migration to groundwater cleanup level. This result is well below direct contact of 10,250 mg/kg
Inhalation – Outdoor Air	Pathway Incomplete	De-Minimis DRO contamination remains in the subsurface, but VOCs are not a concern.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	There are no buildings at the site, De-Minimis DRO contamination remains in the subsurface but VOCs are not a concern.
Groundwater Ingestion	Pathway Incomplete	Groundwater was not encountered during the investigations. Down-gradient wells were sampled and did not result in detections of contaminants of concern.
Surface Water Ingestion	Pathway Incomplete	Down-gradient surface water seeps were sampled and evaluated. No contaminants of concern were detected.
Wild Foods Ingestion	Pathway Incomplete	The site is on a rocky hilltop with very little vegetation. Remaining subsurface DRO contamination is isolated, De Minimis and is unlikely to migrate or be taken up by plants.
Exposure to Ecological Receptors	Pathway Incomplete	The site is on a rocky hilltop with very little vegetation. Remaining subsurface DRO contamination is isolated, De Minimis and is unlikely to impact ecological receptors.

Notes to Table 1: "De-Minimis exposure" means that in ADEC's judgment receptors are unlikely to be affected by the minimal volume of remaining contamination. "Pathway incomplete" means that in ADEC's judgment contamination has no potential to contact receptors.

ADEC Decision

The cleanup actions to date have served to excavate and adequately remove contaminated soil from the site. Based on the information available, ADEC has determined no further assessment or cleanup action is required. There is no longer a risk to human health or the environment, and this site will be designated "Cleanup Complete" on the Department's database.

Although a Cleanup Complete determination has been granted, DEC approval is required for off-site soil disposal in accordance with 18 AAC 75.325(i). It should be noted that movement or use of potentially contaminated soil in a manner that results in a violation of 18 AAC 70 water quality standards is unlawful.

This determination is in accordance with 18 AAC 75.380 (d) and does not preclude DEC from requiring additional assessment and/or cleanup action if future information indicates that this site may pose an unacceptable risk to human health or 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, 410 Willoughby Avenue, Suite 303, Juneau, Alaska 99801, 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 99801, 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 ADEC project manager, Joy Whitsel at (907) 451-2156 or by email at joy.whitsel@alaska.gov.

Sincerely,

Fred Vreeman
Environmental Program Manager

cc: Joy Whitsel, DEC, via email