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 No.: 2661.38.010

May 2, 2022

Mr. Jeremy Craner
U.S. Army Corps of Engineers
P.O. Box 6898
JBER, AK 99506-6898

Re: **Decision Document: Cape Prominence AWS**
Cleanup Complete Determination

Dear Mr. Craner:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the Cape Prominence Aircraft Warning Station (AWS) located at South Side of Unalaska Island. 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 Cape Prominence AWS, 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:
Cape Prominence AWS
South Side of Unalaska Island,
Unalaska, AK 99685

Name and Mailing Address of Contact Party:
Jeremy Craner
U.S. Army Corps of Engineers
P.O. Box 6898
JBER, AK 99506-6898

DEC Site Identifiers:
File No.: 2661.38.010
Hazard ID.: 2829

Regulatory Authority for Determination:
18 AAC 75

Site Description and Background

Cape Prominence is located on the south side of Unalaska Island, Alaska, approximately 30 air miles southwest of Dutch Harbor. The site is located on a remote peninsula between Open Bay and Usof Bay on the southcentral side of Unalaska Island. The coordinates for the site are 53˚20‘30” North Latitude and 166˚45’30” West Longitude (Figure 1). The site covers approximately 160 acres and

consists of two primary areas: 1) the Lower Camp site feature located near the shoreline in a natural valley and, 2) the Upper Camp site feature located on a high bluff south of the Lower Camp (Figure 2).

The Cape Prominence AWS Station was used as a radar detector station by the United States Army from 1942 to 1944. Since there was no formal acquisition of the Cape Prominence AWS Station site, no disposal action was taken. Improvements were abandoned in place when the site was vacated around 1945. Subject to a native regional selection application by The Aleut Corporation, pursuant to the Alaska Native Claims Settlement Act of 1971, the Alaska National Interest Land Conservation Act of 1980 included the site in the newly established Aleutian Islands Unit of the Alaska Maritime National Wildlife Refuge. Jurisdiction and management of the former site is under the United States Fish and Wildlife Service.

During 1993, a petroleum odor was identified through a hole in an underground storage tank (UST) located at the Upper Camp, and petroleum and suspected petroleum liquid were identified at an aboveground storage tank (AST) located at the Lower Camp. Abandoned USTs were also found at the Upper Camp. Diesel Range Organics (DRO) and Residual Range Organics (RRO) contamination was determined to be present in soil.

Contaminants of Concern

During the site characterization and cleanup activities at this site, samples were collected from soil, groundwater, and surface water and analyzed for gasoline range organics (GRO), DRO, RRO, pesticides, polychlorinated biphenyls (PCBs), semi-volatile organic compounds (SVOCs), and target analyte list metals.). Based on these analyses, the following contaminants were detected above the applicable cleanup levels and are considered Contaminants of Concern (COCs) at this site:

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

Cleanup Levels

The more restrictive of either the inhalation or ingestion cleanup levels apply to this site. DRO and RRO were detected in soil above the ingestion cleanup levels established for an Over 40-Inch Zone in 18 AAC 75.341 (d), Table B2. Separate method three migration to groundwater (MTGW) alternative clean up levels (ACLs), as referenced in 18 AAC 75.340 (a) (3), were developed for the Upper Camp and Lower Camp site features. Table B2 ingestion cleanup levels were more conservative than the MTGW ACLs except for DRO at the Upper Camp Site with an ACL of 2800 mg/kg. However, DRO was not encountered in groundwater or surface water sampling efforts. Table B2 ingestion cleanup levels were determined to be the most protective of human health and the environment at the Cape Prominence AWS.

Table 1 – Approved Cleanup Levels for Cape Prominence AWS

Contaminant	Method 2 Ingestion Soil (mg/kg)
DRO	8250
RRO	1400

mg/kg = milligrams per kilogram

Characterization and Cleanup Activities

During a Field Investigation in 1993, the United States Army Corps of Engineers (USACE) identified potential public health and/or environmental hazards related to Department of Defense use at Cape Prominence AWS. No samples were collected during this investigation. However, a petroleum odor was identified through a hole in an UST located at the Upper Camp, and petroleum and suspected petroleum liquid were identified at an AST located at the Lower Camp. The Investigation Report identified the USTs at the Upper Camp.

In 1999, the United States Environmental Protection Agency (EPA) conducted a Preliminary Assessment/Site Inspection (PA/SI) at Cape Prominence AWS. The primary goals of the PA/SI were to collect and analyze samples to characterize potential contaminant sources, determine if there was offsite migration of contaminants, and to document any threat or potential threat to public health or the environment posed by the site. The PA/SI included the collection of samples from prospective hazardous substance source areas and from target areas potentially impacted by contaminant migration. Twenty-seven samples (including background and quality-assurance samples) were collected. The samples were collected from multiple locations at the site and along surface water passage routes. Surface soils, sediment, and surface water were sampled at the site. All samples were analyzed for GRO, DRO, RRO, pesticides, PCBs, SVOCs, and target analyte list metals.

In 2017, the USACE performed a site investigation at Cape Prominence AWS. Surface soils, sediment, and surface water were sampled at various locations at the Upper Camp and Lower Camp. Drums, USTs, ASTs, and other tanks and their contents were inspected and documented. This investigation determined that the most substantial contaminants of potential concern (COPC) were DRO and RRO in soil. These COPCs were identified above the most conservative ADEC Method Two soil cleanup levels identified in Tables B1 and B2 for the Over 40 Inch Zone human health exposure pathways listed in 18 Alaska Administrative Code (AAC) 75.341. All the drums, USTs, ASTs, and tanks at both the Upper and Lower Camps were visibly empty or had a small amount of water; no free product was visible. The USTs were reported to have been in reasonable condition. All the ASTs, drums, and tanks were in various stages of decomposition.

Pond sediment and surface water at the Upper Camp were reported to not be significantly impacted by former military activities. Acenaphthene and acenaphthylene, both polycyclic aromatic hydrocarbons (PAHs), were detected above screening ecological criteria in the pond sediment. There are no streams leading to the Upper Camp Pond and given the general lack of groundwater at the site, it is unlikely that the pond is fed by a seep or spring. It is more likely that the pond received water from snowmelt and

rainfall. Thus, because the only input to the pond is from snowmelt water and rainfall (both direct input and through surface water runoff), it was determined unlikely to provide year-round habitat for potential ecological receptors.

A soil sample collected near the base of the Lower Camp Powerhouse UST had a DRO concentration of 35,000 milligrams per kilogram (mg/kg). An analytical soil sample collected from the floor of the Powerhouse near the pathway/drainage had an RRO concentration of 13,000 mg/kg. A Drum Dump near the Powerhouse contained a soil sample collected from beneath a small drum pile with a DRO concentration of 28,000 mg/kg. The small drum pile near the Powerhouse and near the ASTs present at Barracks Buildings No. 1 and No. 2 had detections of PAHs (naphthalene and/or 1- methylnaphthalene) and the volatile organic compound (VOC) 1,2,3- trichloropropane at concentrations above the most conservative soil cleanup level listed in 18 AAC 75.341 Method Two, Table B1, but below the human health soil cleanup levels in 18 AAC 75.341. At the Lower Camp Standby Powerhouse, a single detection of mercury was reported in soil at a level above ADEC screening criteria. Additionally, a soil sample collected near the Lower Camp Standby Powerhouse had a concentration of DRO at the ADEC Method Two Soil migration-to-groundwater soil cleanup level of 230 mg/kg. The bulk of the soil contamination at the Lower Camp site feature was present near the location of the former Powerhouse.

In 2019, USACE conducted a removal action at Cape Prominence AWS. The overall objective of the project was to remove sources of contamination at site feature locations identified as the Upper Camp and Lower Camp. The project successfully removed scoped volumes of metallic debris (i.e., ASTs, USTs, drums, and drum remnants) and associated petroleum, oil, and lubricants (POL)-impacted soils. A total of 100 tons of POL-impacted soil was removed from the Upper Camp site feature; 1,009 tons of POL-impacted soil was removed from the Lower Camp Powerhouse site feature; and 10 tons of low-level mercury/POL-impacted soil was removed from the Lower Camp Standby Powerhouse site feature. All solid waste generated from the 2019 removal action was disposed of at WM's Columbia Ridge Landfill located in Arlington, Oregon.,

Groundwater samples were collected from temporary monitoring wells and surface water samples were collected from the primary small stream that drains the Lower Camp site features. Groundwater analytical results were all below ADEC Groundwater Human Health Cleanup Levels listed in Table C of 18 AAC 75.345. Surface water sampling results were also compared to ADEC Water Quality Standards for Designated Uses, including listed in 18 AAC 70.020. No exceedances of allowable contaminant concentrations in surface water were observed. No unacceptable human health or ecological risks appear to be present in groundwater or surface water.

The Upper Camp POL-contaminated soil excavation was advanced to a depth of approximately 5 to 7 feet below ground surface. Excavation confirmation samples were collected from the sidewalls and the base, and all analytical results were below the 18 AAC 75 Method Two Table B2 Over 40-inch Zone human-health soil cleanup levels. POL-impacted soil was also scoped for removal in the vicinity of the Upper Camp Powerhouse No. 2 UST and associated building footprint. Nine confirmation samples were collected from the base and sidewalls of a ground depression following UST removal. Apart from the eastern sidewall, all sidewall and excavation confirmation soil samples exhibited concentrations of DRO above the 18 AAC 75 Method Two Table B2 Over 40-inch Zone human-health soil cleanup levels.

The Lower Camp excavation proceeded to bedrock. Confirmation samples were collected from the sidewalls only due to the presence of bedrock at the base. Analytical results for DRO, RRO, and mercury were all below the 18 AAC 75 Method Two Tables B1 and B2 Over 40-inch Zone human-health soil cleanup levels, except for results collected from the Lower Camp Standby Powerhouse. Confirmation samples indicated that exceedances of DRO remained present in the northern sidewall.

An abandoned drum with content was discovered approximately 150 yards southwest of the Lower Camp Powerhouse excavation location. The drum and its contents were removed and disposed of off-site, and a discrete soil sample was collected from below the center of the drum depression and was analyzed for DRO/RRO and the results for DRO were above the 18 AAC 75 Method Two Table B2 Over 40-inch Zone human-health soil cleanup levels.

In 2020, USACE conducted a second removal action at Cape Prominence AWS. The goal of the project was to facilitate site closure by removing potential threats to human health and the environment posed by incidental contaminated soil. POL-contaminated soil removal occurred at the Upper Camp Powerhouse No. 2, Lower Camp Standby Powerhouse, and Lower Camp Abandoned Drum Ground Depression sites. In total, 261.5 tons of POL-contaminated soil were removed and disposed of at the Region Disposal Company landfill in Roosevelt, Washington, during the 2020 removal action. Confirmation analytical soil samples were compared to the ADEC 18 AAC 75.341 Method Two, Tables B1 and B2, Over 40-inch Zone, human-health soil cleanup levels (ADEC, 2021). POL-contaminated soil removal at the Upper Camp Powerhouse No. 2, Lower Camp Standby Powerhouse, and Lower Camp Abandoned Drum Ground Depression sites meets 18 AAC 75.341, Method Two, Tables B1 and B2, human-health soil cleanup levels. Two DRO exceedances, out of twelve samples, were above the Method 3 Migration to Groundwater ACL at the Upper Camp Powerhouse No. 2. All other confirmation samples from the Upper Camp Powerhouse No 2. excavation were below the Method 3 Migration to Groundwater ACL. Groundwater was never encountered at the Upper Camp site feature. Additionally, all analytical confirmation samples for site-related contaminants did not exceed 1/10th of human health cleanup levels in 18 AAC 75.341.

One monitoring well was installed downgradient from the Lower Camp Abandoned Drum site but an analytical groundwater sample was not collected due to a lack of groundwater in the temporary monitoring well. Only one temporary monitoring well was installed and subsequently decommissioned due to the lack of suitable downgradient locations. One surface water sample was collected downgradient of the Lower Camp Abandoned Drum site and a second sample near the site of the 2019 surface water sample location. Analytical results from both surface water samples were non-detect for all analytes. The Removal Action Report stated that all potential sources of POL contamination have been removed and recommended project closure.

The highest concentrations of DRO remaining at the site following completion of all removal actions are referenced in Table 3. No detectable RRO contamination remains at the site.

Table 3 - Highest concentrations of DRO remaining at Cape Prominence AWS

Site Location	DRO (mg/kg)
Lower Camp	1,860
Upper Camp	7,920

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	Soil was excavated and no surface soil contamination remains in excavated areas. There are no exceedances of calculated site-specific cleanup levels or 18 AAC 75.341 Method Two Tables B1 and B2 Human Health soil cleanup levels in subsurface soils remaining at the site, nor do detected analyte concentrations exceed 1/10th of 18AAC75.341 default cleanup levels.
Sub-Surface Soil Contact	De Minimis Exposure	Contamination remains in the sub-surface but is below ingestion cleanup levels. The total remaining surface area with subsurface DRO contamination is approximately 0.02 acres.
Inhalation – Outdoor Air	De Minimis Exposure	Contamination remains in the sub-surface but is below inhalation cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	Cape Prominence is located in the Alaska Maritime National Wildlife Refuge and no buildings are currently present or planned for the site.
Groundwater Ingestion	Pathway Incomplete	Samples collected in 2019 were all below 18 AAC 75 Table C groundwater cleanup levels. Sufficient groundwater was not found in 2020 to allow for sample collection. The site is in a remote, seldom visited part of the Alaska Maritime National Wildlife Refuge and future site development is unlikely. Therefore, it is unlikely that drinking water wells will be installed on site.

Surface Water Ingestion	Pathway Incomplete	Surface water is not used as a drinking water source in the vicinity of the site. Contaminants were not detected in site surface water in 2019 or 2020, and harmful concentrations of contaminants in the source areas have been removed.
Wild and Farmed Foods Ingestion	Pathway Incomplete	Contaminant removal meets 18 AAC 75.341 Method Two Tables B1 and B2 Human Health soil cleanup levels. There are no bio accumulative contaminants remaining in site soils. The total remaining surface area with subsurface DRO contamination is approximately 0.02 acres.
Exposure to Ecological Receptors	De-Minimis	Only fuel-related contaminants remain following the 2019 Removal Action and the 2020 Incidental Contaminant Removal Action. Contaminant concentrations, below project screening levels, and are not expected to cause acute toxicity in potential ecological receptors. Excavation areas are currently unvegetated and remaining contaminants are fuel-related and do not bioaccumulate. Surface water samples collected indicate that surface water in the vicinity of the site has not been impacted by site contaminants. PAH compounds were detected in 2017 at concentrations slightly above screening levels but below 18 AAC 75.341 cleanup levels. Nickel and mercury were detected in sediment but are not associated with refined fuel or site-related activities and likely represent background conditions. No endangered or threatened species inhabit the contaminated areas.

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.

ADEC 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 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.

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) 451-5960 or ginna.quesada@alaska.gov.

Sincerely,

Ginna Quesada
Digitally signed by Ginna Quesada
Date: 2022.05.02 10:28:35 -08'00'

Ginna Quesada
Project Manager

cc: Spill Prevention and Response, Cost Recovery Unit

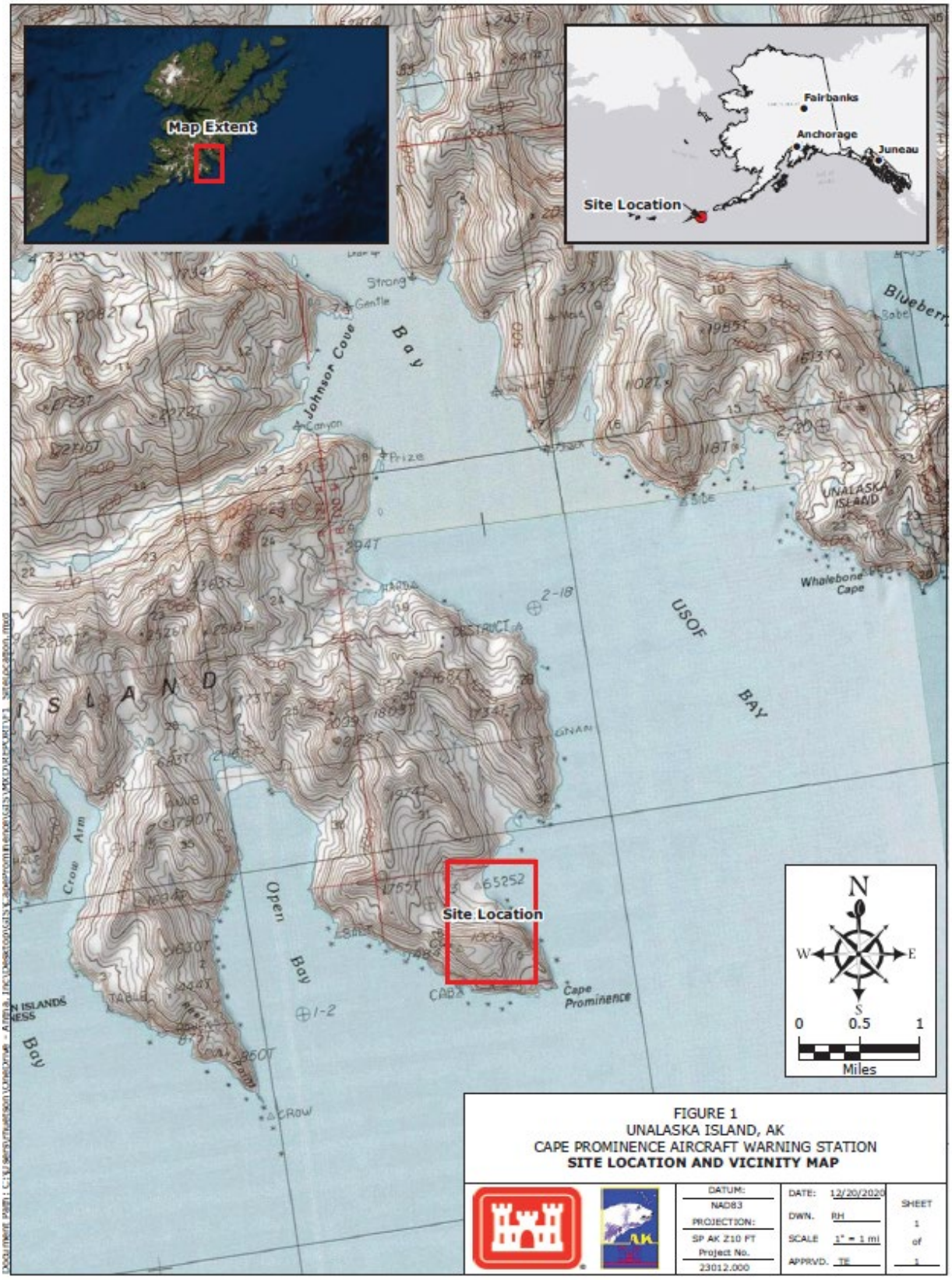

Figure 1. Cape Prominence Site Location

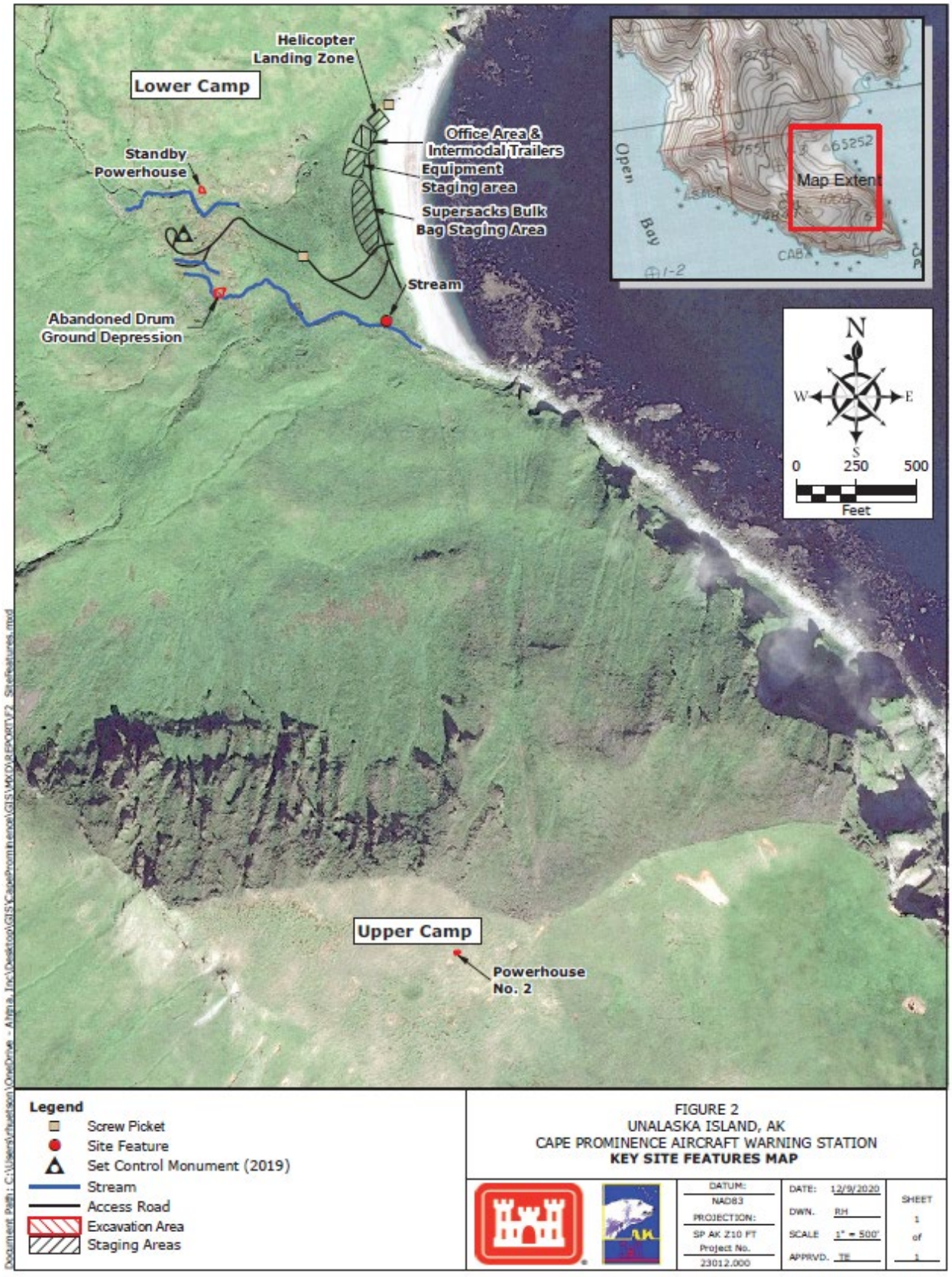

Figure 2. Upper Camp and Lower Camp sites at Cape Prominence AWS