



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Department of Environmental Conservation

DIVISION OF SPILL PREVENTION AND RESPONSE
Contaminated Sites Program

610 University Avenue
Fairbanks, AK 99709-3643
Phone: 907-451-2143
Fax: 907-451-2155
www.dec.alaska.gov

File: 530.38.004

February 16, 2017

Bill Heubner
National Park Service
240 West 5th Avenue
Anchorage, AK, 99501

Re: Decision Document: NPS Bering Land Bridge – Goodhope Cabin
Cleanup Complete Determination

Dear Mr. Heubner:

The Alaska Department of Environmental Conservation (ADEC), Contaminated Sites Program has completed a review of the environmental records associated with the National Park Service (NPS) Bering Land Bridge Goodhope Cabin site in the Bering Land Bridge National Preserve on the Seward Peninsula. 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 NPS Bering Land Bridge Goodhope Cabin site, 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:
NPS Bering Land Bridge - Goodhope Cabin
Bering Land Bridge National Preserve
62 miles southeast of Shishmaref

Section 9, Township 7 North, Range 25 West,
Kateel Meridian

ADEC Site Identifiers

File No: 530.38.004
Hazard ID: 25962

Regulatory Authority for Determination:

18 AAC 75

Site Description and Background

The Goodhope Cabins are emergency use cabins maintained by NPS for stranded winter travelers in the Bering Land Bridge National Preserve on the northern half of the Seward Peninsula, north of Nome, Alaska. Goodhope was historically a reindeer herding station and remnant reindeer pens remain to the west of the site. Cabin 1, the larger of the two cabins, is a permanent structure that has been remodeled to resemble a trapper's cabin. Cabin 2, the smaller cabin, is on skids as reindeer herders at times dragged the building over the snow to different grazing locations. The Goodhope River is approximately 200-feet southeast of the cabins.

In 2012, the NPS performed upgrades at the cabins, including the installation of new fuel tanks. Upon arrival, two bear-excavated holes were observed at the north and south corners of the east side of Cabin 2, and indications of petroleum contamination were observed.

Contaminants of Concern and Cleanup Levels

During the investigation and cleanup activities at this site, soil samples were analyzed for gasoline and diesel range organics (GRO and DRO) and benzene, toluene, ethylbenzene, and xylenes (BTEX). DRO was detected above the migration to groundwater cleanup level established in 18 AAC 75.341, Method 2, Table B2, under 40-inch zone.

Soil Cleanup Levels Table

Contaminant of Concern	Migration to Groundwater Cleanup Level	Inhalation Cleanup Level
DRO	250 mg/kg	12,500 mg/kg

Characterization and Cleanup Activities

In 2012, bear-excavated holes were observed both north and south of the fuel tank at Cabin 2. Each hole was about 1.5-feet deep and 1.5 to 2 feet across. Field screening was conducted at both bear excavations and beneath the fuel tank. Contamination was identified at the north bear excavation. Field screening from areas beneath the tank and from the south bear hole did not indicate petroleum impacts.

An analytical sample was collected from the bear hole at 1.5 feet, and the hole was expanded using field screening as a guide. Approximately 1-cubic yard of soil was removed from the hole and placed on a visqueen liner. Downward excavation was halted by the presence of ice at 2.5-feet, where a second analytical sample was collected. Four additional field screening samples were collected from the side walls just above the bottom of the excavation floor to help characterize remaining soils.

A new visqueen liner was placed in the excavation and the majority of the excavated soils were placed in the hole on the liner and mixed with 1.5-pounds of 22-11-11 N-K-P fertilizer. The top of the liner was wrapped over the top of the soils, the liner buried, and the site restored to grade with the remaining soils. Fertilizer was also added to these soils.

Samples were submitted to the laboratory for analysis of BTEX, GRO, and DRO. The sample from 1.5-feet had a DRO concentration of 6,730-mg/kg, and the sample from 2.5-feet had a DRO concentration of 573-mg/kg. No BTEX was detected in the samples and GRO was detected below the soil cleanup level.

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, 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 or Pathway Incomplete. 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. A summary of this pathway evaluation is included below.

Exposure Pathway Evaluation Table

Pathway	Result	Explanation
Surface Soil Contact	De Minimis	Remaining contaminant concentrations are below ingestion cleanup levels. Approximately 1 cubic yard of contaminated soil remains encapsulated in plastic and buried on-site. Fertilizer was added to the encapsulate soil, and surrounding soils, to promote biodegradation.
Sub-Surface Soil Contact	De Minimis	Remaining contaminant concentrations are below ingestion cleanup levels. Approximately 1 cubic yard of contaminated soil remains encapsulated in plastic and buried on-site. Fertilizer was added to the encapsulated soil and surrounding soil to promote biodegradation.
Inhalation – Outdoor Air	Pathway Incomplete	Remaining contaminant concentrations are below inhalation cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	Remaining contaminant concentrations are below inhalation cleanup levels.
Groundwater Ingestion	Pathway Incomplete	Remaining contaminant concentrations are above the migration to groundwater cleanup level; however, permafrost was encountered at a depth of 2.5 feet. Contaminants are not expected to migrate to groundwater.
Surface Water Ingestion	Pathway Incomplete	The nearest surface water body is the Goodhope River, approximately 200 feet from the cabins. Approximately 1 cubic yard of contaminated soil remains encapsulated in plastic on site. Residual

		contamination is not expected to migrate to the Goodhope River.
Wild and Farmed Foods Ingestion	Pathway Incomplete	Contaminants of concern are not bio-accumulative.
Exposure to Ecological Receptors	Pathway Incomplete	Contaminants of concern are not bio-accumulative.

ADEC Decision

Approximately 1-cubic yard of petroleum contaminated soil was encapsulated in plastic and placed back in the excavation at this site. Sample results show the DRO is the only contaminant of concern. DRO results are above the migration to groundwater cleanup level but below the ingestion and inhalation cleanup level. ADEC has determined that the volume of remaining contaminated soil is De Minimis.

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. (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 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 feel free to contact me at (907) 451-5175 or email at melody.debenahm@alaska.gov.

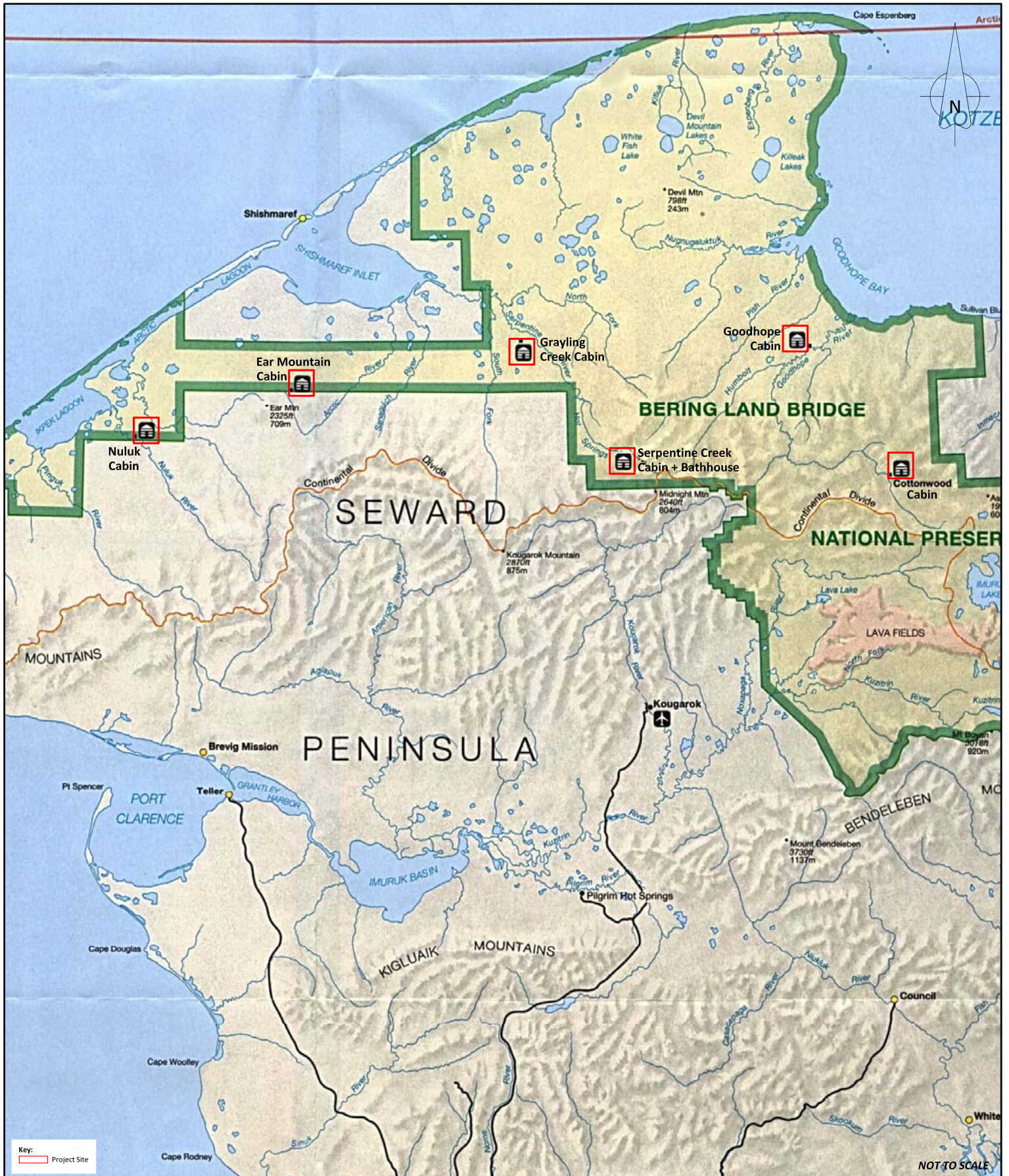
Sincerely,



Melody Debenham
Project Manager

Enclosures: Figure 1-B, Cabin Location Map (Ahtna, 2012)
Figure 5-C, Goodhope Cabin Sampling Locations (Ahtna, 2012)

Cc (via email): Spill Prevention and Response, Cost Recovery Unit

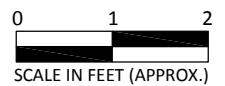
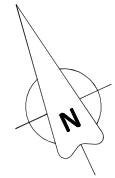
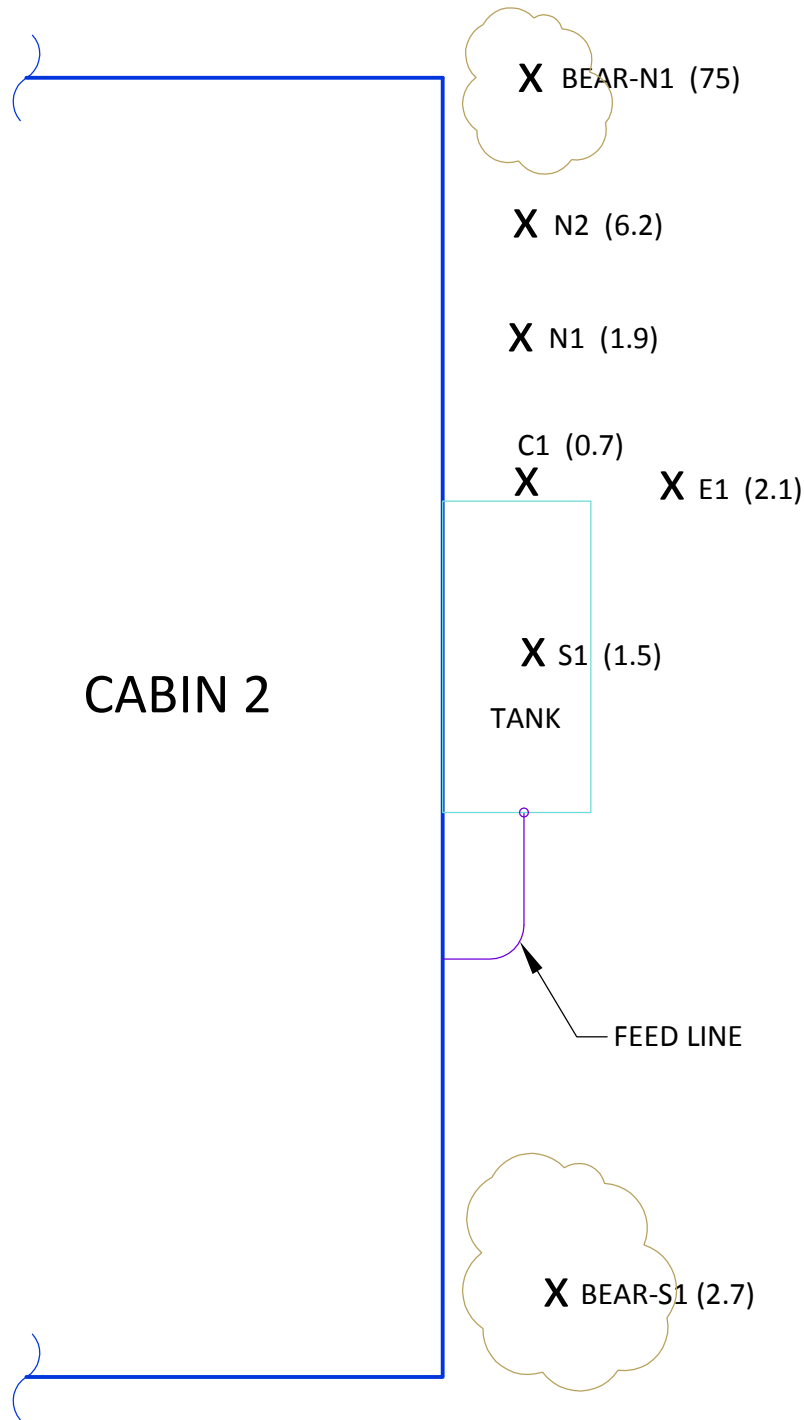


Remote Cabin Site Assessments
 Bering Land Bridge National Preserve, Alaska

Ahtna
 Environmental Inc.

Cabin Locations Map

Project Number: 05014.01	Figure Number: 1-B
Date: 09-04-2012	
Drawn By: I.B.	



Key	
	Aboveground Storage Tank
	Existing Structure
	Pipeline
	Field Screening Location (PID reading in ppmv)
	Distressed Land

Remote Cabin Site Assessments
Bering Land Bridge National Preserve, Alaska

Ahtna
Environmental Inc.

Goodhope Cabin - Sampling Locations

Project Number: 05014.003	Figure Number:
Date: 10-30-2012	5-C
Drawn By: G.R.	