



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: 220.38.009

August 30, 2017

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

Re: Decision Document: NPS Denali National Park HQ Buildings 12 and 13
Cleanup Complete Determination

Dear Mr. Heubner:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (DEC) has completed a review of the environmental records associated with the National Park Service (NPS) Denali National Park Headquarters (HQ) Buildings 12 and 13 site, in Denali National Park & Preserve. 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 Denali National Park HQ Bldg 12 & 13 site, which is located in the DEC 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 Denali National Park HQ Buildings 12 & 13
Denali National Park Headquarters
Denali Park, AK 99755

Name and Mailing Address of Contact Party:

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

DEC Site Identifiers:

File No: 220.38.009
Hazard ID: 3949

Regulatory Authority for Determination:

18 AAC 75

Site Description and Background

The Denali National Park Headquarters Area is located 3.2 miles into the park, on the south side of Denali Park Road. Buildings 12 and 13 are two story duplex homes with basements used as year-round housing for NPS employees. A 1000-gallon heating oil underground storage tank (UST) provided heating oil for both buildings. Petroleum contaminated soil was encountered when the UST was removed in 2002.

Groundwater is approximately 45 feet below ground surface and generally flows to the south. The drinking water source for the Headquarters Area is on the east side of Rock Creek, approximately 0.2 miles north of the site.

Contaminants of Concern and Cleanup Levels

Cleanup levels for this site are established in 18 AAC 75.340, Method Two, Table B2, Under 40-Inch Zone. Soil samples at this site have been analyzed for diesel range organics (DRO); benzene, toluene, ethylbenzene, and xylenes (BTEX); and polycyclic aromatic hydrocarbons (PAHs). Soil sampling results have shown DRO above the migration to groundwater cleanup level. No other contaminants have been detected above the cleanup levels.

Table 1 – Soil Cleanup Levels¹

Contaminant of Concern	Ingestion Cleanup Level	Inhalation Cleanup Level	Migration to Groundwater Cleanup Level
DRO	10,250 mg/kg	12,500 mg/kg	250 mg/kg

¹ – Method Two - Soil Cleanup Levels, Tables B1 and B2

mg/kg = milligrams per kilogram

DRO = diesel range organics

Characterization and Cleanup Activities

In 2002, the NPS removed a 1,000-gallon heating oil UST located between Building 12 and Building 13. The excavation was approximately 23 feet by 8 feet, with a maximum depth of 10 feet. Samples from the bottom of the excavation were analyzed for DRO and BTEX. Results for DRO were above the migration to groundwater cleanup level at the southern end of the excavation, with a maximum concentration of 4,730 mg/kg. BTEX results were all non-detect. Soil removed from the excavation was placed in a stockpile at the Five-Mile gravel pit. Stockpiled soils were taken to Fairbanks for remediation.

After excavation activities were complete, two soil borings were installed at the site to determine the vertical extent of contamination. One soil boring was drilled within the footprint of the UST excavation. Samples were collected from 11 feet, 16 feet, and 21 feet and analyzed for DRO and BTEX. The sample from 11 feet was also analyzed for PAHs. Results from the sample from 11 feet showed DRO above the cleanup level at 1,380 mg/kg. Xylenes were detected below the migration to groundwater cleanup level, and all other contaminants were non-detect. Results of the samples from 16 and 21 feet were non-detect for all contaminants, including DRO. The determination was that the vertical extent of petroleum impacts was limited to between 11 feet and about 16 feet below surface, with little chance of contamination reaching groundwater based on the limited source remaining and the depth to the groundwater.

The second soil boring was installed approximately 15 feet west of the excavation limits. Samples were collected from 15 and 20 feet, analyzed for DRO and BTEX. All results were non-detect.

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

Table 2 – Exposure Pathway Evaluation

Pathway	Result	Explanation
Surface Soil Contact	Pathway Incomplete	Contamination is not present in surface soil (0 to 2 feet below ground surface).
Sub-Surface Soil Contact	De Minimis Exposure	Contamination remains in the sub-surface, but is below ingestion cleanup levels.
Inhalation – Outdoor Air	De Minimis Exposure	Contamination remains in the sub-surface between 11 and 16 feet, but is below inhalation cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	De Minimis Exposure	Contamination remains in the sub-surface, but is below inhalation cleanup levels. Building 12 and Building 13 have operating radon mitigation systems.
Groundwater Ingestion	De Minimis Exposure	Depth to groundwater is 45 feet below ground surface, and soil sample analytical results were non-detect for contamination at 16 and 21 feet.
Surface Water Ingestion	Pathway Incomplete	Remaining contamination is not expected to migrate to surface water.
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.

DEC Decision

Petroleum contaminated soil remains at this site at concentrations above the migration to groundwater cleanup level but below the inhalation and ingestion cleanup levels. Groundwater is approximately 45 feet deep in the headquarters area, and soil sample results from 16 and 21 feet at the UST excavation were non-detect. DEC has determined that the contaminants remaining in soil do not pose an unacceptable migration to groundwater risk. 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 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 DEC 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) 451-2370 or gretchen.caudill@alaska.gov.

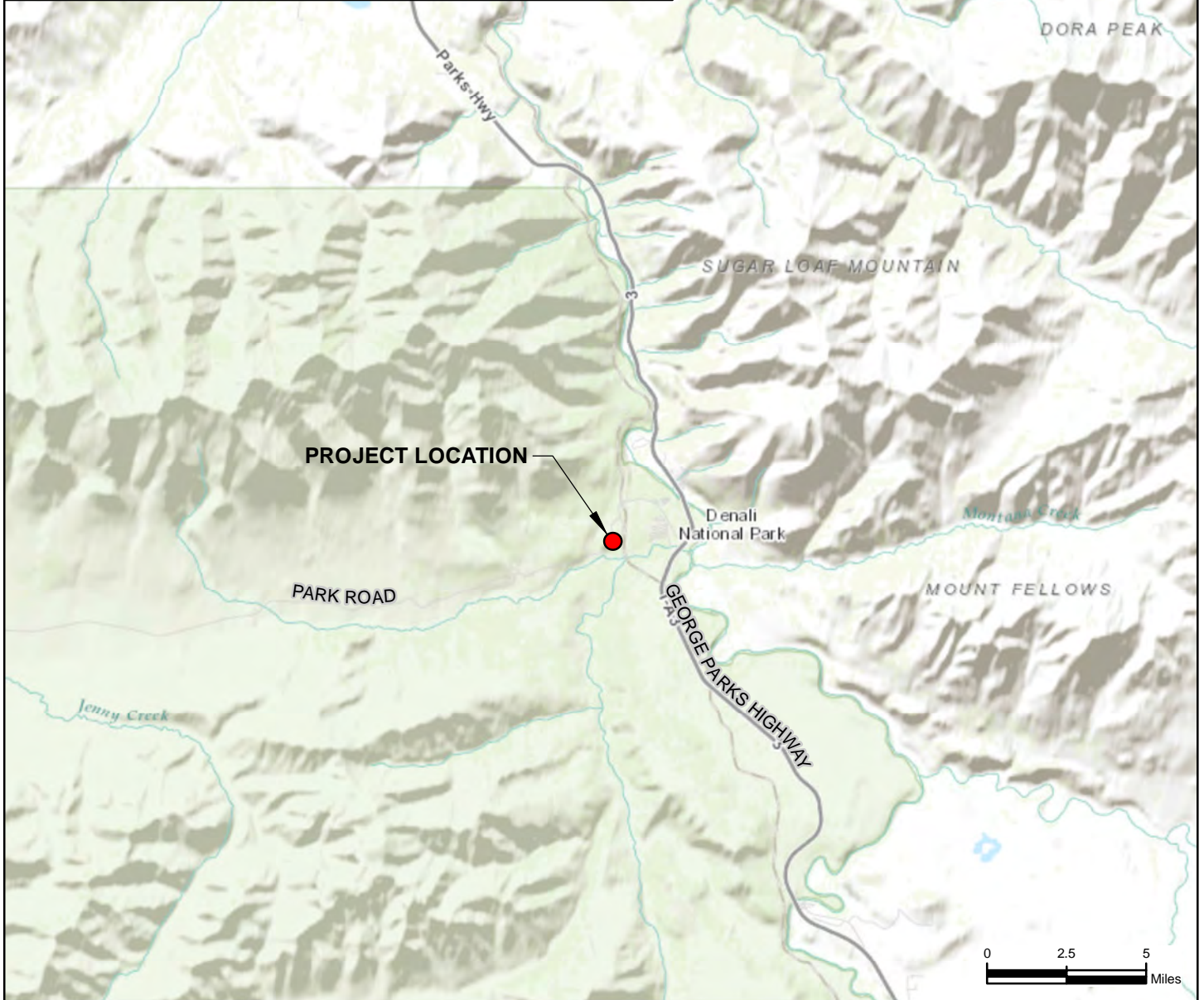
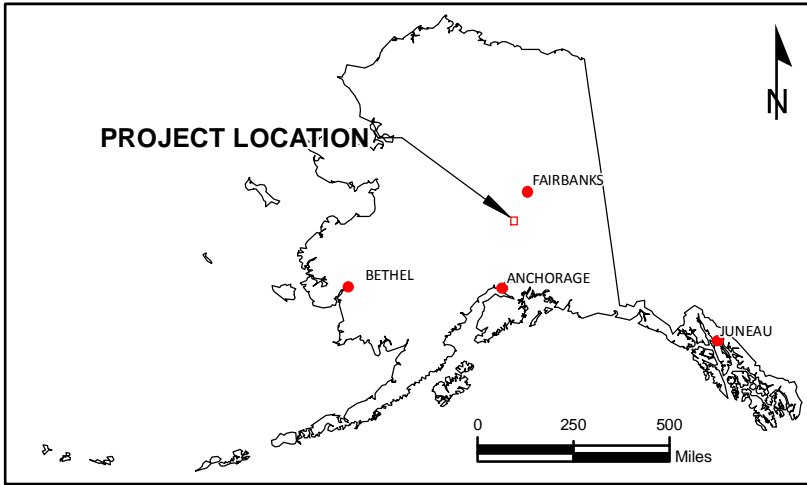
Sincerely,

Gretchen Caudill
Project Manager

Note: This letter is being transmitted to you in electronic format only. If you require a paper copy, let us know and we will be happy to provide one to you. In the interest of reducing file space, the Division of SPAR/Contaminated Sites Program is transitioning to electronic transmission of project correspondence.

Enclosures: Figure 1, Site Vicinity (Ahtna, 2016)
Figure 2, Site Plan (Ahtna, 2003)
Figure 3, Soil Sample Locations 2013 (Ahtna, 2013)

cc: Spill Prevention and Response, Cost Recovery Unit, DEC, via email
Eric Breitenberger, DEC, via email

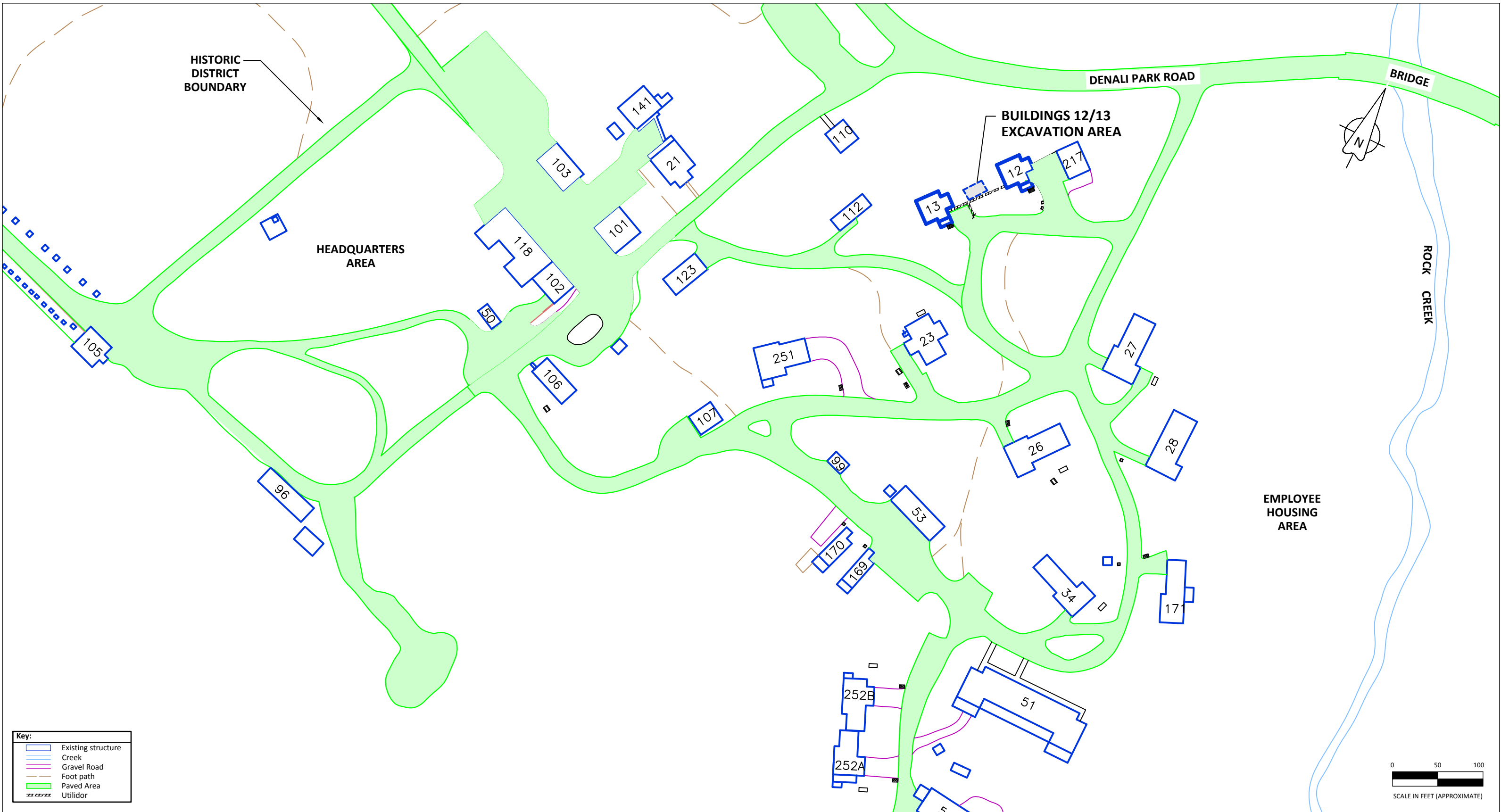


Headquarters
Denali National Park and Preserve, Alaska

Ahtna
Engineering Services, LLC

STATE AND SITE VICINITY

Project Number: 20297.002	Figure Number: 1
Date: 8/26/2016	
Drafted By: R.F.	

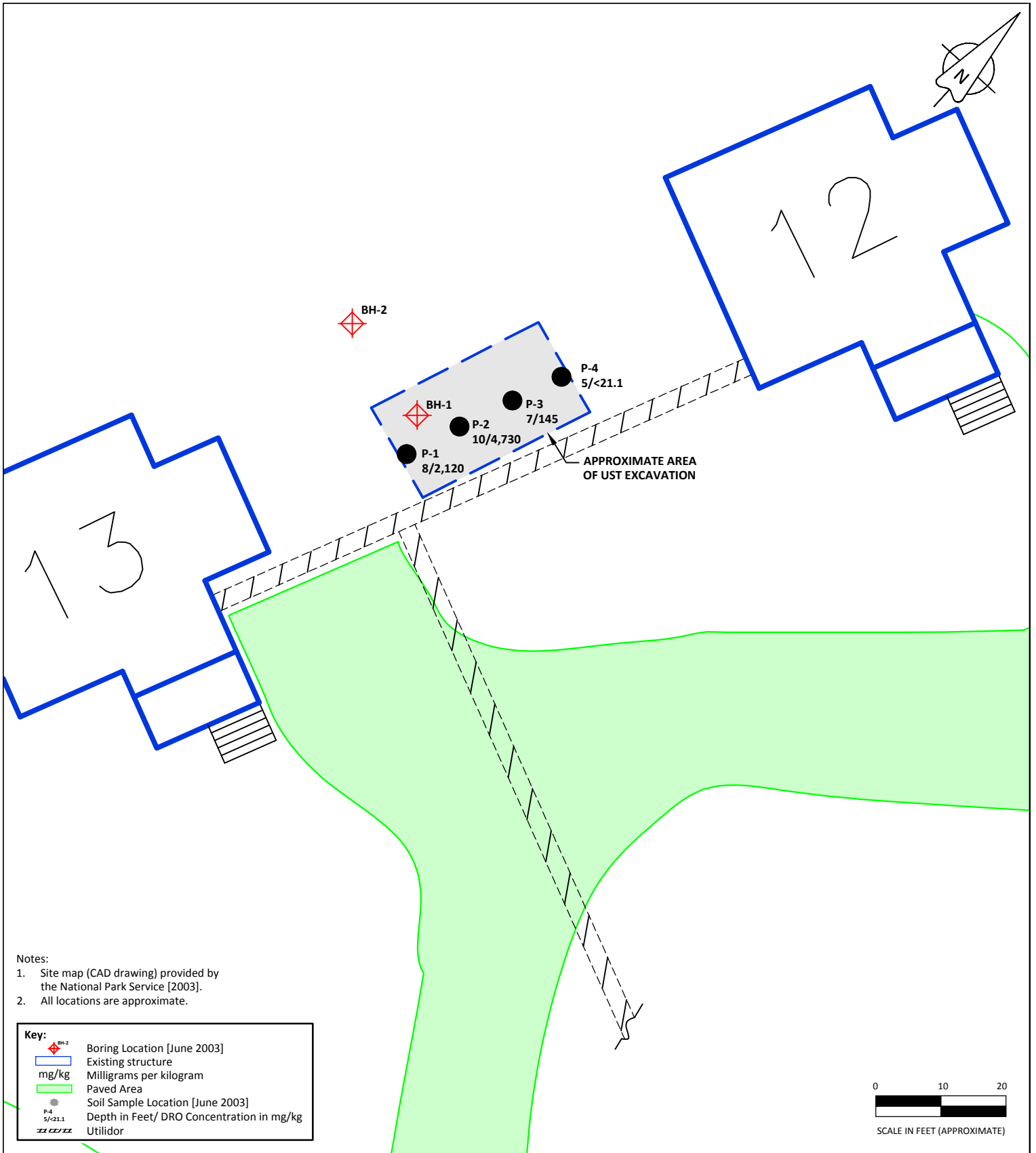


Headquarters Area Buildings 12 & 13 - CSM
Denali National Park, Alaska

Site Plan



Project Number: 20205.01	Figure Number: 2
Date: 01-17-2012	
Drawn By: G.R.	



Headquarters Area Buildings 12 & 13 - CSM
Denali National Park, Alaska



Soil Sample Locations 2013

Project Number: 20205.01	Figure Number: 3
Date: 01-17-2013	
Drawn By: G.R.	