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: 2569.38.029

December 16, 2019

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

Re: Decision Document: NPS Katmai National Park Nonvianuk Ranger Cabin Cleanup Complete Determination

Dear Mr. Heubner:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the NPS Katmai National Park Nonvianuk Ranger Cabin contaminated site located near Nonvianuk River and Nonvianuk Lake in Katmai National Park and 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 Katmai National Park Nonvianuk Ranger Cabin, 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: Name an NPS Katmai National Park Nonvianuk Ranger Cabin 45 miles east of King Salmon South of Nonvianuk River, Near the outlet to Nonvianuk Lake

Name and Mailing Address of Contact Party:er CabinBill HeubnerNational Park Service240 West 5th AvenueAnchorage, AK 99501

DEC Site Identifiers: File No.: 2569.38.029

Hazard ID.: 26257

Regulatory Authority for Determination: 18 AAC 75

Site Description and Background

Nonvianuk Ranger Cabin is located in Katmai National Park 216 feet south of Nonvianuk River near the outlet of Nonvianuk Lake. The cabin is fifteen feet higher in elevation than a swampy area to the east. There was a release just to the west of the cabin, estimated to have occurred in 2010, when a bear tipped over the cabin's heating oil tank and damaged the fuel line feeding the cabin. The amount spilled is unknown. The contamination was discovered in 2013.

Contaminants of Concern

During the site characterization and cleanup activities at this site, samples were collected from surface and subsurface soil and analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX), gasoline range organics (GRO), diesel range organics (DRO), volatile organic compounds (VOCs) and polycyclic aromatic hydrocarbons (PAHs). Based on these analyses, the following contaminants were detected above the applicable cleanup levels and are considered Contaminants of Concern (COCs) at this site:

- DRO
- naphthalene
- 1-methylnaphthalene
- 2-methylnaphthalene

Cleanup Levels

The applicable soil cleanup levels for this site are those found in 18 AAC 75.341 Tables B1 and B2 for the migration to groundwater pathway in the under 40-inch precipitation zone, as noted below in Table 1.

Table 1 – Approved Cleanup Levels

Contaminant	Soil (mg/kg)
DRO	250
naphthalene	29
1 - methylnaphthalene	68
2 - methylnaphthalene	310

mg/kg = milligrams per kilogram

Characterization and Cleanup Activities

An initial cleanup was performed by NPS personnel, removing 0.1 cubic yards (cy) of contaminated soil, shortly after discovery of the site in 2013. In August 2014, a site assessment performed by Ahtna Engineering concluded that approximately 3 cy of contaminated soil remained. To determine if groundwater was affected, Ahtna bored down to 6 feet below ground surface (bgs) and discovered no groundwater. Due to the small volume of the release, the volume of contaminated soil is not large enough to impact the Nonvianuk River or the swampy area nearby, and the surface water pathway is incomplete. In 2015, 3 1/3 cy of contaminated soil was removed, mixed with PersulfOx® to promote remediation, and backfilled. After a hot spot was located and removed in 2017, Ahtna collected soil samples from 6 hand borings placed in and around the area of the release. No VOCs or PAHs were detected. DRO was detected above the migration to groundwater cleanup level but below soil ingestion/inhalation cleanup levels at 0-2 feet bgs. Deeper soil samples did not contain contaminants above the migration to groundwater cleanup level suggesting that groundwater at the site (estimated to be around 15 feet bgs) is not affected. No compounds that bioaccumulate were present, so the wild or farmed foods ingestion pathway is incomplete. Sufficient site characterization has been completed and ADEC has determined that residual contaminants in soil have achieved steady-state equilibrium and will not migrate to groundwater.

Contaminant	Highest	ADEC Cleanup Level	ADEC Cleanup Level
	Concentration	Human Health/Ingestion	Migration to Groundwater
	(mg/kg)	(mg/kg)	(mg/kg)
DRO (0-2 feet bgs)	5,300	10,250	250
DRO (2-5 feet bgs)	150	10,250	250
Naphthalene	ND	29	.038
1-methylnaphthalene	ND	68	.41
2-methylnaphthalene	ND	310	1.3

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mg/kg = milligrams per kilogram ND = nondetect

Cumulative Risk Evaluation

Pursuant to 18 AAC 75.325(g), when 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 there are no VOC or PAH compounds detected, and so residual contaminant concentrations meet the cancer and non-cancer cumulative risk standards.

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.

	D L	
Pathway	Result	Explanation
Surface Soil Contact	De Minimis	Concentrations of contamination in surface soils are
	Exposure	below human health cleanup levels. No PAHs or
		VOCs exceed cleanup levels.
Sub-Surface Soil Contact	De Minimis	Concentrations of contamination in surface soils are
	Exposure	below human health cleanup levels. No PAHs or
		VOCs exceed cleanup levels.
Inhalation – Outdoor Air	Pathway	No VOCs or PAHs are above cleanup levels, and
	Incomplete	DRO is below inhalation cleanup level.
Inhalation – Indoor Air (vapor	Pathway	Cabin is on pilings, therefore this pathway is
intrusion)	Incomplete	considered incomplete.
Groundwater Ingestion	Pathway	Soil samples collected 10 feet bgs had DRO levels
	Incomplete	below migration to groundwater cleanup levels,
		indicating contaminants will not reach groundwater.
Surface Water Ingestion	Pathway	The small size of the release is not likely to impact
	Incomplete	Nonvianuk River or Nonvianuk Lake, over 200 feet
	_	away.
Wild and Farmed Foods	Pathway	Contaminants of concern do not have the potential
Ingestion	Incomplete	to bioaccumulate in plants or animals.
Exposure to Ecological	Pathway	Contaminants are not likely to migrate to
Receptors	Incomplete	Nonvianuk River or Lake to affect fish spawning
	_	habitat.

Table 3 – Exposure Pathway Evaluation

<u>Notes to Table 2:</u> "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

Contamination in soil at this site resulted from a release of heating oil that occurred in 2010. Following the release, contamination was remediated, however residual contamination remains in soil at 0-2 feet bgs. ADEC has reviewed the environmental records regarding this site and determined there is no risk to human health or the environment from exposure to residual contamination that remains at the site and this site will receive a "Cleanup Complete" designation on the Contaminated Sites Database, subject to the following standard conditions.

Standard Conditions

 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. (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 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 date of the appeal is waived.

If you have questions about this closure decision, please feel free to contact me at (907) 451-2131, or email at <u>tim.sharp@alaska.gov</u>.

Sincerely,

Timothy Sharp Project Manager

cc: Spill Prevention and Response, Cost Recovery Unit Eric Breitenberger, DEC Environmental Program Manager Bill O'Connell, DEC Environmental Program Manager

Figure 1: Site Detail

