



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: 870.38.003

September 15, 2015

Nichelle Jacobson
Bureau of Land Management
Central Yukon Field Office
1150 University Avenue
Fairbanks, AK 99709

Re: Decision Document – BLM Melozi Hot Springs
Cleanup Complete Determination

Dear Ms. Jacobson:

The Alaska Department of Environmental Conservation (DEC) has reviewed the environmental records for the Bureau of Land Management (BLM) Melozi Hot Springs site located 45 miles northeast of Ruby, Alaska. This decision letter memorializes the site history, cleanup actions, and standard conditions for long-term site management. No further remedial action is required.

Site Name and Location

BLM Melozi Hot Springs
45 Miles northeast of Ruby, Alaska
Sections 23 & 24, Township 4 South, Range 20 East, Kateel Meridian

ADEC Site Identifiers

File No: 870.38.003
Hazard ID: 25914

Regulatory Authority for Determination

18 AAC 75

Site Description and Background

Melozi Hot Springs is a remote location 45 miles northeast of Ruby, Alaska. The BLM owns the land around Melozi Hot Springs, and leased the sited to private individuals from 1966 to the mid 1990's. The site was operated as a personal residence, lodge, and recreational site for visitors and includes several cabins, a pool area, and a maintenance shop.

Contaminants of Concern and Cleanup Levels

Contaminants of concern at this site include petroleum contaminants associated with a fuel drum storage area and lead associated with a battery burn area. Cleanup levels are established in the 18 AAC 75.341 Table B1 and B2, Method Two Soil Cleanup Levels Tables, Under 40-inch Zone, Migration to Groundwater, presented below:

	Cleanup Level
Gasoline Range Organics	300 mg/kg
Diesel Range Organics	250 mg/kg
Benzene	0.025 mg/kg
Ethylbenzene	6.9 mg/kg
Toluene	6.5 mg/kg
Xylenes	63 mg/kg
Lead	400 mg/kg (direct contact cleanup level)

Characterization and Cleanup Activities

During a site investigation in 1998, the BLM identified an area used to burn batteries. The burned battery plates and battery pieces were containerized and transported off-site for disposal. The soil and ash were excavated and containerized in four 55-gallon drums, which were left on-site for later disposal. Confirmation sampling from the burn area contained a maximum concentration of 62.8 mg/kg lead. One confirmation sample contained 1,350 mg/kg diesel range organics, which is above the migration to groundwater cleanup level of 250 mg/kg but below the ingestion cleanup level of 10,250 mg/kg. DEC has determined that this sample and reported concentration represent a de minimis quantity as the result was compromised by interference from residual organic matter associated with the burn pile.

The BLM conducted a hazardous materials removal project at Melozi Hot Springs in 2012. Materials removed from the site included thirteen 55-gallon drums of heating oil and the 4 drums of lead contaminated soil staged on-site in 1998. The enclosed Hazardous Materials Summary provides additional details of the wastes removed from the site. Based on observations and field screening results, one area of petroleum contamination was identified near the sawmill at the shop area. Sample results showed gasoline and diesel range organics, benzene, and toluene above the cleanup level.

The BLM returned to the site in 2014 and removed the petroleum contaminated soil at the sawmill site. Approximately 1.5 cubic yards of petroleum contaminated soil was removed and transported off-site for treatment. Confirmation samples from the excavation were analyzed for gasoline, diesel, and residual range organics, benzene, ethylbenzene, toluene, xylenes, and polynuclear aromatic hydrocarbons. All sample results were below the cleanup levels.

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 do not pose a cumulative human health risk.

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 the following table.

Exposure Pathway Evaluation

Pathway	Result	Explanation
Surface Soil Contact	De Minimis	Lead and petroleum contaminated soil has been removed from this site. Confirmation sample results are below ingestion and direct contact cleanup levels.
Sub-Surface Soil Contact	De Minimis	Lead and petroleum contaminated soil has been removed from this site. Confirmation sample results are below ingestion and direct contact cleanup levels.
Inhalation – Outdoor Air	De Minimis	Lead and petroleum contaminated soil has been removed from this site. Confirmation sample results are below inhalation cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	De Minimis	Lead and petroleum contaminated soil has been removed from this site. Confirmation sample results are below inhalation cleanup levels.
Groundwater Ingestion	De Minimis	Lead and petroleum contaminated soil has been removed from this site. A de minimis volume of contaminated soil had diesel range organics at concentrations above the migration to groundwater cleanup level in 1998.
Surface Water Ingestion	Pathway Incomplete	Lead and petroleum contaminated soil has been removed from this site. A de minimis volume of contaminated soil had diesel range organics at concentrations above the migration go groundwater cleanup level in 1998. The nearest surface body water is approximately 100 feet from the site.
Wild and Farmed Foods Ingestion	De Minimis	Lead and petroleum contaminated soil has been removed from this site. Confirmation sample results are below ingestion and direct contact cleanup levels.
Exposure to Ecological Receptors	De Minimis	Lead and petroleum contaminated soil has been removed from this site. Confirmation sample results are below ingestion and direct contact cleanup levels.

Notes to Table 2: “De-Minimis Exposure” means that in DEC’s judgment receptors are unlikely to be 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. “Exposure Controlled” means there is an administrative mechanism in place limiting land or groundwater use, or a physical barrier in place that deters contact with residual contamination.

ADEC Decision

Sample results from 1998 show a de minimis volume of soil had diesel range organics above the migration to groundwater cleanup level but below the ingestion and inhalation cleanup levels. Groundwater is anticipated to be approximately 20 feet below the ground surface at the shop and sawmill area, and shallower near the shower house and hot springs tub near the river (see enclosed site map).

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. 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.

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 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 99811-1800, 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 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 any questions about this closure decision, please feel free to contact me at melody.debenham@alaska.gov or (907) 451-5175.

Sincerely,



Melody Debenham
Environmental Program Specialist

Enclosures: Melozi Area Map
Melozi Hot Springs Site Map
Hazardous Materials Summary (BLM, 2012)

Table 1 Hazardous Materials Summary Table

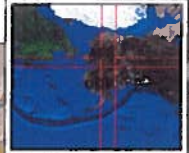
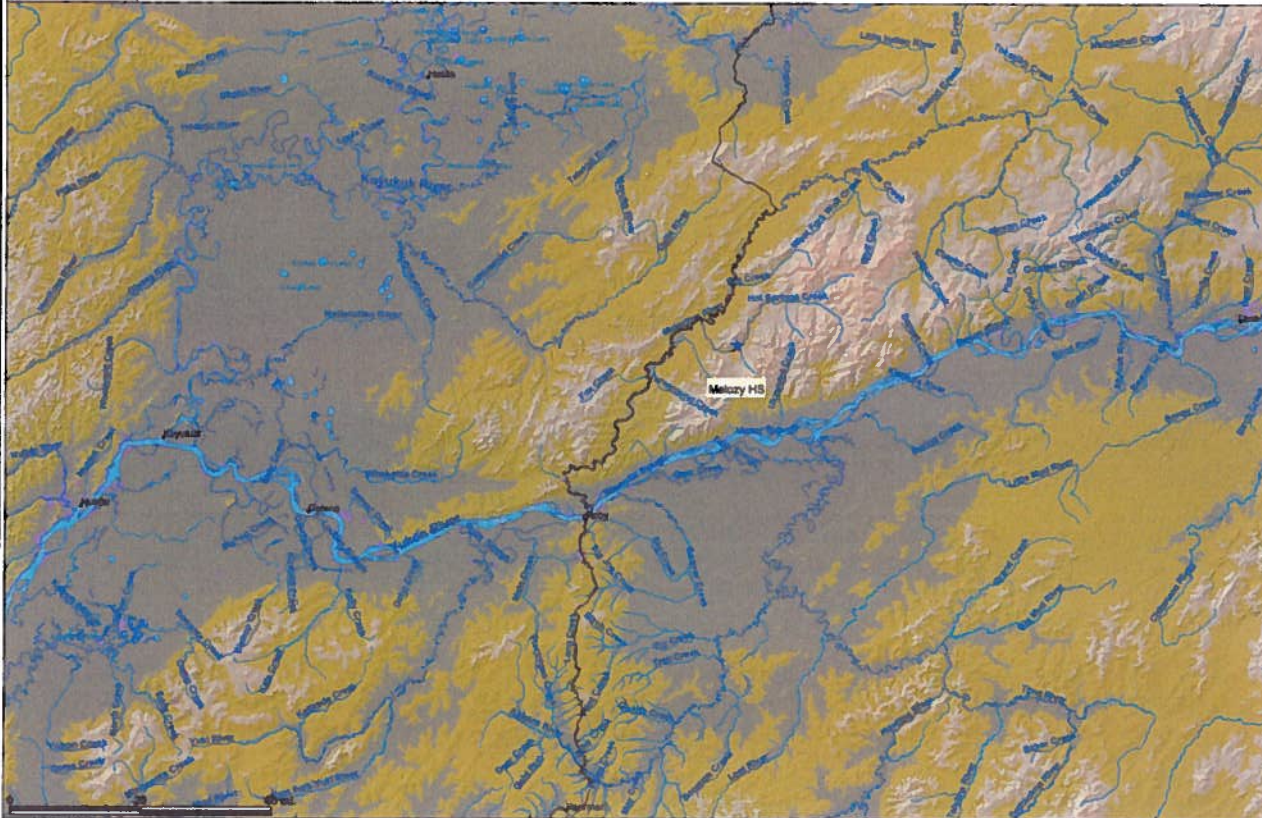
Description of Material	Quantity / Type of Packaging	Handling Method
Propane gas	4 cylinders (3 large; 1 small)	Recycle at Suburban Propane
Oxygen gas	1 cylinder	Recycle at Air Liquide
Acetylene gas	1 med cylinder	Dispose at TSDF
Miscellaneous flammable liquids (Attachment 3)	2 each 55-gallon drums	Dispose at TSDF
Flammable aerosol cans	1 each 20 gallon drum	Dispose at TSDF
Non-regulated liquids	1 each 55-gallon drum	Dispose at TSDF
Dry alkaline batteries	1 each 2-gallon drum	Dispose at TSDF
Lead-acid batteries	1 each Tote container	Recycle
Miscellaneous toxic liquids (Attachment 3)	1 each 10-gallon drum	Dispose at TSDF
Miscellaneous corrosive liquids (Attachment 3)	1 each 20-gallon drum	Dispose at TSDF
Miscellaneous caustic liquids (Attachment 3)	1 each 20-gallon drum	Dispose at TSDF
Soil with lead battery debris	1 each 55-gallon drum	Dispose at TSDF
Soil with POL's and lead	1 each 55-gallon drum	Dispose at TSDF
Floor tile containing non-friable asbestos	20 disposal bags in 2 each cubic yard bags; 1 tote container	Dispose at MOA landfill
Off-spec fuel	2 each 55-gallon drums	Recycle by fuel blending
Fire extinguishers	5 each fire extinguishers in 55-gallon drum	Recycle at Arctic Fire and Safety
Scrap metal	22 empty 55-gallon drums; 2 each cubic yard bags	Recycle at C&R Pipe and Alaska Metal Recyclers
Miscellaneous solid waste	4 each garbage bags	Dispose at MOA landfill
Heating oil	13 each 55-gallon drums	Use as fuel at BLM Fire Service Station

Notes:

ACM – Asbestos-containing material
 CESQG – Conditionally exempt small quantity generator
 MOA – Municipality of Anchorage
 TSDF – Treatment, storage and disposal facility
 POLs – Petroleum, oils and lubricants



Melozzy Hotsprings Area



Legend

Elevation Meters

- 0-200
- 201-500
- 501-750
- 751-1000
- 1001-1250
- 1251-1500
- 1501-1750
- 1751-2000
- 2001-2250
- 2251-2500
- > 2501
- Background
- Out of range

Temporary Flight Restrictions

- Temporary Flight Restrictions

Towns

- Headquarters
- Home Rule City
- Other Towns

Regional Rivers

- Stream/River
- Area of Complete Channels
- Regula
- Boydnet

MWD Lakes GT 1 SQKM

- Lake/Pond
- Ice River
- Bump/Ritash
- Reservoir

Minor Highways (Regional)

- Unimproved Access
- Highway
- Major Road
- Local Road
- Minor Road
- Other Road
- Trail
- Footway
- Passenger Way

Alaska Railroad

- Alaska Railroad
- TransAlaska Pipeline

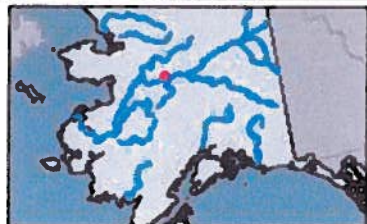
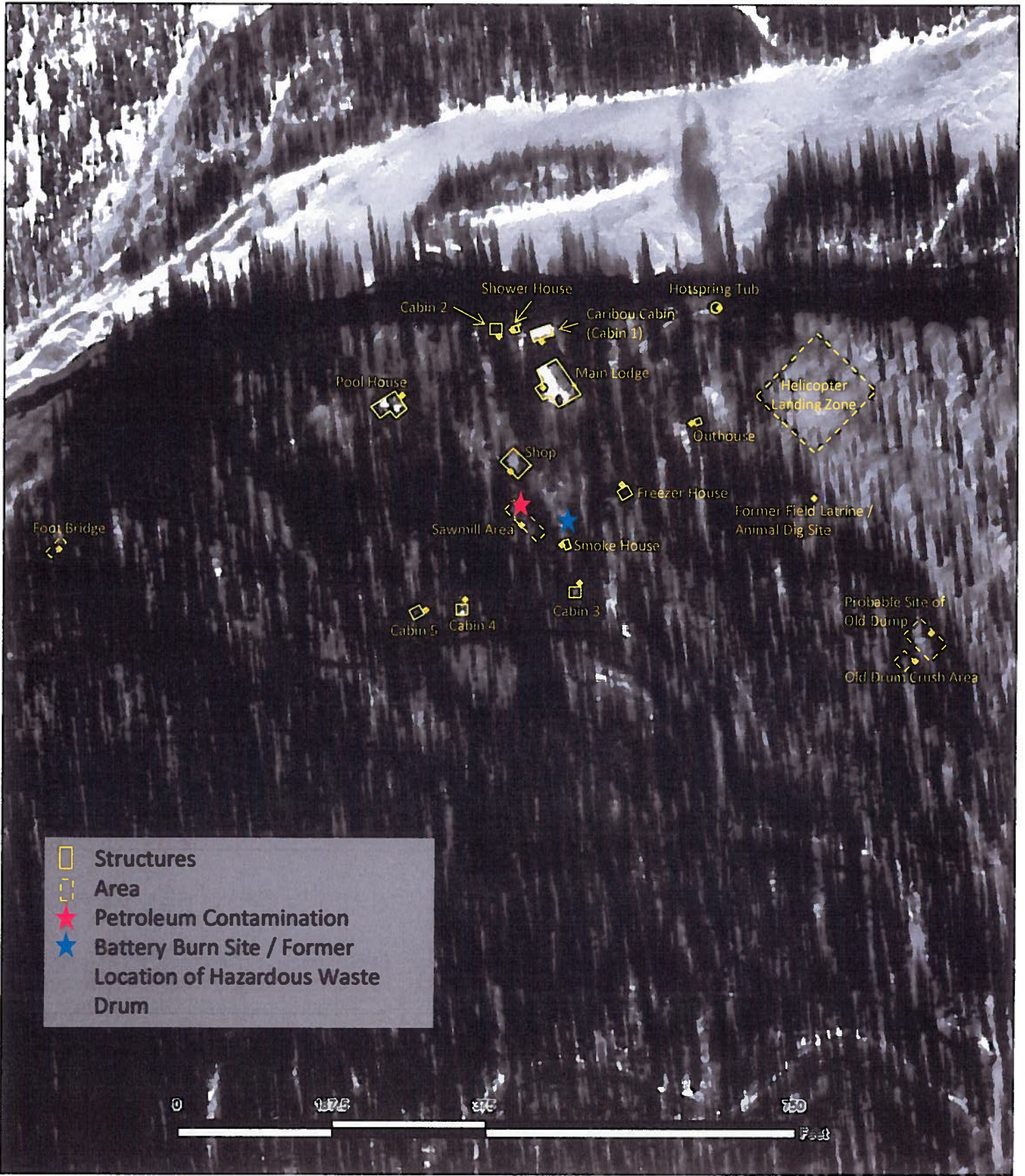
Fire Management Zones

- Active Fires
- APF
- DOF/USFS
- Active Fire Perimeters
- 12 to 24 Hours Ago
- Last 12 Hours
- Native Allotments

Scale: 1:250,000

Map Created: May 10, 2012 8:04:39 AM on the AICC Mapping Site

This map is a user generated static output from an internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.



Melози Hot Springs Lodge

This map is intended for display purposes only. No warranty is made on the accuracy, reliability, or completeness of data displayed. Information on this map may be updated without notification.



1 inch = 152 feet
NAD 83

