



THE STATE
of **ALASKA**
GOVERNOR SEAN PARNELL

**Department of Environmental
Conservation**

Division of Spill Prevention and Response
Contaminated Sites Program

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File: 400.38.029

February 15, 2013

Nome Gold Alaska Corporation, INC
Mr. Mitch Erickson
P.O. Box 1418
Nome, AK 99762

Re: Decision Document; Novagold Barrel Dump
Cleanup Complete Determination

Dear Mr. Erickson:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with Novagold Resources Barrel Dump located in Nome, Alaska. Based on the information provided to date, the ADEC has determined that the contaminant concentrations remaining on site do not pose an unacceptable risk to human health or the environment, and this site will be closed.

This decision is based on the administrative record for Novagold Resources Barrel Dump, which is located in the offices of the Alaska Department of Environmental Conservation in Fairbanks, Alaska. This letter summarizes the decision process used to determine the environmental status of this site and provides a summary of the regulatory issues considered in the Cleanup Complete Determination.

Introduction

Site Name and Location:

Novagold Barrel Dump
Southwest of Nome Airport Main Runway
Latitude 64.51068 North, Longitude 165.44454 West
Township 11 South, Range 34 West, Kateel River Meridian

Name and Mailing Address of Contact Party:

Nome Gold Alaska Corporation
Mr. Mitch Erickson
PO Box 1718
Nome, AK 99762

ADOT & PF
Mr. Richard J. Stumpf, P.E.
2301 Peger Road
Fairbanks, AK 99709

Database Record Key and File Number:

ADEC Reckey: 2000320116701

File: 400.38.029

Hazard ID: 3694

Regulatory authority under which the site is being cleaned up:

18 AAC 75

Background

In 1998, several hundred drums containing road paving asphalt were discovered on Alaska Gold Company land, at the time, west of the Snake River on the west side of Nome Airport. It appeared the drums were used in the early 1970s as part of an airport paving project. The majority of the drums were in poor condition, heavily rusted, with splitting seams or had burst. Some of the drums were found to be empty, while others were intact and contained asphalt.

Between 2008 and 2012, Alaska Gold and the Alaska Department of Transportation and Public Facilities (ADOT) removed 920 abandoned 55-gallon drums of asphalt-like material. Impacted soil was encountered beneath some of the drums and was also removed. Soil and groundwater samples collected at this site were analyzed for: diesel range organics (DRO); gasoline range organics (GRO); residual range organics (RRO); benzene, toluene, ethylbenzene and xylene (BTEX); volatile organic compounds (VOCs); metals; and polynuclear aromatic hydrocarbons (PAHs).

In 2011, Nome Gold Alaska Corporation purchased the subject property from Alaska Gold Company, Inc. as vacant property. ADOT intends to purchase the subject property from Nome Gold Alaska Corporation as part of the Nome Airport Expansion Project. This property has no buildings or drinking water wells.

Characterization and Cleanup Activities

In 2000, two years after the discovery of the drums, Alaska Gold Company (the owner of the property at the time) used backhoes and loaders to scrape and remove dried asphalt from the soil surface. Construction of lined berms around the drum areas was also completed to prevent runoff of possibly contaminated rain or snowmelt water. Asphalt contamination of the soil was readily apparent through visual observation and was easily removed. Immediately after removal of the asphalt, soil samples were taken from 13 locations and screened for total petroleum hydrocarbons using PetroFLAG. The screening results did not indicate petroleum hydrocarbons were present at concentrations above applicable Method Two ADEC 18 AAC 75 soil-cleanup levels at that time.

Beginning in 2003, ADOT conducted several environmental site assessments (ESAs) during planning efforts for the Nome Airport expansion. During the 2003 assessment, their consultant, R&M, identified the asphalt drums at the site as solid waste.

In 2008, Emerald Alaska, under contract to Alaska Gold Company, removed and recycled the contents of about 300 drums at the site. The contents were used for runway repaving at the Nome Airport. Alaska Gold Company planned on removing and disposing of the 620 remaining drums and six other containers, but did not complete that portion of the project.

In 2009 and 2010, ADOT hired an environmental consultant to collect soil and groundwater samples from soil borings, monitoring wells, and test pits in an effort to further characterize the remaining contamination at the site before possible land acquisition for airport expansion. Shannon and Wilson conducted site characterization while Emerald Alaska was contracted to catalog the remaining containers.

Remaining asphalt on the ground surface at the site was estimated to cover a 7,350 square foot area. Analytical results of 20 near-surface soil samples collected at the perimeter and near the center of the asphalt did not exceed ADEC's most stringent 18 AAC 75.345 soil cleanup levels. The samples were collected at depths ranging from 0.5 feet to 4 feet below the ground surface (bgs) and were analyzed for DRO, GRO, RRO, BTEX, VOCs, PAHs, and metals. GRO was present at concentrations ranging from less than detection levels to 5.39 milligrams per kilogram (mg/kg), DRO at concentrations ranging from less than detection levels to 237 mg/kg, and RRO at concentrations ranging from less than detection levels to 2,030 mg/kg. Three monitoring wells were installed adjacent to the asphalt drum area. Groundwater samples collected from these monitoring wells, identified as MW-10-27, MW-10-29, and MW-10-30, did not contain DRO, GRO, RRO, VOCs, or PAHs. However, naturally occurring arsenic (determined to be background through a separate study) was detected in each well at concentrations exceeding ADEC groundwater-cleanup levels; chromium and lead also exceeded ADEC groundwater-cleanup levels in MW-10-30.

In 2011, the monitoring wells were sampled again for arsenic, chromium, and lead as dissolved and total concentrations. Results indicated that total concentrations of arsenic (0.138 milligrams per liter or mg/L to 0.773 mg/L) continued to be above its ADEC cleanup level of 0.010 mg/L. Total concentrations of chromium (0.00541 mg/L to 0.00741 mg/L) and lead (0.00405 mg/L to 0.00516 mg/L) were below their cleanup levels (0.10 and 0.015 mg/L respectively).

In 2012 the property was transferred from Alaska Gold Company to Nome Gold Alaska Corporation. During the fall of that same year, ADOT, in the process of acquiring the property, hired Emerald Alaska to remove the remaining drums and asphalt impacted soil. At the time of the removal, rainwater had accumulated in drums within the bermed areas and oily sheen was visible. Emerald pumped approximately 3,975 gallons of untreated water into a 5,000 gallon tank. The water was shipped to Emerald's facility in Anchorage, Alaska, for proper disposal. After water removal, Emerald removed 620 drums from the site. Additionally, Emerald drained, crushed, and disposed of three 250 gallon totes, one 1,000 gallon plastic container, and two 1,500 gallon plastic containers that had been left at the site from previous cleanup efforts.

Upon completion of the drum removal, Emerald stripped the asphalt and approximately 6 inches of soil from the ground surface using excavators. They placed the asphalt/soil mixture into bulk 20-foot containers and shipped them to Seattle for disposal. Approximately 120 cubic yards (cy) of asphalt and soil were removed. Following asphalt removal and stained-soil excavation, Shannon & Wilson performed field-screening with a photoionization detector (PID) and collected 15 soil samples from the limits of the excavations, at approximately 0.5 feet below the new ground-surface elevation. The samples were submitted to SGS North America, Inc. for analysis of DRO and RRO. Three samples were also analyzed for PAHs and VOCs. VOC's and PAH analytes were not reported above reporting limits. DRO and RRO concentrations did not exceed the ADEC 18 AAC 75.345 ingestion and inhalation soil-cleanup level. RRO results samples ranged from 36.9 mg/kg to 4,320 mg/kg, and below the migration to groundwater soil cleanup level of 11,000 mg/kg. DRO results ranged from less than the detection limit to 6,310 mg/kg, with two samples exceeding the ADEC migration to groundwater cleanup level of 250 mg/kg.

Contaminants of Concern

During the investigations at this site, soil samples were analyzed for diesel range organics (DRO); gasoline range organics (GRO); residual range organics (RRO); volatile organic compounds (VOCs); polynuclear aromatic hydrocarbons (PAHs); and metals. Based on these analyses and knowledge of the source area, the following Contaminants of Concern were identified:

- Diesel Range Organics (DRO)

Cleanup Levels

The default soil cleanup levels for this site are established in 18 AAC 75.341, Method Two, Tables B1 and B2, Migration to Groundwater

Contaminant	Site Cleanup Level (mg/kg)
DRO	250

The default groundwater cleanup levels for this site are established in 18 AAC 75.345 Table C Groundwater Cleanup Levels. No contaminants were detected above groundwater cleanup levels. Arsenic is naturally occurring and is not considered a contaminant of concern at this site.

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 1.

Table 1 – Exposure Pathway Evaluation

Pathway	Result	Explanation
Surface Soil Contact	De-Minimis exposure	DRO and RRO samples from the site contained concentrations less than the ADEC soil ingestion cleanup levels.
Sub-Surface Soil Contact	De-Minimis exposure	Soil samples from the site contained DRO and RRO concentrations below ADEC soil ingestion cleanup levels at 2-4 feet bgs. No contamination above ADEC soil ingestion cleanup levels is expected between 4 and 15 feet bgs.
Inhalation – Outdoor Air	De Minimis Exposure	Soil samples from the site contained DRO and RRO concentrations below ADEC inhalation cleanup levels at 2-4 feet bgs. No contamination above ADEC soil inhalation cleanup levels is expected between 4 and 15 feet bgs.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	There are no buildings at the site. Buildings are not expected to be built in this area in the future due to the airport runway expansion project. In addition, no VOCs or PAHs were detected in groundwater above ADEC vapor intrusion target levels.
Groundwater Ingestion	De-Minimis exposure	Although DRO exceeded soil migration to groundwater cleanup levels, no petroleum, VOCs or PAHs were detected in groundwater.
Surface Water Ingestion	De-Minimis exposure	The site is adjacent to the Snake River. No petroleum, VOC, or PAH analytes were detected in the groundwater during sampling. Residual contamination in soil is considered de minimis.
Wild Foods Ingestion	Pathway Incomplete	Bioaccumulative compounds were not identified at the site, thus wild foods are unlikely to be affected.
Exposure to Ecological Receptors	Pathway Incomplete	Although some residual DRO is present in soil the remaining soil contamination affects less than ½ acre. Wildlife activity is expected to be limited due to its proximity to the airport.

Notes to Table 1: "De-minimis exposure" means that in ADEC's judgment receptors are unlikely to be affected by the minimal volume of remaining contamination. "Pathway incomplete" means that in ADEC'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

The cleanup actions to date have served to excavate and adequately remove contaminated soil from the site. Based on the information available, ADEC has determined no further assessment or cleanup action is required. There is no longer a risk to human health or the environment, and this site will be designated as closed on the Department's database.

Although a Cleanup Complete Determination has been granted, ADEC approval is required for off-site soil disposal in accordance with 18 AAC 75.325(i). It should be noted that movement or use of potentially contaminated soil in a manner that results in a violation of 18 AAC 70 water quality standards is unlawful. This determination is in accordance with 18 AAC 75.380(d) and does not preclude ADEC 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 99801, 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 99801, 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 contact the ADEC project manager, Tamara Cardona at (907) 451- 2192.

Sincerely,



Tamara Cardona, Ph.D
Environmental Program Specialist

cc: Richard Stumpf, P. E, Alaska Department of Environmental Conservation