

STATEMENT OF WORK

Red Top Mill Site (Retort) Closure Project

The purpose of this project is to conduct several tasks which the ADEC has requested in order to grant conditional closure of BLM hazmat response actions at the Red Top Mill (Retort) Site. BLM requests contractor assistance in accomplishing the following ADEC requested tasks:

1. Document the location and depth of residual contamination and the liner.
2. Provide more information to demonstrate whether groundwater contamination has occurred that may pose an unacceptable risk to human health or ecological receptors in Wood River.
3. Provide information on the volume, location, and chemical makeup of waste rock and processed ore from the retort operations.

Project Location: The Red Top Mill (Retort) Site (Site) is on the north bank of the Wood River in Section 32, Township 10 South, Range 55 West, Seward Meridian. Mercury was extracted from Cinnabar ore at the Site in an on-site retort facility. Ore was also stockpiled at the Site and subsequently transported to an off-site retort. The retort cleanup area is approximately 1/8 acres in size, entirely within a 5 acre Mill Site delineated by US Survey 12403 (ref a). Coordinates for the approximate center of USS 12403 are 59° 16.11'N, 158° 34.03'W (NAD27). Access to the Site is possible by boat on the Wood River from Dillingham or Aleknagik, or by an un-maintained dirt road from Aleknagik. Aleknagik is on the north bank of the Wood River; a Village owned “Scow” is used to cross the river to access the Dillingham-Aleknagik road.

Background:

Cinnabar rich in mercury was discovered on Marsh Mountain in 1941. Exploration of six contiguous unpatented mining claims and minor development work occurred from 1943-1952. In 1952, the three partners of the Red Top Mining Co. contracted with the Defense Mineral Exploration Administration and received a grant to continue exploration activities; additional grants were obtained in subsequent years. In 1955, Moneta-Porcupine Mines, Ltd. Partnered with the Red Top Mining Co. and later joined by the DeCourcy Mountain Mining Co. Mercury concentrations in the cinnabar were estimated to be as high as 28 percent in some high-grade veins, however the Defense Mineral Exploration Administration decided not to fund any additional exploration as the mercury concentrations did not increase with depth. A 1959 visit to the mine documented it to be inactive. According to one partner in the mine, total production by 1959 was 60 flasks (1 flask = 72 pounds), with rich ore stockpiled which was capable of producing another 60 flasks. The stockpiled ore was shipped to Anchorage for retorting. In the 1960s, the claims were leased to another operator who high-graded ore out of the tailings at the mine. There was no reported production from these activities and it is likely that the mill-site was not used.

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Cinnabar ore was excavated at an elevation of about 1050' from the mine on Marsh Mountain where it was crushed by a ball mill and transported down the mountain to the retort facility at the mill-site approximately 30 feet from the Wood River. The ore was heated in a steel cylinder retort chamber measuring 8.5 feet long and 2 feet in diameter. The chamber was housed in a small wooden structure measuring about 12 feet wide by 16 feet long. Mercury was volatilized out of the heated ore, flowed through condensing tubes, and gathered into flasks for storage before being shipped out. Wood and bunker C fuel were used to fuel the retorting process. It is likely that this retort facility was only used from 1952-1955.

In 1985, BLM issued abandoned and void decisions for the mining claims and the mill-site for failure to file assessment work for 1979-1981 and 1984. These decisions were appealed by Clarence Wren, a former partner in the mining company, but the decision on the mining claims was upheld and the decision on the mill-site was reversed; the mill-site reversal was upheld by the U.S. 9th Circuit Court of Appeals. The surrounding land has been conveyed to the Aleknagik Natives, Ltd. The mill-site parcel has been surveyed and excluded from the conveyance

BLM became aware of hazardous materials issues at the Mine and Mill Site in 1992 and initiated a voluntary cleanup. Site characterization, interim removal activities and site remediation began in 1994. Work progressed in stages with some periods of inactivity. EPA placed the Site on the Federal Agency Hazardous Waste Compliance Docket (Docket) on June 27, 1997. In 1998, work was completed on a CERCLA based Emergency Removal Action at the retort site. During that summer, all stockpiled mercury and diesel-range organics (oil) contaminated soils were removed from the Site. The materials were loaded on a barge, taken to Dillingham and shipped to approved disposal sites in the lower 48. The area was seeded after materials were removed. BLM completed the CERCLA required Preliminary Assessment (PA) for the Site on December 31, 1998. EPA notified BLM on September 10, 1999 that after evaluating the PA and Remedial Action reports, the Hazard Ranking System score applied was not high enough for the Site to be listed on the National Priorities List. The Docket now reflects a No Further Remedial Action Planned status for the Site.

BLM is currently seeking closure as a contaminated site from the ADEC. Site investigations were conducted during 1998, 1999, and a Summary Report was generated in 2000 (Ref's b - d). These reports document that some residual mercury contamination remains on the Site. During 2005 ADEC provided BLM with a request for actions to be completed in order to grant conditional closure status for the Site (ref e).

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References:

- a. US Survey No. 12403 of the Red Top Retort Site, filed March 17, 1999
- b. Remedial Action Report, Red Top Retort Site, Aleknagik, Alaska, HLA/Wilder JV, dated December 31, 1998
- c. 1999 Site Characterization Report, Red Top Retort Site, Aleknagik, Alaska, HLA/Wilder JV, dated December 21, 1999
- d. 2000 Data Summary Letter Report, Red Top Retort Site, Aleknagik, Alaska, HLA/Wilder JV, dated April 20, 2000.
- e. Letter to BLM from ADEC, Re: BLM Red Top Mercury Retort Site, dated 21 September, 2005.

Contract Tasks:

Task 1: Create a high accuracy topographic map of the Mill Site which overlays data from the 2000 Report (ref c) and USS 12403 (ref d). The map will include GPS coordinates for corners of the liner and locations where previous sampling for mercury has shown concentrations which exceed cleanup threshold.

Task 2: Conduct shallow groundwater sampling to determine if mercury is migrating into the Wood River. Minimum of three (3) micro-wells are required to be located between the liner depicted in Fig 4 of ref c. and the Wood River. One round of water sampling is required.

Task 3: Conduct records search and an on-the-ground visual survey of the Mill Site to determine and document the volume, location, and chemical makeup of waste rock and processed ore from the retort operations. Any identified should be depicted on the map developed for Task 1.

Notes concerning field work:

1. Field work at the project Site will be done in presence of the BLM AFO Project Inspector (PI); sufficient lead time must be provided to coordinate schedules.
2. Travel by charter aircraft (if required for task accomplishment). Contractor must utilize Department of Interior Aviation Management certified (carded) aircraft with carded pilot to allow PI to be onboard.

Aircraft Source List is at: <http://amd.nbc.gov/source/AirQBE.asp>

Pilot Source List is at: <http://amd.nbc.gov/source/pilotqbe.asp>

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Deliverables, due to BLM State Hazmat Program Lead:

1. Draft workplan with allowance for at least 20 work days prior to start of field work to make comment. Workplan will include a Health and Safety Plan and a Sampling QA/QP. Contractor will coordinate the workplan with ADEC to ensure that the work will be accomplishing what ADEC requested (3 copies).
2. Work Plan, at least 10 working days prior to start of field work. (3 copies).
3. Draft report for BLM comment, with allowance for at least 10 work days to make comment (3 copies).
4. Final report, delivered to BLM AFO by 1 November 2007 (5 copies).
5. "508 Compliant" electronic copy of the complete final report on CD in .pdf format (1 each).

BLM Points-of-Contact:

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ADEC Point-of-Contact is Ann Marie Palmieri, AnneMarie_Palmieri@dec.state.ak.us, 907-766-3184