

**CERCLA
TIME CRITICAL REMOVAL ACTION MEMORANDUM
FOR THE
RED TOP RETORT SITE
ALEKNAGIK, ALASKA**

**U.S. Bureau of Land Management
Anchorage Field Office
4700 BLM Road
Anchorage, AK 99507**

April 1, 2011

I. PURPOSE

The purpose of this memorandum is to document the U. S. Bureau of Land Management's (BLM) decision to conduct a Comprehensive Environmental Response Compensation and Liability Act (CERCLA) of 1980, as amended, Time Critical Removal Action at the Red Top Retort (the Site). The Site is in the flood plain of the Wood River and is subject to being submerged by the Wood River during annual spring break-up. The Site was submerged under up to 6 feet of water for several months during the spring and summer of 1998. Flooding and/or erosion could allow burned and unburned cinnabar, and soil contaminated with elemental mercury to be released into the river. The Wood River offers a world class fishery and contains the largest Sockeye (Red) Salmon runs in Alaska; hundreds of redds are created each year in shallows within a few feet of the area of concern (AOC). Removal of mercury contaminated soils is necessary for the protection of the riparian zone, surface waters, and river sediments.

The relative remote location of the Site and long distance from the nearest BLM office restricts the BLM's ability to control access or activities that take place on the Site. Subsistence and sport fishing occurs in the Wood River up and downriver from the Site. An unimproved road from the Village of Aleknagik provides overland access to the Site for subsistence and recreational activities. There are year-round residences within ½ mile of the Site.

The Site is a priority selection for conveyance to the Aleknagik Natives, Ltd (surface estate) and Bristol Bay Native Corporation (subsurface estate), and will be conveyed once cleanup is complete as required by the Alaska Native Claims Settlement Act.

II. SITE CONDITIONS AND BACKGROUND

This section describes the Site, other actions taken, and the role of state and local authorities.

A. Site Description

The Site is located on the east bank of the Wood River, approximately 2 miles downstream from the village of Aleknagik, in southwest Alaska. The RTRS lies within Lot 2, USS 12403. The AOC at the Site is approximately 40' x 60' (approx 2,400 sf). The west edge of the AOC is immediately adjacent to the Wood River; within 1-2 feet of the river. The southwest corner of a plastic liner placed over previous removal excavations at the AOC is exposed at the riverbank.

Records indicate 26 flasks (2 ½ quarts each) of mercury were produced at the Site. Mercury was extracted in a small wood and oil fired retort from cinnabar trucked to the Site from nearby Marsh Mountain. The retort operated during 1954 and 1955.

B. Preliminary Assessment

BLM prepared a Preliminary Assessment of the Site in 1998 to provide data required for the United States Environmental Protection Agency (EPA) to evaluate the Site's eligibility for inclusion on the National Priorities List (NPL). EPA subsequently determined the Site did not score high enough to be placed on the NPL.

C. NPL Status

The Site is not listed on the national priority list and is currently not proposed for listing.

D. Maps, Pictures and Other Graphic Representations

A site map and photos are attached hereto.

E. State and Local Authorities' Roles

As the lead agency, the BLM is exercising its' delegated CERCLA authority to address the contamination at the Site. BLM is coordinating all activities at this Site with the Alaska Department of Environmental Conservation (ADEC); providing meaningful and substantial state involvement as required by 40 C.F.R. § 300.500(a). The Site is on lands selected by Alaska Native Corporations, accordingly BLM is complying with the Alaska Native consultation requirements at 43 C.F.R. § 2650.1.

F. Actions Taken to Date

Since 1992, the BLM has removed several hundred cubic yards of mercury contaminated soil and retort debris from the Site. A 1999 characterization of the Site indicates that mercury concentrations exceeded the most stringent cleanup level were present at 13 of 39 sample points within the AOC.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

The BLM has determined that threats to public health or welfare and the environment at the Site necessitate a time critical removal action pursuant to CERCLA Section 104(a). Mercury in the soil at the Site poses a potential threat to human health and ecological receptors. Dermal contact, ingestion, and inhalation of mercury derived from the retort operations pose a threat to human health and ecological receptors. The mercury deposits at the Site are well above concentration levels for protection of potential ecological receptors.

A Time Critical Removal Action is necessary at the Site to prevent human and ecological exposure to high levels of mercury, to prevent accumulation of mercury in the food chain, and to prevent the migration of mercury into adjacent waterways. The proposed Time Critical Removal Action is intended to reduce the following threats from mercury:

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants. Humans living, recreating, or conducting subsistence activities at, or near the Site may be exposed to potentially harmful levels of mercury.

Actual or potential contamination of sensitive ecosystems. It is possible that future high water flow off the Site during runoff or flooding events may contain mercury above ambient water quality standards.

High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate. Mercury is known to be present in elevated concentrations in deposits at the Site. If the elemental mercury located at the Site were to methylate, then the potential for migration into the food sources would be a much greater threat.

IV. ENDANGERMENT DETERMINATION

Actual and/or threatened releases of hazardous substances, if not addressed by implementing the response action selected in this Time Critical Removal Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. PROPOSED ACTIONS

This section describes the proposed time-removal action, its contribution to remedial response, applicable or relevant and appropriate requirements (ARARs), proposed schedule and cost estimate.

A. Proposed Action

The proposed CERCLA Time Critical Removal Action consists of attaining a “Cleanup Complete” status from the ADEC, resulting in no significant limitation being placed on future use of the Site. Under this action, a contractor would remove and properly dispose off-site soil with mercury concentration above the Method 2 or 3 action level. The soil would be excavated from previously documented sample locations which exceed the action level, “hot spots”. The Method 3 cleanup action level would be acceptable as long as it does not result in a BLM obligation of perennial monitoring of the Site.

B. Contribution to Long-term Cleanup Performance

The proposed Time Critical Removal Action will provide protection for human and ecological receptors, will comply with ARARs, and will initiate the reduction of mercury contamination in the soils.

C. Applicable or Relevant and Appropriate Requirements (ARARs)

A removal action shall, considering the urgency of the situation and the scope of the removal action to be performed, attain ARARs under federal or state environmental laws. Other federal and state advisories, criteria, or guidance may, as appropriate, be considered in formulating the time-critical removal action. (40 C.F.R. § 300.415 (j)).

ARARs are summarized below:

Cleanup of the Site is being conducted under State of Alaska laws and regulations. ARARs are found at Title 18, Alaska Administrative Code, Chapter 75, Oil And Hazardous Substances Pollution Control (18AAC75). Contaminant of concern is Mercury. A site specific cleanup level for the Site has not yet been established by the ADEC.

18AAC75 allows four methods to obtain closure of a contaminated site. Method 1 concerns petroleum only and is not applicable for this Site.

Method 2 provides the default non-site specific cleanup level for a site and results in no restrictions (institutional controls (ICs)) being imposed when cleanup level is met. Method 2 requires the cleanup level be the most stringent of three exposure pathways. For mercury the current Method 2 cleanup level by pathways are: 30mg/kg, Direct Contact; 18mg/kg, Outdoor Inhalation; or 1.4 mg/kg, Migration to Groundwater (18AAC75 Table B1: Method 2 – Soil Cleanup Levels for under 40” precipitation zone).

Method 3 provides flexibility in determining cleanup levels for soil and groundwater. This method allows for the use of site-specific soil data or aquifer data or both, and also allows for the use of commercial/industrial exposure values without performing a full risk assessment. Method 3 results in a site specific cleanup level by modifying one or more of the Method 2 exposure pathways. Method 3 can allow for unrestricted use of the site when the cleanup level is met, although some form of use restrictions is commonly imposed.

Method 4 provides for establishing a site specific cleanup action level based upon a formal risk assessment. Under Method 4, the cleanup level can be substantially higher than Method 2 would allow. A Method 4 risk based alternative cleanup level will require establishment of land use restrictions (ICs). ICs under Method 4 require permanent periodic monitoring of the site to ensure compliance.

D. Project Schedule

The proposed Time Critical Removal Action is scheduled to start during the summer field season, FY2011.

E. Estimated Costs

A government cost estimate has been completed for the proposed time-critical action items listed above. The total estimated cost for the action items is \$80,000 - \$380,000 for contracted support. The cost is given in a range due to uncertainty about how much contaminated soil will ultimately need to be removed and disposed off-site to achieve the Method 2 or 3 standards. Estimated removal is 13 to 200 cubic yards.

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

The ADEC, in concurrence with the EPA has declared the Site an imminent and substantial threat to public health, welfare or the environment. Since 1992, the ADEC has issued two Notices of Violation to BLM concerning condition of this site.

VII. OUTSTANDING POLICY ISSUES

None currently identified.

VIII. ENFORCEMENT

Since 1992, the ADEC has issued two Notices of Violation to BLM concerning condition of the Site.

IX. RECOMMENDATION

This document represents the basis for undertaking a CERCLA Time Critical Removal Action at the Red Top Retort, Aleknagik, Alaska. This Memorandum was developed in accordance with CERCLA and the National Contingency Plan (NCP).

A Time Critical Removal Action is necessary at the Red Top Retort to prevent or significantly reduce human and ecological exposure to high levels of mercury, to reduce mercury accumulation in the food chain, and to reduce or eliminate migration of contaminated wastes from the Red Top Retort. The Time Critical Removal Action will be performed in consideration of human health concerns and potential final environmental remedies.

CERCLA ACTION – SUMMARY

Environmental conditions associated with mercury contamination at the Red Top Retort Site, Aleknagik, Alaska meets the NCP requirement for a time-critical removal action. The BLM is proposing a CERCLA response action similar in methodology to that used at other historic retort sites in Alaska that require cleanup and removal of mercury releases. The proposed BLM CERCLA Time Critical Removal Action meets the removal action objectives identified in this document, in order to reduce human health and environmental risk at the Site.

/s/

James M. Fincher
Field Manager