



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

MEMORANDUM

DATE: SEP 19 2003

SUBJECT: Request for a Time-Critical Removal Action at the Rinconada Mine Site, Santa Margarita, San Luis Obispo County, California

FROM: Michelle Rogow, On-Scene Coordinator
Emergency Response Section (SFD-9-2)

TO: Daniel Meer, Chief
Response, Planning & Assessment Branch (SFD-9)

THRU: Peter Guria, Chief
Emergency Response Section (SFD-9-2)

I. PURPOSE

The purpose of this Action Memo is to obtain approval of \$1,770,000 in direct and extramural costs to mitigate threats to human health and the environment posed by the presence of mercury contaminated waste, soils and structures located the Rinconada Mine Site (the "Site") located on Pozo Road, near Santa Margarita, San Luis Obispo County, California [93453]. The proposed removal of hazardous substances would be taken pursuant to Section 104(a)(1) of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9604(a)(1), and Section 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP"), 40 CFR § 300.415.

II. SITE CONDITIONS AND BACKGROUND

Site Status: Non-NPL
Category of Removal: Time Critical
CERLIS ID: CAD0141190579
SITE ID: LC

A. Site Description

1. Physical Location

The Site is located in Sections 21 and 28, Township 30 South, Range 14 East of the Mount Diablo Meridian, off West Pozo Road, 11 miles southeast of Santa Margarita, San Luis Obispo County, California. The Site appears to be located on lands including both private and public ownership. The public lands are under the administration of the United States Department of Agriculture, Forest Service (“USFS”) and the Bureau of Land Management (“BLM”). The mine and processing area is located adjacent to a recreation area within the Los Padres National Forest. There are other private lands in the area and a few residences are located near the Site.

To access the Site, there is a parking lot off Pozo Road, which is the location of the trailhead for the Rinconada Trail (part of the Los Padres National Forest.) At the parking lot, to the east is the Rinconada Trailhead and to the west is the historic road into the Rinconada Mine. There is a gate to block cars from entering the road at the access, which is believed to be on land administered by the BLM. The mine buildings and adits begin on BLM lands. The mine road traverses the USFS lands and the private property.

2. Site Characteristics

The Rinconada Mine is a historic mercury mine, which consisted of eleven claims near Santa Margarita, California. The mine is at elevations of 1,500 - 2,000 feet above sea level. The mine was alleged to have been discovered during Mexican sovereignty, but federal records state it to be originated in 1872 and operating intermittently for the following 11 years. An inefficient furnace operated at the Site beginning in 1876, and the mine was shut down in 1883. High grade operations were believed to have been conducted in 1897, but only yielded small production. The mine was operated in 1915 and shut down again soon thereafter.

In 1920, Rinconada Mercury Corporation began operating the mine and installed a 4 foot by 50 foot rotary furnace. Shortly after, the operation ceased. The operators changed over the course of the following years, with various entities making improvements to the plant and operations continuing from 1925-1926. The plant was not operated again until 1929, when Mercury Corporation of America added more equipment to the Site and assumed operation. In 1930, a fire destroyed the plant, but it was immediately rebuilt and operations continued until late 1932. Over the next 7 years, the mine operated for very short periods by various entities. During World War II, from 1943-44, the mine was utilized for war effort production. It was reopened in 1951 and continued until 1961, with various lessors conducting operations. It is believed that the last period of mine operation was between 1965-1968.

The mine workings consist of approximately 7,000 feet of adits, levels, sublevels, raises and a glory hole. The mine consists of several tunnels, including the Mexican

Tunnel, Mahoney Tunnel, Mike's Tunnel and the Transportation Tunnel. The Mexican and Mahoney Tunnels run from the north to the south and intersect with Mike's Tunnel leading to the glory hole. Mike's Tunnel is believed to be substantially caved in. The Italian and Fault Tunnels also were excavated in the search for ore, but it is unclear whether they yielded much ore for the mine process. Most of the mine is still open and accessible and located on BLM and USFS lands. The agencies are working cooperatively to restrict the public from entering the tunnels and holes.

The primary processing and surrounding area is the main area of concern. Most of this area is on private lands. The processing area now consists of a rotary furnace, retorts, dust collectors, condensing units, settling tanks, and a variety of stacks. Formerly, the area contained a jaw crusher, fan, cast-iron pipe condensers and redwood settling tanks. Metal debris is littered all over the processing area and the adjacent stream (a.k.a. Mine Creek). Condenser dust, partially processed materials and mine tailings are located in and around the processing area and in and around Mine Creek, a tributary to Pozo Creek.

There also are two other areas that have been identified as processing areas. One of these areas is near the Rinconada Trail parking lot. It contains a triple D retort in a collapsed aluminum structure. The other area is down gradient of the main entrance road, near a pond and adjacent to the streambed. It contains the remnants of an old retort, consisting of a heating system and 3 pipes with collection. Adjacent to the area and contained in the construction materials of the retort is partially processed materials, condenser soot and tailings.

All of the mine and processing areas are currently accessible to the public. The mine is adjacent to a recreation area trail and it is evident that the area is widely used for camping, hiking and other activities.

In addition, to the materials at the mine and processing areas, mine tailings and condenser dust are believed to have been used in the construction of the roads in the area.

3. Removal Site Evaluation

In 1991, this Site was referred to EPA by the BLM, which believed that the land associated with the mine and processing areas was under its administration. Subsequently, BLM informed USFS that BLM believed that some of the mine and associated operations were on USFS land. In 1996, BLM conducted a survey to determine which agency held responsibility for which portions of the Site. From this survey, BLM determined that some of the lands had been patented, and that the mine and associated processing areas were located on private as well as public lands.

On July 29 and November 14, 2003, at the request of BLM, the United States Geological Survey ("USGS") performed limited sampling of the mine processing area,

tailings and sediments in Mine Creek. From this limited event, USGS determined that the mine tailings had mercury concentrations between 60 and 224 ppm. Condenser soot sampled by USGS had concentrations of up to 1340 ppm. Sediment samples collected in Mine Creek after a storm event had concentrations of up to 170 ppm just below the exposure of the mine tailings. Concentrations of mercury in downstream sediments ranged from 47 to 70 ppm and then decreased past the confluence of Mine and Pozo Creek to 9.9 ppm. This sampling event also identified concentrations of nickel at 1990 ppm and zinc at 198 ppm. The USGS determined that fine grained mercury enriched particles at the Site have the potential to be transported a significant distance from the mine area during high flow events, and that mercury on Site is bioavailable with the potential to be methylated in Pozo Creek and further downstream in Rinconada Creek (USGS 2003).

In May 2003, USFS contacted EPA communicating that they believed that part of the mine was on private lands and that they were awaiting the results of the USGS sampling event to determine whether contamination at the Site warranted further action. The USGS results were transmitted to EPA in late July 2003. On August 28, 2003, EPA On Scene Coordinator ("OSC") Rogow and START conducted a removal Site evaluation with members of the USFS and USGS.

USGS identified the location of their samples and provided additional information that it had found in its files regarding the inefficiency of the processing equipment and other areas of concern. START surveyed each of the areas identified by USGS with the Lumex. Condenser soot had concentrations of up to 4500 ng/m³, processing equipment had concentrations up to 6500 ng/m³ and in and around the clay flue pipe, concentrations on the Lumex exceeded 20,000 ng/m³. This area had not been sampled by USGS, but was subsequently determined by them to be an area of concern for further investigation.

Mercury is a hazardous substance as defined by Section 101(14) of CERCLA. Mercury exposure occurs from breathing air contaminated with mercury, ingesting contaminated water and food. Mercury, at high levels of exposure, may cause damage to the brain, kidneys and developing fetus. Effects on brain functioning may result in irritability, tremors, changes in vision or hearing, and memory problems. The nervous system is very sensitive to all forms of mercury. Short-term exposure to high levels of mercury vapors can cause lung damage, nausea, vomiting, diarrhea, increased blood pressure or heart rate, skin rashes and eye irritation. Young children are more sensitive to mercury than adults (ATSDR 1999.)

4. Release or Threatened Release Into the Environment of a Hazardous Substance, or Pollutant or Contaminant

Condenser soot located on the Site has documented mercury concentrations of up to 1340 ppm and sediments in the creek have been found to have mercury concentrations of up to 170 ppm. High concentrations of condenser soot are located in

numerous areas of the Site. The condensor soot is mobile and has the potential to continue to migrate. Tailings piles are located adjacent to and within the creek in a number of different locations. Equipment at the Site has various forms of partially processed materials and mercury enriched particles.

5. NPL Status

This Site is not on the NPL. BLM stated in a letter to EPA that a Preliminary Assessment ("PA") would be conducted for this site in 1991. EPA has not yet verified if a PA was conducted by BLM.

6. Maps, Pictures and Other Graphic Representations

See attached photos.

B. Other Actions to Date

See discussion of USGS sampling, above. No other work is known to have been conducted on Site.

C. State and Local Authorities's Roles

1. State and Local Actions to Date

In 1994, the Regional Water Quality Control Board ("RWQCB") conducted some sampling for mercury downstream of the mine in the creeks. The sampling yielded elevated levels of mercury, with no defined source. Meetings between USFS, BLM, RWQCB and the mineral rights claimants were held, but no other follow up action was conducted.

San Luis Obispo County Health ("SLO County") was notified of the Site by EPA in September 2003, and visited the Site with EPA on September 16, 2003. SLO County is in the process of providing a written request for federal assistance to EPA regarding the private lands within the Site. No other state or local actions are known to have occurred.

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

A. Threats to Public Health, or Welfare or the Environment

Conditions at the Site present a release, and potential threat of release, of a CERCLA hazardous substance threatening to public health, or welfare, or the environment based on the factors set forth in the NCP, 40 CFR § 300.415(b)(2). These

factors include:

1. Actual or Potential Exposure to Hazardous Substances or Pollutants or Contaminants by Nearby Populations or the Food Chain

The Site is located within and nearby a recreation area of the Los Padres National Forest. Residences are located within a half mile of the Site. The materials being released from the Site into the air, water and surrounding soils are hazardous substances. Given the length of time that the mercury laden materials have been located on Site and releasing into waterways with rainfall events, is likely that an accumulation of the hazardous materials has been occurring, increasing exposure to nearby populations.

2. Hazardous Substances or Pollutants or Contaminants in Drums, Barrels, Tanks, or Other Bulk Storage Containers, that may Pose a Threat of Release

There are some partially processed materials in the processing equipment at the Site that contain various forms of mercury. Some of these areas yielded the highest mercury levels with the Lumex.

3. High Levels of Hazardous Substances or Pollutants or Contaminants in Soils at or near the Surface, that may Migrate

From the limited sampling to date, soils around the Site contain high levels of mercury, nickel and zinc. Some of the forms of mercury (smaller particles) have the tendency to migrate and may be traveling far distances in surface water flows.

4. Weather Conditions that may Cause Hazardous Substances or Pollutants or Contaminants to Migrate or be Released

Rainfall events cause erosion and migration of mercury contaminated materials at the Site.

5. Availability of Other Appropriate Federal or State Response Mechanisms to Respond to the Release

The SLO County Health Department informed to OSC that it does not have the resources to address the Site. Both USFS and BLM acknowledge their role as lead agency for clean-up of the respective public lands under their administration. USFS, BLM and EPA will be working on an agreement for a joint response effort to address the contamination at the Rinconada Mine, which will leverage resources in a cost effective manner, and provide reimbursement to EPA for any costs incurred in response on federal land.

B. Threats to the Environment

Threats to environmental receptors have not been evaluated at this time. Further evaluation and characterization of the Site is necessary before proceeding with the response.

IV. ENDANGERMENT DETERMINATION

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

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

Phase I

Restrict access to the Site by constructing a fence or fences to prevent the public from being able to enter the most contaminated areas of the Site. Coordinate with USFS on the issuance of a forest closure with appropriate enforcement to deter public access and vandalism.

Phase II

In cooperation with USFS and BLM, conduct a more comprehensive characterization effort at the Site to determine concentration and scope of contamination. This effort will include field and lab analysis. Define the lateral extent of contamination in each of the areas. Sampling will include surface soils, condenser soot, tailings, partially processed materials, processing equipment, sediments and surface waters.

Determination of next steps in response.

Phase III

Mitigate threats to public health and the environment. Conduct a removal or stabilization of heavily contaminated materials and equipment.

2. Contribution to Remedial Performance

The Long-Term Cleanup Plan for the Site:

Long term remedial actions may include treatment or disposal of contaminated soils, sediments, debris, and surface waters in and around the Site.

Threats that will Require Attention Prior to the Start of a Long-Term Cleanup:

The immediate threats that have been identified in this memorandum will be addressed by the proposed removal action.

The Extent to which the Removal will go to Ensure that Threats are Adequately Abated:

EPA will coordinate closely with USFS and BLM to determine a removal action level, utilizing guidance from EPA, BLM and NOAA.

Consistency with the Long-Term Remedy:

Not applicable at this time.

3. Description of Alternative Technologies

Alternative technologies have not been considered.

4. Applicable or relevant and appropriate requirements (“ARARs”)

Section 300.415(I) of the NCP provides that removal actions must attain ARARs to the extent practicable, considering the exigencies of the situation.

Section 300.5 of the NCP defines applicable requirements as cleanup standards, standards of control, and other substantive environmental protection requirements, criteria or limitations promulgated under federal environmental or state environmental or facility siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location or other circumstances at a CERCLA site.

Section 300.5 of the NCP defines relevant and appropriate requirements as cleanup standards, standards of control and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws that, while not “applicable” to a hazardous substance, pollutant, or contaminant, remedial action, location, or other circumstances at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site and are well-suited to the particular site.

Because CERCLA on-site response actions do not require permitting, only substantive requirements are considered as possible ARARs. Administrative requirements such as approval of, or consultation with administrative bodies, issuance of permits, documentation, reporting, record keeping, and enforcement are not ARARs for the CERCLA sections confined to the site.

Only those State standards that are identified by a State in a timely manner and are more stringent than federal requirements may be applicable or relevant and appropriate. State ARARs are not identified at this time.

The following ARARs have been identified for the proposed response action. All can be attained.

Federal ARARs: Potential federal ARARs are the Clean Water Act (40 CFR Part 403) requirements for direct discharges to a POTW; the RCRA Land Disposal Restrictions (LDRs) 40 CFR 268.40 Subpart D implemented through Title 22 Section 66268.40; the CERCLA Off-Site Disposal Rule OSWER Directive 9347.3-8FS; and the U.S. Department of Transportation of Hazardous Materials Regulations 49 CFR Part 171, 172 and 173.

State ARARs: None identified at this time.

5. Project schedule

EPA plans to mobilize for Phase I in the following month. Phase II operations will be planned for late October into early November. Phase III operations are anticipated to begin in the Spring, when the site is accessible after the rainy season.

B. Estimated Costs

Regional Removal Allowance Costs

Cleanup Contractor	\$1,000,000
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Extramural Costs Not Funded from the Regional Allowance

USCG Strike Team	100,000
START Contractor	<u>300,000</u>

Extramural Subtotal	\$1,400,000
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Extramural Contingency (20%)	<u>\$ 280,000</u>
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TOTAL, Removal Action Project Ceiling \$1,680,000

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

Given the Site conditions, the nature of the hazardous substances documented on Site, and the potential exposure pathways to nearby populations described in

Sections III and IV above, actual or threatened releases of hazardous substances from the Site, if not addressed by implementing the response actions selected in this memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

VII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues associated with the Site identified at this time.

VIII. ENFORCEMENT

Please see the attached Confidential Enforcement Addendum.

A. Estimated Removal Action Costs

Please see the attached Confidential Enforcement Addendum for a discussion regarding potentially responsible parties. In addition to the extramural costs estimated for the proposed action, a cost recovery enforcement action also may recover the following intramural costs:

Intramural Costs¹

U.S. EPA Direct Costs	\$ 90,000
U.S. EPA Indirect Costs (35.28%)	<u>\$ 624,456</u>
TOTAL Intramural Costs	\$ 714,456

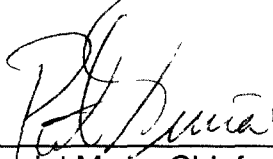
The total EPA extramural and intramural costs for this removal action, based on full-cost accounting practices, that will be eligible for cost recovery are estimated to be \$2,394,456.

¹ Direct costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual costs from this estimate will affect the United States' right to cost recovery.

IX. RECOMMENDATION

This decision document represents the selected removal action for the Rinconada Mine Site, Santa Margarita, San Luis Obispo County, California, developed in accordance with CERCLA as amended, and not inconsistent with the NCP. This decision is based on the administrative record for the Site.

Because conditions at the Site meet the NCP section 300.415(b)(2) criteria for a emergency, I recommend you concur with the actions described above. The total project ceiling if approved will be \$1,770,000, of which an estimated \$1,000,000 comes from the Regional removal allowance. You may indicate your decision by signing below.

Approve:  19 SEPT 03
for Daniel Meer, Chief Date
Response, Planning and Assessment Branch

Disapprove: _____
Daniel Meer, Chief Date
Response, Planning and Assessment Branch

Enforcement Addendum

Attachments:

- 1. Index to the Administrative Record

cc: Lisa Boyton, USEPA, OERR, HQ
Director, California Department of Toxic Substances Control
Department of the Interior

bcc: A.Helmlinger, ORC-3
C. Reiner, SFD 9-2
M. Rogow, SFD 9-2
C. Temple, SFD 9-2
site file