UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

Reply To
Attn Of: ECL-116

DATE: July 12, 2001

SUBJECT: Request for Removal Action at Hermiston Lab Site, Hermiston, Umatilla County, Oregon, Site # 108M.

FROM: Michael I. Sibley II
On-Scene Coordinator

TO: Michael F. Gearheard, Director
Environmental Cleanup Office

THRU:Chris D. Field, Unit Manager
Emergency Response Unit
Environmental Cleanup Office

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval for a time critical removal action at the for the Capmartin Mining Lab Site, located at 81156 N. Highway 395 approximately 2 miles north of Hermiston, Umatilla County, Oregon. GPS Coordinates for this site are: N45 Deg 53.180' & W119 Deg 17.859'. The Removal is required for immediate reduction of the risk to the public and the environment from the uncontrolled hazardous substances at this facility.

II. SITE CONDITIONS AND BACKGROUND

The U.S. Environmental Protection Agency (EPA) identification number for the Site is : ORN001002272. This is a time critical removal action.

The facility is located in a light industrial area and next door to the Daisy Milk Company, a milk processing, storage and distribution facility. The facility consists of a one story cinder block warehouse of approximately 2000 square feet with a rear fenced area. Both the indoor lab and the rear fenced area were used as a metallurgical laboratory for many years. Large quantities of chemicals (known and unknown), in-process or waste chemicals and debris are stored in the building. The facility is no longer in operation because the operator (b) (6) two months ago.

A Pollution Complaint was filed with the Oregon Department of Environmental Quality (ODEQ) and in September, 1999 and the facility was inspected The conclusion of this inspection was that the facility was classified as a conditionally exempt generator. No violations were noted, but concerns over the management of the facility were noted by ODEQ.

The facility is owned by Mr. Billy Kik of Sanitary Disposal Inc. of Hermiston and is leased to the Capmartin Mining Laboratory. Mr. Kik does not appear to have any interest or knowledge of the condition of his facility.

A. **Site Description**

1. **Removal Site Assessment**

The EPA tasked Ecology and Environment Inc. (E & E) Superfund Technical Assessment and Response Team (START), to assess the risks associated with the Capmartin Site. On June 8, 2001, an inspection was performed by Dan Heister, EPA OSC, and Bill Mehnert, E&E contractor. The inspection detailed visible chemicals and indicated that additional materials were present but could not be readily identified. The operator of the facility died recently and the site is not currently occupied or monitored. As an inactive facility, there are significant concerns about the stability of the site. Chemicals are stored in a haphazard manner with the possibility of fire and or chemical release. Although the site is fenced, the site is not secured against vandals or the curious. The danger of explosion and/or vandalism is a major concern.

The inspection of the building and back yard produced an inventory including the following materials:

- 800 lbs. pelletized potassium cyanide;
- 8, 55-gallon drums labeled caustic which are more likely acidic solutions;
- 16, 5-gallon buckets of acid sludge;
- 20, 1-gallon jugs of hydrochloric acid;
- 30, 1-gallon jugs of sulfuric acid;
- 200 smaller laboratory-sized containers of various unknown chemicals;
- Approximately 400 lbs of marine type batteries;
- 8-10 PCB containers;
- Small amounts of radioactive material;
- Brick of sodium metal suspended in drum of oil;
- Trash & debris.
- Soil contaminated with heavy metals

On June 27, 2001, an additional inspection was performed by Mike Sibley,

EPA OSC, Jerry Wade, EPA cleanup contractor, and Bill Mehnert, E&E. The inspection detailed the following additional materials that were present but locked up in cabinets:

- 30, 1-gallon glass containers believed to contain a 78% solution of nitric acid;
- numerous other containers (whiskey bottles) with unknown contents (assumed to be nitric acid) are present in the camper top;
- 11 boxes (with four 1-gallon bottles each) containing formic acid, sulfuric acid, and nitric acid;
- numerous glass containers containing xylene and oxalic acid were found in locked cabinets;
- surplus trailer containing obsolete electronic computer equipment, and;
- numerous vessels & vacuum tubes containing mercury.

In addition, during this inspection certain materials (PCB electrical transformers/capacitors and marine batteries), that are likely to contain hazardous substances, were missing from the Site. The property owner, who was present during the inspection was unable to account for the disappearance of these materials.

2. Physical Location

The Capmartin Mining Lab Site is located at 81156 N. Highway 395, approximately 2 miles north of Hermiston city limits. The site is located in a light industrial area with two residents located within 200 feet to the north of the site, and one business/residence within 100 feet east of the site. In the adjoining building is the Daisy Milk Company facility which processes, stores and distributes milk.

3. Site Characteristics

The facility has been abandoned since the death of the operator Earl Meyers. The operator died a two months ago and is survived by a sister who lives in California and a mother who lives in Hermiston.

For the last seven years, Mr. Meyers collected all types of waste including industrial wastes and chemicals from all over the state. He would use various chemical processes to extract precious metals (gold, silver, and platinum) from computer circuitry boards, plated watch bands, and necklaces. In addition, he had ore brought in for conducting assays. A ceramic oven was used to smelt and refine lead and other metals.

One process believed to be used by Mr. Meyers was to tumble electronic circuit boards with sodium cyanide or potassium cyanide in a process called agitation cyanidation. A high pH cyanide leaching solution was introduced into a cement mixer (located in the fenced area) with the circuit boards in the presence of oxygen. According to Mitch Clanahan (Meyers' friend), Meyers would sometimes add hydrogen peroxide (a strong oxidizer) to speed up the extraction of gold from the circuit boards. Other methods of metal extraction included the use of strong acids (i.e. nitric acid, hydrochloric acid, and sulfuric acid). As a result of this process, open plastic barrels at the site contained blue-green and yellow solutions which gave off an acidic odor. These barrels and dozens of unmarked 5-gallon buckets, contained waste leachate solution with unknown contents (some with liquid and some with solids), caustic solutions including ammonia, and several other unknowns.
The laboratory area inside the building contains a block of sodium metal immersed in oil, at least 2 drums with cyanide compounds, hundreds of laboratory-grade chemicals, zinc powder, and an assay oven believed to be coated on the inside with lead. Exhaust from this oven went outside without filters and may have contaminated surrounding soils with lead as well.

While the site is fenced, the potential for vandalism exists and the site contains many incompatible materials and flammables which are not monitored or controlled.

No previous removal actions have occurred in association with this site.

4. **Release or Threatened Release into the Environment of a CERCLA Hazardous Substance**.

EPA's brief inspection of inside and outside of the building revealed the following types and quantities of materials abandoned on site. These materials are CERCLA hazardous substances as defined by section 101(14):

- 800 lbs. pelletized potassium cyanide;
- 8, 55-gallon drums labeled caustic which are more likely acidic solutions;
- 16, 5-gallon buckets of acid sludge;
- 20, 1-gallon jugs of hydrochloric acid;
- 30, 1-gallon jugs of sulfuric acid;
- 200 smaller laboratory-sized containers of various unknown chemicals;
- Approximately 400lbs of marine type batteries;
- 8-10 PCB containers;
- Small amounts of radioactive material;

- Brick of sodium metal suspended in drum of oil;
- Trash & debris;
- Soil contaminated with heavy metals;
- 30, 1-gallon glass containers believed to contain a 78% solution of nitric acid; numerous other containers (whiskey bottles) with unknown contents (assumed to be nitric acid) are present in the camper top;
- 11 boxes (with four 1-gallon bottles each) containing formic acid, sulfuric acid, and nitric acid;
- numerous glass containers include xylene and oxalic acid were found in locked cabinets;
- surplus trailer containing obsolete electronic computer equipment; and
- numerous vessels and vacuum tubes containing mercury.

A release could occur at anytime. There are numerous open containers of waste chemicals inside and outside of the lab. These containers could be knocked over either by accident or act of vandalism . The block of sodium alone could, if exposed to water, react violently. When the sodium metal contacts the water, the heat of the reaction ignites the sodium metal. Once ignited, fire and explosion would create a serious threat to nearby residences & businesses which are located as close as the adjoining building to the site. Toxic clouds would be produced from the ensuing fire, exposing and endangering nearby residents.

EPA has received a letter from the local fire chief expressing his concerns about the threat of fire and explosion and danger to citizens who live and work near the site. In addition, there are a number of acids and bases in open containers that, if mixed, could create a hazardous situation.

EPA has posted a security guard at the facility to prevent the unauthorized removal of hazardous material or vandalism at the site. This is an interim step to stabilize the situation. Compete removal of hazardous and incompatible materials must occur as soon as possible to eliminate the potential threats to the nearby populations.

5. NPL Status

This site has not been evaluated for inclusion on the NPL. The removal action is expected to fully mitigate the threat of release from this site.

6. Maps, Pictures, and other Graphic Representations

See attached site map & photographs.

B. Other Actions to Date

1. Previous Actions

The site was inspected in September 1999 as the result of a complaint filed with ODEQ. The conclusion of that inspection was that as an operating facility, the site met all requirements. On the other hand, the conclusion also indicated that the facility was poorly operated and could easily become noncompliant. No further actions were taken as a result of this inspection.

2. Current Actions

EPA has hired and posted security guard at the site. This action became necessary when it was discovered during EPA's second removal assessment at the site on June 27, 2001, that PCB transformers/capacitors and a block of marine batteries had been removed from the site.

The disappearance of these items indicates that people have access to the site. This reiterates EPA's concern that the potential of an accident, or act of vandalism could result in harm to trespassers, fire, or explosion. Further, EPA wants to ensure that no additional hazardous material is taken off site.

C. State and Local Authorities' Roles:

1. State and Local Roles:

ODEQ and the local fire department have requested EPA assistance in the stabilization and cleanup of this site. ODEQ does not have the resources to address this site. Although a thorough search has not yet been conducted, it appears that the responsible party (Mr. Meyers' family) does not have the resources to respond to this problem. The owner of the building, Mr. Kik, has been located and contacted. EPA is currently in discussions with him regarding the necessary cleanup actions.

2. Potential for Continued State and Local Response:

DEQ has deferred to the Environmental Protection Agency for any emergency or time-critical actions required at this Site. No cleanup activities are planned

by the local agencies or the Oregon State Department of Environmental Quality (DEQ).

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

Conditions at the site meet the criteria for a removal action as stated in the National Contingency Plan (NCP), 40 CFR Section 300.415 as follows:

A. Threats to Public Health or Welfare

Contamination at the Site creates an imminent and substantial endangerment to the public health and welfare or the environment through actual or potential exposure of trespassers, nearby residents & businesses to high levels of hazardous substances. There are open drums, containers, & soils largely at or near the surface via inhalation & exposure. There is a threat of fire & explosion which is primary concern of the local Fire Chief. The chemicals of concern (COC) are highly flammable.

Possible human health effects from a fire or explosion of the primary contaminants identified at the site may be briefly summarized as follows:

- **Potassium Cyanide**:

  Potassium cyanide can easily enter the body through the lungs as an air pollutant, through the digestive tract as a contaminant of water or food, or through the skin. In general, the most significant routes of exposure are through inhalation, ingestion and dermal absorption. Targeted organs are, the eyes, respiratory tract, cardiovascular, and central nervous systems.

  In a fire or explosion, this substance will react violently with water, releasing corrosive and or toxic gases into the air. Containers may explode when heated.

- **Hydrochloric Acid:**

  Inhalation of fumes results in coughing and choking as well as irritation of the nose and lungs. The liquid causes burns to the skin.

  In a fire or explosion, contact with metals may evolve flammable hydrogen gas, these substance will react violently with water, releasing corrosive and or toxic gases into the air. Containers may explode when heated.

- **Sulfuric Acid:**

  Sulfuric acid is highly corrosive to all body tissues. Inhalation of vapor will cause serious lung damage**.** Contact with eyes may result in total loss of vision. Dermal contact may produce severe necrosis. Even a few drops may be fatal if the acid gains access to the trachea. Circulatory shock is often the immediate cause of death.

  In fire or explosion, contact with metals may evolve flammable hydrogen gas, substance will react violently with water, releasing corrosive and or toxic gases into the air. Reaction with water may generate much heat which will increase the concentration of fumes in the air. Containers may explode when heated, fire will produce irritating corrosive and or toxic gases into the air. Such event would require safety (exclusion zone) of 1000 yards.

- **Nitric Acid: >70% Solution:**

  Nitric acid is highly toxic and maybe fatal if inhaled, swallowed or absorbed through the skin. Fire may produce irritating, corrosive, and or toxic gases. Containers may explode when heated.

- **Lead:**

  Lead is highly toxic and maybe fatal if inhaled, swallowed or absorbed through the skin**.**

IV. ENDANGERMENT DETERMINATION

Actual or threatened release of CERCLA hazardous substances from this site may present an imminent and substantial endangerment to public health or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. <u>Proposed Actions</u>

The objective of the actions outlined below is to reduce potential exposures to human health and the environment in the areas with the potentially most mobile and highest levels of contamination. These actions are also designed to minimize the potential for fire or explosion, and protection of residents and nearby businesses off site. These proposed actions are based on the information known to date regarding the conditions at the site. As additional information is gathered, further actions may be necessary.

1. **Proposed Action Description**

The following options were evaluated:

a. Removal Action:

- Hazard categorization of COC's on site;
- Prepare complete inventory for consolidation of waste streams;
- Divide COC's into appropriate RCRA waste streams for EPA/state approved off site hazardous waste disposal facility(s);
- Prepare lead batteries & PCB containers for disposal;
- Sample soil in back of facility & if necessary excavate & dispose of off site any contaminated soil to an EPA/state approved hazardous disposal facility(s); and
- Drum removal.

b. Same as a. above, but with treatment of COC's on site rather than disposal;

c. No actions.

Alternative b. was not selected due to the high costs of treating the chemicals on site. Alternative c. was not selected because it would not abate the threats outlined in this Action Memorandum.

Alternative a. was selected, as this was determined to be the most protective, while still being cost effective.

2. **Contribution to Remedial Performance**

No remedial action is anticipated for this site. It is expected that all environmental and health concerns will be addressed by this removal action.

3. **Description of Alternative Technologies**

N/A

4. **EE/CA**

This applies only to non-time critical responses. This is a time critical removal action.

5. **ARARs**

The proposed removal action will attain or exceed applicable or relevant and appropriate requirements (ARARs) to the extent practicable. Three factors will be applied to determine whether the identification and attainment of ARARs is practicable: (1) the exigencies of the situation; (2) the scope of the removal action to be taken; and (3) the effect of ARAR attainment on the statutory limits for removal action duration and cost.

The scope of this removal action is to dispose of chemicals & any contaminated soils off site. Complying with ARAR's to the extent practicable will be limited due to the short duration of the removal action.

The following is a summary of state and federal ARARs identified to date that may be applicable to the proposed removal action: Clean Water Act Section 304,& 404; Safe Drinking Water Act; RCRA 40 CFR Part 261; & Oregon Hazardous Waste Management Act.

6. **Project Schedule**

The selected removal action is estimated to require approximately three weeks to complete. Estimated starting date, July 2001.

Activity	**Start**	**Complete**
Mobilize to Site	08/06/2001	
Hazcat of chemicals	08/06/2001	08/12/2001
Disposal of Waste	08/12/2001	08/15/2001
Demobilize from Site		08/15/2001

B. **Estimated Costs**

Extramural Costs	Project Ceiling
1. Extramural	
EPA ERRS Cleanup Contractor	$117,000
START	$ 98,000
Subtotal extramural	$215,000
15% contingency	$ 32,250
Subtotal Extramural	$247,250
2. Intramural	

EPA direct	$ 10,000	
EPA indirect	$ 15,000	
CG Strike Team	$ 35,000	
Subtotal Intramural	$ 60,000	
SUBTOTAL Extramural and Intramural		$307,250
10% Project contingency		$ 30,725
Total Estimated Project Ceiling		**$337,975**

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

Failure to act, delay or disapprove of the proposed action will increase/prolong the threats to human health and the environment described above.

VII. OUTSTANDING POLICY ISSUES

None.

VIII. ENFORCEMENT

A preliminary search has determined two possible PRP's for the site. (b) (6) [redacted], and Bill Kik owner of the site. (b) (6) [redacted]. EPA is currently involved in discussions with Mr. Kik who has indicated a willingness to perform the necessary cleanup actions at the site. Mr. Kik has agreed to submit a work plan to EPA no later then July 17, 2001 for review and or approval/disapproval of the cleanup.

IX. RECOMMENDATION

Conditions at the site meet the NCP Section 300.415(b)(2) criteria for a removal. I recommend your approval of the proposed removal action. The total project ceiling if approved will be $337,975 with $117,000 from the regional advise of allowance (AOA).

Approved	Disapproved
_____	_____
Michael F. Gearheard, Director Environmental Cleanup Office	Michael F. Gearheard, Director Environmental Cleanup Office
Date:_____	Date:_____