TELECOPIER REQUEST

TO : SARA WEINSTOCK OFFICE CODE 8MO

PHONE # FTS 585-5414

AGENCY / FIRM USEPA REG 8 CITY HELENA STATE MT

FTS. X COMM. ___

TELEFAX MACHINE NUMBER 585-5434

NUMBER OF PAGES TO FOLLOW : 6

SUBJECT : Action Memo For Mouat Site

OFFICE CODE 8HWM

FROM : T. NGUYEN PHONE # FTS 330-7120

REMARKS :

REMOVAL WILL START FRIDAY 3/29

LOGGED IN SENT ___

CONFIRMATION : (CHECK ONE)

MECHANICAL ___

VOICE ___

CONFIRMATION NUMBER ___

8010406

CONFIRMATION NUMBER: FTS.564-1653 MACHINE NUMBER : FTS [illegible]

COMM.(303) 293-1653 COMM (303) 293-1647

EPA R8-5000-Z (REV 2/89)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2405

Ref: 8HWM-ER

ACTION MEMORANDUM

I. HEADING

SUBJECT: Request for Removal Action Approval at the Mouat Industries Site, Columbus, Montana:
ACTION MEMORANDUM

Site/Spill ID: Case # M88119; SSID # 65

Category of Removal: Time Critical, NPL, Initial Removal Action

National Significance: This Removal Action is Not of National Significance.

TO: Robert L. Duprey, Director
Hazardous Waste Management Division

FROM: Tien H. Nguyen
On-Scene Coordinator

THROUGH: Floyd D. Nichols, Chief
Response Section

John R. Giedt, Chief
Emergency Response Branch

II. ISSUE

The purpose of this memorandum is to request CERCLA Removal funding to provide site access restriction to the Mouat Industries site. High levels of hexavalent chromium, Cr(VI), in surface and sub-surface soils at the Mouat Industries site pose a health threat to on-site workers and nearby populations and may continue to migrate to the groundwater. The site meets the criteria under section 300.65 of the NCP or section 300.415 of the revised NCP to initiate a Removal action.

The site access restriction is anticipated to require less than twelve months and $ 2 million for completion.

III BACKGROUND

A. Site Description

1. Site Location

The Mouat facility site (see Figure 1 attached) is located just south of Columbus, Stillwater County, Montana, in the SW-1/4 of the NW-1/4, Section 27, Township 2S, Range 20E of the Columbus East Quadrangle. Population of Columbus was estimated to be 1431 (1980 census, Rand McNally 1988). The town of Columbus has owned the site since 1933. The site is currently occupied by the Timberweld Manufacturing facility (manufactures laminated wood products) and the American Metallurgy Corporation (owns a chromium ore stockpile at the site).

2. General Character of the Site

The Mouat plant produced, along with the high-grade sodium dichromate, a sodium sulfate waste which contained sodium chromate and sodium dichromate. Information available to EPA indicates that Anaconda Minerals Company leased and/or conducted operations at the site from 1969 to 1974. In 1973 Anaconda removed the sodium chromate and sodium dichromate wastes to Butte, Montana. Timberweld Manufacturing Company has operated on the site since 1975. The Timberweld's process uses resorcinol-phenol glues in the manufacture of laminated wood products. The Timberweld's finished products are presently stored at the former Mouat chrome process area. The area is not fenced and access is unrestricted.

3. NPL Status

The site is currently listed on the NPL. Remedial Investigation/Feasibility Study (RI/FS) and long-term treatment alternatives are scheduled to begin in 1992.

B. INCIDENT/RELEASE CHARACTERISTICS

At the present location of the Timberweld storage yard, chromium was originally released to the environment as a result of sodium dichromate leaching from the sodium sulfate waste pile stored on site and various spills that occurred during Mouat Industries plant operations.

As a result of concerns about sodium sulfate/ dichromate wastes at the site, the Mayor of Columbus and representatives of Mouat, Monte Vista, and Anaconda Minerals agreed that Anaconda would remove the waste pile.

Subsequently, approximately 100 tons of waste/contaminated soil were removed from the site. Anaconda treated the remaining contaminated soil on site. Their treatment process consisted of reacting the Cr(VI) in the soil with an acid/ferrous sulfate solution to reduce the Cr(VI) to the less toxic trivalent state Cr(III), precipitate it, and then stabilize it in the soil using lime. Timberweld later covered the area where the processing plant and sodium sulfate waste piles had been located with a two-foot layer of gravel, and they are currently using the area for a storage yard. Presently, the gravel surface shows evidence of yellow mineral deposits characteristic of sodium chromate.

C. Quantities and Types of Substances Present

Both trivalent and hexavalent chromium have been found in the surface/sub-surface soil, surface water, and groundwater at the Mouat Industries site; the hexavalent form being more toxic. The groundwater and surface water results are given in Table 1. The 1988 analytical results of chromium from the surface soil samples are given in Table 2 and Table 3. The results for all of the other metals were within the normal range of concentrations found in surface soils in the western United States.

Recently, additional groundwater and surface/sub-surface soil samples were collected by the Environmental Response Team (ERT/REAC) and analyzed for total chromium and hexavalent chromium. A summary of analytical results is in Tables 4 and 5 (see Figure 4 for sample locations). Results confirm that substantial concentrations of hexavalent chromium are present in soil at the Timberweld's storage yard.

D. State and Local Authorities' Role

The City of Columbus requested Mouat Industries, Monte Vista company, and Anaconda Minerals to commence clean-up operations at the Mouat Site in the early 1970s. In response to these requests, various scrap ore, scrap iron, process wastes, and contaminated soil piles were hauled off site.

The state of Montana Department of Health and environmental Sciences assisted in the sampling and analysis of water samples in March 1984 which documented potential chromium exposures to fifteen cattle which died of undetermined causes following drinking surface water downgradient from the Mouat site.

E. Other Actions to Date

As a result of the PA study in 1979 and subsequent additional sampling results, EPA sent a letter to the Town of Columbus stating that several site monitoring well samples exceeded the recommended drinking water standards for chromium and recommended that the contaminated groundwater not be used for human or animal consumption.

Recently, ERB requested that ERT and EPA/Risk Reduction Engineering Laboratory's contractor (PEI Associates, Inc.) in Cincinnati, Ohio develop and assess methods for treating the chromium contaminated soil. The work assignment also includes a soil treating study and a technical and economic feasibilities evaluation.

IV. THREAT TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT

The threat to public health posed by the site is through exposure to Cr(VI) contaminated soils, surface water, and groundwater through the direct contact, inhalation and ingestion pathways.

Chromium(VI) exposure via inhalation causes irritation and may ulcerate mucous membranes. Ingestion causes severe circulatory collapse and toxic nephritis; may be fatal. Chromium(VI) irritates skin and can cause ulcers; if skin is broken, prolonged contact may cause "chrome sores", which leave the area vulnerable to infection as a secondary effect.

Employees of Timberweld enter the chromium contaminated storage yard on a daily basis. With fork lifts and foot traffic entering and leaving the contaminated area many times a day, the workers may suffer exposure via: inhalation of contaminants carried by airborne particles, ingestion of contaminants as a result of hand to mouth transport and dermal contact with contaminants. The Superfund toxicologist reviewed the Preliminary Endangerment Assessment (see Memorandum Attached) for the site and concluded: "it seems advisable to take some actions to reduce exposure to workers on-site. This would probably affect substantial reduction in exposure to site visitors and off-site residents."

V. ENFORCEMENT

See attached.

VII. PROPOSED ACTIONS AND COSTS

A. Proposed Actions

In order to mitigate the threat of direct contact exposure to hazardous material by the Timberweld's workers and nearby individuals, a Removal action to secure the site is appropriate. This proposed action will be to provide site security by fencing appropriate portion of the site. Approximately 1,100 feet of 6-foot chain link fencing will be required to fence the area of concern. Guard extension arms set at 45-degree angles with three strands of barbed wire will be installed at the top of the fence for added security. Two twenty-foot wide gates with locks will be installed.

Alternative options to treat the contaminated soils at the site being studied by the EPA/ERB.

B. Cost Estimate

EXTRAMURAL COSTS:	
ERCS and Sub-contractor Costs	$ 22,600
15% Contingency	3,400
TAT	3,000
TOTAL EXTRAMURAL COSTS	$ 29,000
INTRAMURAL COSTS:	
Direct Costs (HQ & Region)	$ 3,000
Indirect Costs	5,000
TOTAL PROJECT CEILING ESTIMATE	$ 37,000

VII. EXPECTED CHANGE IN THE SITUATION SHOULD NO ACTION BE TAKEN OR ACTION BE DELAYED

If site access is not restricted, the Timberweld workers and nearby individuals are likely to continue to be exposed to elevated levels of hexavalent chromium in the soil at the site.

IX. RECOMMENDATION

Because conditions at the Mouat Industrial site, Columbus, Montana, meet the NCP section 300.65(b)(2) criteria for a Removal action, I recommend your approval of this initial proposed Removal action. The total project ceiling is $37,000, of which $26,000 are for extramural cleanup contractor costs. I recommend your approval due to the nature of the threat described herein.

Approve: _____ Date: 3/26/98
Robert L. Duprey, Director
Hazardous Waste Management Division

Disapprove: _____ Date: _____
Robert L. Duprey, Director
Hazardous Waste Management Division

Attachments