

CERCLIS#: NM0000037408

REMOVAL FUNDED REPORT
FOR
HEARST TAILINGS SITE
Silver City, Grant County, New Mexico

March 31, 1995

Prepared for:

J. Chris Petersen
Deputy Project Officer
Emergency Response Branch
EPA - Region 6

Contract Number: 68-WO-0037



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4801 WOODWAY, 280 WEST, HOUSTON, TEXAS 77056, TEL. (713) 871-9460
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Date: March 31, 1995

To: Warren Zehner, OSC
EPA Region 6, Emergency Response Branch

Thru: J. Chris Petersen, DPO
EPA Region 6, Emergency Response Branch

Thru: Chris Quina, TATL
Region 6, Technical Assistance Team

From: Roberta Haglund
Region 6, Technical Assistance Team

Subj: Removal Funded Report: Hearst Tailings Site
Silver City, Grant County, New Mexico
TDD#: T06-9410-105
PAN: ENM0170FBA
LAT 32°47'12" North LONG 108°15'58" West

I. INTRODUCTION

During the period of August 24, 1994 through November 11, 1994, the Technical Assistance Team (TAT) assisted the United States Environmental Protection Agency - Region 6 Emergency Response Branch (USEPA-ERB) in conducting a removal action at the Hearst Tailings Site in Silver City, Grant County, New Mexico. The geographic center of the site lies at 32°47'12" latitude north and 108°15'58" longitude west, determined from the United States Geological Survey (USGS) 7.5-minute topographic map of Silver City Quadrangle (1992) using a 5-second interval template. Specific elements of the Technical Direction Document (TDD) included:

- 1) coordinate with the appropriate state and local agencies;
- 2) maintain site documentation and site log;
- 3) photodocument removal activities;
- 4) develop community relations plan and support;
- 5) generate weekly Pollution Reports (POLREPs);
- 6) collect appropriate air and soil samples;
- 7) define soil excavation areas using total station survey equipment and XRF screening;

- 8) provide a formal report and the On-Scene Coordinator's (OSC) report; and
- 9) coordinate with and brief the OSC.

II. SUMMARY OF TAT ACTIVITIES

The Hearst Tailings Site was a seven-acre tract of undeveloped land surrounded by a residential neighborhood in Silver City, Grant County, New Mexico. It was used by local children and residents as a playground and recreation area. A mill was located at the site in the 1800's and subsequently contaminated the area with elevated levels of lead, arsenic, zinc and copper. The TAT conducted a site assessment to investigate heavy metals contamination during November and December, 1993, and in April, 1994. Results of the site assessment can be found under TDD# T06-9410-045. Based on the TAT's site assessment results, the OSC determined the site posed an imminent and substantial endangerment (ISE) to the surrounding community, and a removal action was initiated on August 24, 1995.

OSC Warren Zehner and TAT members Roberta Haglund, Joe Cornelius, Mike Malone and Moshood Leshi mobilized to the site on August 23, 1994 to establish the extent-of-contamination boundaries. The total station survey and Spectrace 9000 X-Ray Fluorescence (XRF) spectrometer were used to define the areas to be excavated. Survey data from the total station datalogger were downloaded to a computer equipped with AutoCAD software and a site map with boundaries was generated for onsite use during excavation (see site grid map, Attachment H).

The TAT developed and distributed a community information bulletin to interested parties concerning the removal action. The TAT provided contractor monitoring and documented all site activities through logbook entries and photographs. The TAT provided administrative support through utilization of the Removal Costs Management System (RCMS) to track costs; generation of weekly Pollution Reports (POLREPS) and progress reports; and organization and maintenance of USEPA site files. The TAT developed a Quality Assurance Sampling Plan (QASP) to address the specific sampling requirements of the removal (Attachment C). The TAT coordinated with the ERCS contractor to develop an overall site safety plan.

The TAT continuously monitored all excavation progress with the XRF spectrometer to determine when below action levels were obtained for lead, arsenic, copper and zinc. The action levels established were 500 parts per million (ppm) lead, 50 ppm arsenic, 2,000 ppm copper and 2,000 ppm zinc. Points within the excavation area were randomly chosen for XRF-screening. Biased points were also chosen, based on appearance and color of the soil as indicators of the possible presence of oxidized metals, until the area was sufficiently screened. An area was tentatively determined to be clean when all XRF-screened points were below the action levels for the analytes. The area was then gridded, and systematically chosen points were sampled and composited for laboratory confirmation. These points were also XRF-screened, in duplicate,

and the results compared with the laboratory results as a method of confirming the reliability of the XRF-screening program.

The TAT developed the gridding and sampling design based on Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-10, Representative Sampling Guidance for Soil. A total of 20 grids were measured and sample points were established based on the size of the grid. Grids approximately 50 feet by 50 feet contained five points spaced equidistantly within the grid. Large grids measuring between 50 feet by 50 feet and 100 feet by 100 feet usually contained nine equidistantly-spaced points. The number of points in a grid was occasionally increased to suit grid terrain and conditions. Before sampling, each grid point was XRF-screened in duplicate and the readings recorded on an XRF Screening Grid worksheet (Attachment D). A composite soil sample was collected from each grid and submitted for laboratory analysis for lead, arsenic, zinc and copper (Attachments E and F). Aliquots were collected from a one-foot square area around each screened point at a depth of zero to three inches. Samples were homogenized before being sent to the laboratory. Analytical results were recorded on the XRF Screening Grid worksheets to provide confirmation of XRF results. The XRF results correlated closely with laboratory results (Attachment D).

During the removal, the TAT provided continuous high-volume air sampling using the PM-10 samplers to determine the effectiveness of dust suppression measures. A meteorological station was established onsite to support the air sampling program. Samplers were operated for 24-hour periods for the duration of the work week throughout the excavation and offsite transportation phases of the removal. The glass-fiber filters were changed each morning and archived until being sent for lead and arsenic analysis to a laboratory certified by the American Industrial Hygiene Association (AIHA). A total of 229 samples were collected and 149 were sent for analysis. No elevated levels of arsenic were detected in air samples during the project. Slightly elevated levels of lead were detected by two samplers but were below the site action level for airborne lead particulates. The TAT generated daily PM-10 calibration worksheets and meteorological station data summaries. (Included in EPA site file, refer to Attachment B.)

The TAT conducted air monitoring for nuisance particulates using the Real-Time Air Monitor-1 (RAM-1) equipped with datalogger and a miniRAM positioned downwind of soil moving activities (RAM-1 data included in EPA site file, refer to Attachment B). Miniram readings were recorded in the site logbook. No readings above zero were obtained on the miniRAM for the shift Time Weighted Average (TWA) or Shift Average (SA) during the course of the removal. The TAT also provided personal air sampling equipment and expertise to assist the ERCS contractor in conducting personnel monitoring for lead exposure, in accordance with Occupational Safety and Health Administration (OSHA) regulations in the Code of Federal Regulations, 29 CFR 1910.1025. Personal air sampling data were maintained by the ERCS site safety officer.

The TAT documented the transportation of soil from the site to an approved disposal facility in Rio Rancho, New Mexico. A total of 140 trucks transported approximately 2,627.5 cubic yards of contaminated soil offsite for disposal. As excavated areas were verified clean by laboratory analysis, they were backfilled with clean fill soil and a final layer of topsoil. Areas with exposed rock were lined with crushed limestone before backfilling to neutralize acidic conditions. A total of 1,643.1 cubic yards of limestone, backfill and topsoil were used to complete site restoration. Backfilled areas were reseeded with a blend of native grass seeds, fertilized and covered with biodegradable fiber blankets to prevent soil erosion and seed loss. The TAT monitored backfilling activities and assisted with preparing the seed blends and installing the fiber blankets. Reseeded areas were generously watered until rental equipment was demobilized from the site on November 8, 1994. Final site demobilization was complete on November 11, 1994.

III. LIST OF DELIVERABLES IN SITE FILE

Organization of the USEPA Site File is documented in the Site File Organization Index. Items referenced in this report have been returned to the site file.

ATTACHMENTS

EPA FILE ATTACHMENTS

- A. Draft On-Scene Coordinator's Report (DOSCR)
- B. Disk Copy of DOSCR *not included* *CH*
- C. Federal Records Center Transmittal and Receipt List (FRCTR) *not included* *CH*
- D. Disk Copy of FRCTR *not included* *CH*
- E. Copy of TDD# T06-9408-015, TDD# T06-9410-105 and Amendment A *CH*

SITE FILE - Under Separate Cover as Labeled (2 boxes)

2 Boxes

HT-EM 1 of 2 Emergency Response Technical File
HT-CC 1 of 1 Contractor Confidential

1 Binder

HT-PH 1 of 1 Photographs

TAT FILE ATTACHMENTS

3 Binders Labeled & Containing:

1 of 3:

- A. Draft On-Scene Coordinator's Report
- B. Federal Records Center Transmittal and Receipt List
- C. Quality Assurance Sampling Plan (QASP)
- D. Field Screening Data

2 of 3:

- E. Analytical Data Package (Separate Cover)
- F. Data Validation Reports
- G. Environmental Justice Report
- H. TAT-Generated Site Grid Map

3 of 3:

- I. Negatives (6 Rolls)
- J. Photocopies of Mounted Photographs
- K. Copies of Logbooks (7)
- L. Computer Disk Containing TAT-Generated Files
- M. Copy of TDD# T06-9408-015, TDD# T06-9410-105 and Amendment A