Five-Year Review Report

First Five-Year Review Report
for
Cleveland Mill Superfund Site
Grant County, New Mexico

August 2002

PREPARED BY:

United States Environmental Protection Agency
Region 6
Dallas, Texas

915029

FIVE-YEAR REVIEW

Cleveland Mill Superfund Site
EPA ID #NMD981155930
Grant County, New Mexico

Summary of Five-Year Review Findings

This is the first five-year review of the Cleveland Mill Superfund Site (the "Site") located in Grant County, New Mexico. The results of the five-year review indicate that the remedy is protective of human health and the environment. Based on this five-year review, Site documentation confirms the remedy at the Site as set forth in the Record of Decision (ROD), the Amended ROD, and the Action Memorandum has been implemented and is protective of human health and the environment.

Actions Needed

The remedy is functioning as designed, and the Site has been maintained appropriately. No deficiencies were noted that impact the protectiveness of the remedy, and the remedy should remain protective if Site Operation and Maintenance is continued. Ground water monitoring and surface water monitoring shall also continue as detailed in the Statement of Work for the Site Consent Decree.

Determinations

I have determined that the remedy for the Cleveland Mill Superfund Site is protective of human health and the environment.

Myron O. Knudson

8-20-02

Myron O. Knudson, P.E.
Director, Superfund Division
U.S. Environmental Protection Agency
Region 6

Date

CONCURRENCES

FIRST FIVE-YEAR REVIEW REPORT
for
Cleveland Mill Superfund Site
Grant County, New Mexico
EPA ID# NMD981155930

Kathleen A. Aisling — 8/13/02
Remedial Project Manager, Technical Support Team — Date

James E. Costello, Senior Attorney — 8/20/02
Superfund Branch, Regional Counsel — Date

Mark A. Peycke, Chief — 08/19/02
Superfund Branch, Office of Regional Counsel — Date

Donald Williams, Team Leader — 8/13/02
Technical Support Team — Date

Wren Stenger, Chief — 8/20/02
Chief, LA/NM/OK Branch — Date

Pamela Phillips, Deputy Director — Date
Superfund Division

June Buzzell — 8/20/02
Writer Editor, Superfund Division — Date

Section ***Page***

EXECUTIVE SUMMARY

The first five-year review of the Cleveland Mill Superfund Site (the "Site") located in Silver City, New Mexico, was completed from January 2002 to July 2002. The results of the five-year review indicate that the remedy is protective of human health and the environment. Overall, the remedial actions performed are functioning as designed, and the Site has been maintained appropriately. No deficiencies were noted that impact the protectiveness of the remedy.

The response action at the Site consisted of several steps. First, the tailings and sediment with concentrations above the Remedial Action Goals (RAGs)were excavated and disposed of in an on-site disposal cell. The disposal cell was covered with a cap designed and constructed in a manner to maximize drainage around the disposal cell, minimize erosion, and permanently minimize migration of liquids through the underlying tailings, sediment, and soil. The Site was then re-vegetated with native vegetation to assist in erosion control. Excavated areas were tested to verify that the RAGs had been met. The field activities were completed in November 1998. The site was deleted from the National Priorities List on July 23, 2001.

Operation and Maintenance at the Site consist of inspections to confirm fence integrity, inspection of sediment containment structures, and inspections of the disposal cell. Site inspections, and semi-annual ground water and surface water monitoring have been conducted and no contaminants of concern as defined by the Record of Decision (ROD) have been detected above drinking water standards in the ground water. The concentrations of constituents in wells monitoring the integrity of the disposal cell have been consistent or lower since the removal action was completed.

Based on the five-year review, site documentation confirms the RAGs at the Site as set forth in the Amended ROD have been met and the remedy continues to be protective of human health and the environment.

Five Year Review Summary Form

Site Identification

Site Name (from WasteLAN): Cleveland Mill Site
EPA ID (from WasteLAN):
Region: EPA Region 6
State: NM
City/County: Grant County

Site Status

NPL Status: ☐ Final ■ Deleted ☐ Other (Specify):
Remediation Status (choose all that apply): ☐ Under construction ☐ Operating ■Complete
Multiple OUs? ☐ Yes ■ No
Construction Completion date: September 23, 1999
Has site been put into reuse? ☐ Yes ■ No

Review Status

Reviewing Agency: ■ EPA ☐ NMED ☐ Tribe ☐ Other Federal Agency:
Author: Kathleen Aisling, US EPA Region 6
Review Period: January-July 2002
Date(s) of Site Inspection: January 8, 2002, Re-Inspection July 17, 2002
Type of Review: ■ Statutory
☐ Policy
□ Post-SARA □ Pre-SARA □ NPL-Removal only
□ Non-NPL Remedial Action Site □ NPL State/Tribe-lead
□ Regional Discretion
Review Number: ■ 1 (first) □ 2 (second) □ 3 (third) □ Other (specify):

Triggering Action:
■ Actual RA On-site Construction □ Actual RA Start at OU#____
□ Construction Completion □ Recommendations of Previous Five-Year Review Report
□ Other (specify):

Triggering Action date (from WasteLAN): September 8, 1997
Due Date (five years after triggering action date): September 8, 2002

Issues: EPA and the participating companies addressed EPA, NMED, and citizen concerns raised during the five-year review inspection during the five-year review period. The gate on the road to the Site had been compromised by vandals prior to the January 2002 inspection. A sturdier gate was installed in March 2002. During the five-year review period, neighbors commented that three small areas of their access road (non-maintained county road) were damaged by trucks during the Site cleanup. These three small areas were resurfaced in mid-July 2002.

Five Year Review Summary Form

Recommendations and Follow-up Actions:
Since the issues were addressed during the five-year review period, no additional follow-up actions are recommended.

Protectiveness Statement(s):
The remedy completed for the Cleveland Mill Site is protective of human health and the environment.

Other Comments:

No other comments.

List of Acronyms

AOC	Administrative Order on Consent
ARARs	Applicable or Relevant and Appropriate Requirements
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CD	Consent Decree
CFR	Code of Federal Regulations
EPA	United States Environmental Protection Agency
FR	Federal Register
MCL	Maximum Contaminant Limits
MRRC	Mining Remedial Recovery Company
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NMED	New Mexico Environment Department
NM WQCC	New Mexico Water Quality Control Commission
NPL	National Priorities List
O&M	Operation and Maintenance
OSWER	Office of Solid Waste and Emergency Response
ppb	part per billion
ppm	part per million
PRP	Potentially Responsible Party
RAG	Remedial Action Goal
RAO	Remedial Action Objective
RD	Remedial Design
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
TBC	To Be Considered

I. Introduction

The purpose of this five-year review is to determine whether the remedy at the Cleveland Mill Superfund Site (the "Site") is protective of human health and the environment. The methods, findings, and conclusions of the five-year review are documented in this five-year review report. In addition, this report identifies issues found during the review, and states how these issues were addressed.

The Agency is preparing this five-year review pursuant to CERCLA §121 and the National Contingency Plan (NCP). CERCLA §121 states: *If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgement of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action.*

The Agency interpreted this requirement further in the National Contingency Plan (NCP); 40 CFR §300.430(f)(4)(ii)states: *If a remedial action is selected that results in hazardous substances, pollutants or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.*

The United States Environmental Protection Agency (EPA) Region 6 has conducted a five-year review of the remedial action implemented at the Cleveland Mill Superfund Site (the "Site") in Grant County, New Mexico. The New Mexico Environment Department participated in the review as the support agency. The review, which began with a Site inspection in January 2002, was conducted from January 2002 to July 2002. Participants in the inspection included a representative of the New Mexico Environment Department (NMED), a representative of Mining Remedial Recovery Company (MRRC) representing the Potentially Responsible Parties (the "participating companies"), and the participating companies' contractor, Geochemical Solutions. This report documents the results of the five-year review.

This is the first five-year review for the Cleveland Mill Superfund Site. The triggering action for this review is the date of the initiation of the response action, a removal action, as shown in EPA's Waste LAN database. A description of the relationship between the removal action and the remedial action is given in Section IV of this report. A five-year review of the site is necessary because the response action at the Site, initiated in 1997, included placing treated

tailings and sediment in an onsite disposal cell. Because hazardous substances remain onsite at the levels that do not allow for unlimited use of the disposal cell area of the Site, a five-year review is necessary.

II. Site Chronology

Table 1: Chronology of Site Events

Event	Date
Initial discovery of problem or contamination	1985
Pre-National Priorities List (NPL) responses	None
NPL listing	3/31/89
Removal actions	9/8/97 - 12/10/98[1]
Remedial Investigation/Feasibility Studies	3/29/90 - 9/22/93
ROD signature	9/22/93
ROD Amendments	9/20/99
Enforcement documents	7/3/95 (Consent Decree) 9/18/97 (Administrative Order on Consent)
Remedial design (RD) start	1/19/95[2]
Remedial design complete	11/6/97[3]
Superfund State Contract	N/A, PRP-lead action
Actual remedial action (RA) start	See Removal action dates

[1]Date of Removal Action Final Report from the participating companies.

[2]This is the date the RD to implement the 1993 ROD was initiated.

[3]This is the date the participating companies removal work plan was approved. There was no RA work plan.

Event	Date
Construction dates (start, finish)	See Removal action dates
Construction completion date	9/23/99
Final Close-out Report	6/16/00
Deletion from NPL	7/23/02
Previous five-year reviews	None

III. Background

The Cleveland Mill Superfund Site is located in southwestern New Mexico, approximately 5.5 miles north of Silver City in Grant County, New Mexico. The coordinates of the Site are the northeast quarter of Section 2, Township 17 South, Range 14 West. The Site, which contained an operating mine and mill in the early part of the century, is located at the headwaters of a small tributary of Little Walnut Creek, an intermittent creek. The Site occupies approximately 4 acres in mountainous terrain at an elevation of 7,100 feet above mean sea level (MSL), and it also occupies approximately 14 acres which extend down the drainage area (the intermittent creek) and into the streambed of Little Walnut Creek.

The Site is located in a developing residential area that is adjacent to the Gila National Forest and private lands. Downstream residences are concentrated along Little Walnut Creek, almost all of which rely on private wells for potable water and agricultural uses. The nearest residence is located about 3,200 feet southwest of the Site, although residences closer to the Site are under construction. The population within a 3-mile radius of the Site is estimated to be 1,200. The present and future land uses for the Site and the surrounding land are residential, recreational, and agricultural with limited grazing of cattle.

Disposal of mill tailings and mine waste rock occurred in several areas of the Site during mining activities and during processing related to the Cleveland Mine. These areas contained tailings and sediment[4] contaminated with metals such as arsenic, beryllium, cadmium, lead, and zinc from the ore processing. The March 1993 Remedial Investigation (RI) report stated that a shallow on-site aquifer at the toe of the tailings was also contaminated with beryllium and cadmium, and residential wells downstream from the Site in a deeper aquifer showed effects from the Site. The residential wells showed elevated concentrations of sulfates which are also found in the tailings, but the wells did not have any Site-related contaminants at concentrations exceeding health-based standards.

Citizen complaints to the New Mexico Environment Department (NMED), formerly the New Mexico Environmental Improvement Division, are what initially led to NMED's 1985

[4] Note that the term "tailings and sediment" was used to ensure that the participating companies cleaned all the contamination in the soil media, most of which were tailings that had fallen into the Site drainage. Because this drainage area, a small tributary to Little Walnut Creek, is almost always dry, this material is not technically "sediment" as that term is used in most EPA documents.

identification of the Site as an area of potential concern. Residents along Little Walnut Creek and the Site drainage area that served as a tributary of the creek complained about the acidic run-off of tailings into the creek, causing the water color to change to dark red. The Site was proposed to the National Priorities List (NPL) on June 24, 1988, and added to the final NPL on March 31, 1989. Risk from direct contact with Site contaminants in the soil media (tailings and sediment) and in the surface water, and the potential risk to the residents' drinking water wells were determined to be the primary health threats.

There were no response actions taken at the Site until implementation of the Action Memorandum. This is explained in the following section.

IV. Remedial Actions

The EPA, in consultation with NMED, signed a ROD for the Site on September 22, 1993, to address all contaminated areas of the Site in one operable unit. The overall Site remedy, as described in the 1993 ROD, would have addressed the current and potential threats to human health and the environment at the Site through excavation of the waste material, transportation of the waste material to a reprocessor for treatment, and disposal of the residuals at the reprocessing facility in an area where other tailings and residuals from ore-processing were disposed. The remedy in the 1993 ROD did not include a remedy for the shallow onsite aquifer because the EPA believed that the contamination would attenuate once the source was removed. Therefore, the 1993 ROD included ground water monitoring to ensure that the contamination did not worsen or spread to nearby residential wells prior to the source removal.

In a June 12, 1995, Consent Decree (CD), the participating companies, Mining Remedial Recovery Company, Bayard Mining Corp., and Viacom Inc., agreed to implement the remedy specified in the 1993 ROD. The participating companies started the Remedial Design of the remedy. However, the 1993 ROD remedy was not implemented because the search for an acceptable off-site disposal facility was ultimately unsuccessful, and, during the search, unanticipated weather events caused extensive contaminant migration at the Site. This contaminant migration increased the potential risk to human health and the environment and made the risk more immediate.

To address the immediate risks, on July 11, 1997, the EPA, with the concurrence of the NMED, issued an Action Memorandum that authorized a time-critical removal action to physically address the Site contamination and to restore affected surface areas at the Site. The participating companies agreed to implement this action through an Administrative Order on Consent (AOC) with EPA which became effective on September 23, 1997. The Removal Action

Work Plan, submitted by the participating companies, was approved by EPA on November 6, 1997, though some preliminary Site work was initialized through a letter agreement in September 1997. The Removal Action Work Plan detailed the design criteria and the steps that would be undertaken to achieve the goals and objectives of the 1993 ROD.

The time-critical removal action included:

- excavation of 164,960 cubic yards of contaminated tailings and sediment from the mine area, the mill area, and the streambed;
- neutralization of the acidic excavated material through admixing with limestone;
- disposal of the neutralized material in a limestone cell constructed at the Site;
- covering of the cell with a multi-layered cap,
- construction of erosion control measures such as terraces; and
- re-seeding of the disturbed areas of the Site and the disposal cell cap.

Health-based remediation goals for the soil media specified in the 1993 ROD (these goals were referred to as Remedial Action Goals in the 1993 ROD) and incorporated into the 1997 Action Memorandum included: arsenic, 30 milligrams per kilogram of soil (mg/kg); beryllium, 4 mg/kg; cadmium, 140 mg/kg; lead, 500 mg/kg; and zinc, 82,000 mg/kg. At the conclusion of the time-critical removal action, confirmatory samples were taken in all excavated areas of the Site to verify that all tailings and sediment with concentrations of contaminants higher than the remediation goals had been removed.

The field activities required by the AOC were completed on November 19, 1998, the date on which the last area of the Site was seeded. Completion of the final AOC requirement occurred on December 10, 1998, the date the participating companies submitted the Removal Action Final Report.

The EPA issued an Amended ROD for the Site on September 20, 1999, stating that no further response action was necessary; however, as explained in the Amended ROD, the ground water and surface water monitoring, Operation and Maintenance (O&M) of the constructed remedy, and implementation of the existing institutional controls will continue as specified in the 1993 ROD and the 1995 CD. Institutional controls include restrictive covenants limiting the use

of ground water and advising future owners about the risks of disturbing the cover and/or the underlying material. Access to the Site (located in mountainous terrain) is currently limited through the use of gates and some fencing. Restrictive covenants, limiting land and ground water use in the disposal cell area, were filed in August 1999. Therefore, all institutional controls are in place.

Operation and Maintenance activities began immediately after the completion of the removal action. The participating companies, as agreed upon in the CD and accompanying Statement of Work (SOW) and the AOC, and as detailed in the O&M Plan, have assumed all responsibility for O&M at the Site, with EPA and NMED oversight. O&M activities include routine Site inspections to ensure that the cap on the disposal cell remains intact and that vegetative cover at the Site is sufficient to minimize erosion in the excavated areas. In addition, ground water and surface water monitoring are performed on a schedule stated in the CD SOW and in the O&M Plan. Currently, the ground water monitoring is performed twice annually in January and July. The purpose of the ground water monitoring is to ensure that the disposal cell remains intact and does not discharge contaminants to the environment.

The participating companies have paid for EPA past costs and oversight costs, implementation of the cleanup, and O&M activities to date. Under the AOC, the CD, and the amended CD when it is issued, the PRPs will continue to pay O&M and oversight costs. Although the participating companies have not disclosed their O&M costs, the EPA believes that the costs are comparable or somewhat lower than the O&M costs of $51,250 estimated in the 1993 ROD.

V. Progress Since the Last Review

This is the first five-year review for the Site, so there are no follow-up actions or recommendations from the last review on which to report. Issues that were discovered during the five-year review inspection in January 2002, have already been addressed. (See Section VII, Issues.)

VI. Five-Year Review Process

Administrative Components and Community Involvement

The EPA, NMED, MRRC (participating company representative) and Geochemical Solutions (participating company contractor) participated in the five-year review process. The

EPA announced the five-year review process in the local newspaper in January 2002. (See Attachment 1, Public Notice of Five-Year Review.) The period of review was from January 2002 through July 2002. As part of the evaluation, the following activities were conducted:

- EPA, NMED, neighbors, and community members were interviewed;
- Site documents were reviewed;
- Ground water and surface water data were reviewed; and
- The Site was inspected.

All activities and findings are described in the following sections.

Document Review

This five-year review consisted of a review of relevant documents including Site Progress Reports generated during the O&M period. (See Attachment 2, January 2002 Progress Report for the Cleveland Mill Superfund Site.) Applicable Remedial Action Goals and Remedial Action Objectives(RAOs), which were incorporated into the Action Memorandum, were also reviewed.

Data Review

Ground Water Monitoring

Ground water monitoring at the Site has been conducted since the middle of the removal action in 1997. Contaminants were detected at their highest levels early in the history of the site (during the Remedial Investigation in the early 1990s.) The drop in these concentrations is most likely a result of the removal action which removed the source of contamination, the tailings and sediment.

The ROD did not select a remedy for ground water because all the monitoring wells and residential wells used to gather RI data were below Safe Drinking Water Act Maximum Contaminants Levels (MCLs) and New Mexico Water Quality Control Commission (NM WQCCs) standards. These wells, and additional wells installed during the removal action to ensure that the disposal cell is not leaking contaminants, have been below these Federal and State standards throughout the O&M period. The residential wells that were used to monitor effects from Site run-off were dropped from the sampling program because they were no longer necessary, and because these wells had contaminants at stable or decreasing concentrations below

Federal and State standards. The reasons for changing the sampling program are documented in a February 2001 letter from EPA to MRRC.

One of the RAOs for the Site from the 1993 ROD is to return the shallow perched aquifer at the toe of the tailings to a condition where the concentration of contaminants is below MCLs and NM WQCCs; however, the shallow aquifer no longer exists. Once the tailings were removed, three attempts to drill wells at the toe of the tailings were unsuccessful in hitting water, and the well currently installed in that area has been dry since the monitoring was initiated in 1997. EPA believes that the shallow aquifer at the toe of the tailings was a perched aquifer that existed because of the tailings and that it was dismantled when the tailings were removed.

The ground water monitoring wells will continue to be sampled on a schedule set forth in the CD, the O&M Plan, and subsequent letter revisions to the O&M Plan. The Site area has been in severe drought conditions since the ground water monitoring was initiated, so the possibility remains that ground water data may change if there are non-drought years.

Surface Water Monitoring

The 1993 ROD did not select a remedy for surface water because EPA expected that once the source of surface water contamination was removed, all site-related surface water effects (contamination and diminished water quality) would be resolved. Note that the Site and surrounding area is highly mineralized so that the surface water could still be affected from non-site-related natural features.

All surface water sampling locations have been dry since January 2001, so they could not be sampled during the five-year review inspection. However, water quality parameters measured in surface water decreased significantly immediately after the removal action was completed. For example, the surface water sample at the base of the former east tailing pile changed from a total dissolved solids maximum of 53,000 mg/L in September 1997 to 6,800 mg/L in January 2001, for a total reduction of 87 percent. The participating companies have since removed some residuals from sediment retention structures and successfully revegetated the Site. Therefore, EPA expects that future effects on the surface water from the Site will be minimal, even in non-drought conditions.

The surface water locations will continue to be inspected and sampled during flowing conditions on a schedule set forth in the CD and the O&M Plan, and subsequent letter revisions to the O&M Plan.

Site Inspection

The Site was inspected by Kathleen Aisling of EPA, Chris Meehan of NMED, Norman Johnson of MRRC, and Wendy Meyer of Geochemical Solutions, MRRC's contractor, on January 8, 2002. Geochemical Solutions provided the Site data, photographs, and information for use in most of the tables in this report; transcribed the community interviews; made some tables; and performed a review of the administrative record, in addition to the review performed by EPA.

The Site Inspection Form is included as Attachment 3. The site inspection indicated that all items inspected were acceptable: the disposal area was secure; there was little erosion; the cap on the disposal cell was intact; the sediment retention structures were not full; and vegetation was growing.

There was some evidence of trespassing on the Site property such as tire tracks and fire rings, and the front gate appeared to be somewhat compromised, but this did not affect the protectiveness of the remedy. The gate was immediately repaired, then replaced by a much sturdier gate in March 2002.

A follow-up inspection, conducted in conjunction with the bi-annual sampling, was conducted by EPA July 17, 2002. Site photographs from the July inspection are included as Attachment 4.

Interviews

Interviews of neighbors and community members were conducted on January 8-9, 2002, in Silver City, Grant County, New Mexico. The interview responses, including EPA and NMED responses, are included as Attachment 5. Interviews were conducted with the following local residents and local organization representatives:

- Rocky Vendrely, NMED District Field Office Manager,
- Nick DeBono, nearby resident (also interviewed by telephone in May 2002),
- Paul and Patricia Unger, nearby landowners, and
- Candace Ross, local resident who served as MRRC Silver City contact in the past.

EPA attempted to interview the appropriate County Commissioner and the mayor of Silver City, but they were unavailable.

All interviewees were complimentary about the work done at the Site, especially the remediation of Little Walnut Creek. The nearby Site neighbors did have one issue regarding the access road to the Site. The resolution of this issue is included in Section IX of this report.

VII. Technical Assessment

Question A: Is the remedy functioning as intended by the decisions documents?

The review of documents, Applicable, or Relevant and Appropriate Requirement (ARARs), risk assumptions, and the results of the site inspection indicate that the remedy is functioning as intended by the 1993 ROD and the Amended ROD. The neutralization, disposal, and capping of the contaminated tailings and sediments has achieved the remedial objectives of preventing dermal contact, ingestion of, and inhalation of contaminated tailings and sediment; and preventing the downstream aquifers from becoming contaminated with hazardous substances from the tailings and sediments, at concentrations which exceed MCLs and NM WQCC standards.

Operation and Maintenance of the cap on the disposal cell has been effective. The vegetation on the cap has increased during each inspection, and the cap has remained intact. There were no opportunities for system optimization observed during this review. The monitoring well network provides sufficient data to assess the protectiveness of the disposal cell and the vegetation on the cap is sufficient to maintain its integrity.

The institutional controls that are in place include prohibitions against use of ground water in the area of the disposal cell, excavation activities, disturbing the cap, or any other activities or actions that might interfere with the implemented remedy. During the July 2002 inspection, the gate at the entrance to the Site was in excellent condition, and the fencing around the disposal cell was intact and in good repair.

Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection still valid?

There have been no changes in the physical conditions of the Site that would affect the protectiveness of the remedy. However, as noted in Section VI of this report, one of the Site RAOs is to return the shallow perched aquifer at the toe of the tailings to a condition where the concentration of contaminants is below MCLs and NM WQCCs. EPA believes that the shallow aquifer at the toe of the tailings was a perched aquifer that existed because of the tailings and that it was dismantled when the tailings were removed. Therefore, this RAO is no longer applicable

to the Site due to physical changes that were made during the removal action.

Changes in Standards and To Be Considereds

Since the remedial work as the Site is complete, the ARARs in the ROD cited for soils and sediment have been met. No newly promulgated standards call into question the protectiveness of the remedy.

One MCL changed recently during the five-year review period: the MCL for arsenic, which went from 50 parts per billion (ppb) to 10 ppb. A review of site data shows that all data except for one data point from two different wells (one in 1997 and one in1999) have been below the new arsenic standard. These two wells had results right at the standard (10 ppb and 11 ppb) and do not appear to be a part of an increasing trend or to have significance at the Site. All current data for arsenic is below the new MCL, and recent data for arsenic and most of the other metals monitored at that Site have been below detection limits (and, thus, below the MCLs.) This newly promulgated standard does not call into question the protectiveness of the remedy. The new arsenic MCL will be used for all future Site data analysis.

Changes in Exposure Pathways, Toxicity, and other Contaminant Characteristics

The exposure assumptions used to develop the Human Health Risk Assessment included both current exposures and potential future exposures which have not changed because land use has not changed. There have been no changes in the toxicity factors for the contaminants of concern that were used in the baseline risk assessment. These assumptions are considered to be conservative and reasonable in evaluating risk and developing risk-based cleanup levels. No change to these assumptions, or the cleanup levels developed from them is warranted. There has been no change to the standardized risk assessment methodology that could affect the protectiveness of the remedy. The remedy is complete and all cleanup standards and RAOs have been met, except as noted in Question A where one RAO is no longer applicable.

Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

No new information was discovered during the five-year review period that could affect the protectiveness of the remedy.

Technical Assessment Summary

According to the data reviewed, the Site inspection, and the interviews, the remedy is functioning as intended by the ROD and the Amended ROD. There have been no changes in the physical conditions of the Site that would affect the protectiveness of the remedy. All ARARs for the tailings and sediment (soil media) contamination have been met. There have been no changes in the toxicity factor or the standard risk assessment methodology that could affect the protectiveness of the remedy. There is no other information that calls into question the protectiveness of the remedy.

VIII. Issues

Two issues, disrepair of the road after the removal action and vandalism of the gate at the entrance to the Site were brought to EPA's attention during the five-year review inspection.

1. **Issue:** During the five-year review period, a nearby site neighbor and two nearby Site landowners, stated that the access road to their property and the Site (a non-maintained county road) had deteriorated because of truck traffic during the removal action. They believed that the road had deteriorated and become rutted in three places where the top layer of packed gravel had been scraped off while the road was graded when it snowed during the removal action. This caused the road to be difficult to negotiate during precipitation. The neighbors also said that they had been told that the road would receive fresh gravel on those portions at the end of the removal action, but that this was never completed.

   This issue did not affect the protectiveness of the remedy, nor could it have done so in the future; however, EPA did address the issue.

   Resolution: The road was repaired using participating company funding. At the same time, the nearby landowners paid to have the rest of the road regraded and regraveled.

2. **Issue:** During the January 2002 five-year review inspection, the gate at the entrance to the Site had been compromised. There was some evidence of trespassing on the Site property which had not affected the protectiveness of the remedy, but could have in the future if trespassers disturbed the disposal cell cap or the revegetated areas of the Site. (Note that the disposal cell itself is fenced and gated.) After talking to Site neighbors and inspecting the gate, the problem appeared to be that the gate had been unbolted so that it could be disassembled, allowing vehicles access to the Site.

   Resolution: The gate was immediately repaired in January 2002, then replaced by a

much sturdier gate in March 2002. During the July 2002 inspection, the new gate was intact and there was much less indication of vehicular traffic on the Site roads.

IX. Recommendations and Follow-up Actions

Because the two issues, disrepair of the road after the removal action and vandalism of the gate at the entrance to the Site have been resolved, there are no recommendations or follow-up actions. Site inspections, a part of O&M, and monitoring of ground water and surface water will continue.

X. Protectiveness Statement

This Site met all the site completion requirements as specified in OSWER Directive 9320.2-09A-P, Closeout Procedures for National Priorities List Sites and was closed out on June 16, 2000. Specifically, confirmatory sampling verified that the Site had achieved the 1993 ROD remediation goals, and that all cleanup actions specified in the Site RODs and the Site Action Memorandum had been implemented. The Site risks associated with the tailings and sediment have been eliminated or reduced to acceptable levels through institutional controls, excavation, treatment, and onsite disposal. The only remaining activities that are being preformed are O&M activities, and ground water and surface water monitoring to ensure the protectiveness of the remedy.

Because the remedial action is protective, the Site is protective of human health and the environment.

XI. Next Review

The next five-year review for the Cleveland Mill Superfund Site is required by September 2007, five years from the date of this review.

Attachment 1

Public Notice of Five-Year Review

CLEVELAND MILL SUPERFUND SITE
PUBLIC NOTICE

U.S. EPA Region 6 Begins First Five-Year Review of Site Remedy
January 2002

The U.S. Environmental Protection Agency (EPA) is beginning the First Five-Year Review of the remedy at the Cleveland Mill Superfund Site (the Site) in Grant County, New Mexico, about 5.5 miles north of Silver City. The Site cleanup was necessary because disposal of mill tailings had contaminated the soil near the mine site, and had also contaminated the sediment in the streambed of Little Walnut Creek with metals such as arsenic, beryllium, cadmium, lead, and zinc. The EPA conducts a Five-Year Review after a Superfund National Priorities List (NPL) site cleanup is completed at sites where waste remains onsite at levels that do not allow for unlimited use. Because the tailings and sediment at the Site were treated and placed into an onsite disposal cell, a portion of the site (the disposal cell) cannot be used, and a Five-Year Review is required.

Since implementation of the remedy was completed in November 1998, ground water and surface water monitoring, operation and maintenance (O&M) of the constructed remedy which includes periodic inspections, and implementation of the existing institutional controls (such as a restrictive covenant limiting land use) have continued. The purpose of this Five-Year Review is to assure that human health and the environment continue to be protected by the remedy that was implemented at the Site. During the review process, EPA will analyze site ground water data; inspect the cap on the disposal cell and the erosion control measures; and review the access limitations at the Site. The EPA will also consider any information or concerns that people may have about the Site during the review process, which is expected to last until mid-2002.

Information about the Site is located on the Internet at: http://www.epa.gov/earth1r6/6sf/pdffiles/clv-mill.pdf

The administrative record for the Site, which includes all major site documents and reports, is located at the EPA Dallas office and the New Mexico Environment Department Santa Fe office as well as the following local information repository:

Silver City Public Library
5151 West College Avenue
Silver City, New Mexico 88061
(505) 538-3672

You may contact the EPA Remedial Project Manager if you have any questions or concerns about the Site:

Kathleen Aisling
U.S. EPA Region 6 (6SF-LT)
1445 Ross Avenue
Dallas, Texas 75202-2733
(214) 665-8509 or
1-800-533-3508 (toll-free)

CONFIRMED publication in the Silver City Daily Press on Thursday, January 3, 2002, and Monday, January 7, 2002
CH2M HILL/Bernard Hodes 972-980-2170

Attachment 2

January 2002 Progress Report

Sample ID	Well ID	Date Sampled	Time Sampled	pH (Lab)	Q*	TDS	Sulfate	Total Alkalinity	Acidity	Q*	Arsenic	Q*	Beryllium	Q*	Cadmium	Q*	Copper	Q*	Lead	Q*	Mercury	Q*	Silver
											Metals Analyzed for every sample												
Units				units		mg/L	mg/L	mg/L	mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L
EPA Method Number				M150.1		M160.1	M375.3	M2320B	M2310B		M206.2		M200.7		M200.7		M200.7		M239.2		M245.1		M200.7
NMWQCC Stds				6-9**		1000**	600**				0.1				0.01		1**		0.05		0.002		0.05
EPA MCLs				6.5-8.5**		500**	250**				0.010 ++		0.004		0.005		1.3		0.015		0.002		0.10**
MW-1	MW-1	12-Jun-97	1800	3.5		8468	5580		1872		*<0.005*	U	*0.011*		*1.28*		*0.6*		*2.08*		*<0.001*	U	*<0.01*
MW-2	MW-2	12-Jun-97	2030	7.1		1644	778	425	<1	U	*0.022*		*<0.004*	U	*<0.001*	U	*<0.01*	U	*<0.005*	U	*<0.001*	U	*<0.01*
MW-2D	MW-2	12-Jun-97	2015	7.2		1478	708	349	<1	U	*<0.005*	U	*<0.004*	U	*<0.001*	U	*<0.01*	U	*<0.005*	U	*<0.001*	U	*<0.01*
CMRAGW003	MW-2	10-Sep-97	1115	7.8		1770	880	437			*0.008*		*<0.01*	U	*<0.003*	U	*<0.05*	U	*<0.001*	U	*<0.0002*	U	*<0.03*
CMRAGW004 (DUPL)	MW-2	10-Sep-97	1130	7.8		1800	870	439			*0.008*		*<0.002*	U	*<0.02*	U	*0.01*		*<0.001*	U	*<0.0002*	U	*<0.005*
GWMW2-2	MW-2	12-Dec-97	1530	7.8				206			0.02		<0.002	U	0.007		0.03		0.038		0.0004		<0.005
GWMW2-3	MW-2	10-Mar-98	1200	7.4		1230	550	398			0.004		<0.002	U	<0.003	U	<0.01	U	0.008		<0.0002	U	<0.005
MW-2	MW-2	05-Jun-98	1055	7.6		1640	760	447	<2	U	0.008		<0.002	U	<0.003	U	0.03		0.014		<0.0002	U	<0.005
GWMW2-5	MW-2	25-Sep-98	1230	7.3		1570	720	408	<2	U	0.004		<0.002	U	<0.003	U	0.02		0.015		<0.0002	U	<0.005
GW-2	MW-2	19-Nov-98	1020	7.2		1360	590	423			0.003		<0.002	U	<0.003	U	0.03		0.004		<0.0002	U	<0.005
MW-2	MW-2	04-Feb-99	1430	7.3		1400	680	382	<2	U	0.002		<0.002	U	<0.003	U	<0.01	U	0.002		<0.0002	U	<0.005
GW-2	MW-2	11-Jun-99	1645	7.1		1660	900	347	<2	U	0.002		<0.002	U	<0.003	U	0.02		0.014		<0.0002	U	<0.005
GW-2	MW-2	07-Sep-99	900	6.9		1730	870	374	<2				<0.002	U	<0.003	U	0.02		0.04		<0.0002	U	<0.005
GW-D-10 (Dupe of GW-2)	MW-2	07-Sep-99	700	7.1		1720	980	376	<2		0.01		<0.002	U	<0.003	U	0.01		0.04		<0.0002	U	<0.005
MW-2	MW-2	30-Nov-99	1300	7.1		1800	997	360			0.006		<0.002	U	<0.003	U	<0.01	U	0.012		<0.0002	U	<0.005
MW-2	MW-2	24-Mar-00	1225	7.6		1810	1050	329			0.003		<0.002	U	<0.003	U	<0.01	U	0.004		<0.0002	U	<0.005
MW-2	MW-2	27-Jun-00	1445	6.9		2070	1250	250	<2	U	0.001		<0.004	U	<0.006	U	<0.02	U	0.002		<0.0002	U	<0.01
GWMW3-2	MW-3	18-Dec-97	1445	7.9				127			0.002		<0.002	U	0.003		0.01		0.004		<0.0002	U	<0.005
GWMW3-3	MW-3	04-Mar-98	1520	7.6		490	170	209			0.003		<0.002	U	<0.003	U	0.01		0.009		<0.0002	U	0.007
MW-3	MW-3	05-Jun-98	900	7.5		460	130	200	<2	U	0.002		<0.002	U	<0.003	U	0.02		0.007		<0.0002	U	<0.005
GWMW3-5	MW-3	23-Sep-98	1740	8.0		480	160	220	<2	U	<0.001	U	<0.002	U	<0.003	U	<0.01	U	<0.001	U	<0.0002	U	<0.005
GW-D-2 (Dupe of GWMW	MW-3	23-Sep-98	1500	7.8		480	160	216	<2	U	<0.001	U	<0.002	U	<0.003	U	<0.01	U	<0.001	U	<0.0002	U	<0.005
GW-3	MW-3	19-Nov-98	1620	7.5		480	150	221			0.002		<0.002	U	<0.003	U	0.01		0.007		<0.0002	U	<0.005
MW-3	MW-3	04-Feb-99	1515	7.4		450	150	216	<2	U	<0.001	U	<0.002	U	<0.003	U	<0.01	U	<0.001	U	<0.0002	U	<0.005
GW-3	MW-3	11-Jun-99	1110	7.5		440	150	215	<2	U	<0.001	U	<0.002	U	<0.003	U	0.01		0.001		<0.0002	U	<0.005
GW-3	MW-3	06-Sep-99	1415	6.9		460	120	219	<2	U	<0.001	U	<0.002	U	<0.003	U	<0.01	U	<0.040	U	<0.0002	U	<0.005
MW-3	MW-3	29-Nov-99	1400	7.3		420	130	202			<0.001	U	<0.002	U	<0.003	U	<0.01	U	0.003		<0.0002	U	<0.005
MW-3	MW-3	24-Mar-00	1245	7.8		460	140	387			0.002		<0.002	U	<0.003	U	0.02		0.115		<0.0002	U	<0.005
MW-3	MW-3	27-Jun-00	1210	7.4		440	130	221	<2	U	<0.001	U	<0.002	U	<0.003	U	0.01		0.018		<0.0002	U	<0.005
MW-3	MW-3	25-Sep-00	0:00	7.2		400	110	170	<2	U	<0.001	U	<0.002	U	0.005	U	0.02		0.022		<0.0002	U	<0.005
MW-3	MW-3	04-Jan-01	1715	7.4		310	80	156	<2	U	<0.001	U	<0.002	U	<0.003	U	<0.01	U	0.031		<0.0002	U	<0.005
97MW-4	97MW-4	06-Jun-97	1040	7.2			128	317			*<0.005*	U	*<0.004*	U	*<0.001*	U	*<0.01*	U	*<0.005*	U	*<0.001*	U	*<0.01*
CMRAGW006	97MW-4	11-Sep-97	1030	7.7		630	110	192			*0.001*		*<0.002*	U	*<0.003*	U	*<0.01*	U	*<0.001*	U	*<0.0002*	U	*<0.005*
GWMW4-2	97MW-4	18-Dec-97	840	8.0				176			0.001		<0.002	U	<0.003	U	<0.01	U	0.001		<0.0002	U	<0.005
GWMW4-3	97MW-4	04-Mar-98	1100	7.0		600	120	323			<0.001	U	<0.002	U	<0.003	U	<0.01	U	0.001		<0.0002	U	<0.005
GWMW4D-3	97MW-4	04-Mar-98	1100	7.4		600	120	324			<0.001	U	<0.002	U	<0.003	U	<0.01	U	<0.001	U	<0.0002	U	<0.005
MW-4	97MW-4	04-Jun-98	1120	7.2		700	160	324	<2	U	<0.001	U	<0.002	U	<0.003	U	<0.01	U	<0.001	U	<0.0002	U	<0.005

		Units		pH (Lab)	Q*	TDS	Sulfate	Total Alkalinity	Acidity	Q*	Arsenic	Q*	Beryllium	Q*	Cadmium	Q*	Copper	Q*	Lead	Q*	Mercury	Q*	Silver
				units		mg/L	mg/L	mg/L	mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L
GWMW4-5	97MW-4	24-Sep-98	1355	7.9		990	210	434	<2	U	<0.001	U	<0.002	U	<0.003	U	<0.01	U	<0.001	U	<0.0002	U	<0.005
GW-4	97MW-4	20-Nov-98	1530	7.1		1010	230	435			<0.001	U	<0.002	U	<0.003	U	<0.01	U	<0.001	U	<0.0002	U	<0.005
GW-D-6 (Dupe of GW-4)	97MW-4	20-Nov-98	800	7.0		990	230	437			<0.001	U	<0.002	U	0.003		<0.01	U	<0.001	U	<0.0002	U	<0.005
MW-4	97MW-4	05-Feb-99	1120	7.0		930	220	414	<2	U	<0.001	U	<0.002	U	<0.003	U	<0.01	U	<0.001	U	<0.0002	U	<0.005
GW-4	97MW-4	11-Jun-99	1635	6.7		1000	220	427	<2	U	<0.001	U	<0.002	U	<0.003	U	<0.01	U	<0.001	U	<0.0002	U	<0.005
GW-4	97MW-4	07-Sep-99	1310	6.8		1030	210	430	<2	U	<0.001	U	<0.002	U	<0.003	U	<0.01	U	<0.040	U	<0.0002	U	<0.005
MW-4	97MW-4	30-Nov-99	1510	6.9		1040	200	463			<0.001	U	<0.002	U	<0.003	U	<0.01	U	0.082		<0.0002	U	<0.005
MW-4	97MW-4	24-Mar-00	928	7.7		1050	200	443			<0.001	U	<0.002	U	<0.003	U	<0.01	U	0.002		<0.0002	U	<0.005
MW-2A (Dupe of MW-4)	97MW-4	24-Mar-00	1104	7.8		1050	200	447			<0.001	U	<0.002	U	<0.003	U	<0.01	U	0.001		<0.0002	U	<0.005
MW-4	97MW-4	27-Jun-00	1714	6.8		998	200	457			<0.001	U	<0.002	U	<0.003	U	<0.01	U	0.003		<0.0002	U	<0.005
MW-4	97MW-4	25-Sep-00	0	7.1		970	200	410			0.001		<0.002	U	<0.003	U	<0.01	U	0.001		<0.0002	U	<0.005
MW-4	97MW-4	04-Jan-01	1620	6.9		1220	210	538	<2	U	<0.001	U	<0.002	U	<0.003	U	<0.01	U	0.001		<0.0002	U	<0.005
GW-4	97MW-4	18-Jul-01	820	6.9		1600	370	607	<2	U	<0.001	U	<0.002	U	<0.003	U	<0.01	U	0.002	B	<0.0002	U	<0.005
MW-4	97MW-4	08-Jan-02	3:40	7.4	H	1380	400	524	<2	U	<0.001	U	<0.002	U	<0.003	U	<0.01	U	0.001	B	<0.0002	U	<0.005
MW-4	MW-4	17-Jul-02	10:15	6.4	H	1600	380	608	<2		<0.001	U	<0.002	U	<0.003	U	<0.01	U	0.002	B	<0.0002	U	<0.005
97MW-5	97MW-5	05-Jun-97	18:50	7.8		85	201				*<0.005*	U	*<0.004*	U	*<0.001*	U	*<0.01*	U	*<0.005*	U	*<0.0010*	U	*<0.010*
CMRAGW007	97MW-5	11-Sep-97	11:00	8.5		420	60	210			*0.004*		*<0.002*	U	*<0.003*	U	*<0.01*	U	*<0.001*	U	*<0.0002*	U	*<0.005*
GWMW5-2	97MW-5	18-Dec-97	1130	8.2				166			0.011		<0.002	U	0.005		0.02		0.024		<0.0002	U	<0.005
GWMW5-3	97MW-5	04-Mar-98	1300	7.7		420	50	209			0.006		<0.002	U	<0.003	U	0.01		0.015		<0.0002	U	<0.005
MW-5	97MW-5	04-Jun-98	1700	7.7		480	60	194	<2	U	0.004		<0.002	U	<0.003	U	<0.01	U	0.008		<0.0002	U	<0.005
GWMW5-5	97MW-5	24-Sep-98	1700	8		600	60	219	<2	U	0.005		<0.002	U	<0.003	U	<0.01	U	0.003		<0.0002	U	<0.005
GW-5	97MW-5	20-Nov-98	1400	7.9		630	40	212			0.006		<0.002	U	<0.003	U	0.01		0.013		<0.0002	U	<0.005
MW-5	97MW-5	05-Feb-99	1030	7.4		620	40	234	<2	U	0.003		<0.002	U	<0.003	U	<0.01	U	0.011		<0.0002	U	<0.005
GW-D-8 (Dupe of MW-5)	97MW-5	05-Feb-99	800	7.5		660	40	242	<2	U	0.004		<0.002	U	<0.003	U	<0.01	U	0.008		<0.0002	U	<0.005
GW-5	97MW-5	10-Jun-99	1530	6.8		780	40	292	<2	U	0.001		<0.002	U	<0.003	U	<0.01	U	0.006		<0.0002	U	<0.005
GW-5	97MW-5	06-Sep-99	1715	6.8		910	40	285	<2	U	0.002		<0.002	U	<0.003	U	<0.01	U	0.04		<0.0002	U	<0.005
MW-5	97MW-5	30-Nov-99	1630	7.2		660	50	214			0.002		<0.002	U	<0.003	U	<0.01	U	0.024		<0.0002	U	<0.005
MW-5	97MW-5	24-Mar-00	618	7.7		780	50	311			0.003		<0.002	U	<0.003	U	0.01		0.006		<0.0002	U	<0.005
MW-5	97MW-5	27-Jun-00	1110	6.9		740	60	267			0.003		<0.002	U	<0.003	U	<0.01	U	0.004		<0.0002	U	<0.005
MW-4A (Dupe of MW-5)	97MW-5	27-Jun-00	1110	7		790	60	272			0.003		<0.002	U	<0.003	U	<0.01	U	0.004		<0.0002	U	<0.005
MW-5	97MW-5	25-Sep-00	1449	6.8		810	80	272			0.003		<0.002	U	<0.003	U	<0.01	U	0.005		<0.0002	U	<0.005
MW-2A (Dupe of MW-4)	97MW-5	25-Sep-00	1449	7		850	80	283			0.003		<0.002	U	<0.003	U	<0.01	U	0.005		<0.0002	U	<0.005
MW-5	97MW-5	04-Jan-01	1512	7.2		770	80	301	<2	U	0.001		<0.002	U	<0.003	U	<0.01	U	0.001		<0.0002	U	<0.005
GW-5	97MW-5	18-Jul-01	1230	7.2		840	120	233	<2	U	0.003	B	<0.002	U	<0.003	U	<0.01	U	0.003	B	<0.0002	U	<0.005
MW-5	97MW-5	08-Jan-02	2:45	7.7	H	740	140	243	<2	U	0.002	B	<0.002	U	<0.003	U	<0.01	U	0.004	B	<0.0002	U	<0.005
MW-5	MW-5	17-Jul-02	11:20	6.9	H	850	130	310	<2		0.001	B	<0.002	U	<0.003	U	<0.01	U	0.011		<0.0002	U	<0.005
GWMW-6-1	97MW-6	24-Sep-98	1140	8.1		600	150	316	<2	U	<0.001	U	<0.002	U	<0.003	U	<0.01	U	<0.001	U	<0.0002	U	<0.01
GW-6	97MW-6	19-Nov-98	1140	7.4		530	120	278			<0.001	U	<0.002	U	<0.003	U	<0.01	U	<0.001	U	<0.0002	U	<0.005
MW-6	97MW-6	05-Feb-99	1210	7.4		440	110	259	<2	U	<0.001	U	<0.002	U	<0.003	U	<0.01	U	<0.001	U	<0.0002	U	<0.005
MW-6	97MW-6	30-Nov-99	1045	7.4		430	80	273	<2	U	<0.001	U	<0.002	U	<0.003	U	<0.01	U	0.026		<0.0002	U	<0.005
MW-6	97MW-6	24-Mar-00	1830	8.1		410	80	267	<2	U	0.001		<0.002	U	<0.003	U	<0.01	U	<0.015	U	<0.0002	U	<0.005
MW-6	97MW-6	27-Jun-00	1257	7.3		410	80	261	<2	U	<0.001	U	<0.002	U	<0.003	U	<0.01	U	<0.020	U	<0.0002	U	<0.005
MW-6	97MW-6	04-Jan-01	1155	7.6		420	90	238	<2	U	<0.001	U	<0.002	U	<0.003	U	<0.01	U	0.007		<0.0002	U	<0.005

		Units		pH (Lab)	Q*	TDS	Sulfate	Total Alkalinity	Acidity	Q*	Arsenic	Q*	Beryllium	Q*	Cadmium	Q*	Copper	Q*	Lead	Q*	Mercury	Q*	Silver
				units		mg/L	mg/L	mg/L	mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L
GW-6	97MW-6	18-Jul-01	1330	7.5		430	90	251	<2	U	0.001	B	<0.002	U	<0.003	U	<0.01	U	0.01		<0.0002	U	<0.005
MW-6	97MW-6	08-Jan-02	10:00	7.9	H	420	100	235	<2	U	<0.001	U	<0.002	U	<0.003	U	<0.01	U	0.036		<0.0002	U	<0.005
MW-6	MW-6	17-Jul-02	9:15	7.2	H	450	90	249	<2		<0.001	U	<0.002	U	<0.003	U	<0.01	U	0.007		<0.0002	U	<0.005
DUP-1 (Dupe of MW-6)	MW-6	17-Jul-02	9:00	7.3	H	440	90	249	<2		<0.005	U	<0.002	U	<0.003	U	<0.01	U	<0.001	U	<0.002	U	<0.005
Dry - No Sample	MW-7	25-Sep-98	17:15																				
Dry - No Sample	MW-7	19-Nov-98	15:19																				
Dry - No Sample	MW-7	04-Feb-99	10:20																				
Dry - No Sample	MW-7	10-Jun-99	10:25																				
Dry - No Sample	MW-7	06-Sep-99	12:00																				
Dry - No Sample	MW-7	18-Jul-01	9:45																				
Dry - No Sample	MW-7	08-Jan-02	16:09																				
Dry - No Sample	MW-7	17-Jul-02	11:45																				
Hughes Shallow		12-Jun-97	19:00	6.8		1812	1070	291	<1	U	*<0.005*	U	*<0.004*	U	0.001		0.04		*<0.005*	U	*<0.001*	U	*<0.01*
Hughes Deep	Hughes Potabl	12-Jun-97	710	7.3		834	298	334	<1	U	*<0.005*	U	*<0.004*	U	*<0.001*	U	*0.02*		*<0.005*	U	*<0.001*	U	*<0.01*
Hughes Deep-Total Metals	Hughes Potabl	12-Jun-97	710	7.3		834	298	334	<1	U	<0.005	U	<0.004	U	<0.004	U	0.02		<0.05	U	<0.001	U	<0.01
CMRAGW002	Hughes Potabl	10-Sep-97	1030	8.6		450	190	217			*<0.001*	U	*<0.01*	U	*<0.003*	U	*0.05*		*<0.001*	U	*<0.0002*	U	*<0.03*
GWHU-2	Hughes Potabl	12-Dec-97	1440	7.9				225			0.001		<0.002	U	<0.003	U	0.01		<0.001	U	<0.0002	U	<0.005
GWHU-3	Hughes Potabl	10-Mar-98	1315	6.9		680	260	289			<0.001	U	<0.002	U	<0.003	U	0.02		0.001		<0.0002	U	<0.005
GW-HU	Hughes Potabl	05-Jun-98	1005	7.3		660	230	247	<2	U	<0.001	U	<0.002	U	<0.003	U	0.02		0.001		<0.0002	U	<0.005
GWD1 (Dupe GW-HU)	Hughes Potabl	05-Jun-98	630	7.2		650	220	270	<2	U	<0.001	U	<0.002	U	<0.003	U	0.06		0.001		<0.0002	U	<0.03
GWHU-5	Hughes Potabl	25-Sep-98	1140	7.5		760	250	292	<2	U	<0.001	U	<0.002	U	<0.003	U	<0.01	U	<0.001	U	<0.0002	U	<0.005
GW-HU	Hughes Potabl	19-Nov-98	945	6.9		680	240	262			<0.001	U	<0.002	U	<0.003	U	0.02		<0.001	U	<0.0002	U	<0.005
GW-HU	Hughes Potabl	04-Feb-99	1400	7.3		550	210	214	<2	U	<0.001	U	<0.002	U	<0.003	U	0.01		<0.001	U	<0.0002	U	<0.005
GW-HU	Hughes Potabl	09-Jun-99	1600	7.3		570	210	226	<2	U	<0.001	U	<0.002	U	0.03		0.02		<0.001	U	<0.0002	U	<0.005
GW-HU	Hughes Potabl	07-Sep-99	830	6.8		570	190	245	<2	U	<0.001	U	<0.002	U	<0.003	U	0.01		<0.040	U	<0.0002	U	<0.005
GW-Hu	Hughes Potabl	30-Nov-99	1230	7.2		420	120	198			<0.001	U	<0.002	U	<0.003	U	<0.01	U	<0.001	U	<0.0002	U	<0.005
GW-HU	Hughes Potabl	24-Mar-00	1245	8		700	260	270	<2	U	<0.001	U	<0.002	U	<0.003	U	0.06		<0.001	U	<0.0002	U	<0.01
GW-HU	Hughes Potabl	27-Jun-00	1508	7.1		690	250	267	<2	U	<0.001	U	<0.002	U	<0.003	U	0.03		0.004		<0.0002	U	<0.005
Gosney Well	Gosney Well	13-Jun-97	10:00	7.6		286	18	219	<1	U	<0.005	U	<0.004	U	<0.001	U	0.07		<0.005	U	<0.001	U	<0.01

Q* = Data Qualifiers: U = Undetected, B = Between the Practical Quantitation Limit and Method Detection Limit, H = Holding time was exceeded

** = Secondary Standard

*** = Irrigation Use Standard

++ = As of 1/12/2006

Italics = Dissolved metals; All other metal concentrations are total metals

						Metals with Select Analysis											
		Units	Q*	Zinc	Q*	Aluminum**	Antimony	Barium	Calcium	Chromium	Cobalt**	Iron*	Magnesium	Manganese*	Nickel**	Potassium	Selenium
				mg/L		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
		EPA Metho		M200.7													
Sample ID	Well ID	Date Sampled															
NMWQCC Stds				10**		5		1		0.05	0.05	1		0.2	0.2		0.05
EPA MCLs				5**		0.05-0.2**	0.006	2		0.1		0.3**		0.05**			0.05
MW-1	MW-1	12-Jun-97	U	*341*		*4.31*	*<0.04*	*<0.01*	4.6	*<0.01*	1	*614*	418	120	*0.49*	*1.02*	*<0.005*
MW-2	MW-2	12-Jun-97	U	0.11		*<0.05*	*<0.04*	*0.04*	*313*	*<0.01*	*<0.01*	*0.2*	*84*	*0.3*	*<0.01*	0.55	*<0.005*
MW-2D	MW-2	12-Jun-97	U	*<0.02*	U	*<0.05*	*<0.04*	*0.02*	*321*	*0.01*	*<0.01*	*0.34*	*68*	*0.45*	*<0.01*	*1.2*	*<0.005*
CMRAGW003	MW-2	10-Sep-97	U	*<0.3*	U												
CMRAGW004 (DUPL)	MW-2	10-Sep-97	U	*<0.01*	U												
GWMW2-2	MW-2	12-Dec-97	U	0.11													
GWMW2-3	MW-2	10-Mar-98	U	0.04													
MW-2	MW-2	05-Jun-98	U	0.06													
GWMW2-5	MW-2	25-Sep-98	U	0.07													
GW-2	MW-2	19-Nov-98	U	0.02													
MW-2	MW-2	04-Feb-99	U	0.02													
GW-2	MW-2	11-Jun-99	U	0.21													
GW-2	MW-2	07-Sep-99	U	0.09													
GW-D-10 (Dupe of GW-2)	MW-2	07-Sep-99	U	0.09													
MW-2	MW-2	30-Nov-99	U	0.04		4.78	<0.002	0.073	319	<0.01	<0.01	5.49	109	0.171	<0.01	1.6	<0.001
MW-2	MW-2	24-Mar-00	U	0.03		1.5	<0.002	0.042	298	<0.01	<0.01	1.84	102	0.087	<0.01	0.8	<0.001
MW-2	MW-2	27-Jun-00	U	0.04		0.74	<0.002	0.045	361	<0.02	<0.02	1.87	118	0.2	<0.02	0.8	<0.001
GWMW3-2	MW-3	18-Dec-97	U	0.05													
GWMW3-3	MW-3	04-Mar-98		0.1													
MW-3	MW-3	05-Jun-98	U	0.11													
GWMW3-5	MW-3	23-Sep-98	U	0.03													
GW-D-2 (Dupe of GWMW	MW-3	23-Sep-98	U	0.04													
GW-3	MW-3	19-Nov-98	U	0.09													
MW-3	MW-3	04-Feb-99	U	0.01													
GW-3	MW-3	11-Jun-99	U	0.01		0.42	<0.002	0.019	<115	<0.01	<0.01	0.43	13.6	0.042	<0.01	1.4	<0.001
GW-3	MW-3	06-Sep-99	U	0.02													
MW-3	MW-3	29-Nov-99	U	0.03													
MW-3	MW-3	24-Mar-00	U	0.16													
MW-3	MW-3	27-Jun-00	U	0.04													
MW-3	MW-3	25-Sep-00	U	0.08													
MW-3	MW-3	04-Jan-01	U	0.05													
97MW-4	97MW-4	06-Jun-97	U	*0.029*													
CMRAGW006	97MW-4	11-Sep-97	U	*0.01*													
GWMW4-2	97MW-4	18-Dec-97	U	0.03													
GWMW4-3	97MW-4	04-Mar-98	U	<0.01	U												
GWMW4D-3	97MW-4	04-Mar-98	U	<0.01	U												
MW-4	97MW-4	04-Jun-98	U	<0.01	U												

		Units	Q*	Zinc mg/L	Q*	Aluminum** mg/L	Antimony mg/L	Barium mg/L	Calcium mg/L	Chromium mg/L	Cobalt** mg/L	Iron* mg/L	Magnesium mg/L	Manganese* mg/L	Nickel** mg/L	Potassium mg/L	Selenium mg/L
GWMW4-5	97MW-4	24-Sep-98	U	<0.01	U	<0.03	<0.002	0.006	202	<0.01	<0.01	0.03	36.6	<0.005	<0.01	1.6	0.005
GW-4	97MW-4	20-Nov-98	U	<0.01	U												
GW-D-6 (Dupe of GW-4)	97MW-4	20-Nov-98	U	<0.01	U												
MW-4	97MW-4	05-Feb-99	U	<0.01	U												
GW-4	97MW-4	11-Jun-99	U	<0.01	U												
GW-4	97MW-4	07-Sep-99	U	<0.01	U												
MW-4	97MW-4	30-Nov-99	U	<0.01	U												
MW-4	97MW-4	24-Mar-00	U	0.01													
MW-2A (Dupe of MW-4)	97MW-4	24-Mar-00	U	<0.01	U												
MW-4	97MW-4	27-Jun-00	U	0.01													
MW-4	97MW-4	25-Sep-00	U	0.02													
MW-4	97MW-4	04-Jan-01	U	0.02		<0.03	<0.002	0.009	319	<0.01	<0.01	<0.01	57.3	<0.005	<0.01	2.1	0.004
GW-4	97MW-4	18-Jul-01	U	0.04	B												
MW-4	97MW-4	08-Jan-02	U	0.02	B												
MW-4	MW-4	17-Jul-02	U	<0.01	U												
97MW-5	97MW-5	05-Jun-97	U	*<0.025*	U												
CMRAGW007	97MW-5	11-Sep-97	U	*<0.01*	U												
GWMW5-2	97MW-5	18-Dec-97	U	0.1													
GWMW5-3	97MW-5	04-Mar-98	U	0.06		14.9	<0.002	0.012	166	0.04	0.01	18.7	33.5	0.346	0.04	4.2	0.002
MW-5	97MW-5	04-Jun-98	U	0.05													
GWMW5-5	97MW-5	24-Sep-98	U	0.02													
GW-5	97MW-5	20-Nov-98	U	0.06		12.2	<0.002	0.099	162	0.06	<0.01	14	44.1	0.257	0.06	3.9	0.002
MW-5	97MW-5	05-Feb-99	U	0.03													
GW-D-8 (Dupe of MW-5)	97MW-5	05-Feb-99	U	0.03													
GW-5	97MW-5	10-Jun-99	U	0.02													
GW-5	97MW-5	06-Sep-99	U	0.05													
MW-5	97MW-5	30-Nov-99	U	0.02													
MW-5	97MW-5	24-Mar-00	U	0.02													
MW-5	97MW-5	27-Jun-00	U	0.03													
MW-4A (Dupe of MW-5)	97MW-5	27-Jun-00	U	0.03													
MW-5	97MW-5	25-Sep-00	U	0.05													
MW-2A (Dupe of MW-4)	97MW-5	25-Sep-00	U	0.04													
MW-5	97MW-5	04-Jan-01	U	0.02													
GW-5	97MW-5	18-Jul-01	U	0.05													
MW-5	97MW-5	08-Jan-02	U	0.02	B												
MW-5	MW-5	17-Jul-02	U	0.04	B												
GWMW-6-1	97MW-6	24-Sep-98	U	<0.01	U												
GW-6	97MW-6	19-Nov-98	U	<0.01	U												
MW-6	97MW-6	05-Feb-99	U	<0.01	U	0.07	<0.002	0.02	85.2	<0.01	<0.01	0.31	27.3	0.135	<0.01	0.9	<0.001
MW-6	97MW-6	30-Nov-99	U	<0.01	U												
MW-6	97MW-6	24-Mar-00	U	<0.01	U												
MW-6	97MW-6	27-Jun-00	U	<0.01	U												
MW-6	97MW-6	04-Jan-01	U	<0.01	U												

		Units	Q*	Zinc mg/L	Q*	Aluminum** mg/L	Antimony mg/L	Barium mg/L	Calcium mg/L	Chromium mg/L	Cobalt** mg/L	Iron* mg/L	Magnesium mg/L	Manganese* mg/L	Nickel** mg/L	Potassium mg/L	Selenium mg/L
GW-6	97MW-6	18-Jul-01	U	0.02	B												
MW-6	97MW-6	08-Jan-02	U	<0.01	U												
MW-6	MW-6	17-Jul-02	U	<0.01	U												
DUP-1 (Dupe of MW-6)	MW-6	17-Jul-02	U	0.01	B												
Dry - No Sample	MW-7	25-Sep-98															
Dry - No Sample	MW-7	19-Nov-98															
Dry - No Sample	MW-7	04-Feb-99															
Dry - No Sample	MW-7	10-Jun-99															
Dry - No Sample	MW-7	06-Sep-99															
Dry - No Sample	MW-7	18-Jul-01															
Dry - No Sample	MW-7	08-Jan-02															
Dry - No Sample	MW-7	17-Jul-02															
Hughes Shallow		12-Jun-97	U	1.72		*<0.05*	*<0.04*	0.02	347	*<0.01*	*<0.01*	*0.39*	89	0.039	*<0.01*	*<0.2*	*<0.005*
Hughes Deep	Hughes Potabl	12-Jun-97	U	*0.44*		*0.07*	*<0.04*	*0.01*	*89.3*	*<0.01*	*<0.01*	*0.05*	*87*	*<0.005*	*<0.01*	*0.98*	*<0.005*
Hughes Deep-Total Metals	Hughes Potabl	12-Jun-97	U	0.44		0.16	<0.04	<0.01	79	<0.01	1.81	0.04	81	<0.005	<0.01	<1.0	<0.005
CMRAGW002	Hughes Potabl	10-Sep-97	U	*0.30*													
GWHU-2	Hughes Potabl	12-Dec-97	U	0.02		<0.03	<0.002	0.006	49.1	<0.01	<0.01	0.01	50.1	<0.005	<0.01	<0.3	<0.001
GWHU-3	Hughes Potabl	10-Mar-98	U	0.01													
GW-HU	Hughes Potabl	05-Jun-98	U	0.01													
GWD1 (Dupe GW-HU)	Hughes Potabl	05-Jun-98	U	0.01													
GWHU-5	Hughes Potabl	25-Sep-98	U	3.91													
GW-HU	Hughes Potabl	19-Nov-98	U	0.04													
GW-HU	Hughes Potabl	04-Feb-99	U	<0.01	U												
GW-HU	Hughes Potabl	09-Jun-99	U	<0.01	U												
GW-HU	Hughes Potabl	07-Sep-99	U	1.56		0.03	0.004	0.01	<62.7		0.01	0.01	55.2	0.005	0.01	0.7	0.04
GW-Hu	Hughes Potabl	30-Nov-99	U	1.10													
GW-HU	Hughes Potabl	24-Mar-00	U	0.16													
GW-HU	Hughes Potabl	27-Jun-00	U	0.02													
Gosney Well	Gosney Well	13-Jun-97	U	0.03		<0.05	<0.04	<0.01	<45.10	<0.01	<0.01	<0.02	17	<0.005	<0.01	1.58	<0.005

Q* = Data Qualifiers: U = Undetected, B = Between
** = Secondary Standard
*** = Irrigation Use Standard
++ = As of 1/12/2006
Italics = Dissolved metals; All other metal concentrat

Sample ID	Well ID	Units / EPA Metho / Date Sampled	Sodium mg/L	Thallium mg/L	Vanadium mg/L
NMWQCC Stds					
EPA MCLs				0.002	
MW-1	MW-1	12-Jun-97	83	*<0.002*	*<0.01*
MW-2	MW-2	12-Jun-97	*57*	*<0.002*	*<0.01*
MW-2D	MW-2	12-Jun-97	*50.2*	*<0.002*	*<0.01*
CMRAGW003	MW-2	10-Sep-97			
CMRAGW004 (DUPL)	MW-2	10-Sep-97			
GWMW2-2	MW-2	12-Dec-97			
GWMW2-3	MW-2	10-Mar-98			
MW-2	MW-2	05-Jun-98			
GWMW2-5	MW-2	25-Sep-98			
GW-2	MW-2	19-Nov-98			
MW-2	MW-2	04-Feb-99			
GW-2	MW-2	11-Jun-99			
GW-2	MW-2	07-Sep-99			
GW-D-10 (Dupe of GW-2)	MW-2	07-Sep-99			
MW-2	MW-2	30-Nov-99	58.1	<0.002	0.006
MW-2	MW-2	24-Mar-00	51	<0.002	<0.005
MW-2	MW-2	27-Jun-00	56	<0.01	<0.01
GWMW3-2	MW-3	18-Dec-97			
GWMW3-3	MW-3	04-Mar-98			
MW-3	MW-3	05-Jun-98			
GWMW3-5	MW-3	23-Sep-98			
GW-D-2 (Dupe of GWMW	MW-3	23-Sep-98			
GW-3	MW-3	19-Nov-98			
MW-3	MW-3	04-Feb-99			
GW-3	MW-3	11-Jun-99	17.5	<0.002	<0.005
GW-3	MW-3	06-Sep-99			
MW-3	MW-3	29-Nov-99			
MW-3	MW-3	24-Mar-00			
MW-3	MW-3	27-Jun-00			
MW-3	MW-3	25-Sep-00			
MW-3	MW-3	04-Jan-01			
97MW-4	97MW-4	06-Jun-97			
CMRAGW006	97MW-4	11-Sep-97			
GWMW4-2	97MW-4	18-Dec-97			
GWMW4-3	97MW-4	04-Mar-98			
GWMW4D-3	97MW-4	04-Mar-98			
MW-4	97MW-4	04-Jun-98			

		Units	Sodium mg/L	Thallium mg/L	Vanadium mg/L
GWMW4-5	97MW-4	24-Sep-98	20.8	<0.002	<0.005
GW-4	97MW-4	20-Nov-98			
GW-D-6 (Dupe of GW-4)	97MW-4	20-Nov-98			
MW-4	97MW-4	05-Feb-99			
GW-4	97MW-4	11-Jun-99			
GW-4	97MW-4	07-Sep-99			
MW-4	97MW-4	30-Nov-99			
MW-4	97MW-4	24-Mar-00			
MW-2A (Dupe of MW-4)	97MW-4	24-Mar-00			
MW-4	97MW-4	27-Jun-00			
MW-4	97MW-4	25-Sep-00			
MW-4	97MW-4	04-Jan-01	26.1	<0.002	<0.005
GW-4	97MW-4	18-Jul-01			
MW-4	97MW-4	08-Jan-02			
MW-4	MW-4	17-Jul-02			
97MW-5	97MW-5	05-Jun-97			
CMRAGW007	97MW-5	11-Sep-97			
GWMW5-2	97MW-5	18-Dec-97			
GWMW5-3	97MW-5	04-Mar-98	25.7	<0.002	0.032
MW-5	97MW-5	04-Jun-98			
GWMW5-5	97MW-5	24-Sep-98			
GW-5	97MW-5	20-Nov-98	29.9	<0.002	0.026
MW-5	97MW-5	05-Feb-99			
GW-D-8 (Dupe of MW-5)	97MW-5	05-Feb-99			
GW-5	97MW-5	10-Jun-99			
GW-5	97MW-5	06-Sep-99			
MW-5	97MW-5	30-Nov-99			
MW-5	97MW-5	24-Mar-00			
MW-5	97MW-5	27-Jun-00			
MW-4A (Dupe of MW-5)	97MW-5	27-Jun-00			
MW-5	97MW-5	25-Sep-00			
MW-2A (Dupe of MW-4)	97MW-5	25-Sep-00			
MW-5	97MW-5	04-Jan-01			
GW-5	97MW-5	18-Jul-01			
MW-5	97MW-5	08-Jan-02			
MW-5	MW-5	17-Jul-02			
GWMW-6-1	97MW-6	24-Sep-98			
GW-6	97MW-6	19-Nov-98			
MW-6	97MW-6	05-Feb-99	26.9	<0.002	<0.005
MW-6	97MW-6	30-Nov-99			
MW-6	97MW-6	24-Mar-00			
MW-6	97MW-6	27-Jun-00			
MW-6	97MW-6	04-Jan-01			

		Units	Sodium mg/L	Thallium mg/L	Vanadium mg/L
GW-6	97MW-6	18-Jul-01			
MW-6	97MW-6	08-Jan-02			
MW-6	MW-6	17-Jul-02			
DUP-1 (Dupe of MW-6)	MW-6	17-Jul-02			
Dry - No Sample	MW-7	25-Sep-98			
Dry - No Sample	MW-7	19-Nov-98			
Dry - No Sample	MW-7	04-Feb-99			
Dry - No Sample	MW-7	10-Jun-99			
Dry - No Sample	MW-7	06-Sep-99			
Dry - No Sample	MW-7	18-Jul-01			
Dry - No Sample	MW-7	08-Jan-02			
Dry - No Sample	MW-7	17-Jul-02			
Hughes Shallow		12-Jun-97	45.6	*<0.002*	*<0.01*
Hughes Deep	Hughes Potabl	12-Jun-97	*37.5*	*<0.002*	*<0.01*
Hughes Deep-Total Metals	Hughes Potabl	12-Jun-97	<0.2	<0.002	<0.01
CMRAGW002	Hughes Potabl	10-Sep-97			
GWHU-2	Hughes Potabl	12-Dec-97	49.8	<0.002	<0.005
GWHU-3	Hughes Potabl	10-Mar-98			
GW-HU	Hughes Potabl	05-Jun-98			
GWD1 (Dupe GW-HU)	Hughes Potabl	05-Jun-98			
GWHU-5	Hughes Potabl	25-Sep-98			
GW-HU	Hughes Potabl	19-Nov-98			
GW-HU	Hughes Potabl	04-Feb-99			
GW-HU	Hughes Potabl	09-Jun-99			
GW-HU	Hughes Potabl	07-Sep-99	40.7	0.002	0.005
GW-Hu	Hughes Potabl	30-Nov-99			
GW-HU	Hughes Potabl	24-Mar-00			
GW-HU	Hughes Potabl	27-Jun-00			
Gosney Well	Gosney Well	13-Jun-97	36.2	<0.002	0.01

Q* = Data Qualifiers: U = Undetected, B = Between
** = Secondary Standard
*** = Irrigation Use Standard
++ = As of 1/12/2006
Italics = Dissolved metals; All other metal concentrat

Attachment 3

Site Inspection Checklist

Geochemical Solutions
Environmental Sampling, Remediation & Compliance

Cleveland Mill Site, Silver City, New Mexico
Site Inspection Form

Date of Inspection: January 8, 2002
Time: 0900
Weather: Sunny and Clear

Last Storm: Very dry
Amount/Type of Precipitation: NA

Site Area	Inspection Item	Condition	Acceptable	Needs Repair	Comments
Disposal Cell	Vegetation	Disturbed/Intact	Intact		
	Surface	Damage/Erosion	Good		
	Road	Damage/Erosion	Intact		
	Traffic	Damage/Erosion	No New traffic		
	Well MW-4	Damage/Intact	Intact & Sampled		
	Well MW-5	Damage/Intact	Intact & Sampled		
	Well MW-6	Damage/Intact	Intact & Sampled		
Mill Area	Traffic	Damage/Erosion	Light, no damage		
	Springs	Present/Flowing	Not flowing		
	Upper Drainage	Damage/Erosion	Some erosion at top		watch/inspect
	Lower Drainage	Damage/Erosion	Some erosion		watch/inspect
	Overall Vegetation	Disturbed/Intact	Intact – Patchy		
	Mill Area Roads	Damage/Erosion	Some erosion-passable		
	Well MW-7	Damage/Intact	Intact-Dry		
	SRS*	Sediment**	>1' clearance		
Cobbed Ore	Terraces – 5	Damage/Erosion	Intact		
	Vegetation	Disturbed/Intact	Intact		
Dust Piles	Terraces – 2	Damage/Erosion	No erosion		
	Vegetation	Disturbed/Intact	Tracks, intact, patchy		
Western Hillside Area	Terraces – 5	Damage/Erosion	One terrace broken		watch/inspect
	Vegetation	Disturbed/Intact	Intact, patchy		
West Tailings	Terraces – 2	Damage/Erosion	No erosion		
	Vegetation	Disturbed/Intact	Intact, patchy		
East Tailings	Terraces – 2	Damage/Erosion	No erosion		
	Vegetation	Disturbed/Intact	Intact on 2 terraces		
Mine Area	Mine Door	Damage/Erosion	Intact		
	Well MW-3	Damage/Intact	Intact, deer tracks		
	Road to Mine	Damage/Erosion	Tracks, no damage		
	Vegetation	Disturbed/Intact	Intact, good coverage		
	SRS	Sediment	>1' clearance		
Little Walnut Creek	Access Roads	Damage/Erosion	Intact		
	Vegetation	Disturbed/Intact	Intact		
SRS #1	SRS	Sediment	>1' clearance		
SRS#1A	SRS	Sediment	>1' clearance		
SRS#2	SRS	Sediment	>1' clearance		
Confluence	Water	Present/Flowing	Dry		No new ferrihydrite precipitation
General Comments:	Front gate is loose and needs repair. Vegetation on access road is intact and healthy				

* SRS (Sediment Retention Structure)
**SRS will need sediment removal if sediment is less than one foot from the top of the SRS

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Attachment 4

Interview Record Forms

Five-Year Review Interview Record
Cleveland Mill Site, Silver City, New Mexico

SITE INFORMATION

Site Name: Cleveland Mill Site
EPA ID No.: NMD981155930

INTERVIEW INFORMATION

Interviewee	Address	Phone	Date of Interview	Interview Method
Chris Meehan NMED Site Project Manager	P.O Box 26110 Santa Fe, NM 87502	505-476-3777	January 7, 2002	In Person
Interview Transcribed by:	**Organization**	**Phone**	**Address**	**Email**
Wendy Meyer	Geochemical Solutions	(859) 971-0971	825 Walnut Hill Rd Lexington, KY 40515	WendyMeyer@msn.com

INTERVIEW QUESTIONS AND RESPONSES

1. Have you seen any change in traffic on the Cleveland Mill road since November 2000?

Response:

- ☐ Significant Traffic Reduction
- ☐ Slight Traffic Reduction
- ☑ No Traffic Change
- ☐ Slight Increased Traffic
- ☐ Significant Increased Traffic

2. During the past year, have you seen any changes in the color of runoff in Little Walnut Creek?

Response:

- ☐ Significant reduction of red or orange color in runoff
- ☑ Slight reduction of red or orange color in runoff
- ☐ No change in runoff color
- ☐ Slight increase of red or orange color in runoff
- ☐ Significant increase of red or orange color in runoff
- ☐ Other changes in color, please specify:_____

_____

3. Are there any positive effects of this remediation on you? And if yes, what are the positive effects?

Response:

_____

_____

_____

4. Do you have any comments or questions regarding the remediation at the Cleveland Mill site?
Response:
I think that the remediation at the Cleveland Mill Site was a success. Concentrations of metals in groundwater and surface water have dropped significantly since the remedial action. There has been significant vegetative growth on the disposal cell, which has inhibited erosion. Recent site inspections also indicate that runoff in the Little Walnut Creek has greatly improved.

Five-Year Review Interview Record
Cleveland Mill Site, Silver City, New Mexico

SITE INFORMATION

Site Name: Cleveland Mill Site
EPA ID No.: NMD981155930

INTERVIEW INFORMATION

Interviewee	Address	Phone	Date of Interview	Interview Method
Candace Ross MRRC Contact	1104 W 7th St Silver City, NM 88061	(505) 388-2864	January 9, 2002	In Person
Interview Transcribed by:	**Organization**	**Phone**	**Address**	**Email**
Wendy Meyer	Geochemical Solutions	(859) 971-0971	825 Walnut Hill Rd Lexington, KY 40515	WendyMeyer@msn.com

INTERVIEW QUESTIONS AND RESPONSES

1. Have you seen any change in traffic on the Cleveland Mill road since November 2000?

Response:

- ☐ Significant Traffic Reduction
- ☐ Slight Traffic Reduction
- ☑ No Traffic Change
- ☐ Slight Increased Traffic
- ☐ Significant Increased Traffic

2. During the past year, have you seen any changes in the color of runoff in Little Walnut Creek?

Response:

- ☐ Significant reduction of red or orange color in runoff
- ☐ Slight reduction of red or orange color in runoff
- ☐ No change in runoff color
- ☐ Slight increase of red or orange color in runoff
- ☐ Significant increase of red or orange color in runoff
- ☑ Other changes in color, please specify: No red colored runoff in Little Walnut Creek

3. Are there any positive effects of this remediation on you? And if yes, what are the positive effects?

Response: The remediation is marvelous.

4. Do you have any comments or questions regarding the remediation at the Cleveland Mill site?

Response:

We have received no interest in the site since the remediation has been completed.

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825 Walnut Hill Road, Lexington, Kentucky 40515
Tel. 859.971.0971 Fax. 859.245.1581

Five-Year Review Interview Record
Cleveland Mill Site, Silver City, New Mexico

SITE INFORMATION

Site Name: Cleveland Mill Site
EPA ID No.: NMD981155930

INTERVIEW INFORMATION

Interviewee	Address	Phone	Date of Interview	Interview Method
Nick DeBona Resident near site	Cleveland Mine Road Silver City, NM		January 9, 2002	In Person
Interview Transcribed by:	**Organization**	**Phone**	**Address**	**Email**
Wendy Meyer	Geochemical Solutions	(859) 971-0971	825 Walnut Hill Rd Lexington, KY 40515	WendyMeyer@msn.com

INTERVIEW QUESTIONS AND RESPONSES

1. Have you seen any change in traffic on the Cleveland Mill road since November 2000?

Response:

- ☐ Significant Traffic Reduction
- ☐ Slight Traffic Reduction
- ☐ No Traffic Change
- ☑ Slight Increased Traffic
- ☐ Significant Increased Traffic

2. During the past year, have you seen any changes in the color of runoff in Little Walnut Creek?

Response:

- ☐ Significant reduction of red or orange color in runoff
- ☑ Slight reduction of red or orange color in runoff
- ☐ No change in runoff color
- ☐ Slight increase of red or orange color in runoff
- ☐ Significant increase of red or orange color in runoff
- ☐ Other changes in color, please specify:_____

3. Are there any positive effects of this remediation on you? And if yes, what are the positive effects?

Response: I think the remediation is a good thing.

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4. Do you have any comments or questions regarding the remediation at the Cleveland Mill site?

Response:

Is the road going to remained closed?

Five-Year Review Interview Record
Cleveland Mill Site, Silver City, New Mexico

SITE INFORMATION

Site Name: Cleveland Mill Site
EPA ID No.: NMD981155930

INTERVIEW INFORMATION

Interviewee	Address	Phone	Date of Interview	Interview Method
Rocky Vendrely NMED Local Manager	District Field Office, NMED	(505) 388-1934	January 8, 2002	In Person
Interview Transcribed by:	**Organization**	**Phone**	**Address**	**Email**
Wendy Meyer	Geochemical Solutions	(859) 971-0971	825 Walnut Hill Rd Lexington, KY 40515	WendyMeyer@msn.com

INTERVIEW QUESTIONS AND RESPONSES

1. Have you seen any change in traffic on the Cleveland Mill road since November 2000?

Response:

- ☐ Significant Traffic Reduction
- ☐ Slight Traffic Reduction
- ☑ No Traffic Change
- ☐ Slight Increased Traffic
- ☐ Significant Increased Traffic

2. During the past year, have you seen any changes in the color of runoff in Little Walnut Creek?

Response:

- ☑ Significant reduction of red or orange color in runoff
- ☐ Slight reduction of red or orange color in runoff
- ☐ No change in runoff color
- ☐ Slight increase of red or orange color in runoff
- ☐ Significant increase of red or orange color in runoff
- ☐ Other changes in color, please specify:_____

3. Are there any positive effects of this remediation on you? And if yes, what are the positive effects?

Response: Little Walnut Creek looks good and is not turning red.

4. Do you have any comments or questions regarding the remediation at the Cleveland Mill site?
Response:
There is some traffic up there, but I haven't really heard anything and I haven't had any complaints.

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Five-Year Review Interview Record
Cleveland Mill Site, Silver City, New Mexico

SITE INFORMATION

Site Name: Cleveland Mill Site
EPA ID No.: NMD981155930

INTERVIEW INFORMATION

Interviewee	Address	Phone	Date of Interview	Interview Method
Paul and Patrice Unger, Nearby Site Property Owners	5156 Little Walnut Road Silver City, NM		January 8, 2002	In Person
Interview Transcribed by:	**Organization**	**Phone**	**Address**	**Email**
Wendy Meyer	Geochemical Solutions	(859) 971-0971	825 Walnut Hill Rd Lexington, KY 40515	WendyMeyer@msn.com

INTERVIEW QUESTIONS AND RESPONSES

1. Have you seen any change in traffic on the Cleveland Mill road since November 2000?

Response:

- ☐ Significant Traffic Reduction
- ☑ Slight Traffic Reduction
- ☐ No Traffic Change
- ☐ Slight Increased Traffic
- ☐ Significant Increased Traffic

2. During the past year, have you seen any changes in the color of runoff in Little Walnut Creek?

Response:

- ☐ Significant reduction of red or orange color in runoff
- ☐ Slight reduction of red or orange color in runoff
- ☐ No change in runoff color
- ☐ Slight increase of red or orange color in runoff
- ☐ Significant increase of red or orange color in runoff
- ☑ Other changes in color, please specify: Last year I walked around and nothing has gotten past the limestone dams. I think the Creek has improved. I noticed tadpoles in one of the pools.

3. Are there any positive effects of this remediation on you? And if yes, what are the positive effects?

Response: The party spot has been curbed.

4. Do you have any comments or questions regarding the remediation at the Cleveland Mill site?
Response:
We have a problem with the road. We think that when the Cleveland Mill work was going on, the road was damaged and has gotten worse since the remediation was finished. We want someone to fix the road.

Attachment 5

Site Inspection Photographs

Photo l:Cleveland Mill Access Road and Vegetation, July 17, 2002

Photo 2: Cleveland Mill Disposal Cell on July 17, 2002

Photo 3: Close-up of vegetation on the Cleveland Mill Disposal Cell, July 17, 2002 (near MW-4)

Photo 4: Dry (vegetated) drainage of Little Walnut Creek from the former West tailings area, July 17, 2002

Photo 5: Former Western Hillside Area, July 17, 2002

Photo 6: Vegetation at base of Cleveland Mill Building, July 17, 2002

Photo 7: Vegetation at base of Cleveland Mill Building, July 17, 2002

Photo 8: Vegetation on Former East Tailings Area, July 17, 2002

Photo 9: Repaired Cleveland Mill Road - Section 5, July 17, 2002

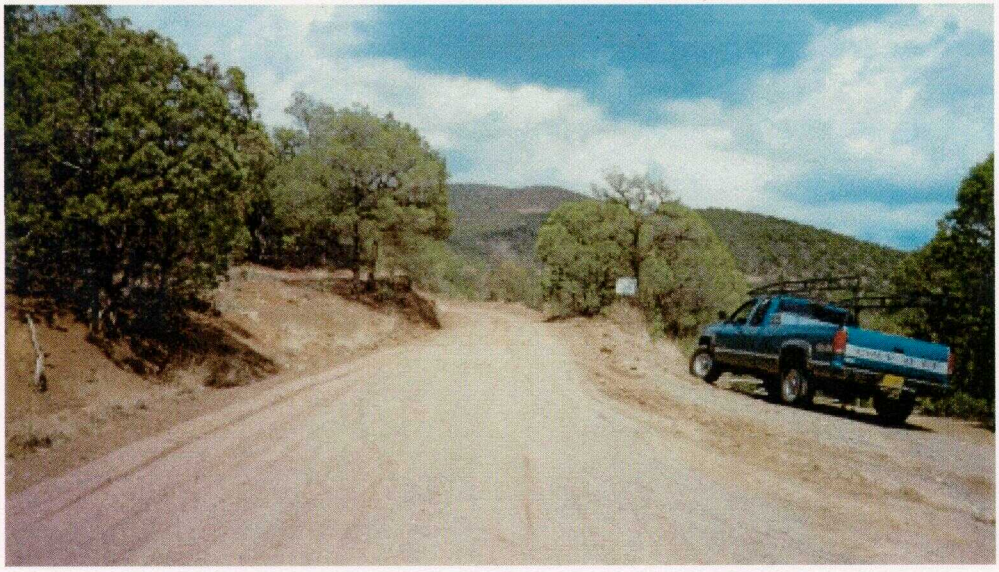

Photo 10: Repaired Cleveland Mill Road - Section 6, July 17, 2002