

TA-16



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Date: March 16, 2004
Refer to: ER2004-0124



Mr. John Young, Project Leader
Permits Management Program
NMED – Hazardous Waste Bureau
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**SUBJECT: FEBRUARY 2004 CORRECTIVE MEASURES STUDY (CMS) PROGRESS
REPORT FOR POTENTIAL RELEASE SITE (PRS) 16-021(C), THE 260
OUTFALL**

Dear Mr. Young:

Enclosed are two copies of the February 2004 CMS Progress report for PRS 16-021(c), the 260 outfall. This report is being submitted as part of the reporting conditions outlined in Section R, scope of work for Resource Conservation and Recovery Act CMS at the Laboratory, Task IV, Reports, Part A, Progress Module VIII of the Laboratory's Hazardous Waste Facility Permit.

If you have any questions, please call Dave McInroy at (505) 667-0819 or Lance Woodworth at (505) 665-5820

Sincerely,

David McInroy, Deputy Project Director
Remediation Services
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Sincerely,

David Gregory, Federal Project Director
Department of Energy
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DM/DG/DH/th



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Enclosures: February 2004, CMS Progress Report (ER2004-0113)

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Monthly Progress Report
Corrective Measures Study (CMS) for Potential Release Site (PRS) 16-021(c)-99
February 2004

This report summarizes Los Alamos National Laboratory (LANL) activities completed during February of fiscal year (FY) 2004 on the CMS for PRS 16-021(c)-99, the 260 outfall. Both the activities described in the CMS plan ([LA-UR-98-3918], approved by NMED-HWB on 9/8/99), and other related activities are described herein.

Description of Activities and Contacts

High Performing Team (HPT) Activities – The 260 HPT met on February 23, 2004. Agenda items included a 260 update, a presentation of a methodology for geochemical correlation analysis, a discussion of ongoing drilling activities, a review of the outline for the investigation work plan for the TA-16-340 complex, and a brief discussion of the notice of deficiency (NOD) on the Phase III RFI Report, including its recently submitted addendum.

LANL representatives provided updates on the CMS sampling investigations, including a discussion of intermediate-well drilling activities and an update on the status of the Canon de Valle hydrologic system. Additional details on these projects are provided below in this monthly progress report and in the January 2004 progress report.

Personnel from LANL's subcontractor, Shaw Environmental and Infrastructure, presented information on a new method of analyzing soil and water data to determine whether metals are naturally occurring. This method relies on geochemical correlation analysis. Metal contaminants are correlated with inorganics (e.g. iron, aluminum, manganese) that proxy for minerals that are common constituents in natural clays and oxides. This method is not Environmental Protection Agency (EPA)-approved, although several EPA regions have accepted results from such analyses in site investigations. Numerous examples were presented. NMED representative were skeptical concerning the value of the method, but acknowledged that it could be potentially useful as a complement to background comparisons. LANL agreed that they would provide site-specific briefings prior to any future attempts to apply the method to soil or water data from the Laboratory.

LANL provided updated information on the three intermediate depth boreholes. RDX screening results from CdV-16-1(i) and CdV-16-2(i) were provided. Both boreholes contain RDX, with higher levels in the former well than in the latter well. The geophysical results from CdV-16-3(i) were reviewed. We expect there is no water in this borehole because there are several hundred feet of tight dacite formation in the bottom of the borehole.

LANL provided the outline for the investigation work plan that includes both interim measure (IM) soil removal and sampling for PRSs associated with TA-16-340, the Fish Ladder. This facility is scheduled to be removed by the Decontamination and

Decommissioning (D&D) group during FY 04 and there are opportunities to accelerate cleanup by working closely with the D&D group. NMED provided comments on the outline in a follow-up e-mail and, as a result, LANL will cut back the discussion on soils in the work plan, but will provide an abbreviated historical investigation report that outlines all of the existing RFI data.

LANL noted that a revision to several tables associate with the NOD response would be provided to NMED as an addendum. An error associated with chromium toxicological information that affected the risk calculations in Canon de Valle was discovered during an internal review of the NOD. As a result, a 100% review of the tables was performed by LANL's subcontractor, and several other errors, none of which affected the risk assessment, were also found and corrected.

LANL reported that a presentation to the Citizens Advisory Board had occurred in February, and suggested that further public involvement activity could be scheduled in the next few months.

The next HPT meeting is tentatively scheduled for March 15, 2004. Topics will include a 260 update, updated information on drilling, and a more detailed discussion of the sampling strategy for the Fishladder complex.

RCRA Facility Investigation (RFI) Phase II Report and CMS Plan– No activities this month.

Best Management Practices (BMPs)– BMPs are inspected quarterly and following significant precipitation events. No BMP repairs were required in February.

CMS Hydrogeologic Investigations– CMS hydrogeologic investigations include ongoing Phase II RFI sampling as well as continuing investigations outlined in the CMS plan.

The ongoing Phase II RFI sampling program includes collecting samples at Martin and Burning Ground spring for stable isotopes. This sampling is now focused on capturing high-flow events. Martin spring and SWSC spring remain dry.

The alluvial and intermediate wells were checked for presence and level of water. The lower four of five alluvial wells in Canon de Valle contained water, as did one of three alluvial wells in Martin Spring Canyon. All of the intermediate depth boreholes were dry.

Canon de Valle was wet from Burning Ground spring to MDA-P. The 90s Line pond, Fish Ladder seep, and Water Canyon at the Canon de Valle confluence were dry.

Two precipitation samples were collected during this reporting period.

Ecological Risk Pilot–

The ecological risk pilot is complete and results are presented in the phase III RFI Report.

CMS Bench and Pilot Studies– Write-up of bench and pilot studies, many of which were completed under the auspices of the Innovative Technology Remediation Demonstration (ITRD) program, is complete. The ITRD HE program is focused on two DOE sites: LANL and Pantex. Ongoing studies include:

1. A study of the passive barrier technology of Stormwater Management, Inc., potentially useful for removing HE and barium from waters (LANL).
2. At study of in situ anaerobic bioremediation of HE using gas-phase carbon additions (Pantex).
3. Oxidation, reduction, and in-situ bioremediation studies of groundwater contamination (Pantex).

Interim Measure (IM) –

No activities. The IM Report was approved by NMED in a letter dated January 13, 2003. No new activities occurred during this reporting period.

RFI and CMS Report –

The CMS Report was completed and submitted to NMED on November 26, 2003. The RFI Report was completed and submitted to NMED in September. A response to the NOD on the RFI Report was submitted on January 28, 2004. An addendum to that response was submitted on February 25, 2004.

Public and Stakeholder Involvement– A presentation to the LANL citizens advisory board was made on February 11, 2004.

Percentage of CMS Completed

LANL estimates 100 % of the surface CMS has been completed to date. Note this percentage does not reflect the deep and intermediate boreholes that are being drilled per the CMS plan addendum. LANL estimates that 61% of the deep groundwater CMS has been completed.

Problems Encountered/Actions to Rectify Problems

The fact that CDV-16-2(i) and CDV-16-3(i) are not producing water is of concern. This means that nature and extent of groundwater contamination remains poorly constrained. LANL/DOE will continue to sound these boreholes and decide how to proceed over the next six months. Additional boreholes may be required.

Key Personnel Issues

None.

Projected Work for March 2004

RFI Reports and CMS Report

- Incorporation of NOD comments into RFI Report text.

BMPs

- Continued inspection of existing BMPs following significant precipitation events.

CMS Hydrogeologic Investigations

- Site maintenance at the TA-16 trailers.
- Quarterly sampling
- Maintenance of autosamplers
- Checking for levels and presence of water in alluvial and deep wells. Sounding CDV-16-2(i) and CDV-16-3(i)
- Precipitation monitoring
- Zonge geophysics investigations write-up
- Data analysis.

Ecological Risk Pilot

- None

CMS Bench and Pilot Studies

- None

Public and Stakeholder Involvement

None