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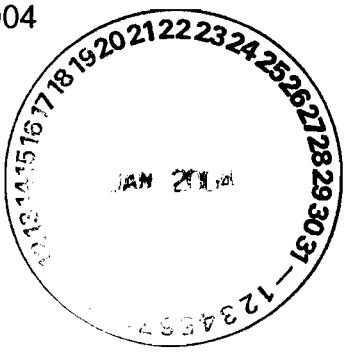
Date: January 21, 2004
Refer to: ER2004-0018



Mr. John Young, Corrective Action Project Leader
Permits Management Program
NMED – Hazardous Waste Bureau
2905 Rodeo Park Drive East
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Santa Fe, NM 87505-6303

SUBJECT: DECEMBER 2003 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 December 2003 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, Project Manager
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Los Alamos Site Operations

DM/DG/NR/th

Enclosure: December 2003 CMS Progress Report (ER2004-0017)

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Monthly Progress Report
Corrective Measures Study (CMS) for Potential Release Site (PRS) 16-021(c)-99
December 2003

This report summarizes Los Alamos National Laboratory (LANL) activities completed during December 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 briefly on December 4, 2003. Agenda items included a 260 update including issues that had arisen during formulation of the CMS report, a discussion of ongoing drilling activities, and a brief discussion of the upcoming notice of deficiency (NOD) on the Phase III RFI Report.

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 November 2003 progress report.

LANL outlined issues that had arisen during the final stages of formulation of the CMS report; in particular, the fact that manganese had been carried forward as a CMS constituent of potential concern (COPC).

NMED representatives noted that the NOD for the Phase III RFI Report for the 260 outfall was almost complete and that there were significant comments, particularly in the area of risk assessment. They suggested that they would try to get us both draft and final versions of the NOD as soon as they could.

The next HPT meeting is tentatively scheduled for January 12, 2004. Topics will include a 260 update, a discussion of RFI NOD comments, scoping the investigations for the TA-16-340 complex, and updated information on drilling.

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 December.

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. Flow is down to ~ 300 ml/sec. in Burning Ground spring.

The alluvial and intermediate wells were checked for presence and level of water. The lower four out of five alluvial wells in Canon de Valle contained water, as did one of three of the 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.

No precipitation samples were collected during this reporting period.

Quarterly sampling was completed in Canon de Valle. Sampling locations included all of the springs, alluvial wells, and other sampling locations that contained water, as well as stream profile locations located in the wet section of Canon de Valle.

Quarterly sampling was completed at well CDV-R-37-2. The uppermost screen within the regional aquifer had high turbidity.

Drilling and well construction were completed at the second intermediate depth borehole location, which is located east of the TA-16 Burning Ground. Schlumberger completed a full suite of open-hole geophysical analyses of the borehole. The total depth of this borehole was ~ 1060 ft. Two well screens were installed, one in the saturated zone located near the bottom of the borehole at a depth of ~ 1000 ft., the other in zone with a significant show of water based on the borehole video at a depth of ~ 860 ft.

Pad preparation was initiated at the third intermediate depth borehole location, which is east of the building TA-16-340 complex on the road to Nakamu.

Ecological Risk Pilot–

The ecological risk pilot is complete and results are presented in the phase III RFI Report. Results from the ecorisk study were presented at the American Geophysical Union meeting held in San Francisco, CA during early December.

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.

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. An NOD on the RFI Report was received on December 29, 2003.

Public and Stakeholder Involvement– Results of the ecorisk study and the hydrologic studies in Canon de Valle were presented at the AGU meeting.

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.

Problems Encountered/Actions to Rectify Problems

None identified.

Key Personnel Issues

None.

Projected Work for January 2004

RFI Report and CMS Plan

- Response to NOD comments.

BMPs

- Continued inspection of existing BMPs following significant precipitation events.

CMS Hydrogeologic Investigations

- Site maintenance at the TA-16 trailers.
- Maintenance of autosamplers

- Checking for levels and presence of water in alluvial and deep wells.
- Precipitation monitoring
- Quarterly sampling at CDV-R-15-3.
- Zonge geophysics investigations write-up
- Drilling of intermediate depth boreholes
- Data analysis.

Ecological Risk Pilot

- None

CMS Bench and Pilot Studies

- None

Public and Stakeholder Involvement

None.