

TA-16

03-021



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Date: December 16, 2003  
Refer to: ER2003-0759



Mr. John Young, Corrective Action Project Leader  
Permits Management Program  
NMED – Hazardous Waste Bureau  
2905 Rodeo Park Drive East  
Building 1  
Santa Fe, NM 87505-6303

**SUBJECT: NOVEMBER 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 November 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.

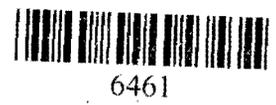
Sincerely,

David McInroy, Deputy Project Director  
Remediation Services  
Los Alamos National Laboratory

Sincerely,

for David Gregory, Project Manager  
Department of Energy  
Los Alamos Site Operations

DM/DG/NR/dwt



Enclosure: November 2003 CMS Progress Report (ER2003-0758)

Cy:(w/enc)

A. Dorries, RRES-ECR, MS M992  
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D. Gregory, LASO, MS A316  
L. Woodworth, LASO, MS A316  
J. Schoepfner, NMED-GWQB  
J. Kieling, NMED-HWB  
S. Yanicak, NMED-OB  
M. Leavitt, NMED-SWQB  
L. King, EPA Region 6  
RRES-RS File, MS M992  
IM-5, MS A150  
RPF MS M707

Cy:(w/o enclosure)

D. McInroy, RRES-RS, MS M992  
B. Ramsey, RRES-DO, MS J591  
J. Johnson, ADO, MS A104  
S. Martin, NMED-HWB  
C. Voorhees, NMED-OB

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

This report summarizes Los Alamos National Laboratory (LANL) activities completed during November of fiscal year (FY) 2003 on the CMS for PRS 16-021(c), 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 did not meet during November 2003.

The next HPT meeting is tentatively scheduled for December 4, 2003. Topics will include a 260 update, NMED questions related to the RFI Report, CMS Report issues, 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 November.

**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 was producing a small amount of water, however, not enough for sampling; SWSC spring remains dry.

The alluvial and intermediate wells were checked for presence and level of water. All five alluvial wells in Canon de Valle contained water, as did three of the alluvial wells in Martin Spring Canyon, although there was only enough water to sample in the lowermost well in Martin Canyon. All of the intermediate depth boreholes were dry.

Canon de Valle was wet from Burning Ground spring to MDA-P, Canon de Valle downgradient from the Fish Ladder Canyon was wet, and Water Canyon remains wet.

Samples from 2 precipitation events were collected and archived for analysis during this reporting period.

Preparations for quarterly sampling in Canon de Valle and the CDV-R-15-3 and CDV-R-37-2 wells were initiated. This effort has been slowed by the recent mandate that work must comply with the integrated work documentation (IWD) process. The IWD process

requires both detailed step-by-step analysis of hazards associated with work tasks and additional signatures to begin work. It is likely to slow fieldwork activities slightly.

Drilling and well construction were completed at the first intermediate depth borehole location, which is in Canon de Valle west of MDA-P. Schlumberger completed a full suite of open-hole geophysical analyses of the borehole. The total depth of this borehole was ~ 690 ft. The well screen was installed at a depth of ~ 625 ft, which was a zone of high permeability and appeared to be a fractured zone based on the geophysical results. Screening data for HE was equivocal, if HE is present it is near the detection limit.

Drilling was initiated at the second intermediate depth borehole location, which is east of the TA-16 Burning Ground. Borehole advancement had proceeded to > 750 ft by the end of the month. A water-bearing zone had not been encountered.

#### ***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 Society of Environmental Toxicology and Chemistry (SETAC) meeting in Austin, Texas during early November.

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

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

***Public and Stakeholder Involvement–*** Results of the ecorisk study were presented at the SETAC conference.

## **Percentage of CMS Completed**

LANL estimates 100 % of the 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 December 2003**

### ***RFI Report and CMS Plan***

- None.

### ***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 including completion of integrated work documents
- 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***

Presentation of results from the Phase III RFI, including ecorisk results, will be made at the American Geophysical Union meeting in San Francisco (December 8 through December 12, 2003)

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