



TA-16



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Date: December 22, 2005  
Refer To: ER2005-0921

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



**SUBJECT: NOVEMBER 2005 MONTHLY PROGRESS REPORT FOR CORRECTIVE MEASURES STUDY FOR POTENTIAL RELEASE SITE 16-021(c)-99**

Dear Mr. Young:

Enclosed are two hard copies with electronic files of the November 2005 Corrective Measures Study (CMS) Progress Report for Potential Release Site (PRS) 16-021(c)-99, the 260 Outfall. This report is submitted in accordance with the approved CMS plan for PRS 16-021(c)-99.

If you have questions, please call Don Hickmott at (505) 667-8753 (dhickmott@lanl.gov) or Woody Woodworth at (505) 665-5820 (lwoodworth@doeal.gov).

Sincerely,  
  
David McInroy, Deputy Program Director  
Environmental Remediation & Surveillance  
Los Alamos National Laboratory

Sincerely,  
  
for  
David Gregory, Federal Project Director  
Department of Energy  
Los Alamos Site Office



DH/jk

Enclosure: Two hard copies with electronic files – Monthly Progress Report Corrective Measures Study (CMS) for Potential Release Site (PRS) 16-021(c)-99, November 2005 (ER2005-0924)

Cy: (w/enc)

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**Monthly Progress Report**  
**Corrective Measures Study (CMS) for Potential Release Site (PRS) 16-021(c)-99**  
**November 2005**

This report summarizes Los Alamos National Laboratory (LANL) activities completed during November of fiscal year (FY) 2006 on the CMS for PRS 16-021(c)-99, the TA-16-260 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 HPT met on November 21, 2005. Topics of discussion included: 1) an update on TA-16-260 activities, 2) a discussion of the performance of permeable reactive barriers (PRBs) at sites nationwide, 3) a review of data from the Stormfilter system submitted to NMED on November 9, 2005, 4) a review of the status of the TA-16-340 Complex project, and 5) a discussion of the nature and extent of contamination of the surge bed in the TA-16-260 pond area.

LANL personnel provided an update on the status of the hydrogeologic system in Cañon de Valle; it was noted the system remains remarkably wet and quarterly sampling had been completed. Further details on the status of the Hydrogeologic system are provided below and in the October CMS monthly report.

Information on PRBs located across the country was discussed. Two recent documents, one commissioned by the Environmental Protection Agency and one commissioned by the Interstate Technology & Regulatory Council, summarizing the pros and cons of PRBs were noted. LANL indicated they had been in contact with personnel at the Cornhusker high explosives (HE) PRB site, and that that PRB appeared to be working well for TNT; it was also noted the PRB appeared to be fouling somewhat due to high dissolved sulfate. A Dupont PRB was cited as being effective for barium.

HPT personnel reviewed the data submitted to NMED on November 9, 2005 concerning the effectiveness of the Stormwater Management System installed in Martin Spring. It was noted that this system was effective (generally > 99 % HE removal) for its first 18 months of use, but some breakthrough had occurred after that time frame.

LANL personnel updated NMED on the status of the TA-16-340 Complex project. NMED noted the request for a modified outline for the investigation report for the project had been received and the approval of LANL's request had been completed. LANL stated that nature and extent of contamination had not been completely defined through the sampling, therefore, the report would include a sampling plan and a recommendation for further soil removal. LANL also noted some data, in particular pore gas data from one of the two intermediate depth boreholes that had collapsed and possibly data from the alluvial wells, would most likely be received too late to be included in the January report, so any late-arriving data would be provided in a report addendum.

NMED noted they would probably request that LANL initiate drilling activities to better define the nature and extent of the highly-HE-contaminated surge bed located in the TA-16-260 pond area. NMED will want to see these data prior to approving the final CMS remedy. LANL indicated that completing these boreholes could probably be done in the late spring, and suggested a letter describing the locales for such boreholes could be provided to NMED in February 2006.

The next HPT meeting is tentatively scheduled for January. Topics will include a TA-16-260 update, a discussion of intermediate-well drilling activities, a discussion of a drilling strategy to define the nature and extent of contamination of the TA-16-260 contaminated surge bed, and a discussion of the upcoming RFI Report for deep groundwater.

***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. BMP were inspected following precipitation events in November and the BMPs were repaired.

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

The ongoing Phase II RFI sampling program, currently focused on capturing high-flow events, includes collecting quarterly stable isotope samples at Martin and Burning Ground Springs.

The hydrologic system in Cañon de Valle continues to be wet, due to heavy monsoonal rains in August and September. Water continues to flow over the weir at SWSC spring (~30 mL/sec). Martin Spring is flowing at ~100 mL/sec and Burning Ground Spring is flowing at a rate of ~250 mL/ sec.

The 90s Line Pond, Fishladder Seep, and downgradient surface locations in Martin Spring Canyon and Cañon de Valle are wet, but frozen. The alluvial wells in both Cañon de Valle and Martin Spring Canyon are wet. Surface water in Cañon de Valle was present from SWSC spring to past MDA P; however most of this reach was frozen. Water was also present at the Cañon de Valle headwaters, the Water Canyon confluence, and the Fishladder Canyon confluence. Three alluvial wells were installed in Fishladder Canyon as part of the TA-16-340 Complex investigations; the lower two of these are wet.

Quarterly sampling of all wet localities identified above was completed.

Redrilling of the CDV-16-2(i) well was completed in July. The borehole was drilled to a total depth of 872 ft with a static water level following drilling of ~ 837 ft. A single screen well was installed. The pump was installed in October. The initial electrical hookup of this well was unsuccessful; the pump will be pulled, repaired, and reinstalled. A single high explosive sample was collected from well CdV-16-3(i).

## **Problems Encountered/Actions to Rectify Problems**

The initial electrical hookup for the pump in the CDV-16-2(i) well was unsuccessful. The pump will be pulled, repaired, and reinstalled.

## **Key Personnel Issues**

None.

## **Projected Work for December 2005**

### ***RFI Reports and CMS Report***

- Discussions regarding the CMS Report with NMED personnel.
- Tour of TA-16-260, Canon de Valle, and Martin Spring Canyon for NMED personnel.

### ***BMPs***

- Continued inspection of existing BMPs following significant precipitation events.

### ***CMS Hydrogeologic Investigations***

- Site maintenance at the TA-16 trailers.
- Checking for levels and presence of water in alluvial and deep wells.
- Precipitation monitoring.
- Data analysis.
- Groundwater modeling.
- Work on groundwater RFI report.
- Hookup of pump in the redrilled CdV-16-2(i).
- Sampling of CDV-16-1(i).

### ***Ecological Risk Pilot***

- None

### ***CMS Bench and Pilot Studies***

- None

### ***Public and Stakeholder Involvement***

- None planned.