

Date: January 19, 2006  
Refer To: ER2006-0007

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



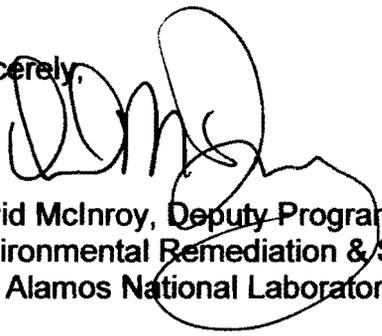
**SUBJECT: DECEMBER 2005 MONTHLY PROGRESS REPORT FOR CORRECTIVE MEASURES STUDY FOR POTENTIAL RELEASE SITE 16-021(C)-99**

Dear Mr. Young:

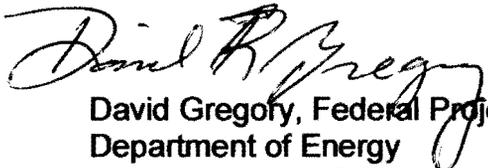
Enclosed are two hard copies of the December 2005 Corrective Measures Study (CMS) Progress Report for Potential Release Site (PRS) 16-021(c)-99, the 260 Outfall. The report is submitted according to the approved CMS plan for PRS 16-021(c)-99.

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

Sincerely,

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

Sincerely,

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



Mr. John Young  
ER2006-0007

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January 12, 2006

DH/jk

Enclosure: Two hard copies of the Monthly Progress Report Corrective Measures Study (CMS)  
for Potential Release Site (PRS) 16-021(c)-99, December 2005 (ER2006-0024)

Cy:(w/enc)

D. Hickmott, EES-6, MS D462  
P. Reneau, ENV-ECR, MS M992  
D. Gregory, LASO, MS A316  
B. Rich, ADO, MS A104  
ENV-ECR File, MS M992  
RPF, MS M707

Cy:(w/o enclosure)

A. Dorries, ENV-ECR, MS M992  
D. McInroy, ENV-ERS, MS M992  
B. Rich, ADTS, MS A104  
D. Pepe, NMED-OB  
IM-9, MS A150

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

This report summarizes Los Alamos National Laboratory (LANL) activities completed during December 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 did not meet during December 2005. However, a tour for NMED-HWB personnel of the TA-16-260 outfall, Cañon de Valle, Martin spring and other locations at TA-16 was held on December 2, 2005.

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 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 December and no BMP repairs were required.

**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 quarterly stable isotope samples at Martin and Burning Ground Springs.

The hydrologic system in Cañon de Valle continues to be moderately 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 lower Martin Spring Canyon are wet. Surface water in Cañon de Valle was present from SWSC spring to just east of MDA P; however most of this reach was frozen. Water was likely 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.

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. This well was sampled during December.

#### ***Ecological Risk Pilot–***

The ecological risk pilot is complete; 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, have been completed. 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). Monitoring of barrier effectiveness has recommenced after several quarters of drought conditions during which Martin spring was dry.
2. A 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) –***

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 Reports –***

The CMS Report was completed and submitted to NMED on November 26, 2003; the RFI Report was completed and submitted in November of 2003. A response to the NOD on the RFI Report was submitted on January 28, 2004 and an addendum to that NOD response was submitted on February 25, 2004. An approval with modifications for the RFI was received on June 23, 2004, and a response to the approval was submitted to NMED on July 23, 2004. The RFI text modifications were completed during December 2004 and submitted to NMED. An NOD on the CMS Report was received on May 16, 2005. A response to that NOD was submitted on June 15, 2005. LANL responded to several NMED queries concerning the CMS Report.

Initial sections for the RFI Report for TA-16 groundwater due in August 2006 were continued. Modeling strategies for the report were discussed and the modeling was continued.

***Public and Stakeholder Involvement*** – A tour was held for NMED-HWB personnel.

### **Percentage of CMS Completed**

LANL estimates 100% of the surface CMS has been completed (please note this percentage does not reflect either the deep or intermediate boreholes being drilled per the CMS plan addendum).

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

None.

### **Key Personnel Issues**

None.

### **Projected Work for January 2006**

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

- Discussions regarding the CMS Report with 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 wells.
- Precipitation monitoring.
- Data analysis.
- Groundwater modeling.
- Work on groundwater RFI report.

***Ecological Risk Pilot***

- None

***CMS Bench and Pilot Studies***

- None

***Public and Stakeholder Involvement***

None planned.