TA-16

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*Date:* February 17, 2005
*Refer To:* ER2005-0086

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



**SUBJECT: JANUARY 2005 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 January 2005 CMS Progress Report for PRS 16-021(c), the 260 Outfall. The report is being submitted as part of the reporting conditions outlined in Section R, Task IX of Module VIII of the Los Alamos National Laboratory's Hazardous Waste Facility Permit.

If you have any questions, please call David 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,

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

DM/DG/DH/ds

Enclosure : 1. January 2005, Corrective Measures Study Progress Report (LA-UR-05-0967)

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

This report summarizes Los Alamos National Laboratory (LANL) activities completed during January of fiscal year (FY) 2005 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 January 10, 2005. Discussion topics included an update on activities associated with the TA-16-260 CMS, a discussion of potential impacts of the RFI Report Notice of Deficiency (NOD) on the CMS Report, a preview of the January public meeting, and an update on the status of the TA-16 intermediate wells.

LANL personnel provided an update on the status of the hydrologic system in Cañon de Valle, noting that the heavy fall monsoons had reinitiated flow in Martin Spring and filled the 90s Line Pond with water. It was noted the water in the 90s Line pond had impeded sampling therein. Cañon de Valle flow is confined to a reach from Burning Ground Spring to east of MDA-P.

LANL personnel updated NMED on the status of the Ponds and TA-16-340 sampling efforts. It was noted the 30s Line Pond sampling was complete and that significant concentrations of high explosives (HE) had been found in the westernmost pond. The 90s Line Pond could not be sampled due to the water present in the pond (see above). LANL stated the drilling and sampling of the 200 ft boreholes at the TA-16-340 Complex had been completed, the geophysical investigations had been accomplished, and soil excavation had been initiated. However, it was noted that minimal progress on soil excavation had occurred due to an accident that had taken place at the jobsite in late November and delays associated with the decontamination and decommissioning (D&D) project.

NMED, LANL, and LANL subcontractor personnel discussed possible impacts of the RFI Report NOD on the CMS Report. Two key potential impacts were: 1) would constituents such as arsenic, iron, and aluminum have to be considered on the list of CMS chemicals of potential concern? and 2) on the cleanup strategies for the canyon, where NMED concerns with ecological risk in the SWSC cut due to silver may impact cleanup strategies. In a follow-up e-mail, NMED personnel requested they be provided with verification data from the solid waste management unit (SWMU) 16-020 (silver outfall) cleanup. LANL is providing these data.

NMED noted their comments on the CMS report would not be provided in the short term, and they would not be providing approvals on CMS reports. Rather they would proceed

to the statement of basis following iteration with LANL and DOE on the CMS report. It was noted that delays in CMS Report review and issuance of the statement of basis would extend the delivery date for the Corrective Measures Implementation (CMI) plan.

It was noted intermediate well CDV-16-2(i) would be 'overdrilled' and re-completed as soon as spotted-owl restrictions allowed access to the site. If this overdrilling is not feasible a new well will be drilled in the same area.

The Team discussed the format and strategy for the public meeting presentation scheduled for January 26, 2005. All of the HPT members attended the meeting. A draft of the vugraphs for this meeting was reviewed.

The next HPT meeting is tentatively scheduled for late February or early March 2005. Topics will include a TA-16-260 update, a discussion of the investigation work plan for the ponds, the CMS report, 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.

***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 stable isotope samples at Martin and Burning Ground Springs; this sampling is now focused on capturing high-flow events.

The hydrologic system in Cañon de Valle is moderately wet, due to the significant fall rains and heavy snowfalls. SWSC Spring contains a small amount of water, but not enough to collect a sample. Martin Spring is flowing at a rate of ~ 50 mL/sec. Burning Ground Spring is flowing at a rate of ~ 500 mL/ sec, which has increased compared to the flow rate observed during December.

The 90s Line Pond contains water and is frozen, which has impacted planned drilling activities in the pond. Many of the other locations that had become wet during last spring's runoff, including Fishladder Seep, and downgradient surface locations in Martin Spring Canyon and Cañon de Valle, except from Burning Ground Spring to just east of MDA-P and the upper reaches of Martin Spring Canyon, are now dry. The alluvial wells in both Cañon de Valle and Martin Spring Canyon are wet, although the upgradient well in Martin Spring Canyon is recharging too slowly to allow sampling. The intermediate depth borehole at the head of Martin Spring Canyon contains water.

Two precipitation samples were collected during this reporting period.

Quarterly sampling of the springs, seeps, and alluvial waters in Cañon de Valle was completed. Field parameters for these wells were consistent with previous sampling rounds.

The pump in CDV-16-1(i) is not producing water. This pump will be pulled and reinstalled to allow sampling of the well.

***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, 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).
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 Report –***

The CMS Report was completed and submitted to NMED on November 26, 2003: the RFI Report was completed and submitted in October 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.

***Public and Stakeholder Involvement***– A public meeting was held on January 26, 2005 at Fuller Lodge. The meeting was well attended with approximately 45 individuals present.

**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**

CDV-16-2(i) and CDV-16-3(i) are not producing significant water. CDV-16-2(i) will be overdrilled or redrilled to ensure that it produces water. The pump in CDV-16-1(i) is malfunctioning and will be repaired.

**Key Personnel Issues**

None.

**Projected Work for February, 2005**

***RFI Reports and CMS Report***

- Discussions of 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.
- 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)
- Repair of pump in CDV-16-1(i)
- Precipitation monitoring
- Data analysis

***Ecological Risk Pilot***

- None

***CMS Bench and Pilot Studies***

- None

***Public and Stakeholder Involvement***

None.