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Date: December 22, 2006
 Refer to: EP2006-1064

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

SUBJECT: NOVEMBER 2006 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 2006 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) or Woody Woodworth at (505) 665-5820 (lwoodworth@doeal.gov).

Sincerely,

Andrew Phelps, Associate Director
 Environmental Programs
 Los Alamos National Laboratory

Sincerely,

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



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DM/DG/DH/ew

Enclosure: Two hard copies with electronic files - Monthly Progress Report Corrective Measures Study (CMS) for Potential Release Site (PRS) 16-021(c)-99, November 2006

Cy: (w/enc)

D. Hickmott, EES-6, MS D462 (with CD)
W. Woodworth, DOE LASO, MS A316 (with CD)
CAP File, MS M992 (with CD)
RPF, MS M707 (with CD)

Cy: (letter and CD only)

P. Reneau, EP-ERSS, MS M992
J. Heikoop, EES-6, MS D462
L. King, EPA Region 6

Cy: (w/o enc)

A. Dorries, ERSS-DO, MS M992
G. Dover, EP-CAP, MS M992
D. Gregory, DOE LASO, MS A316
C. Mangeng, ADEP, MS J591
A. Phelps, ADEP, MS J591
T. Skibitski, NMED-OB
IRM-RMMSO, MS A150

Monthly Progress Report
Corrective Measures Study (CMS)/Corrective Measures Implementation (CMI)
for Consolidated Unit 16-021(c)-99
November 2006

This report summarizes Los Alamos National Laboratory (LANL) activities completed during November of fiscal year (FY) 2006 on the CMS/CMI for Consolidated Unit 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) – The HPT met on November 8, 2006. Much of this meeting was devoted to discussion of issues associated with the 90s Line Pond. Because the pond is still full of water, drilling will be delayed until June 2007 and the investigation report will be delayed until September 2007, pending NMED approval of LANL's request for extension.

An update on TA-16-260 investigations was provided. The HPT also discussed the forthcoming approval on the Investigation Report for TA-16 Groundwater. NMED personnel indicated that this approval would request a well assessment report. They asked LANL to provide input as to when this document could be due. LANL did this by e-mail the following week. NMED also discussed the potential drilling of a well to replace the upper screens of the R-25 well.

The next HPT meeting is tentatively scheduled for January.

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. There were only minor precipitation events in November; these did not require repair of BMPs in the 260 outfall area.

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 biannual stable isotope sampling at Martin and Burning Ground Springs. These sampling activities are now being accomplished under the auspices of the interim facility-wide groundwater monitoring plan.

The hydrologic system in Cañon de Valle remains wet following the higher-than-average intensity monsoonal rains. Martin Spring is flowing at ~1000 mL/min., Burning Ground Spring is flowing at a rate of ~300 mL/ sec., and SWSC Spring is dry.

The 90s Line Pond and downgradient surface locations in Martin Spring Canyon and Cañon de Valle are wet. The alluvial wells in lower Cañon de Valle, Fishladder Canyon, and lower Martin Spring Canyon are wet. Surface water in Cañon de Valle was present from Burning Ground spring to well east of MDA-P. In the non-perennial reaches of Cañon de Valle, Martin Spring

canyon, and Fishladder canyon there are intermittent pockets of ponded water present at the surface.

Slug tests were performed in the alluvial wells in Cañon de Valle and Martin Spring Canyon. These will provide hydrologic property data for the canyon alluvium that will support the engineering designs for the Corrective Measures Implementation (CMI).

Ecological Risk Pilot–

The ecological risk pilot study 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 conducted 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).

LANL representatives spoke with Pantex representatives during November. The Pantex representatives indicated that a recent dithionite reduction pilot test had been only moderately successful. An in-situ bioremediation test is in the planning stages.

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 September 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 has responded to several recent NMED queries concerning the CMS Report.

NMED issued the "Intent to Public Notice Remedy Selection for the Solid Waste Management Unit 16-021(c)" on May 15, 2006. Public comments on this notice were due to NMED by July 14, 2006. LANL provided comments on this public notice. The remedy was approved by NMED in a letter dated October 13, 2006.

The Investigation Report for TA-16 groundwater was completed and submitted to NMED on August 31, 2006. An approval of this IR dated November 29, 2006 was received by e-mail on the same day. This approval requires an additional report assessing the quality of the wells in and around TA-16.

Corrective Measures Implementation (CMI) Plan –

A draft outline for the CMI Plan was completed. LANL engineering was contacted to confirm the requirements for the engineering designs. An attempt was made to survey in the Permeable Reactive Barrier (PRB) locations.

Public and Stakeholder Involvement – None

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 December 2006

Investigation Reports and CMS/CME Reports

- Discussions regarding the Groundwater Investigation and CME Reports with NMED personnel
- Continuation of Groundwater Modeling for the Groundwater CME Report

BMPs

- Continued inspection of existing BMPs following significant precipitation events

CMS Hydrogeologic Investigations

- Site maintenance at the TA-16 trailers
- Checking for presence and levels of water in alluvial wells
- Precipitation monitoring
- Data analysis

Ecological Risk Pilot

- None

CMS Bench and Pilot Studies

- Planning for column studies to support the CMI
- Initiation of batch and column studies to support the CMI

CMI

- Formulation of study designs for barrier materials for use in PRBs
- Initiation of batch and column studies for designs of barrier materials for use in the PRB
- Locating and surveying sites for possible installation of permeable reactive barriers
- Initial engineering designs

Public and Stakeholder Involvement

None