

**Monthly Progress Report**  
**Corrective Measures Study (CMS)/Corrective Measures Implementation (CMI) for**  
**Consolidated Unit 16-021(c)-99**  
**November 2007**

This report summarizes Los Alamos National Laboratory (LANL) activities completed during November of fiscal year (FY) 2007 on the CMS/CMI for Consolidated Unit 16-021(c)-99, the TA-16-260 Outfall. Activities described in the CMS plan ([LA-UR-98-3918], approved by New Mexico Environment Department (NMED)-HWB on 9/8/99), and other related activities are described herein.

**Description of Activities and Contacts**

**NMED Interactions** – An e-mail from NMED outlining their thoughts on the R-25 redrill was received on November 30, 2007, following a query from LANL. NMED did not express a strong preference for two single screen wells versus a single dual-screened well.

**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 three small and one large (> 1 in.) precipitation events in November; these did not require repair of BMPs in the 260 outfall area.

**CMS Hydrogeologic Investigations**– Hydrogeologic investigations include periodic water sampling as outlined in the Phase II RFI as well as continuing investigations delineated in the CMS plan. The ongoing spring sampling program, currently focused on capturing high-flow events, includes biannual sampling at Martin, SWSC, 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 moderately wet following the higher-than-average intensity monsoonal rains. Martin Spring is flowing at ~ 2 L/min., Burning Ground Spring is flowing at a rate of ~0.5 L/ sec. After several years of being dry, SWSC Spring is flowing at a rate of ~0.1 L/sec.

The 90s Line Pond was wet throughout November. Perched water was detected in a borehole located southeast of the 90s Line Pond during August and this borehole remained saturated throughout November. Downgradient surface locations in Martin Spring Canyon and Cañon de Valle are wet. The alluvial wells in lower Cañon de Valle and lower Martin Spring Canyon are wet. Surface water in Cañon de Valle is present from Burning Ground spring to beyond MDA-P.

**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 was 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).

The CMS Report from Pantex detailing these studies has been reviewed and results are incorporated in the CME report that was submitted to NMED on August 31, 2007. No relevant activities occurred during November.

***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/IR and CMS/CME Reports –***

The surface system 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 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 May 16, 2005. A response to that NOD was submitted on June 15, 2005.

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 (IR) for TA-16 groundwater was completed and submitted to NMED on August 31, 2006. An approval with direction of this IR dated November 29, 2006 was received by e-mail the same day. This approval requires an additional report assessing the quality of the wells in and around TA-16. Additional information, including borehole videos and X-ray diffraction data, requested in this approval was provided to NMED in a letter dated January 17, 2007.

The TA-16 Well Evaluation Report was submitted to NMED on April 30, 2007. An NOD on this document dated August 15, 2007 was received on August 17, 2007. The response to that NOD was provided to NMED on September 30, 2007. An approval of the drilling work plan for the R-25b well was received in November; this document requires drilling and development of this well to be completed by April 30, 2008.

The Groundwater CME Report was submitted to NMED on August 31, 2007.

***Corrective Measures Implementation (CMI) Plan –***

The CMI Plan was submitted to NMED on May 10, 2007. An NOD on that document was received on June 29, 2007; the response to that NOD was submitted on July 30, 2007. NMED approved the CMI Plan in a letter dated August 17, 2007.

Planning for CMI Implementation continued during November.

***Public and Stakeholder Involvement*** – None.

**Percentage of CMS Completed**

LANL estimates 100% of both the surface CMS and the groundwater CME have been completed.

**Problems Encountered/Actions to Rectify Problems**

None

**Key Personnel Issues**

Longtime NMED liaison for the 260 outfall project Darlene Goering is being transferred to other projects.

**Projected Work for December 2007**

***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 Cañon de Valle alluvial system
- Precipitation monitoring

***Groundwater CME/CMI***

- Contracting for R-25b redrilling.

***CMS Bench and Pilot Studies***

- None

***CMI***

- Contracting for CMI Implementation

***Public and Stakeholder Involvement***

- None

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