Monthly Progress Report
Corrective Measures Study/Corrective Measures Implementation
for Consolidated Unit 16-021(c)-99
January 2008

This report summarizes Los Alamos National Laboratory (LANL) activities completed during December of fiscal year (FY) 2008 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 09/08/1999), and other related activities are described herein.

Description of Activities and Contacts

NMED Interactions – A meeting between NMED, LANL, and DOE representatives was held on January 24, 2008 concerning the "Evaluation of the Suitability of Wells near TA-16 for Monitoring Contaminant Releases from Consolidated Unit 16-021(c)-99, Revision 1" (LA-UR-07-6433) that was submitted to the regulator in September 2008. NMED had questions about: 1) the suitability of drilling CdV-16-3(i) into the Tschicoma dacites and installing a regional well; and 2) the likelihood of success of the rehabilitation of Screen 2 of CdV-R-37-2.

LANL representatives acknowledged the uncertainties associated with the geology at CdV-16-3(i) and noted that the borehole would be advanced 300 to 400 ft beyond its current depth, borehole geophysics would be completed, and a well would be targeted at the uppermost producing zone. LANL and DOE representatives stated that NMED would be consulted prior to installation of a well.

NMED representatives expressed concerns that the proposed rehabilitation of Screen 2 of CdV-R-37-2 might not be successful due to the low permeability/porosity of the formation at that depth. They also expressed concern that an attempt at rehabilitation might compromise Screens 3 and 4 of that well. LANL personnel agreed rehabilitation would be difficult due to the tightness of the formation. NMED suggested that they probably would not require rehabilitation of Screen 2.

NMED requested that an updated calculation of the efficiency of the TA-16 well network be provided by e-mail, with a formal submittal of this calculation following approval or denial of the report referenced above.

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 several small (< 1 in.) precipitation events in January; 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, but frozen, 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 extremely wet throughout January. In August, perched water was detected in a borehole ~ 25 yards southeast of the 90's Line Pond and it remained saturated through the end of the year. Downgradient surface locations in Martin Spring Canyon and Cañon de Valle remain wet and frozen. 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 submitted to NMED on August 31, 2007. No relevant activities occurred during January.

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 email 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. A letter from NMED requiring completion of the CdV-16-3(i) as a regional well by July 30, 2008 was received in December.

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. A 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.

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

None

Projected Work for February 2008

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.
- Completion of a drilling work plan for the R-25c redrilling.

CMS Bench and Pilot Studies

- None

CMI

- Contracting for CMI Implementation

Public and Stakeholder Involvement

- None