Monthly Progress Report
Corrective Measures Study (CMS)/Corrective Measures Implementation (CMI) for Consolidated Unit 16-021(c)-99
June 2010

This report summarizes Los Alamos National Laboratory (LANL) activities completed during June of fiscal year 2010 on the CMS/CMI for Consolidated Unit 16-021(c)-99, the Technical Area 16 (TA-16) 260 Outfall. Activities outlined in the CMS plan ([LA-UR-98-3918] approved by the New Mexico Environment Department [NMED] Hazardous Waste Bureau on 9/8/99) and other related activities are described herein.

Description of Activities and Contacts – An informal meeting with Michael Dale of NMED was held on June 2, 2010. The meeting focused on the proposed tracer test at TA-16. LANL requested that decisions regarding the need for the tracer test be deferred until completion of the R-25b and CdV-16-4ip pumping tests. NMED agreed with this suggestion.

Best Management Practices (BMPs) – BMPs are inspected quarterly and following significant precipitation events. Several small precipitation events occurred in June, but none exceeded 0.5 in. BMPs were maintained in both the 260 Outfall and PRB installation area in support of the CMI.

CMS Hydrogeologic Investigations – Hydrogeologic investigations include periodic water sampling as outlined in the Phase II Resource Conservation and Recovery Act facility investigation (RFI) work plan 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 activities are now conducted under the auspices of LANL's interim facility-wide groundwater monitoring plan.

Flow in the TA-16 canyons decreased in June; however, localized surface flow is present in mesa-top drainages. Martin Spring is flowing at a rate of >0.1 L/s, Burning Ground Spring is flowing at a rate of < 1.5 L/s, and SWSC Spring is flowing at a rate of < 0.3 L/s.

The 90s Line Pond is dry. Surface water is present in Cañon de Valle from upstream of the outfall channel to beyond the former location of Material Disposal Area P.

RFI and CMS/CME for Surface System – These activities have been completed.

RFI/Investigation Report and CMS/Corrective Measures Evaluation (CME) for Deep Groundwater – Well R-25c, completed in September 2008, is not producing water. Well R-25b was drilled and completed in October 2008. The well completion report for R-25c was submitted in September 2008, and the well completion report for R-25b was submitted in October 2008.

LANL submitted the "Work Plan for Replacement Well R-25" on June 18, 2010.

Well CdV-16-3(i) (renamed R-48) was deepened to 1705 ft. in September 2009. Well construction was completed in late September (NMED complete on September 25, 2009).

Well R-47i at TA-14 was completed in November 2009 to a depth of 895 ft. (NMED complete on November 15, 2009).

LANL submitted a response to the approval with modifications for the "Hydrologic Testing Work Plan for Consolidated Unit 16-021(c)-99" on June 14, 2010. This response suggested postponing a decision on the tracer test until completion of pump tests at R-25b and CdV-16-4ip and proposed a schedule for those pump tests. NMED approved this response in a letter dated June 25, 2010.

The drill pad for CdV-16-4ip was completed on June 12, 2010.

CMI – Permitting for CMI activities is proceeding slowly. It was determined that the storm-filter systems in the springs required National Pollutant Discharge Elimination System (NPDES) permits because of elevated levels of aluminum. LANL's permitting group is currently working this issue with the U.S. Environmental Protection Program (EPA). The basic problem is that naturally occurring levels of aluminum in the spring water exceed current water standards.

TerranearPMC continued water-level monitoring and sampling activities in June. Manual water-level measurements were collected from the alluvial monitoring wells; several, more distal from the stream channel, are dry. Pressure transducers were installed in six wells.

The second round of PRB sampling was completed during the first week in June. The sampling included the six alluvial monitoring wells and the five sampling ports of the PRB vessel. Results from this sampling event are anticipated in August 2010.

Ecotoxicological results from the samples from SWSC cut were received. No adverse effects to *Chironomous tentans* were observed. No further soil removals in SWSC cut are anticipated.

The "Long-Term Monitoring and Maintenance Plan for the Corrective Measures Implementation at Consolidated Unit 16-021(c)-99" was completed and submitted to NMED on April 23, 2010.

Public and Stakeholder Involvement – A tour for NMED and EPA representatives was held on May 26, 2010.

Percentage of CMS Completed

LANL estimates 100% of the surface CMS has been completed.

Problems Encountered/Actions to Rectify Problems

R-25c is not producing water, and the current level remains below the screen; R-25b is still showing high turbidity based on sampling field parameters. LANL will continue to monitor the well screens.

The status of aluminum under potential NPDES permits for the storm-filter systems is problematic, as noted above in the CMI section.

Bentonite present in R-47 necessitated completion of this well as an intermediate well. A new deep well may be required at this site.

Key Personnel Issues – None

Projected Work for July 2010

BMPs

- Continue to inspect existing BMPs following significant precipitation events
- Inspect new BMPs to support CMI

CMS Hydrogeologic Investigations

- Maintain site at the TA-16 trailers
- Check for presence and levels of water in Cañon de Valle alluvial system
- Continue to monitor precipitation

Groundwater CME/CMI

- Mobilize equipment (anticipated to begin early July) and initiate drilling at CdV-16-4ip

CMI

- Continue NPDES permitting discussions with EPA
- Continue monitoring water levels in PRB wells
- Continue sampling PRB wells and treatment vessel
- Continue site restoration and waste management activities at CMI remedy sites

Public and Stakeholder Involvement – None