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

This report summarizes Los Alamos National Laboratory (LANL) activities completed during December of fiscal year 2011 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 – A phone conversation with NMED representatives was held on December 7, 2010, to discuss the delayed schedule for well R-63. NMED requested LANL submit a letter proposing an extension on the December 31 deadline. LANL submitted the letter on December 10.

Best Management Practices (BMPs) – BMPs are inspected quarterly and following significant precipitation events. Several small precipitation events occurred in December; none exceeded 0.5 in.

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 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 was very low in December. Water levels have decreased by several inches in the wells and piezometers located near the permeable reactive barrier (PRB) since the summer water-level maxima. Martin Spring is flowing at a rate of <0.1 L/s, Burning Ground Spring is flowing at a rate of <0.3 L/s, and SWSC Spring is not flowing over the weir-box exit.

The 90s Line Pond remains wet. Surface water is present in Cañon de Valle from upstream of the 260 Outfall channel to beyond the former location of Material Disposal Area P.

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

Equipment was mobilized to the R-63 site and drilling was initiated. Twenty-four–inch casing was emplaced to a depth of 53 ft before the holiday break. A letter requesting the due date for this well be extended to February 28, 2011, was submitted on December 10, 2010, and approved by NMED in a letter dated December 16, 2010.

Well CdV-16-4ip was drilled to a depth of 1150 ft in August (NMED complete on August 23, 2010).

Planning for the CdV-16-4ip pump test continued. Hydrologic evaluation of the pump test suggested that it should not overlap in time with drilling at nearby R-63 because of possible pressure transients. LANL received approvals for the notice of intent to discharge the treated pump-test water (NMED letter dated December 16, 2010) and for the "no longer contained in" designation for the pump test water (NMED letter dated December 8, 2010).

CMI – Permitting for CMI activities continues to proceed slowly. It was determined the storm-filter systems in the springs required National Pollutant Discharge Elimination System (NPDES) permits because of elevated levels of aluminum. The basic problem is that naturally occurring levels of aluminum in the spring water exceed current water standards.

TerranearPMC continued water-level monitoring activities for the PRB in December. Manual water-level measurements were collected from the alluvial monitoring wells; several wells more distant from the stream channel remain dry. Flow into the PRB is low but is balanced by outflow. The contractor added insulation materials to the PRB sampling ports to minimize freezing of the vessel ports (freezing had been noted in November).

Waste soil from the soil removal in the Consolidated Unit 16-021(c)-99 outfall source area has all been removed from behind building TA-16-260.

Public and Stakeholder Involvement – As noted above, LANL personnel had a phone conversation with NMED staff to discuss the schedule for drilling at R-63.

Percentage of CMS Completed

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

Problems Encountered/Actions to Rectify Problems

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

Key Personnel Issues – None

Projected Work for January 2011

BMPs

- Continue inspection of existing BMPs following significant precipitation events

CMS Hydrogeologic Investigations

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

Groundwater CME/CMI

- Continue planning for the R-25b and CdV-16-4ip pump tests
- Drill at R-63
- Initiate CdV-16-4ip pump test (pending completion of R-63 drilling)

CMI

- Continue NPDES permitting discussions with the U.S. Environmental Protection Agency
- Continue monitoring water levels and field parameters in PRB wells
- Continue waste management activities for water at CMI remedy sites

Public and Stakeholder Involvement – Continue discussions with NMED personnel concerning the PRB and pump tests