Monthly Progress Report
Corrective Measures Evaluation (CME)/Corrective Measures Implementation (CMI) for Consolidated Unit 16-021(c)-99
January 2011

This report summarizes Los Alamos National Laboratory (LANL) activities completed during January of fiscal year 2011 on the CME/CMI for Consolidated Unit 16-021(c)-99, the Technical Area 16 (TA-16) 260 Outfall. Activities outlined in the corrective measures study (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 tour of the R-63 and permeable reactive barrier (PRB) sites for NMED representatives was held on January 17, 2011. A tour of the TA-16-260 CMI sites for representatives from the U.S. Department of Energy (DOE) Headquarters (HQ) was held on January 18, 2011; this was part of a larger tour focused on the status of the Cañon de Valle Watershed aggregate's status as a capital project. An email requesting a formal extension of the due date of the annual CMI Monitoring and Maintenance Summary Report from April 2011 to September 15, 2011, was submitted to NMED on January 14, 2011. NMED approved this in a January 25, 2011, email communication.

Surface CME/CMI

Best Management Practices (BMPs) – BMPs are inspected quarterly and following significant precipitation events. One small precipitation event occurred in January; it did not exceed 0.5 in.

CME 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 remained very low in January. Water levels have decreased by several inches in the wells and piezometers located near the 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, but frozen. Surface water, much of it frozen, is present in Cañon de Valle from upstream of the 260 Outfall channel to beyond the former location of Material Disposal Area P.

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 January; the PRB remained unfrozen throughout the month. 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 inflow is balanced by outflow.

Subsurface CME/CMI

RFI/Investigation Report and 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).

Well R-63 was completed to a depth of 1423 ft. Borehole geophysics investigations and the well design were completed. The single screen will be located at a depth of 1325–1345 ft. This interval is located in a productive zone based both on the geophysics and observations made during drilling. NMED personnel were involved in the decision to locate the well screen at this depth. Backfilling was initiated and had been completed to a depth of 1027 ft by the end of the month.

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 suggests it should not overlap in time with drilling at nearby R-63 because of possible pressure transients.

Public and Stakeholder Involvement – As noted above, LANL personnel conducted a tour of the R-63 site and the PRB for NMED personnel. A more detailed tour for personnel from DOE-HQ was also conducted (see above).

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 FEBRUARY 2011

Surface CME/CMI

BMPs

- Continue inspection of existing BMPs following significant precipitation events

CME Hydrogeologic Investigations

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

CMI

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

Subsurface CME/CMI

- Continue planning for the R-25b and CdV-16-4ip pump tests
- Complete pump test at upper screen in CdV-16-4ip
- Complete backfilling and well development at R-63

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