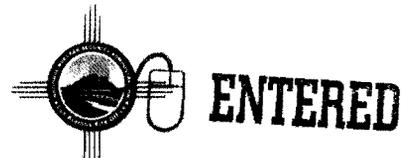




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Date: July 22, 2009
Refer To: EP2009-0323

James P. Bearzi, Bureau Chief
 Hazardous Waste Bureau
 New Mexico Environment Department
 2905 Rodeo Park Drive East, Building 1
 Santa Fe, NM 87505-6303

Subject: Submittal of the June 2009 Monthly Progress Report Corrective Measures Study/Corrective Measures Implementation for Consolidated Unit 16-021(c)-99

Dear Mr. Bearzi:

Enclosed are two hard copies with electronic files of the June 2009 Monthly Progress Report Corrective Measures Study/Corrective Measures Implementation for Consolidated Unit 16-021(c)-99. The report is submitted according to the approved corrective measures study plan for Consolidated Unit 16-021(c)-99.

If you have questions, please call John McCann at (505) 665-1091 (jmccann@lanl.gov) or Woody Woodworth at (505) 665-5820 (lwoodworth@doeal.gov).

Sincerely,

Sincerely,

B. G. Schryver for M.J.G.
 Michael J. Graham, Associate Director
 Environmental Programs
 Los Alamos National Laboratory

David R. Gregory
 David R. Gregory, Project Director
 Environmental Operations
 Los Alamos Site Office



MG/DG/DM/JM/DH:sm

Enclosures: Two hard copies with electronic files – June 2009 Monthly Progress Report
Corrective Measures Study for Potential Release Site 16-021(c)-99
(LA-UR-09-4331)

Cy: (w/enc.)
Neil Weber, San Ildefonso Pueblo
John McCann, EP-CAP, MS M992
Woody Woodworth, DOE-LASO, MS A316
RPF, MS M707 (two CDs)
Public Reading Room, MS M992

Cy: (Letter and CD only)
Laurie King, EPA Region 6, Dallas, TX
Steve Yanicak, NMED-OB, White Rock, NM
Jeff Heikoop, EES-6, MS D462
Kristine Smeltz, EP-WES, MS M992
EP-CAP File, MS M992

Cy: (w/o enc.)
Tom Skibitski, NMED-OB, Santa Fe, NM
Keyana DeAguero, DOE-LASO (date-stamp copy emailed)
Michael J. Graham, ADEP, MS M991
Alison M. Dorries, EP-WES, MS M996
Dave McInroy, EP-CAP, MS M992
IRM-RMMSO, MS A150 (date-stamp copy emailed)

Monthly Progress Report
Corrective Measures Study (CMS)/Corrective Measures Implementation (CMI) for
Consolidated Unit 16-021(c)-99
June 2009

This report summarizes Los Alamos National Laboratory (LANL) activities completed during June of fiscal year (FY) 2009 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 New Mexico Environment Department [NMED] Hazardous Waste Bureau [HWB] on 9/8/99), and other related activities are described herein.

Description of Activities and Contacts – NMED provided LANL and the U.S. Department of Energy (DOE) with a letter (dated 6/24/2009) updating the schedule for the CMI.

Best Management Practices (BMPs) – BMPs are inspected quarterly and following significant precipitation events. Several precipitation events occurred in June, of which two exceeded 0.5 in.; however, they did not require BMP repair in the 260 Outfall area.

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

The hydrologic system in Cañon de Valle is extremely wet resulting from the unseasonable June rains. Martin Spring is flowing at >0.02 L/s. Burning Ground Spring is flowing at a rate of ~0.25 L/s; SWSC Spring is flowing at >0.05 L/s.

The 90s Line Pond remained wet throughout June. Downgradient surface locations in Martin Spring Canyon and Cañon de Valle remain wet. The alluvial wells in lower Cañon de Valle and lower Martin Spring Canyon and Fishladder Canyon are also wet. Surface water is present in Cañon de Valle from Burning Ground Spring past the location of Material Disposal Area P.

Ecological Risk Pilot – The ecological risk pilot study has been completed, and the 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 high explosives (HE) program was focused on two DOE sites: LANL and Pantex. Ongoing studies, mainly consisting of monitoring in support of the previous studies, include the following:

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 the results incorporated in the CME report submitted to NMED on August 31, 2007.

RFI and CMS/CME for Surface System – The surface system CMS report was completed and submitted to NMED on November 26, 2003; the RFI report was completed and submitted in September 2003. A response to the notice of deficiency on the RFI report was submitted on January 28, 2004, and an addendum to that 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. A notice of disapproval (NOD) on the CMS report was received on 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.

RFI/Investigation Report (IR) and CMS/CME for Deep Groundwater – The IR for TA-16 groundwater was completed and submitted to NMED on August 31, 2006; an approval with direction, dated November 29, 2006, was received by email the same day. This approval required an additional report assessing the quality of the wells in and around TA-16. Additional information requested in this approval, including borehole videos and X-ray diffraction data, 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, and an NOD was received on August 17, 2007. The response to that NOD and a revised report were provided to NMED on September 30, 2007. NMED approved the revised TA-16 well evaluation report on February 11, 2008. A response to this approval was submitted on March 15, 2008. Two drilling work plans [for CdV-R-15-1 and CdV-16-3(i)] were submitted as part of this approval response and were approved by NMED in letter dated March 28, 2008. An approval of the drilling work plan for the R-25b well, which was submitted in June 2007, was received in November 2007. A letter from NMED requiring completion of the CdV-16-3(i) as a regional well by July 30, 2008, was received in December 2008. The drilling work plan for R-25c was submitted in February 2008 and approved in a letter dated March 11, 2008. Well R-25c was drilled in September, and the well was constructed at that time. The well is not producing water. R-25b was drilled and the well was constructed 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.

The groundwater CME report was submitted to NMED on August 31, 2007, and an NOD requiring submittal of a supplemental investigation work plan (IWP) was received on April 22, 2008. The supplemental IWP was submitted on June 30, 2008. An approval with

modifications on the IWP was received on January 26, 2009. Additional development activities for R-25b occurred in April 2009.

Initial attempts to deepen the CdV-16-3(i) well were conducted in June but were unsuccessful because the well was off vertically. A letter was drafted requesting drilling fluids (e.g. EZ-mud) be allowed to be used to complete this well. The drill rig and crew moved to the site of R-47 at TA-14 and commenced drilling. As of the end of the month, this borehole had reached a depth of 241 ft. The plugging and abandonment of CdV-16-2(i) was initiated.

CMI – The plan was submitted to NMED on May 10, 2007. An NOD was received on June 29, 2007; LANL’s response was submitted on July 30, 2007. NMED approved the CMI plan in a letter dated August 17, 2007. NMED updated the CMI schedule in a letter dated June 24, 2009.

Bench and pilot studies supporting the CMI continued. Permitting for CMI activities continued in June. The first three segments of the 401/404 permit were submitted to the Army Corps of Engineers on June 25, 2009, for the carbon filtration system at SWSC and Martin Spring and the permeable reactive barrier (PRB). Submittal of the 401/404 permit for the carbon filtration system at Burning Ground Spring is pending completion of the wetland determination. Notices of intent to discharge for the construction of the PRB and the operation of the springs’ carbon filtration systems were submitted to NMED Surface and Groundwater Bureaus on June 25, 2009. PR-ID comments are being resolved. The letter requesting an “area of contamination” designation was submitted on June 15, 2009. A request for a “contained in” determination for the springs and alluvial groundwaters impacted by the CMI was submitted to NMED on May 4, 2009. LANL is waiting for a response to this request. Bid packages from the CMI contractors were received and initial reviews were completed.

Public and Stakeholder Involvement – None

Percentage of CMS Completed

LANL estimates 100% of both the surface CMS and the groundwater CME have been completed. This estimate does not include additional work covered by the work plan submitted on June 30, 2008.

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. LANL will continue to monitor the well screens. Redrilling of CdV-16-3(i) is problematic; it will be necessary to consult with NMED to decide on a path forward.

Key Personnel Issues – None

Projected Work for July 2009

BMPs

- Continuing 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

- Continuation of drilling at R-47
- Completion of plugging and abandoning of CdV-16-2(i)

CMS/CME Bench and Pilot Studies – No activities projected

CMI

- Contract award for CMI
- Continued lab scale tests to finalize media selection for PRB
- Submittal of the final 401/404 permit requests for installation of storm filters following completion of wetlands delineation
- Receipt of approval for request for area of contamination for CMI
- Redesign of storm filters to avoid National Pollutant Discharge Elimination System permitting issues
- Kick-off meeting for fieldwork
- Contractor preparation for field deployment
- Meetings with site personnel to expedite CMI

Public and Stakeholder Involvement – None