Response to the Notice of Disapproval for the Phase III Investigation Report for Material Disposal Area T, Consolidated Unit 21-016(a)-99, at Technical Area 21, Los Alamos National Laboratory EPA ID No: NM0890010515, HWB-LANL-09-045, Dated November 9, 2009

INTRODUCTION

To facilitate review of this response, the New Mexico Environment Department's (NMED's) comments are included verbatim. The comments are divided into general and specific categories, as presented in the notice of disapproval. Los Alamos National Laboratory's (LANL's or the Laboratory's) responses follow each NMED comment.

GENERAL COMMENTS

NMED Comment

1. *In numerous pieces of correspondence, NMED directed the Permittees to sample the vapor-monitoring wells at MDA T (see NMED January 16, 2007 Notice of Approval with Direction; NMED April 9, 2007 Approval with Modifications; NMED February 8, 2008 Notice of Disapproval; NMED March 28, 2008 Approval with Modifications; NMED October 20, 2008 Response to Comments; NMED February 25, 2009 Intent to Assess Stipulated Penalties; NMED May 22, 2009 Final Demand for Payment of Stipulated Penalties). The purpose of the Phase III work at MDA T was to fill in the data gaps left by the Permittees' failure to sample the vapor-monitoring wells as well as to define the horizontal and vertical extent of vapor-phase contamination. The Report further highlights how the Permittees continue to not follow standard site investigation methods and NMED's direction at this site.*

LANL Response

1. NMED's comment underscores the need for improved communication between the regulator and the Permittees.

NMED Comment

2. *In the approved Work Plan, the Permittees proposed drilling, sampling and monitoring three vapor-monitoring wells at MDA T. The Report covers data for vapor-monitoring well 21-25262. NMED and the Permittees agreed to include installation of the vapor-monitoring well at Building 21-257 in the DP Aggregate corrective action activities. The Permittees did not make this change clear in the Report and must revise the Report to clearly state that the installation of the Building 21-257 vapor-monitoring well is part of the DP Aggregate investigation activities.*

   Data from the North Perimeter Road vapor-monitoring well also was not included in the Report. The Permittees must revise the Report to include these data.

LANL Response

2. With approval of the work plan (NMED 2009, 105691), the installation of a vapor-monitoring well near building 21-257 was removed from the Phase III work scope. Section 3.0 of the revised investigation report has been changed to clearly state that the installation of a vapor-monitoring well near building 21-257 is part of the DP Aggregate investigation activities.

The North Perimeter Road vapor-monitoring well (21-607955) was completed in December 2009. Concentrations on core samples were analyzed, and one round of vapor sampling was completed. All data for this well are presented in the revised report.

NMED Comment

3. *In Section 3.4, Deviations, the Permittees discuss deviations regarding sampling and analysis, but omit other deviations such as collection of data from the North Perimeter Road vapor-monitoring well, inclusion of the Building 21-257 vapor-monitoring well with the DP Aggregate investigation activities, and not following the schedule provided in Table 1 of the Work Plan. The Permittees did not provide justification for their failure to install the North Perimeter Road vapor-monitoring well, or request an extension. As required by Section XI.C.7.b of the March 1, 2005 Compliance Order on Consent (Order), the Permittees must discuss field observations or conditions that altered the planned work or may have influenced the results of sampling, testing, and logging. The Permittees must revise the Report to discuss any changes to the Work Plan.*

LANL Response

3. Section 3.4, Deviations, has been revised to include additional deviations from the approved work plan not previously documented. The vapor-monitoring well to be located near building 21-257, which was removed from the work plan, is not considered a deviation (see the response to comment 2).

NMED Comment

4. *The Permittees discuss the vapor-monitoring schedule on page 4, Section 3.1, Field Activities, where they state "monthly sampling of MDA T vapor-monitoring wells 21-607955 and at building 21-257 for 12 rounds (upon completion), continued sampling of MDA T vapor-monitoring well 21-25262 for an additional eight rounds (August 2009 – June 2010)." Vapor-monitoring data for the well located adjacent to Building 21-257 will be included in the DP Aggregate investigation activities. Additionally, as stated in NMED's May 26, 2009 letter* Correction Approval with Modifications Phase III Work Plan for Material Disposal Area T, Consolidated Unit 21-016(a)-99*, vapor-monitoring at all vapor-monitoring wells at MDA T (21-25262, 21-607955, 21-603058, 21-603059, and 21-25264) must continue for the foreseeable future. NMED reaffirms the vapor-monitoring schedule outlined in previous correspondence; the Permittees must revise the Report to remove all statements regarding timeframes for vapor-monitoring that NMED has not approved.*

LANL Response

4. LANL has revised the investigation report to remove all statements regarding time frames for vapor monitoring that NMED has not approved.

NMED Comment

5. *In Appendix B, Field Methods, the Permittees must ensure that the descriptions of the field methods reflect the actual procedures used in the field. The section must be written in past tense to reflect past actions. The Permittees must revise Appendix B of the Report to describe the methods actually implemented in the field.*

LANL Response

5. All discussions contained in Appendix B, Field Methods, refer to methods actually used in the field. The use of future tense in Appendix B, sections B-5.2.1 and B-5.2.2, was in error and has been corrected in the revised report.

SPECIFIC COMMENTS

NMED Comment

1. Section 6.1.1, Solid Media, page 12:

Permittees' Statement: *"Core samples from BH 21-25262 were collected in 2009 to confirm the nature and extent of specific inorganic, organic, and radioactive COPCs in the MDA T subsurface. As determined by previous investigations (LANL 2006, 094151; LANL 2008, 102182), data from the 2009–2010 investigation include only analytical results for the following: anions using EPA Method 300.0, perchlorate using EPA Method SW-846:6850, VOCs using EPA Method SW-846:8260B, and tritium using EPA Method 906.0. Therefore, the following data review discusses results (historical and current) only from analyses included in the 2009–2010 samples."*

NMED Comment: *The approved Work Plan states that "[a]nalysis will also be conducted for perchlorate using the LANL method that allows more sensitive detection than that of the U.S. Environmental Protection Agency (EPA) test method previously used to investigate MDA T." EPA Method 6850 was not part of the approved Work Plan. Further characterization of perchlorate in the subsurface may be necessary, because MDA T is a potential source of perchlorate contamination in alluvial and groundwater wells in DP Canyon. No revision is necessary.*

LANL Response

1. The method used by LANL to detect perchlorate is U.S. Environmental Protection Agency (EPA) Method: SW-846:6850. This method is more sensitive than perchlorate results obtained by EPA Method 300.0. A discussion of how the investigation results satisfy the requirements of the work plan will be included in section 6.1.1.

REFERENCES

NMED (New Mexico Environment Department), May 4, 2009. "Approval with Modifications, Phase III Work Plan for Material Disposal Area T, Consolidated Unit 21-016(a)-99," New Mexico Environment Department letter to D. Gregory (DOE-LASO) and D. McInroy (LANL) from J.P. Bearzi (NMED-HWB), Santa Fe, New Mexico. (NMED 2009, 105691)

NMED (New Mexico Environment Department), May 26, 2009. "Correction, Approval with Modifications, Phase III Work Plan for Material Disposal Area T, Consolidated Unit 21-016(a)-99," New Mexico Environment Department letter to D. Gregory (DOE-LASO) and D. McInroy (LANL) from J.P. Bearzi (NMED-HWB), Santa Fe, New Mexico. (NMED 2009, 106455)