Response to the "Notice of Disapproval Periodic Monitoring Report for Vapor-Sampling Activities at Material Disposal Area (MDA) L, Solid Waste Management Unit 54-006, at Technical Area 54, First Quarter Fiscal Year 2009 Los Alamos National Laboratory EPA ID #NM0890010515, HWB-LANL-09-008," Dated April 27, 2009

INTRODUCTION

To facilitate review of this response, the New Mexico Environment Department's (NMED's) comments are included verbatim. Los Alamos National Laboratory's (LANL's or the Laboratory's) responses follow each NMED comment.

COMMENTS

NMED Comment

1. *Section 2.1, Deviations, page 4, bullet 2:*

   Permittees' Statement: *"Borehole location 54-24244 was not field screened or sampled. The Flexible Liner Underground Technology (FLUTe) vapor-sampling system installed at this location is currently damaged."*

   NMED Comment: *The Permittees must offer possible explanations of how the FLUTe system was damaged and when the vapor-monitoring well will be replaced or repaired.*

LANL Response

1. The Flexible Liner Underground Technology (FLUTe) vapor-sampling system installed at borehole location 54-24244 failed shortly after installation. The liner was installed in the borehole using a weight attached to the bottom of the liner. Once the liner was placed in the borehole, it was backfilled with sand. After backfilling with sand, the liner was clamped to the drill casing and the tubing was fitted through the manifold. Settling of the sand within the liner caused the liner to dislodge from the clamps at the top of the casing, causing the tubing attached to each of the vapor-sampling ports to stretch and break. The liner remains in the borehole at depth, but tubing is no longer connected to each port. The borehole cannot be sampled in its current condition.

   The FLUTe vapor-sampling system at borehole location 54-24244 will be replaced to accommodate sampling first quarter fiscal year (FY) 2010.

   The text of the periodic monitoring report has been revised to read as follows:

   > Borehole location 54-24244 was not field screened or sampled. The Flexible Liner Underground Technology (FLUTe) vapor-sampling system installed at this location is damaged and is not able to be sampled. Borehole location 54-24244 will be replaced to accommodate sampling during the first quarter FY2010.

   Replacement pages are attached.

NMED Comment

2. Section 4.0, Field-Screening Results, page 5, paragraph 3:

Permittees' Statement: *"Several sampling ports were blocked and did not produce airflow adequate to collect representative Landtec or B&K field-screening measurements. Blocked ports are identified in Table 2.0-1."*

NMED Comment: *The Permittees must explain whether or not the ports will be repaired or replaced. Also, in addition to not collecting field-screening measurements, the Permittees did not collect vapor samples for VOC and tritium analysis at the blocked ports. The Permittees must identify this in the "Deviations" section of the Report.*

LANL Response

2. The blocked ports associated with monitoring location 54-01016 are scheduled for field-screening only as presented in Table 1.0-1, NMED-Approved MDA L Subsurface Vapor-Monitoring Locations. Previous efforts to unblock other blocked ports have been unsuccessful; and therefore, the Laboratory requests these ports be removed from the field-screening program.

   The text of section 4.0, Field-Screening Results, has been revised to read as follows:

   > The 414.3-ft, 459.5-ft, and 517.6-ft ports in borehole location 54-01016 were blocked and did not produce adequate airflow to collect representative Landtec or B&K field-screening measurements. These ports have been consistently blocked and cannot be repaired without replacement of all monitoring components at this location. The Laboratory proposes to discontinue attempts to field screen these ports.
   >
   > Low airflow, which is one indicator of a partially or completely blocked port, was observed in the 60-ft and 180-ft ports in borehole location 54-02001 and in the 20-ft and 140-ft ports in borehole location 54-02002. However, an appropriate volume of air was able to be purged from these ports before collecting Landtec and B&K measurements. Landtec CO_2 and B&K CO_2 values measured in these ports were indicative of subatmospheric air conditions (versus ambient, surface air conditions).
   >
   > Blocked ports and ports presenting low airflow conditions are identified in Table 2.0-1. According to the NMED-approved Table 1.0-1, VOC and tritium samples are not required to be collected from the blocked ports in borehole location 54-01016 or from the partially blocked ports in borehole locations 54-02001 and 54-02002.

   The text of section 4.0, Field-Screening Results, have been revised to read, "Low airflow was observed in the 120-ft port at borehole location 54-02024, indicating the possibility of a blocked or partially blocked port." The revised text also states, "The laboratory-analytical VOC concentrations observed in the 120-ft port depth were compared with the laboratory-analytical VOC concentrations from the two nearest port depths (100 ft and 140 ft) within the same borehole."

   A third bullet has been added to section 2.1, Deviations, that states, "The 414.3-ft, 459.5-ft, and 517.6-ft ports in borehole location 54-01016 were blocked and could not be field screened. These three ports have been consistently blocked and are proposed for no further field screening. According to Table 1.0-1, VOC and tritium samples are not required to be collected from these ports."

Footnotes that indicate blocked ports and ports where low airflow was observed have been added to Tables 2.0-1, 4.0-1, and 4.0-2, replacement pages are attached.

NMED Comment

3. Table 5.0-1, VOC Pore-Gas Results at MDA L, pages-106-175:

***NMED Comment:** NMED acknowledges that the data supplied on the disc included with the Report provides the results in micrograms per cubic meter (µg/m^3) and parts per billion per volume (ppbv). To facilitate NMED's review of the Report, the Permittees must also present the results in Table 5.0-1 in both µg/m^3 and ppbv.*

LANL Response

3. Table 5.0-1 has been revised to present analytical results in both parts per billion per volume (ppbv) and micrograms per cubic meter (µg/m^3), replacement pages are attached.