



September 19, 2023

Arturo Duran  
Designated Agency Manager  
Environmental Management  
U.S. Department of Energy  
Los Alamos Field Office  
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Los Alamos, New Mexico, 87544

**RE: REVIEW**  
**PERIODIC MONITORING REPORT FOR 2022 VAPOR-SAMPLING ACTIVITIES AT MATERIAL DISPOSAL AREA C, SOLID WASTE MANAGEMENT UNIT 50-009, AT TECHNICAL AREA 50 (MAY 2023)**  
**LOS ALAMOS NATIONAL LABORATORY (LANL)**  
**EPA ID #NM0890010515**  
**HWB-LANL-23-033**

Dear Mr. Duran:

The New Mexico Environment Department (NMED) has received the United States Department of Energy's (DOE) *Periodic Monitoring Report for 2022 Vapor-Sampling Activities at Material Disposal Area C, Solid Waste Management Unit 50-009, at Technical Area 50* (Report), dated May 2023 and referenced by EM2023-0053. The Report was received by NMED on May 16, 2023.

NMED reviewed the Report and has the following comments:

- **Table 5.2-1, *Detected Tritium Results in Pore-Gas Samples at MDA C Vapor-Monitoring Wells, First 2022 Sample Round*, pg. 33.** NMED notes the presence of tritium in the pore-gas samples collected from most boreholes, with a high concentration exceeding 2,500,000 pCi/L in borehole location 50-603470 at a depth of 83 feet below ground surface.
- **Figure D-1.0-2, *Lateral and vertical extent of the MDA C TCE plume*, pg. D-12.** Reduce the number of neighboring points used for interpolation of iso-contours. The iso-contours are erratic and inconsistent with iso-contour maps from previous reports concerning the VOC vapor plume. Provide the revised Figure D-1.0-2.
- **Section D-2.1, *Borehole 50-24813*, pg. D-3-.** VOC vapor is detected in the lowest ports of the boreholes in the Tvt2 – Younger Tschicoma Dacite Formation at concentrations below screening levels. Concentrations of trichloroethylene (TCE) and total volatile organic compounds (VOCs) over time at 600 feet below ground surface (ft bgs) show a gradual increase over time.

- **Section D-2.3, Borehole 50-603064, pg. D-3.** VOC vapor is detected in the lowest ports of the boreholes in the Tvt2- Younger Tschicoma Dacite Formation at concentrations below screening levels. Concentrations of total VOC concentrations over time at 500 ft bgs show a gradual increase over time.
- **Figure D-5.0-1, Lateral and vertical extend of the MDA C TCE plume, baseline (2010-2012 average) vs 2022 maximum measured concentration at each sample port, pg. D-43.** Reduce the number of neighboring points used for interpolation of iso-contours. The iso-contours are erratic and inconsistent with iso-contour maps from previous reports concerning the VOC vapor plume. Provide the revised Figure D-5.0-1.

NMED notes that this is a periodic monitoring report, and this review does not constitute approval of the reference documents and content of the Report. Please provide a response to NMED comments within 45 days of receipt of this letter.

Should you have any questions regarding this correspondence, please contact Michael Petersen at (505) 690-5107.

Sincerely,

 Digitally signed by Rick  
Shean  
Date: 2023.09.19  
11:24:12 -06'00'

Rick Shean  
Designated Agency Manager  
Director, Resource Protection Division  
New Mexico Environment Department

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File: LANL 2023, Periodic Monitoring Report for 2022 Vapor-Sampling Activities at Material Disposal Area C, Solid Waste Management Unit 50-009, at Technical Area 50, May 2023  
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