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John Kieling, Bureau Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

Subject: Response to Review of the Periodic Monitoring Report for Technical Area 54 Monitoring Group, Third Quarter, Monitoring Year 2016

Dear Mr. Kieling:

The New Mexico Environment Department (NMED) provided comments on November 4, 2016, on the Periodic Monitoring Report for Technical Area 54 Monitoring Group, Third Quarter, Monitoring Year 2016, submitted in August 2016 by the U.S. Department of Energy (DOE) and Los Alamos National Security, LLC (LANS) (collectively, the Permittees). To facilitate review of the Permittees's responses, NMED's comments are included verbatim, followed by the Permittees's responses.

COMMENTS:

1. Missing Transducer/Manual Groundwater Level Data

NMED Comments:

Appendix B, Page B-34:

Transducer (continuous) and manual groundwater level data were not reported for R-20 S1 from February 12, 2016, through February 28, 2016.

Appendix B, Page B-49-50:

Transducer (continuous) and manual groundwater level data were not reported for R-20 S2 from May 12, 2015, through February 28, 2016.

Appendix B, Page B-90:

Transducer (continuous) and manual groundwater level data were not reported for R-23i S1 from January 22, 2016, through April 11, 2016. No groundwater level measurement was reported for the April 11, 2016, groundwater sampling event.

Appendix B, Page B-92:

Transducer (continuous) and manual groundwater level data were not reported for R-23i S2 from October 27, 2015, through January 27, 2016.

Appendix B, Page B-99:

Transducer (continuous) and manual groundwater level data were not reported for R-23i S3 from November 4, 2015, through December 20, 2015.

Appendix B, Page B-237:

Transducer (continuous) and manual groundwater level data were not reported for R-41 S2 from February 5, 2016, through April 11, 2016. No groundwater level measurement was reported for the April 11, 2016, groundwater sampling event.

Appendix B, Page B-512:

Transducer (continuous) and manual groundwater level data were not reported for R-52 S2 from October 22, 2015, through December 22, 2015.

Continuous and manual groundwater level measurements are described in the approved MY2016 Interim Facility-Wide Groundwater Monitoring Plan. *In the future, provide complete continuous and manual groundwater level data in the Report, including the water level measurement on the groundwater sampling date, or discuss the gaps in reporting of the groundwater level data; and provide groundwater sample results or provide comment on the deviation.*

LANL Response:

Los Alamos National Laboratory (the Laboratory) recognizes that measuring the groundwater level before purging and sampling a monitoring location is a requirement of the Compliance Order on Consent. The Interim Facility-Wide Groundwater Monitoring Plan for Monitoring Year 2017 was prepared to comply with this requirement, and all future periodic monitoring reports (PMRs) will note any instances when a groundwater level measurement was not obtained before purging and sampling.

In addition to collecting groundwater level data before purging and sampling, the Laboratory collects groundwater level data "continuously" (e.g., hourly, daily) for most monitoring locations, and these data are voluntarily provided in PMRs. Any gaps in the continuous groundwater level records presented in the PMRs are a result of one or more of the following reasons:

- Dry well
- Water level falls below level monitoring pressure transducer
- Well not equipped with a level transducer
- Level transducer not functioning properly (including failure)
- Transducer temporarily removed from well for maintenance and/or calibration

Section 3.3, Groundwater Elevations and Base Flow Observations, of future PMRs will include the above reasons for any gaps in continuous groundwater level data.

2. Laboratory Holding Time Exceedances

NMED Comment:

Laboratory validation reports reveal exceedances of holding times that are not discussed in the Report. For example, the R-23i S1 Data Package 2016-1027, Case Narrative, Page 15 of 72 revealed the following for a sample collected for volatile organic compounds (VOCs) on April 11, 2016, and analyzed on April 27, 2016:

Holding Time Specifications

GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the ALPHALIMS system. Those holding times expressed as days expire at midnight on the day of expiration. Samples 395106001 (CAPA-16-114714), 395106002 (CAPA-16-114680), 395106003 (CAPA-16-114715) and 395106004 (CAPA-16-114681) were not analyzed within the recommended holding. However, the samples were analyzed within two times the holding period. This satisfies the client criteria. The results are qualified accordingly.

In the future, avoid exceeding holding times. In the event that holding times are exceeded, provide a discussion on the exceedance in the Report and any effects it has on data quality.

LANL Response:

A corrective action was implemented on December 15, 2016, that requires the contract analytical laboratory to make every effort to analyze samples provided by the Laboratory within method-specified holding times (14 days for preserved volatile organic analysis samples). The corrective action also requires the contract laboratory to notify the responsible Laboratory Project Manager if any samples cannot be analyzed within the method-specified holding times and fully explain in the analytical narrative why samples were analyzed outside of the method-specified holding times.

Analytical data will continue to be validated and qualified in accordance with the Laboratory's data validation procedures. It should be noted that the Laboratory's data validation procedures incorporate the U.S. Environmental Protection Agency's (EPA's) National Functional Guidelines for Data Review as well as the DOE/National Nuclear Security Administration's Data Validation Model. In September 2016, EPA updated the National Functional Guidelines, and the Laboratory is in the process of updating its data validation standard operating procedures accordingly.

If you have any questions, please contact Steve Paris at (505) 606-0915 (smparis@lanl.gov) or Hai Shen at (505) 665-5046 (hai.shen@em.doe.gov).

Sincerely,

Bruce Robinson, Program Director
Environmental Remediation Program
Los Alamos National Laboratory

Sincerely,

David S. Rhodes, Director
Office of Quality and Regulatory Compliance
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