



Environmental Protection and Compliance Division

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National Nuclear Security Administration

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Symbol: EPC-DO-23-016

Date: February 15, 2023

LA-UR: 23-20276

Mr. Rick Shean, Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6313

Subject: Proposed Methodology for Sampling Polyfluoroalkyl and Perfluoroalkyl Compounds at Los Alamos National Laboratory for the Closure of the Technical Area 16-399 Burn Tray

Dear Mr. Shean:

This letter proposes the sampling and analytical methodology to be utilized to detect whether polyfluoroalkyl and perfluoroalkyl compounds are in the soil to at Technical Area 16-399 Burn Tray at the Los Alamos National Laboratory (LANL) in order to complete closure activities. On September 6, 2022, the New Mexico Environment Department (NMED) issued LANL the *Amended Closure Plan Open Burning Treatment Unit Technical Area 16-399 Burn Tray, Revision 2* (Amended Closure Plan), based on a request from the United States Department of Energy National Nuclear Security Administration Los Alamos Field Office (NA-LA) and Triad National Security, LLC (Triad), collectively referred to as the Permittees.

To address comments received from the public, the Amended Closure Plan includes the requirement for the Permittees to sample and analyze for polyfluoroalkyl and perfluoroalkyl compounds by “an appropriate NMED approved sampling method” per Section 6.1.2, *Soil Sampling*. The Permittees propose the following sampling and analytical methodologies to NMED for review and approval. All soil samples collected, as part of these closure activities, will be collected as outlined in the Amended Closure Plan Section 6.1.1, *Soil Collection Procedures*.

The samples will be sent to GEL Laboratories in Charleston, South Carolina for analysis utilizing a modified version of the United States Environmental Protection Agency (EPA) Drinking Water Laboratory Method 537: Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS). The method has been utilized for other soil analysis at LANL and will be directly comparable to other soil sample analytical results at LANL. Additionally, in previous samples sent to GEL Laboratories and analyzed using the modified Method 537, the report method detection limits were between 0.112 and 2.580 parts per billion (the range is based on the individual compound results). The range of low historical report method detection limits indicate that the estimated quantitation limits will be well below

the minimum soil screening levels included in *Appendix A, State of New Mexico Soil Screening Levels, within the New Mexico Environment Department Risk Assessment Guidance for Site Investigations and Remediation, Volume I Soil Screening Guidance for Human Health Risk Assessments*. The lowest soil screening level included in Appendix A for these types of compounds is 0.185 parts per million. Lastly, while there is a more generalized draft method (EPA Clean Water Act Method 1633) currently under review by the EPA, it is unclear when the method will be finalized. EPA Method 1633 is not within the current LANL analytical chemistry laboratory contract and for this reason will not be included in GEL Laboratories services until such time as the method becomes official.

However, it should be noted that the EPA has provided the following caveat for use of modified methods:

EPA is aware of some laboratories that are offering analysis for PFAS by techniques described as “modified” (e.g., “Modified Method 537”). These modified methods are sometimes offered by laboratories to assess samples of drinking water and other environmental media (e.g., soils, ambient water) and to address PFAS analytes not currently addressed by EPA’s methods. EPA is not aware of a standardized description of the modified methods, nor is the Agency aware of studies that have validated the performance of these modified methods across multiple laboratories. Therefore, EPA cannot address the performance of “modified methods” in a general manner. If you are considering using a modified method to analyze a sample, EPA recommends that you evaluate its appropriateness relative to your goals for the data and data quality objectives. See (<https://www.epa.gov/pfas/epa-pfas-drinking-water-laboratory-methods>)(last accessed January 17, 2023).

Soil sample collection and analysis activities will occur after the soil excavation at the former location of the Technical Area 16-399 Burn Tray. Soil excavation activities are currently in the planning and scheduling stage. Please review the information herein and provide concurrence with the path forward for this methodology per the Amended Closure Plan requirements.

If you have any questions or comments concerning the proposed methodology, please contact Karen E. Armijo (NA-LA), at 505-665-7314 or by email at karen.armijo@nnsa.doe.gov or Patrick L. Padilla (Triad) at 505-412-0462 or by email at plpadilla@lanl.gov.

Sincerely,

JENNIFER
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Jennifer E. Payne
Division Leader
Environmental Protection and Compliance Division
Triad National Security, LLC
Los Alamos National Laboratory

Sincerely,

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Karen E. Armijo
Permitting and Compliance Program Manager
National Nuclear Security Administration
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JEP/KEA/PLP

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