NEW MEXICO
ENVIRONMENT DEPARTMENT

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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

March 23, 2021

Michael Weis, Manager
National Nuclear Security Administration
Los Alamos Field Office
3747 West Jemez Road, A 316
Los Alamos, NM 87544

Kirk Lachman, Manager
DOE Environmental Management
Los Alamos Field Office
P.O. Box 1663, MS-K491
Los Alamos, NM 87545

RE: ADMINISTRATIVELY INCOMPLETE DETERMINATION
PART A AND GENERAL PART B OF THE RCRA PERMIT RENEWAL APPLICATION
LOS ALAMOS NATIONAL LABORATORY
EPA ID#NM0890010515
HWB-LANL-20-001

Dear Messrs. Weis and Lachman:

On June 29, 2020, the New Mexico Environment Department (NMED) received General Part A Permit Application Revision 10.0 (referenced by ESHQSS-20-029/LA-UR-19-32403) and volumes 1 and 2 of the Part B Permit Application for Renewal of the Los Alamos National Laboratory Hazardous Waste Facility Permit (Application), dated June 26, 2020 (referenced by ESHQSS-20-030/LA-UR-20-24479). The Resource Conservation and Recovery Act (RCRA) Permit Renewal Application was submitted by the United States Department of Energy (DOE), Newport Nuclear-BWXT (N3B), and Triad National Security, LLC. (Triad), collectively, the Permittees.

In accordance with 20.4.1.900 NMAC, incorporating 40 Code of Federal Regulations (CFR) 270.14, NMED has determined that the Application is administratively incomplete. NMED is providing a written notice in accordance with the New Mexico Hazardous Waste Permit and Corrective Action Fees Regulations, 20.4.2.201(B)(2)(b) NMAC. NMED's comments are listed in the enclosure attached to this letter. The Permittees must be address the comments before a technical review of the Application can be conducted.

The Permittees response to the comments must be submitted to NMED in the form of 3 physical copies and at least one electronic copy. An electronic copy must also be made available to the public through the Los Alamos Electronic Public Reading Room (EPRR). The information and response to this Administratively Incomplete notice must be submitted **no later than sixty (60) days** from the date of the receipt of this letter.

If you have any questions regarding this letter, please contact Neelam Dhawan of my staff at (505) 690-5469 or via email at neelam.dhawan@state.nm.us

Sincerely,

Kevin Pierard

Digitally signed by Kevin Pierard
Date: 2021.03.23 17:26:03 -06'00'

Kevin M. Pierard, Chief
Hazardous Waste Bureau

Enclosure

cc:

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File: 2021 LANL Permit, Administratively Incomplete Determination-Part A and General Part B of the RCRA Permit Renewal Application
LANL-20-001

Enclosure

Request for Additional Information for Administratively Complete Review
RCRA Permit Renewal Application General Part A and Part B, Volume 1 and 2

General Part A

1. 40 CFR 270.14(c)(4), Extent of Groundwater Contamination Plume:

A description of any plume of contamination that has entered the ground water from a regulated unit at the time that the application was submitted that:

(i) Delineates the extent of the plume on the topographic map required under 270.14(b)(19) of this section;

(ii) *Identifies the concentration of each appendix IX, of part 264 of this chapter, constituent throughout the plume or identifies the maximum concentrations of each appendix IX constituent in the plume.*

The United States Department of Energy (DOE), Newport Nuclear-BWXT (N3B), and Triad National Security, LLC. (Triad), collectively the Permittees, have not provided maps depicting the extent of the existing ground water plumes at the LANL Facility (Facility, as defined in 40 CFR 260.10) in accordance with the above requirements. Maps 2 and 3 show National Pollution Discharge Elimination System (NPDES) site locations and other groundwater monitoring wells, however, these maps do not provide contaminant plume boundaries. Include maps depicting extent of plumes and maximum concentration of contaminants on a topographic map as required by 40 CFR 270.14(b)(19).

2. 40 CFR 270.14 (b)(11), Facility Location:

Facility location information:

(i) In order to determine the applicability of the seismic standard (40 CFR 264.18(a)) the owner or operator of a new facility must identify the political jurisdiction (e.g., county, township, or election district) in which the facility is proposed to be located.

(ii) If the facility is proposed to be located in an area listed in appendix VI of part 264, the owner or operator shall demonstrate compliance with the seismic standard.

Los Alamos National Laboratory is located in the Los Alamos County, which is an area listed in Appendix VI of 40 CFR 264, therefore, the Permittees must provide geologic data which demonstrates compliance with the seismic standard (see 40 CFR 270.14 (b)(11) for more information). The Permittees must provide seismic information for the three (3) waste treatment units proposed to be included in the permit (i.e., Technical Area (TA) 16-388, 36-8, and 39-6).

The Permittees have stated that these units are not newly built, however, these units have existed and operated only as interim status units. For NMED to consider these units to be included in the permit the Permittees must demonstrate that these units meet all requirements of the permitted units, including compliance with the seismic standard.

Part B-Volume 1

3. Section 2.7.5, Preventing Undue Exposure of Personnel, page 2-7:
The information provided by the Permittees is not adequate because it does not address modifications required for the proposed thermal treatment units (open burn and open detonation (OB/OD)) to prevent undue exposure to personnel. The Permittees must revise this section to include additional information about the Permittees' plan to prevent undue exposure to personnel during treatment activities at the proposed OB and OD units. Additionally, the Permittees have not provided copies of the DOE Standard referenced in this section, *Industrial Hygiene Practices,* DOE-STD-6005-2001. This section must be revised to include information about steps that would be taken to prevent personnel exposure.

4. Section 2.7.6, Preventing Releases to the Atmosphere, page 2-7:
The information provided is not adequate because it does not address modifications required for the proposed thermal treatment units (open burn and open detonation (OB/OD)) to prevent releases to the atmosphere. The Permittees must revise this section to include additional information about how releases to the atmosphere will be prevented or mitigated at the three new thermal treatment units, and how releases will be monitored and how would the Permittees communicate this information to NMED and the public.

5. Section 2.10.1 Seismic Standard, page 2-11:
See NMED Comment #2.

6. Section 2.10.3, page 2-12:
See NMED Comment #1.

7. Section 2, Figure 2-3 Wind Roses (Day and Night), page 2-24:
The Permittees have not provided adequate information regarding the wind roses referenced in Sections 4, 5, and Supplements 4-3 through 4-9, -12, and -13. It is unclear when the data used to generate these wind roses was collected, and how many total days of data are compiled in the figure (e.g., a single year of data, or the average of five years of data). The Permittees must revise this Application to provide additional details on what year or years are represented by the day and night wind roses. Wind roses appear to have been calculated based on data from meteorological stations distant from the proposed OB/OD units. Please provide a rationale explaining why these monitoring locations are representative of conditions at the proposed OB/OD units.

8. Section 3 Specific Unit Information Requirements, page 3-1:
The Permittees have failed to include two units which are permitted to treat by neutralization and the proposed OB/OD units in this section. Revise this section to include additional subsections listing neutralization treatment units and thermal treatment units.

9. Supplement 1-1, Redline Permit Parts 1-11, Table of Contents, page 5:
The revised table of contents is missing subsections; Permit Parts 5 and 6.

10. Supplement 1-1, Redline Permit Parts 1-11, Section 5.1, page 99:

a. **Supplement Permittees Statement:** The Permittees shall conduct OD operations in accordance with this Permit Part, Attachment A (Technical Area Unit Descriptions), 40 CFR 265, Subpart P, 40 CFR§§ 268.7(b) and 40 CFR Part 270, which are incorporated by

reference.

NMED Comment: The Permittees' reference to 40 CFR 265, Subpart P is incorrect since the Permittees are proposing to permit these units and not retain them as interim status units. However, NMED notes that 40 CFR 264 Subpart X does not have the same specificity as 40 CFR 265 Subpart P. Please revise this section to include a reference to 40 CFR 264 Subpart X Miscellaneous Units, 40 CFR 264 Subpart BB Air Emissions Standards for Equipment Leaks, as well as to other air quality permits relevant to the Permitted Unit.

b. The information is missing from this section regarding waste which is prohibited from treatment at the OD units. The 2002 EPA Region 3 *Draft Final Open Burning/Open Detonation Permitting Guideline*s Section 2.2.5 recommends prohibiting thermal treatment of biologic or chemical warfare weaponry, depleted uranium, and small arms ammunition up to 50 calibers. Include the information on wastes that will be prohibited from treatment at the OD units.

11. Supplement 1-1, Redline Permit Parts 1-11, Section 5.2.3.2 Weather Conditions, page 100:
The Permittees have proposed to use red flag conditions to determine when OD operations will not be performed, but have not provided the information on what constitutes red flag conditions for the units. The Permittees must revise this section to include details on weather conditions (e.g., precipitation, wind speed) under which detonation operations will be prohibited.

12. Supplement 1-1, Permit Parts 1-11, Permit Part 6.4 Alternative Assessment, page 107:
The Permittees have proposed submitting an alternative treatment assessment report for the permitted OB units to NMED by no later than 8 years after the effective date of the OB permit, but have not provided a similar deadline in Permit Part 5 for the proposed permitted OD units. Please provide a rationale for this frequency and propose a similar deadline for the OD unit.

13. Supplement 1-4, Permit Attachment D, Section 2, page D-16:
Permittees must revise Permit Attachment D, Section 2 to indicate how spills or off-site contamination from OB/OD operations will be monitored and reported to NMED and communicated to the public to prevent harm to human health or the environment as required by 40 CFR 270.32(b).

14. Supplement 1-5, Permit Attachment E.4.1, page E-10:
The Permittees must include details on how the Facility will notify the fire department, or emergency medical responders, one day prior to performing treatment at the OD unit. NMED notes that other RCRA permitted OD units also require documentation (e.g., pre-treatment inspection check list) that OD/high explosive (HE) personnel contacted a meteorology team to get a predicted forecast for the day of the planned event prior to conducting operations.

15. Supplement 3-1, Closure Plans, G.2, G.3 and G.28:
The closure plans for the proposed thermal treatment units do not account for the limited available documentation of RCRA hazardous waste treatment activities during the units operational history, specifically prior to 1980, when the units became interim status units. The closure plans must be modified to address the limited knowledge of waste treated at these units prior to 1980. Since the

Permittees have not been able to provide documentation of waste treatment activities for that time frame, the proposed analytical suite must be expanded to account for lack of this knowledge

Part B-Volume 2
General Comments-Supplement 4:

16. The Permittees state that waste is determined to be HE waste but have not provided documentation on how this waste determination was made, and what test or criteria were used by waste personnel to make this determination. In particular NMED is interested in the methods used, or will be used, to determine if HE contamination exists on combustible and non-combustible debris.

17. Supplement 4-1 Assessment of Alternatives for OD and OB Activities:

a. The Permittees have not evaluated the OB/OD technology and the alternative technologies for impacts to human health and the environment nor the clean-up costs associated with each technology.

b. Table 1-2 provides quantities of explosives treated at TA 36-8 and TA 39-6 OD Units from 2012 - 2020 by waste stream. The Permittees must separate waste volumes from the two different OD units, into two different tables. It is unclear from the table the volumes of waste that have been historically treated at each unit.

18. Supplement 4-2:

The Permittees have not provided sufficient information on surface water and groundwater sampling data. To facilitate the review, the data must include the date the samples were collected at each location and provide the frequency of exceedances above the regulatory limits. Revise the table accordingly.

19. Supplement 4-4 :

a. The Permittees have not provided standard sampling information with this submittal, such as field notes, chain of custody, and copies of the third-party laboratory analysis which is typically provided with data, please review Permit Part 11.10.2.14, Documentation of Field Activities for the requirements.

b. The Permittees have not provided adequate descriptions of sampling procedures and have instead referenced internal standard operating procedures. The Permittees have not provided copies of those procedures, in accordance with Permit Part 11.10.2.9, Sample Handling, and Permit Parts 11.10.3.3, Blanks, Field duplicates, Reporting Limits and Holding Times. It is unclear if the samples were collected in accordance with EPA SW-846 methods. The sampling procedures must be revised to provide more detail to demonstrate that sample were collected in accordance with current EPA SW-846 methods.

c. The Permittees statement “Data were collected following the standard data collection procedures” does not provide adequate description of data collection methods or quality controls utilized by the Permittee or analytical laboratory as described in Permit Part 11.10.3.

d. The Permittees conclusion section does not describe the detected analyte concentrations, nor does it make comparisons to background values, and EPA Region 6 air quality standards. At a minimum the Permittees must provide a summary of the sampled results, gaussian comparisons within the data including 95% upper tolerance limit (UTL), the maximum values detected, and compare those results to current EPA screening level values. The Permittees have not provided adequate information to demonstrate that the air releases from OD sites do not pose a threat to human health or the environment, please see Permit Part 11.10.4, Site Specific Human Health Risk; 11.5, Site Specific Ecological Risk Assessment Methods; and 11.6 Determination of Background guidance on for general information on reporting requirements to NMED. NMED notes that this information from the sampling event does not appear to be included in Supplements 4-7 and 4-8, OD Unit 36 and 39, Human Health and Ecological Risk Assessment.

20. Supplement 4-*5*

a. ***Laboratory Analysis and Reporting*** **pages 1 and 2:**

Polychlorinated biphenyls (PCBs) were not included in the analytical suites for the samples collected at TA 36-8. However, PCBs were detected in soil as noted in the 2011 sampling report and PCBs were detected in three of the five whole body field mice samples collected from TA 36. The Permittees must provide additional information to address the following issues:

- A discussion justifying why PCBs were not included for sample analyses, when PCB were detected in mice at TA 36.
- A discussion addressing the lack of current PCB data, and whether this constitutes a data gap and must evaluate whether additional sampling is needed.
- Please also see NMEDs comments on Supplement 4-7: at a minimum, the historic PCB soil data should be included in the current risk assessment.

b. ***Laboratory Analysis and Reporting*** **page 3:**

Soil samples were inadvertently analyzed for plutonium instead of isotopic uranium. The report states that previous sampling included uranium (U-234, U-235/236, and U238) and that the 2011 risk assessment addressed uranium. However, the current risk assessment does not include the uranium data.

The Permittees must provide additional information to address the following issues:

i. The Permittees have not included a complete list of constituents of potential concern (COPCs) analysis, at a minimum, the uranium data provided in 2011 sampling report should be used in the current risk assessment. It is noted for TA 36-8 that all three isotopes of uranium were detected above background levels and were retained as COPCs in the 2013 risk assessment.

ii. The Permittees must provide a discussion on whether any depleted uranium has been treated since the sampling was conducted in 2010. If any depleted uranium has been treated at TA 36-8, then the historical data likely underestimate potential concentrations and sampling must be conducted to fill this data gap. Previously the Permittees have treated depleted uranium at TA 36-8 and must clarify whether this has occurred since the last soil sampling event in 2010.

21. Appendix 4: Supplement 4-6 Soil Sampling Results Summary Report for the OD Unit at TA 39-6

a. *Laboratory Analysis and Reporting* pages 1 and 2:
PCBS were not included in the analytical suites for the samples collected at TA 39-6. However, PCBs were detected (minimally) in soil as noted in the 2011 sampling report.

The Permittees must provide additional information to address the following issues are noted by NMED:

- A discussion why PCBs were not included for sample analyses.
- A discussion whether lack of current PCB data constitutes a data gap and must evaluate whether additional sampling is needed.
- Please also see also comments on Supplement 4-8: at a minimum, the historic PCB soil data should be included in the current risk assessment.

22. Appendix 4: Supplement 4-7 Open Detonation Unit at Technical Area 36 Human Health and Ecological Risk-Screening Assessments

a. *Executive Summary* page ii:
The risk assessment does not address the potential for contaminants in soil to migrate to groundwater (refer to Section 4 of the New Mexico Environment Department Soil Screening Guidance (NMED SSG). As noted in Table 4.2-1 of Supplement 4-2, several constituents have been detected in groundwater at levels above action levels. Revise the assessment to address the potential leaching of contaminants from the vadose zone to groundwater and correlate detections in soil to groundwater results.

b. Section 2.2.1 *Sampling and Analysis Data* page 2:
PCBs were not included in the analytical suites for the samples collected at TA-36-8. However, PCBs were detected in soil as noted in the 2011 sampling report and PCBs were detected in three of the five whole body field mice samples collected from TA 36. Address this potential data gap. At a minimum, revise the report to include the historic PCB soil data in the current risk assessment.