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Date: January 13, 2022
Refer To: N3B-2021-0466

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

Subject: Request for Supplemental Information Regarding Energy Solutions Waste Shipment Corrective Actions Effectiveness Review

Dear Mr. Shean:

The following information has been prepared by the U.S. Department of Energy Environmental Management Los Alamos Field Office (EM-LA) and Newport News Nuclear BWXT-Los Alamos, LLC (N3B) (collectively the Permittees) in response to the New Mexico Environment Department's (NMED's) "Request for Supplemental Information Energy Solutions Waste Shipment Corrective Actions Effectiveness Review Los Alamos National Laboratory," dated December 2, 2021. NMED's request is in response to the Permittees' correspondence relating to "Energy Solutions Waste Shipment Corrective Actions Effectiveness Review" (N3B-2021-0328), dated October 29, 2021.

For clarity, each comment provided by NMED in its recent correspondence is repeated below followed by a corresponding response and additional information.

NMED Comment 1. The Respondents have provided a bulleted list of actions but have not provided sufficient detail or documentation of review activities.

Permittees' Response: The supplemental information included in this response is intended to provide additional details and documentation of the review activities.

NMED Comment 2. The Permittees must provide a technical report of a summary in sufficient detail for NMED's review that must include:

- a. When the review occurred?
- b. What waste streams and locations were reviewed?
- c. What criteria were used to review the effectiveness?

- d. Which entities performed the review?
- e. Was the waste characterization review done by visual examination or by testing?
- f. Did the reviewers have any comments or recommendations to ensure the waste is characterized correctly in the future?

Permittees' Response:

- a. In response to the waste discrepancy reported by the Permittees to NMED on June 1, 2020, a fact-finding and an extent-of-condition review was conducted. This in-depth review was conducted during the period of August 23–27, 2021.
- b. Four waste streams from locations at Technical Area 15 (TA-15) and TA-33 were randomly chosen from waste profiles created during the period of 2020–2021 for this evaluation. Each profile was evaluated for the following considerations:
 - the method(s) used to characterize the waste, such as acceptable knowledge (AK) and/or laboratory analysis,
 - the span of time from creation of the profile to approval, and
 - how the characterization was documented.

The waste streams reviewed and considerations made are summarized as follows:

Location	Waste Stream ID and Name	Date Created	Date Approved	Method(s) of Characterization	Documentation	Summary Information
TA-15	47587; Mixed Low Level Waste (MLLW) Soil and Debris Generated from Activities at TA-15 R-44 Firing Site	9/8/2019	9/9/2020	Chemical/physical analysis; Radiological analysis; PCB analysis; acceptable knowledge (AK)	Los Alamos National Laboratory (LANL) Waste data sheet (WDS) Reports RAD; Toxicity; Additional Chemicals; Waste characterization strategy form (WCSF)/acceptable knowledge (AK) known cleanup sites	Previous collected documentation and analysis reduced the response time of non-Transuranic (non-TRU) waste material to one day.
TA-33	48107; TA-33 - Used Test Kits	10/8/2020	10/8/2020	Chemical/physical analysis; Radiological analysis; Material safety data sheets (MSDS)/safety data sheets (SDS); AK	LANL WDS Report RAD; WCSF/AK Chaquehui and Ancho Canyons; Manufacturer safety data sheets	Characterization method was based upon review of manufacturer SDS combined with radioassay analysis of soil that the test kits were used upon. Historical Radioassay data and the SDS allowed the response time of Non-TRU waste material to one day.
TA-33	48098; TA-33 Soils - Hazardous	2/6/2020	2/12/2020	Chemical / physical analysis; AK	LANL chemical WPF-33	Characterization method was based upon review of chemical WPF_33 and AK of Chaquehui and Ancho Canyons. Samples collected by N3B's Sample Management Office (SMO) allowed the response time of non-TRU waste material to six days.
TA-54	47732; N3B Sitewide-Industrial Water From Wells	10/23/2020	Pending	Chemical / physical analysis; Acceptable Knowledge; MSDS / SDS; Radiological Analysis	LANL Report chemical; Resource Conservation and Recovery Act; RAD; Toxicity, Multiple reports • SDS Alconox • AK Documentation	Characterization method was based upon review of chemical data, multiple types, radioassay data, SDS's and AK information. Samples collected by the SMO results were returned on 10/10/2020. The characterization response time of Non-TRU waste material is thirteen days.

- c. The effectiveness of the corrective actions put in place to address the waste discrepancy was evaluated several ways. Documentation was reviewed to verify that records were complete and that each corrective action was closed appropriately. The effectiveness of communication, training, and definition of roles and responsibilities was considered, and opportunities for recurrence or needed improvements were evaluated. The following conclusions were developed:
- Characterization of waste is performed on a regular basis as required and/or as needed and in compliance with applicable N3B procedures.
 - Based on the evaluation of the four profiles, N3B's response time to characterize newly generated non-transuranic waste was within 6 days from receipt of the analytical report.
 - Of the profiles evaluated, approval based on analytical data was received within 1 day.
 - The characterization and development of waste profiles by N3B's Contact-Handled Transuranic Waste (CH-TRU) is implemented accurately and within applicable time limits.
- d. Individuals who were not involved with the original waste discrepancy were selected to perform the extent-of-condition review. These individuals, their associated entity, and their roles/responsibility in conducting this review include the following:

Individual	Entity	Title	Assessment Role
Frank Tarantello	N3B CH-TRU	Integration & Process Improvement Director	Responsible Manager
Ovide Morin	N3B CH-TRU	MLLW Program Manager	Assessment Lead
Dean Lobdell	N3B CH-TRU	Director Waste & Facility Operations	Independent Oversight
Gale Voyles	N3B Quality Assurance	QA Engineer	Independent Oversight
Jesse Kahler	DOE EM-LA	RCRA Compliance	Oversight

- e. The initial characterization for each waste stream considered in this review included chemical and physical analysis as well as additional information identified above. No confirmation testing was conducted in conjunction with this review.
- f. Based on the evaluation conducted, the review team concluded that the corrective actions put in place following the waste discrepancy event of June 2020 were effective. No reoccurrence or similar discrepancies have occurred since the initial event and the enactment of the corrective actions.

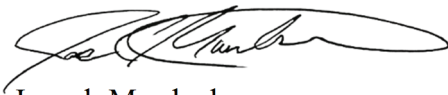
Two recommendations were made by the review team and later implemented by N3B:

- Two standing orders originally created in response are in the process of being incorporated into existing N3B procedures. While this revision is underway, the standing orders remain effective.
- A liquid waste sampling program has been developed to ensure continued compliance. Additionally, Banda Group International, LLC (BGI), a local company which is familiar with N3B's operations and the site, has been retained as the primary waste sampling subcontractor for N3B. BGI specializes in sampling environmental and waste materials.

Based on the various corrective actions implemented in response to the waste discrepancy, verification of those corrective actions, and findings of the effectiveness review discussed here, the Permittees have determined that adequate corrective action has been taken to prevent reoccurrence.

If you have questions, please contact Emily Day (505) 695-4243 (emily.day@em-la.doe.gov) or M. Lee Bishop at (702) 218-4460 (lee.bishop@em.doe.gov).

Sincerely,



Joseph Murdock
Program Manager
Environment, Safety and Health
N3B-Los Alamos

Sincerely,

M Lee
Bishop

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Bishop
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M. Lee Bishop, Director
Office of Quality and Regulatory Compliance
U.S. Department of Energy
Environmental Management
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cc (letter emailed):

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