



Department of Energy

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October 4, 2022

Mr. Rick Shean, Chief
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New Mexico Environment Department
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Subject: Response to the June 14, 2022 Letter Regarding the NMED Review of the Idaho National Laboratory/Central Characterization Program (INL/CCP) Final Audit Report A-22-07, Waste Isolation Pilot Plant, EPA I.D. Number NM4890139088

Reference: New Mexico Environment Department correspondence from Rick Shean, Chief, Hazardous Waste Bureau, to Reinhard Knerr, Manager, and Sean Dunagan, Project Manager; Subject: Review of the Idaho National Laboratory/Central Characterization Program Final Audit Report A-22-07; Waste Isolation Pilot Plant, EPA I.D. Number NM4890139088, dated June 14, 2022

Dear Mr. Shean:

The purpose of this letter is to respond to the above referenced letter regarding the New Mexico Environment Department (NMED) Review of the Idaho National Laboratory/Central Characterization Program (INL/CCP) Final Audit Report, A-22-07.

This response provides background information and addresses salient issues of concern raised by the NMED in the referenced letter. This response specifically addresses the following NMED concerns:

The NMED does note and is concerned that Final Audit Report A-22-07 does not include a section on Generator Site Technical Reviews (GSTRs).... Because of the missing GSTR information discussed above, NMED considers the Final Audit Report A-22-07 to be incomplete and cannot at this time give our approval. The NMED will again review the status of the INL/CCP Final Audit Report once the GSTR concerns are adequately addressed between NMED and the Permittees.

The background information below explains the salient differences between the certification audit program required under the Resource Conservation and Recovery Act (RCRA) Hazardous Waste Facility Permit (Permit) and the GSTR program required as the result of a settlement agreement and implemented under Department of Energy (DOE) policies and procedures. The measures proposed below address NMED's concerns.

BACKGROUND

Current Certification/Recertification Audit Program. The specific focus of the certification/recertification audit program required by the Permit is to assess generator/storage site compliance with the Waste Isolation Pilot Plant (WIPP) Waste Analysis Plan (WAP) and the Permit. As detailed in Permit Attachment C, Section C-5(a)3, of the WIPP WAP, each generator/storage site performing waste characterization activities will be initially audited, as well as an annual audit thereafter.

The Audit and Surveillance Program is described in Permit Attachment C, Section C-5a (3). The Carlsbad Field Office (CBFO) procedure for conducting these audits is CBFO OP 10.13, Audits.

(Re)certification audits cover applicable generator site waste characterization and other requirements governed by RCRA, including confirmation of generator site compliance with “acceptable knowledge” (AK) requirements under 40 Code of Federal Regulations (CFR) § 262.11 and 40 CFR § 264.13.¹ The Permittees obtain from generator sites detailed waste specific information (Transuranic [TRU] Mixed Waste Stream Information) with “traceability of acceptable knowledge information for a selected container in the audited Waste Summary Category Group(s)” to be “examined during the Department of Energy’s (DOE’s) audit of a site (Permit Attachment C4, Section C4-3g). The consistent presentation of acceptable knowledge documentation among sites in auditable records” enables verification of the “completeness and adequacy of acceptable knowledge for TRU mixed waste characterization during the audit process.” See Permit Attachment C4, Section C4-2. Auditors also confirm compliance with these requirements by obtaining and evaluating “objective evidence by means of observation, document reviews, or the conduct of interviews with operators, technicians, and others necessary to determine the adequacy and effective implementation of the WAP.” *Id.*, Permit Attachment C6, Section C6-3. Pursuant to Permit Attachment C6, Section C6-1, audit reports and underlying records are maintained with unlimited access provided to the NMED. Pursuant to Permit Attachment C6, Section C6-2, “Records of all audit activities shall be part of the WIPP Operating Record and maintained at the WIPP facility until closure. The NMED shall be provided unlimited access to these records.” In addition, NMED personnel may independently validate the implementation of and compliance with applicable provisions of the WAP at each generator/storage site by participation in” (re)certification audits. *Id.*, Permit Attachment C4, Section C4-2.

Current GSTR Program. The GSTRs are broader than the compliance monitoring required under RCRA regulations and the WIPP WAP in that they are performed by the CBFO and the WIPP Management and Operating (M&O) contractor to ensure waste packaging and treatment activities are performed under adequate control and that waste information is accurately communicated to the WIPP certified program pursuant to the Waste Acceptance Criteria (WAC) and various DOE policies and procedures that extend well beyond the scope of RCRA and WAP requirements. See *infra* note 2. Subsequent to the February 2014 radiological release event, a complete GSTR, referred to as a Level 1 review, was performed at each generator site prior to the shipment of any waste containers certified under the WIPP WAC. Subsequent GSTRs, referred to as Level 2 reviews, are of limited scope and tailored to, for example, new processes or waste streams or other items that are of specific interest to CBFO and the M&O contractor. The frequency/periodicity of GSTRs after Level 1 reviews is dependent on new processes and/or adverse situations identified at a given generator site. Adverse conditions or concerns are typically identified by CBFO National TRU Program, TRU Waste Certification Managers. The GSTR is not intended to replicate the CBFO certification audits; rather, a GSTR examines the work activities performed in preparing TRU waste before the packaged waste is provided to the certified program for characterization, i.e., processes performed upstream prior to presenting waste to the certified program for characterization. Such activities are primarily monitored and managed by the generator site contractor assurance and compliance programs, safety management programs, and federal oversight programs.

¹ See, e.g., Permit, Attachment C6, Table C6-1, Item 10 (confirming “procedures in place to ensure that the generator/storage site uses acceptable knowledge and, as necessary, radiography and visual examination analysis as specified in Table C-1”); Item 36 (confirming documentation and procedures “to ensure that all raw data is collected and managed at the data generation level in accordance with [specified] criteria”); Item 37 (confirming “independent technical review by an individual qualified to review the data who was not involved in the generation or recording of the data ... prior to characterization of the associated waste and shipment to the WIPP”); Item 134 (confirming availability of primary documents “containing acceptable knowledge information”); Item 141 (confirming that for “each waste stream” the generator site documents ... “material inputs or other information that identifies the chemical content of the waste stream and the physical form”).

The WIPP M&O contractor previously had not participated in the GSTR program until implementation of corrective actions recommended in the 2014 Accident Investigation Board (AIB) report.

Overlapping Scope of GSTR and Certification Audits. The purpose and scope of (re)certification audits and GSTRs are distinct. As explained above, the GSTR program focuses on implementation of specific DOE policies and procedures, whereas certification audits focus on compliance with the specific requirements of the Permit. As demonstrated above, the WIPP WAP sets forth detailed compliance checklists of WAP requirements for compliance use by generator sites and as audit checklists. The GSTRs, on the other hand, are considered experience-based reviews focused on the needs of the generator sites, not comprehensive compliance audits primarily based on compliance checklists and the assembly of objective evidence of compliance.

Nevertheless, some overlap and/or redundancy exist between the GSTRs and certification audits, including but not limited to review, assessment, and evaluation of the following areas: training, Contractor Assurance Systems, document control and reporting procedures, chemical compatibility evaluations, enhanced AK procedures, and various RCRA non-WAP requirements specific to the generator site. The intent of the GSTR is to identify improvements in the work/processes in these areas to minimize the risk to the TRU waste disposal complex pursuant to DOE, rather than RCRA, requirements. For that reason, the GSTR team identifies “issues” and provides recommendations, rather than issuing compliance “findings.”

May 22, 2017 GSTR of INL/CCP. On January 23-27, 2017, and in compliance with the Settlement Agreement, the Permittees performed a Level 1 GSTR (ID-1-17-01) of INL/CCP and its three areas associated with managing and packaging of TRU waste. The GSTR focused its review on the following programs: Quality Assurance (QA) Program, Performance Assurance Program, Conduct of Operations, Federal Oversight of INL, TRU waste management programs, and deferred maintenance activities that may impact TRU waste management. The GSTR included review of programmatic support organizations (based on personnel interviews), document review, and observations of waste management operations. Review criteria were based on various specified DOE procedures.² The Remote-Handled (RH) TRU characterization and certification activities in connection with the Idaho Nuclear Technical and Engineering Center (INTEC) “hot cell” facility are the only waste packaging or treatment activities subject to the CCP.

² The review criteria and requirements for the 2017 INL/CCP GSTR included:

- DOE/CBFO-16-3563, *Waste Isolation Pilot Plant Generator Site Technical Review Plan*
- DOE/WIPP-16-3564, *Generator Site Technical Review Procedure*
- DOE/WIPP 07-3372, *Waste Isolation Pilot Plant Documented Safety Analysis*; Chapter 18, Key Element 18-4
- DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*
- DOE Order (O) 226.1 B, *Department of Energy Oversight Policy*
- DOE O 227.1A, *Independent Oversight*
- DOE O 414.1 D, *Quality Assurance*
- DOE O 422.2, *Conduct of Operations*
- DOE O 435.1, *Radioactive Waste Management*.

The INL/CCP-related Contact-Handled (CH) TRU waste programs do not engage in waste packaging or treatment activities.³ The INL/CCP GSTR identified eight issues that required resolution, but none of which were classified with “a severity level or of a magnitude that would affect or be detrimental to future WIPP shipments,” as stated in GSTR Report at 17 n.1. The summary of GSTR-ID-01-17-01 issues include the following:

- Issue [I-1]: This issue addressed a perceived lack of knowledge relative to waste management programs and requirements, as indicated by interviews with individual waste operations personnel. The proposed actions and status as described in DOE Idaho Operation Office letter (WDP-AMWTP-17-013) (Sept. 11, 2017), included a series of simple Plan of Day (POD) briefings documented with tailgate rosters, which were then reviewed, evaluated and accepted as sufficient to resolve and close this issue.
- Issue [I-2]: This issue addressed including waste operators (those processing and handling the waste) in the AK briefings. The proposed actions as described in DOE Idaho Operation Office Letter (Sept. 11, 2017), included providing AK briefing information to operators and revision of AK procedure MCP-4010 revision, which were then evaluated and accepted as sufficient to resolve and close this issue.
- Issue [I-3]: This issue addressed use of Form 880 at INTEC to document waste treatment and repackaging, which previously did not record the personnel who perform that treatment and repackaging. The response, enabling closure, entailed a new “Repackaging Logbook” that will be an official record and will be maintained as required in attached long term order 16-L-03 (FDPA-LTO-16-03: Operations Guidance), pursuant to MCP-2980 (Log keeping).
- Issue [I-4]: This issue addressed the procurement and use of new chemicals that may come in contact with TRU waste. Although the document change process includes a mandatory review by the TRU Program, the evaluation of how this chemical may affect the waste was not being performed at that time. The response, enabling closure, entailed ensuring that appropriate compatibility evaluations are performed. This additional review will be required as part of MCP-135 (Document Management) and MP-DOCS-18.4 (Document Control).
- Issue [I-5]: This issue noted that the dust suppressant used is a starch-based product. This is not an issue requiring an INL response nor resolution. Rather, it is provided to notify INL that further explanation should be provided regarding potential risks of contact with waste being exhumed and to include such explanation when the Chemical Compatibility Evaluation Memorandum (CCEM) is prepared.
- Issue [I-6]: This issue described a “Notable Practice,” consisting of use of shared resources and support between Environmental Management (EM) and Nuclear Energy (NE), resulting in an effective use of personnel and resources. Resolution is N/A.
- Issue [I-7]: This issue related to CCP-666 personnel who indicated that additional time to clean and organize the interior of the hot cell would improve efficiency. The response, enabling closure, included cleanup campaigns in Fiscal Year (FY) 2016 and FY 2017 and other corrective measures including a tailgate training session to communicate strategic plans to both the CCP-666 and CPP-659 hot cell operations crews.
- Issue [I-8]: This issue related to enhancements of the Operator Aid Program to provide guidance on the frequency of review and reference/approval. The response, enabling closure, included review of DOE O 422.1, additional review of the implementation of operator aids, and drum filter usage, review, and approval.

³ See, e.g., Section 5.2.5 of the INL/CCP CH TRU Final Audit Report A-20-06 (Dec. 10-12, 2019).

April 2022 Recertification Audit of INL/CCP. On February 15-17, 2022, the Permittees performed an annual recertification audit of the programs, procedures, and processes for characterizing and managing the following waste streams: RH TRU waste Summary Category Groups (SCGs) S3000 solids and S5000 debris wastes, and CH SCGs S3000 solids, S4000 soils/gravel, and S5000 debris wastes. The recertification audit included review of “general activities” (including results of previous audits, changes in programs or operations, new programs or activities being implemented, and changes in key personnel), WAP-related QA activities, non-WAP-related QA activities, WAP-related technical activities (including implementation of acceptable knowledge requirements), and non-WAP-related technical activities. The reviews included document reviews, personnel interviews, and observations. Audit criteria were based on various DOE policies and procedures, and regulatory requirements based on Permit Attachment C6 and other specified audit criteria.⁴ Audit A-22-07 presented and classified the following:

- Corrective Action Report (CAR) No: 22-032: Containers originally scanned on 8/30/2018 and then rescanned on 9/6/2018; however, the original real time radiography (RTR) data form was not superseded as required by CCP’s records management program.
- CAR No: 22-033: For three RTR Batch Data Reports there was no objective evidence demonstrating RH RTR Operators had received training on how to estimate weights for debris items nor were tables provided to base weight estimates from, which was determined to be noncompliant to the CBFO Quality Assurance Program Document.
- CAR No: 22-034: This CAR comprised 6 separate concerns consolidated into this CAR relating to failures to comply with the flammable gas analysis (FGA) procedure. Though the requirements did not result in non-compliant containers, they did highlight a quality concern that needed to be addressed regarding the execution of the FGA procedure at INL.
- Recommendation No. 1: The audit team recommended that the Dose-to-Curie (DTC) operators identify the neutron operability check source physical location, activity, and identification in the logbook or on the operator aid WM-CCP-659-0A-00.
- Recommendation No. 2: The audit team recommended that the Lead Operator post applicable standing orders in the FGA area in WMF-628.
- Corrected During Audit (CDA) No. 1: BDR # INRHDTTC19028, Attachment 9, Gamma Spectroscopy Daily Check List and Measurement Controls was properly completed by the DTC operator and was signed by Operator 2 as required; however, DTC Operator 2 wrote an inaccurate date next to the signature block.

⁴ The audit criteria for the 2022 INL/CCP Audit included references to and preparation of audit checklists based on the following:

- Waste Isolation Pilot Plant Hazardous Waste Facility Permit NM4890139088-TSDF
- DOE/CBFO-94-1012, *Quality Assurance Program Document*
- WP 13-1, *Nuclear Waste Partnership LL C Quality Assurance Program Description*
- DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant (WAC)*
- DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan (WCPIP)*
- DOE/WIPP-07-3372, *Waste Isolation Pilot Plant Documented Safety Analysis (DSA)*, Chapter 18
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan (QAPjP)*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-PO-043, *CCP Interface Document Preparation*
- CCP-PO-501, *CCP/INL RH TRU Waste Interface Document*
- Related CCP QA and technical implementing procedures.

RESPONSES TO NMED ISSUES OF CONCERN

Issue One: The NMED does note and is concerned that Final Audit Report A-22-07 does not include a section on GSTRs.

The Permittees note that various prior recertification audit reports approved by NMED did not include a discussion of the GSTR for the facility subject to the certification audit. These include Audit A-17-23 (June 13-15, 2017) and Audit A-19-06 (December 10-12, 2018). Nevertheless, going forward, the Permittees propose to include a brief discussion in certification audit reports of completed GSTRs for the facility subject to the audit that addresses any issues and recommendations relevant to WAP compliance that have not been previously reported to NMED.

Issue Two: “Because of the missing GSTR information discussed above, NMED considers the Final Audit Report A-22-07 to be incomplete and cannot at this time give our approval.”

The Permittees note that nothing in the Permit or applicable regulations requires that GSTR information be included in a certification audit report. In fact, in an email exchange in 2015, the Acting NMED WIPP Staff Manager stated: “this new review process is outside the Permit”.⁵ However, as indicated under Issue One above, the Permittees propose to include relevant GSTR information going forward for clarification purposes. To address NMED’s completeness concerns, the Permittees suggest appending this letter to the final audit report.

Issue Three: “NMED will again review the status of the INL/CCP Final Audit Report once the GSTR concerns are adequately addressed between NMED and the Permittees.”

The Permittees understand that shipments of waste from INL/CCP may continue. This approach is consistent with the fact that nothing in the 2017 GSTR or 2022 Certification Audit identified substantive compliance issues relating to waste characterization and management.⁶ The next waste shipment from that generator site is anticipated to occur sometime in December 2022.

PROPOSED MEASURES

It is important to understand that while the purpose and focus of certification audits and GSTRs are distinct, some overlap exists, as explained above. Together they provide useful compliance monitoring tools. The Permittees continue to value both certification audits and GSTRs to ensure generator site compliance to protect workers, the public, and the environment.

However, given their different purpose and frequency, it is inappropriate and unnecessary to incorporate the GSTR Program into the Permit. We know of no RCRA permit involving a government owned contractor-operator facility, or a commercial facility permitted under RCRA Subtitle C, that requires a review of internal procedures and policies pertaining to areas such as procurement, personnel management, organizational oversight, management of non-RCRA waste, and operations not subject to regulation under RCRA. Moreover, aspects of generator site operations that generate and treat waste streams include sensitive operations. For that reason, the Permit explains that: “nothing in this Permit is intended to, nor should it be interpreted to, require the disclosure of any U.S. DOE classified information to persons without appropriate clearance to view such information.”

⁵ See AR 151208.

⁶ Without opining on the validity of the legal authority NMED relies upon in its September 14, 2022, letter to the Permittees (Letter from Rick Shean, Chief, Hazardous Waste Bureau, NMED, to Reinhard Knerr, Manager DOE – Carlsbad Field Office and Sean Dunagan, President and Project Mgr., Nuclear Waste Partnership LLC, *Re: Request for Information Concerning Recent Shipments, Waste Isolation Pilot Plant, EPA I.D. No. NM4890139088* (Sep. 14, 2022)), whereby NMED directed the Permittees “to not receive waste shipments from INL until a response is received by NMED” (the “09/14/22 Letter”), this approach is also consistent with the 09/14/22 Letter because the Idaho shipments identified therein originated from the Advanced Mixed Waste Treatment Project.

Permit, Attachment C, Section C-14; Permit Attachment C6, Section C6-1 (“Only personnel with appropriate U.S. DOE clearances will have access to classified information during audits. Classified information will not be included in audit reports and records.”).

Based upon discussions with NMED, this explanation addresses NMED’s concerns regarding Audit Report A-22-07; however, to minimize future concerns, the Permittees propose the following measures:

1. Future (re)certification audits will include a section reflecting the review, follow-up, and confirmation of closure of any issues and recommendations from the most recent GSTR at the generator site to the extent such issues and recommendations are relevant to WAP compliance and to the extent they have not been previously reported.
2. To the extent NMED believes that enhancements are warranted in the scope, substance or methods used to perform (re)certification audits required under the RCRA permit, the Permittees propose continuing to work together to modify the language in Attachment C6 to reflect such enhancements. The Permittees proposed some improvements as part of the response to the NMED Technical Incompleteness Determination for the Renewal Permit Application.
3. The DOE will review and amend the GSTR procedures, as appropriate, to reflect the fact that while the GSTR program does not fall under the RCRA requirements, generator site personnel and those involved in GSTR program implementation will provide GSTR information and documentation relevant to WIPP WAP compliance as requested by personnel conducting [re]certification audits.

The Permittees believe that working with NMED to implement the above measures will eliminate much of the confusion that now exists regarding the function and role of the GSTR Program, while still benefitting from the added layer of non-RCRA review performed under that program.

We certify under penalty of law that this document was prepared under our direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on our inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of our knowledge and belief, true, accurate, and complete. We are aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you have any questions, please contact Mr. Michael Gerle at (575) 988-5372.

Sincerely,

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