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SEP 19 2018



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

Subject: Comments on the August 6, 2018, Draft Waste Isolation Pilot Plant Hazardous Waste Facility Permit Pertaining to the Class 3 Permit Modification Request entitled "Clarification of Transuranic Mixed Waste Disposal Volume Reporting, Permit Number NM4890139088-TSDF

Dear Mr. Kieling:

The purpose of this letter is to provide you with comments on the August 6, 2018, Draft Waste Isolation Pilot Plant Hazardous Waste Facility Permit pertaining to the Class 3 Permit Modification Request entitled "Clarification of TRU Mixed Waste Disposal Volume Reporting".

We certify under penalty of law that this document and all attachments were 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 R. Brown at (575) 234-7476.

Sincerely,

Todd Shrader, Manager
 Carlsbad Field Office

Bruce C. Covert, Project Manager
 Nuclear Waste Partnership LLC

Enclosure

cc: w/enclosure
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Permittees' Comments on the August 6, 2018, Draft Waste Isolation Pilot Plant Hazardous Waste Facility Permit Pertaining to the Class 3 Modification entitled "Clarification of TRU Mixed Waste Disposal Volume Reporting"

The Permittees propose the following changes to the August 6, 2018, Draft Waste Isolation Pilot Plant Hazardous Waste Facility Permit (Permit). The proposed changes are shown in redline strikeout text in Attachment 1.

1. Revise Definition 1.5.22., *Land Withdrawal Act TRU Waste Volume* to:
 - a. Add the acronym "(LWA)" immediately following "Land Withdrawal Act"
 - b. Add ", separately from the Permit," between "reported" and "by the DOE."
 - c. Replace "Land Withdrawal Act" with "LWA" between "WIPP" and "total."
 - d. Delete "of 6.2 million ft³ (175,564 m³)" pursuant to comment 4.
 - e. Delete the last sentence, "For informational purpose, the LWA TRU..." pursuant to comment 2.

The revised definition is shown in Attachment 1.

2. Delete the column, "Final LWA TRU Waste Volume⁴" from Permit Part 4, Table 4.1.1, *Underground HWDUs*; delete the associated footnote 4; and delete the last sentence of footnote 2 to Permit Attachment J, Table J-3, *Underground Hazardous Waste Disposal Units*. These changes are shown in Attachment 1. Deletion of the "Final LWA TRU Waste Volume" column and respective footnote information is required for the following reasons:
 - a. Including this column is inconsistent with the Permittees request to track and report the LWA TRU waste volume separately from the Permit. The Permit Modification Request states "*The TRU waste VOR [volume of record] will be tracked and reported, separately from the Permit, by the DOE pursuant to the WIPP Land Withdrawal Act ("LWA") so that the LWA total capacity limit for TRU waste is not exceeded.*" The Permittees clearly established in the PMR that DOE has the responsibility, separate from the Permit, to track and report the LWA TRU waste volume in order to determine when the DOE has reached the statutory total capacity limit of 6.2 million cubic feet (ft³) (175,564 cubic meters (m³)) of TRU waste:

This change will allow the DOE to establish a formal tracking and reporting mechanism, independent of the Permit, for comparing the disposed TRU waste VOR to the 6.2 million ft³ (175,564 m³) capacity limit of the WIPP LWA. Because several regulatory requirements are implemented at the WIPP facility, it is important to distinguish between these requirements since they are subject to different regulatory authority. For example, the authority for overseeing RCRA at the WIPP facility has been granted to the NMED by the Environmental Protection Agency, and

the authority for management, tracking, and reporting the LWA TRU waste volume has been granted to the DOE by Congress.

- b. Including this column for informational purposes as stated in Permit Part 4, Table 4.1.1, footnote 4 and in Table J-3, footnote 2 is not appropriate because this table reflects Permit conditions and maximum capacities relevant to RCRA (e.g., authorized Panels) and, therefore, should be restricted to RCRA requirements. The LWA TRU waste volume capacity is not a RCRA requirement. Permit Part 4, Table 4.1.1 should be restricted to RCRA requirements since it reflects Permit conditions and maximum capacities. Regardless of whether the data to be included in the column are considered “informational,” adding the final LWA TRU waste volumes and maintaining the information in the Permit would be subject to the RCRA requirements in 40 CFR Part 270 and would, therefore, be subject to RCRA enforcement requirements. This is inappropriate for a requirement driven by the LWA and the Atomic Energy Act, and not RCRA.
 - c. The Final LWA TRU Waste Volume that would be reported in Permit Part 4, Table 4.1.1 would not reflect the most current information. The most current LWA TRU waste volumes will be posted on the WIPP Home Page. This posted LWA TRU waste volume will reflect real-time values for the active Panel, as well as for filled Panels. As stated in the Permittees’ Response to the Technical Incompleteness Determination, dated July 12, 2018,¹ *“A link to the information regarding the VOR will be placed on the WIPP Home Page at www.wipp.energy.gov. The DOE plans to update the information at least monthly as the information changes.”* The information reported in Permit Part 4, Table 4.1.1 could only be updated after Panels are full, and Panels are typically filled over a time span of two to three years.
3. Revise footnote 3 to consolidate some information from footnote 4 in Permit Part 4, Table 4.1.1 as shown in Attachment 1.

This revision is required to reflect the proposed deletion to the “Final LWA TRU Waste Volume” column, and corresponding footnote 4 in comment 2; to delete information that is inconsistent with the Permittees proposed methodology for tracking and reporting the LWA TRU Waste Volume; and to remove “6.2 million ft³ (175,564 m³) of TRU waste” (see comment 4). Footnote 4 states that “The LWA TRU Waste Volume is based on the volume of TRU waste inside a disposal container...” The Permittees described the planned methodology for tracking and reporting the LWA TRU Waste Volume in the Permittees’ response to the TID. The Permittees provided clarification that a DOE policy will be developed and that pursuant to this policy, the volumes will be tracked by using container volumes. The Permittees further clarified that “The policy will not instruct the use of ‘fill factors’ in performing the data collection.” Footnote 4 implies the use of fill

¹ U.S. Department of Energy (DOE) and Nuclear Waste Partnership LLC (NWP). 2018. Letter from Mr. Todd Shrader, Manager, Carlsbad Field Office, and Mr. Bruce C. Covert, Project Manager, Nuclear Waste Partnership LLC to Mr. John E. Kieling, Chief, Hazardous Waste Bureau, New Mexico Environment Department, subject: Response to the Referenced Technical Incompleteness Determination, Waste Isolation Pilot Plant Hazardous Waste Facility Permit Number: NM4890139088-TSDF. July 12, 2018. Carlsbad, New Mexico.

factors by stating, "The LWA TRU Waste Volume is calculated based on the volume of TRU waste inside a disposal container..." This is inconsistent with the Permittees' TID response.

4. Delete references to LWA TRU waste capacity of 6.2 million ft³ (175,564 m³) and/or the additional Final LWA TRU Waste Volume column in Permit Part 4, Table 4.1.1 in the following sections of the draft Permit as shown in Attachment 1:
 - a. Permit Part 1, Section 1.5.22.
 - b. Permit Part 4, Table 4.1.1
 - c. Permit Attachment B, Narrative to Item 6. Process Codes and Design Capacities
 - d. Permit Attachment G, Section G-1
 - e. Permit Attachment G, Section G-1c
 - f. Permit Attachment H1, Introduction
 - g. Permit Attachment J, Table J-3

Referring to the LWA TRU waste capacity of "6.2 million ft³ (175,564 m³)" in the footnotes to Table 4.1.1 and throughout the Permit is unnecessary because this value is clearly delineated in the LWA which is cited in the proposed revision to footnote 3 (see comment 3 above) and in other places in the Permit. Removing the references to the LWA TRU waste capacity limit is one of the Permittees' objectives in the PMR since the number is not relevant to RCRA and stating two separate limits in the Permit is a source of confusion. This point is made in the following excerpt from the PMR Overview (emphasis added):

*The Permit states in several places that the capacity of the WIPP facility is 6.2 million ft³ (175,564 m³) of TRU waste based on the WIPP LWA limitation. However, since the permitted HWDUs are the panels, and currently Panels 1 through 8 are permitted for the disposal of TRU mixed waste, the permitted capacity of the WIPP repository is more appropriately defined as the sum of the individual maximum capacities of the eight permitted panels, as listed in Permit Part 4, Table 4.1.1, Underground HWDUs, which equates to 151,135 m³. **This proposed modification is necessary to clarify the basis for the permitted maximum capacity of the WIPP repository and to modify the Hazardous Waste Permit Part A and the Closure Plan accordingly for consistency.** For example, when the Permittees seek a Permit modification to allow for the disposal of TRU mixed waste in Panel 10, a revision to the maximum permitted capacity of the WIPP repository would be included at that time.*

In addition, including this value here and throughout the Permit is redundant and the information is not pertinent to the existing TRU mixed waste volumes in Permit Part 4, Table 4.1.1 and should therefore be deleted. Removing redundancy throughout the Permit is needed to reduce administrative burden in maintaining the Permit.

5. Editorial Comments (shown in Attachment 1)
 - a. Permit Part 4, Table 4.1.1
 - Remove reference to Table 4.1.1 in the "Note"

b. Attachment B, Narrative to Item 6. Process Codes and Design Capacities

- Define the unit for cubic meters and add the conversion to cubic feet in three places.
- Add “, separately from the Permit,” in one place.

c. Attachment J, footnote 2

- Add “, separately from the Permit,” between “reported” and “by the DOE.”

Attachment 1
Permittees Comments on the Draft Permit
Redline Strikeout

PART 1 - GENERAL PERMIT CONDITIONS

1.5. DEFINITIONS

Unless otherwise expressly provided herein, the terms used in this Permit shall have the meaning set forth in RCRA, HWA, and/or their implementing regulations.

1.5.22. Land Withdrawal Act TRU Waste Volume

“Land Withdrawal Act (LWA) TRU Waste Volume (LWA TRU Waste Volume)” means the volume of TRU waste inside a disposal container. This volume is tracked and reported, separately from the Permit, by the DOE internally relative to the WIPP Land Withdrawal Act LWA total capacity limit of 6.2 million ft³ (175,564 m³) (Pub. L. 102-579, as amended). For informational purposes, the LWA TRU Waste Volume is included in Table 4.1.1.

PART 4 - GEOLOGIC REPOSITORY DISPOSAL

Description¹	Waste Type	Maximum TRU Mixed Waste Capacity²	Final TRU Mixed Waste Volume³	Final LWA TRU Waste Volume⁴
Panel 1	CH TRU	636,000 ft ³ (18,000 m ³)	370,800 ft ³ (10,500 m ³)	
Panel 2	CH TRU	636,000 ft ³ (18,000 m ³)	635,600 ft ³ (17,998 m ³)	
Panel 3	CH TRU	662,150 ft ³ (18,750 m ³)	603,600 ft ³ (17,092 m ³)	
Panel 4	CH TRU	662,150 ft ³ (18,750 m ³)	503,500 ft ³ (14,258 m ³)	
	RH TRU	12,570 ft ³ (356 m ³)	6,200 ft ³ (176 m ³)	
Panel 5	CH TRU	662,150 ft ³ (18,750 m ³)	562,500 ft ³ (15,927 m ³)	
	RH TRU	15,720 ft ³ (445 m ³)	8,300 ft ³ (235 m ³)	
Panel 6	CH TRU	662,150 ft ³ (18,750 m ³)	510,900 ft ³ (14,468 m ³)	
	RH TRU	18,860 ft ³ (534 m ³)	7,600 7,500 ft ³ (215) 214 m ³)	
Panel 7	CH TRU	662,150 ft ³ (18,750 m ³)		
	RH TRU	22,950 ft ³ (650 m ³)		
Panel 8	CH TRU	662,150 ft ³ (18,750 m ³)		
	RH TRU	22,950 ft ³ (650 m ³)		
Total	CH TRU	5,244,900 ft³ (148,500 m³)		
	RH TRU	93,050 ft³ (2,635 m³)		

¹ The area of each panel is approximately 124,150 ft² (11,533 m²).

² "Maximum TRU Mixed Waste Capacity" is the maximum volume of TRU mixed waste volume that may be emplaced in each panel. This volume is calculated based on the gross internal volume of the outermost disposal containers. The maximum repository capacity of "6.2 million cubic feet of transuranic waste" is specified in the WIPP Land Withdrawal Act (Pub. L. 102-579, as amended)

³ Final TRU Mixed Waste Volume is calculated based on the gross internal volume of the outermost disposal containers. The volume listed here is reported pursuant to Permit Part 6, Section 6.10.1. The LWA TRU Waste Volume is tracked and reported.

Table 4.1.1 - Underground HWDUs

Description ¹	Waste Type	Maximum <u>TRU Mixed Waste Capacity</u> ²	Final <u>TRU Mixed Waste Volume</u> ³	<u>Final LWA TRU Waste Volume</u> ⁴
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separately from the Permit, by the DOE internally pursuant to the WIPP LWA total capacity limit (Pub. L. 102-579, as amended). A link to the LWA TRU Waste Volume is posted on www.wipp.energy.gov.

⁴ Final LWA TRU Waste Volume is calculated based on the volume of TRU waste inside a disposal container. The volume listed here is tracked and reported by the DOE internally pursuant to the WIPP Land Withdrawal Act total capacity limit of 6.2 million ft³ (175,564 m³) of TRU waste (Pub. L. 102-579, as amended) and is included here for informational purposes. A link to the LWA TRU Waste Volume is posted on www.wipp.energy.gov.

Note: The final TRU mixed waste volumes reported in Table 4.1.1 in ft³ are rounded to the nearest 100 ft³.

ATTACHMENT B

HAZARDOUS WASTE PERMIT APPLICATION PART A

EPA ID Number: NM4890139088

Hazardous Waste Permit Part A Form

Narrative to Item 6, Process Codes and Design Capacities 7. ~~PROCESS CODES AND DESIGN CAPACITIES (continued)~~

For purposes of this application, all TRU waste is managed as though it were mixed. During the Disposal Phase of the facility, which is expected to last 25 years, the total amount of waste received from off-site generators and any derived emplaced TRU mixed waste volume will be limited to 175,600 m³ of TRU waste of which up to 7,080 m³ may be remote-handled (RH) TRU mixed waste not exceed the design capacity specified in Item 6, Process Codes and Design Capacities. For purposes of this application, all TRU waste is managed as though it were mixed. This volume is calculated based on the gross internal volume of the outermost disposal containers and cannot exceed 151,135 cubic meters (m³) (5,337,282 million cubic feet (ft³)) for Panels 1 through 8. The Land Withdrawal Act (LWA) TRU waste volume is tracked and reported, separately from the Permit, by the DOE internally for the purposes of compliance with the WIPP LWA total capacity limit for TRU waste of 6.2 million ft³ (175,564 m³), and is included for informational purposes in Permit Part 4, Table 4.1.1.

The process design capacities for each of the miscellaneous unit (composed of ten underground HWMUs in the geologic repository) eight underground HWMUs in the geologic repository (i.e., miscellaneous unit) are shown in Section 7 B Item 6, Process Codes and Design Capacities, is for the maximum amount of waste that may be received from off-site generators plus the maximum expected amount of derived wastes that may be generated at the WIPP facility. In addition, two HWMUs have been designated as container storage units (S01) in Section 7 B Item 6, Process Codes and Design Capacities. One is inside the Waste Handling Building (WHB) and consists of the contact-handled (CH) bay, waste shaft conveyance loading room, waste shaft conveyance entry room, RH bay, cask unloading room, hot cell, transfer cell, and facility cask loading room. This HWMU will be used for waste receipt, handling, and storage (including storage of derived waste) prior to emplacement in the underground geologic repository. No treatment or disposal will occur in this S01 HWMU. The capacity of this S01 unit for storage is 194.1 m³ (6,854.6 ft³), based on 36 ten-drum overpacks on 18 facility pallets, four CH Packages at the TRUDOCKS, one standard waste box of derived waste, two loaded casks and one 55-gallon drum of derived waste in the RH Bay, one loaded cask in the Cask Unloading Room, 13 55-gallon drums in the Hot Cell, one canister in the Transfer Cell and one canister in the Facility Cask Unloading Room. The second S01 HWMU is the parking area outside the WHB where the Contact- and Remote-Handled Package trailers and the road cask trailers will be parked awaiting waste handling operations. The capacity of this unit is 50 Contact-Handled Packages and twelve Remote-Handled Packages with a combined TRU mixed waste volume of 242 m³ (8,546 ft³).

ATTACHMENT G

CLOSURE PLAN

G-1 Closure Plan

For the purposes of this Closure Plan, final facility closure is defined as closure that will occur when all ~~waste disposal areas~~ permitted HWDUs are filled or have achieved their maximum capacities as outlined in Permit Part 4, Table 4.1.1 or when the WIPP achieves its capacity of 6.2 million cubic feet (ft³) (175,564 cubic meters (m³)) of Land Withdrawal Act (LWA) TRU waste volume. At final facility closure, the surface container storage areas will be closed, and equipment that can be decontaminated and used at other facilities will be cleaned and sent off site. Equipment that cannot be decontaminated plus any derived waste resulting from decontamination will be placed in the last open underground HWDU. Stockpiled salt may be placed in the underground; it may be used as the core material for the berm component of the permanent marker system; or it must be otherwise disposed of in accordance with Sections 2 and 3 of the Minerals Act of 1947 (30 U.S.C. §§602 and 603). In addition, shafts and boreholes which lie within the WIPP Site Boundary and penetrate the Salado will be plugged and sealed, and surface and subsurface facilities and equipment will be decontaminated and removed. Final facility closure will be completed to demonstrate compliance with the Closure Performance Standards contained in 20.4.1.500 NMAC (incorporating 40 CFR §264.111, 178, and 601).

G-1c Maximum Waste Inventory

The maximum waste inventory (maximum capacity) for the permitted HWDUs is established in Permit Part 4, Table 4.1.1. In accordance with the LWA, The WIPP will receive no more than 6.2 million ft³ (175,564 m³) of LWA TRU mixed waste volume, which may include up to 250,000 ft³ (7,079 m³) of remote handled (RH) TRU mixed waste. Excavations are mined as permitted when needed during operations to maintain a reserve of disposal areas. The amount of waste placed in each room is limited by structural and physical considerations of equipment and design. Transuranic mixed waste Waste volumes include waste received from off-site generator locations as well as derived waste from disposal and decontamination operations. ~~The maximum volume of TRU mixed waste in a disposal panel is established in Permit Part 4, Table 4.1.1.~~ For closure planning purposes, a maximum achievable volume of 685,100 ft³ (19,400 m³) of TRU mixed waste per panel is used. This equates to 662,150 ft³ (18,750 m³) of contact-handled (CH) TRU mixed waste and 22,950 ft³ (650 m³) of RH TRU mixed waste per panel.

ATTACHMENT H1

ACTIVE INSTITUTIONAL CONTROLS DURING POST-CLOSURE

Introduction

Upon receipt of the necessary certifications and permits from the EPA and the New Mexico Environment Department, the Permittees will begin disposal of contact-handled (CH) and remote-handled (RH) TRU and TRU mixed waste in the WIPP. This waste emplacement and disposal phase will continue until the initiation of final closure when the HWDUs have received the final volume of waste regulated capacity of the repository of or when the 6.2 million 6,200,000 cubic feet (ft³) (175,588 cubic meters (m³)) of LWA TRU and TRU mixed waste volume has been reached, and as long as the Permittees comply with the requirements of the Permit. For the purposes of this Permit Attachment, this time period is assumed to be 25 years. The waste will be shipped from DOE facilities across the country in specially designed transportation containers certified by the Nuclear Regulatory Commission. The transportation routes from these facilities to the WIPP have been predetermined. The CH TRU mixed waste will be packaged in 55-gallon (208-liter), 85-gallon (322-liter), 100-gallon (379-liter) steel drums, standard waste boxes (SWBs), ten drum overpacks (TDOPs), and/or standard large box 2s (SLB2s). An SWB is a steel container having a free volume of 66.3 cubic feet (1.88 cubic meters). Figure H1-2 shows the general arrangement of a seven-pack of drums and an SWB as received in a Contact-Handled Package. RH TRU mixed waste inside a Remote-Handled Package is contained in one or more of the allowable containers described in Permit Attachment A1. Some RH TRU mixed waste may arrive in shielded containers as described in Permit Attachment A1.

ATTACHMENT J

HAZARDOUS WASTE MANAGEMENT UNIT TABLES

**Table J-3
Underground Hazardous Waste Disposal Units**

Description ¹	Waste Type	Maximum Capacity ²	Container Equivalent
Panel 1	CH TRU	636,000 ft ³ (18,000 m ³)	86,500 55-Gallon Drums
Panel 2	CH TRU	636,000 ft ³ (18,000 m ³)	86,500 55-Gallon Drums
Panel 3	CH TRU	662,150 ft ³ (18,750 m ³)	90,150 55-Gallon Drums
Panel 4	CH TRU	662,150 ft ³ (18,750 m ³)	90,150 55-Gallon Drums
	RH TRU	12,570 ft ³ (356 m ³)	400 RH TRU Canisters
Panel 5	CH TRU	662,150 ft ³ (18,750 m ³)	90,150 55-Gallon Drums
	RH TRU	15,720 ft ³ (445 m ³)	500 RH TRU Canisters
Panel 6	CH TRU	662,150 ft ³ (18,750 m ³)	90,150 55-Gallon Drums
	RH TRU	18,860 ft ³ (534 m ³)	600 RH TRU Canisters
Panel 7	CH TRU	662,150 ft ³ (18,750 m ³)	90,150 55-Gallon Drums
	RH TRU	22,950 ft ³ (650 m ³)	730 RH TRU Canisters
Panel 8	CH TRU	662,150 ft ³ (18,750 m ³)	90,150 55-Gallon Drums
	RH TRU	22,950 ft ³ (650 m ³)	730 RH TRU Canisters
Total	CH TRU	5,244,900 ft³ (148,500 m³)	713,900 55-Gallon Drums
	RH TRU	93,050 ft³ (2,635 m³)	2960 RH TRU Canisters

¹ The area of each panel is approximately 124,150 ft² (11,533 m²).

² "Maximum Capacity" is the maximum volume of TRU mixed waste that may be emplaced in each panel. The maximum repository capacity of "6.2 million cubic feet of transuranic waste" is specified in the WIPP Land Withdrawal Act (Pub. L. 102-579, as amended) and is tracked and reported separately from the Permit, by the DOE internally as the LWA TRU Waste Volume. The LWA TRU Waste Volume is included for informational purposes in Permit Part 4, Table 4.1.1.