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Class 2 Permit Modification Request

- Item 1: Update the WIPP Waste Information System**
- Item 2: Clarify Language Pertaining to Acceptable Knowledge Compilation**
- Item 3: Streamline Waste Stream Profile Form (WSPF) and Associated Requirements**
- Item 4: Remove the Quarterly Repeat of Data Generation Review, Validation, and Verification**
- Item 5: Revise Waste Stream Definition**
- Item 6: Revise Waste Confirmation Program**
- Item 7: Modification to Revise Centralized Waste Analysis Plan (WAP) Characterization Program Audit Frequency**

**Waste Isolation Pilot Plant
Carlsbad, New Mexico**

WIPP Permit Number - NM4890139088-TSDF

November 2013

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Overview of the Permit Modification Request

This Class 2 Permit Modification Request for the Waste Isolation Pilot Plant (**WIPP**) Hazardous Waste Facility Permit (**Permit**) Number NM4890139088-TSDF contains seven items. This PMR is being submitted by the U.S. Department of Energy (**DOE**) and Nuclear Waste Partnership (**NWP**), collectively referred to as the Permittees, in accordance with the WIPP Permit Part 1, Section 1.3.1. (20.4.1.900 New Mexico Administrative Code (NMAC), incorporating Title 40 Code of Federal Regulations (CFR) §270.42(d)). Modifications to the Permit are requested for the following items:

1. Update the WIPP Waste Information System
2. Clarify Language Pertaining to Acceptable Knowledge Compilation
3. Streamline Waste Stream Profile Form (**WSPF**) and Associated Requirements
4. Remove the Quarterly Repeat of Data Generation Review, Validation, and Verification
5. Revise Waste Stream Definition
6. Revise Waste Confirmation Program
7. Modification to Revise Centralized Waste Analysis Plan (**WAP**) Characterization Program Audit Frequency

These items are being proposed in an effort to provide clarification, updated information, and efficiencies to the waste characterization program. Each of these items affects separate aspects of the Permit Attachment C, *Waste Analysis Plan*, and associated Permit attachments; however, they may affect common areas of the Permit text. The proposed changes, including the redline/strikeout of the Permit text, are addressed separately within each item of this Class 2 package. These changes do not reduce the ability of the Permittees to provide continued protection to human health and the environment.

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Item 1

Class 2 Permit Modification Request

Update the WIPP Waste Information System

**Waste Isolation Pilot Plant
Carlsbad, New Mexico**

WIPP Permit Number - NM4890139088-TSDF

November 2013

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Acronyms and Abbreviations

1		
2	CFR	Code of Federal Regulations
3	CH	contact-handled
4	DA	Data Administrator
5	DOE	U.S. Department of Energy
6		
7	NMAC	New Mexico Administrative Code
8	NMED	New Mexico Environment Department
9	NWP	Nuclear Waste Partnership LLC
10	Permit	Hazardous Waste Facility Permit
11	Permittees	DOE and NWP
12	PMR	Permit Modification Request
13	RCRA	Resource Conservation and Recovery Act
14	RH	remote-handled
15	TRU	transuranic
16	WDS	Waste Data System
17	WIPP	Waste Isolation Pilot Plant
18	WWIS	WIPP Waste Information System

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Overview of the Permit Modification Request

This document contains a Class 2 Permit Modification Request (**PMR**) for the Waste Isolation Pilot Plant (**WIPP**) Hazardous Waste Facility Permit (**Permit**), Permit Number NM4890139088-TSDF.

This PMR is being submitted by the U.S. Department of Energy (**DOE**) and Nuclear Waste Partnership LLC (**NWP**), collectively referred to as the **Permittees**, in accordance with the Permit, Part 1, Section 1.3.1. (20.4.1.900 New Mexico Administrative Code (**NMAC**) incorporating Title 40 Code of Federal Regulations (**CFR**) §270.42(b)). The modification request proposes the following changes:

- Update the nomenclature used to describe the WIPP Waste Information System (**WWIS**)
- Update descriptive text related to the accessing of certain waste information by the New Mexico Environment Department (**NMED**) and the general public
- Update some descriptive information related to the WWIS
- Delete the title of qualified individuals who maintain the WWIS
- Editorial changes relative to the WWIS

These changes do not reduce the ability of the Permittees to provide continued protection to human health and the environment.

The requested modification to the Permit and related supporting documents are provided in this PMR. The proposed modification to the text of the Permit has been identified using red text and a double underline for new text and a ~~strikeout~~ font for deleted information. The following information specifically addresses how compliance has been achieved with the Permit, Part 1, Section 1.3.1., for submission of this Class 2 PMR.

1. 20.4.1.900 NMAC (incorporating 40 CFR 270.42(b)(1)(i)) requires the applicant to describe the exact change to be made to the permit conditions and supporting documents referenced by the Permit.

This PMR proposes to change the WWIS to a more generic name and proposes to update information related to the WWIS to incorporate upgrades and changes made to the system.

The proposed changes are in the following Parts and Attachments of the Permit:

- Part 2, "General Facility Conditions"
- Part 3, "Container Storage"
- Part 4, "Geologic Repository Disposal"
- Attachment A1, "Container Storage"
- Attachment C, "Waste Analysis Plan"
- Attachment C1, "Waste Characterization Testing Methods"
- Attachment C3, "Quality Assurance Objectives and Data Validation Techniques for Waste Characterization Methods"
- Attachment C6, "Audit and Surveillance Program"

- 1 • Attachment D, "RCRA Contingency Plan"
- 2 • Attachment F1, "RCRA Hazardous Waste Management Job Titles and Descriptions"
- 3 • Attachment F2, "Training Course and Qualification Card Outlines"

4 The Table of Changes (Appendix A) and the redline strikeout in this modification (Appendix B)
5 describe each change that is being proposed. The Permittees are providing new figures
6 (Appendix C) with the redline/strikeout incorporated.

7 **2. 20.4.1.900 NMAC (incorporating 40 CFR 270.42(b)(1)(ii)), requires the applicant to**
8 **identify that the modification is a Class 2 modification.**

9 The proposed modification is classified as a Class 2 modification for the reason indicated below:

10
11 20.4.1.900 New Mexico Administrative Code (incorporating 40 CFR §270.42, Appendix I,
12 Item B.) "*General Facility Standards, 1. Changes to waste sampling or analysis*
13 *methods:...d. Other changes...2*" and "*General Facility Standards, 5. Changes in the*
14 *training plan:...a. That affect the type or decrease the amount of training given to*
15 *employees...2*"

16 **3. 20.4.1.900 NMAC (incorporating 40 CFR 270.42(b)(1)(iii)), requires the applicant to**
17 **explain why the modification is needed.**

18 The Permit requires that the Permittees maintain an electronic waste information system,
19 currently referred to as the WWIS, containing data for all waste containers disposed at the
20 WIPP facility. Access to this waste information system by the NMED is also required. Recently,
21 the Permittees developed the Waste Data System (**WDS**) as a web-based software system
22 used by WIPP Project personnel to gather, store, and process information pertaining to contact-
23 handled (**CH**) and remote-handled (**RH**) transuranic (**TRU**) waste. The Permit-required edit/limit
24 checks and required information were retained in the WDS.

25 The Permittees are proposing to replace "WWIS" with a generic term to describe the waste
26 information required by the Permit. The generic term proposed by the Permittees that will be
27 used in place of the "WWIS" is "waste information system." The reason for this change is that as
28 the Permittees identify the need for future updates to the WDS, the Permit and implementing
29 documents will not be impacted.

30 In addition, the Permittees are proposing to update the data information requirements in the
31 Permit. These updates include editorial changes, updates to the description, clarifications,
32 deletion of the Data Administrator (**DA**) training requirements, and the removal of redundant
33 text. The explanation for why these changes are needed is described below:

- 34 • Part 2, Section 2.3.1.7, WIPP Waste Information System (WWIS) Database - Updated
35 text related to the accessing of certain output from the waste information system by the
36 NMED and the general public. This section is being updated to clarify that access is to
37 the output from the waste information system and not to the database itself, thereby
38 ensuring system security. This update is also needed to eliminate outdated information,
39 such as references to the terms "WWIS" and "modem," and to delete unnecessary
40 information, such as text regarding the date of implementation of the public access to
41 waste information.

- 1 • Part 4, Section 4.8.2, Disposal Waste Type and Location - The WWIS Data Dictionary is
2 an outdated term. The required information in this section is clearly delineated without
3 the use of this term. This change will eliminate confusion and streamline the text in the
4 Permit. The required waste information is listed in Permit Attachment C, Table C-3.
5 Deleted "Code" to be consistent with the information in Attachment C, Table C-3.
- 6 • Attachment C, List of Tables – See the explanation below for Attachment C, Table C-3.
- 7 • Attachment C, Section C-4a(5), Data Transmittal – Deleted "electronically." This change
8 is being made to accommodate manual data entry when needed. Deleted the reference
9 to data fields and format requirements. This change is needed to clarify the Permit.
10 Section C-5a(1) delineates the requirements for the waste information system.
- 11 • Attachment C, Section C-5a, Phase I Waste Stream Screening and Verification –
12 Clarified the process of data submittal for generator/storage sites by changing "via" to
13 "into" and "entered" to "submitted." Removed redundant text regarding NMED's access
14 to the waste information system. The requirement for NMED's access is in Permit Part 2,
15 Section 2.3.1.7. The Permittees have established edit and limit checks within the waste
16 information system to perform the data comparison on their behalf. Clarified text
17 regarding when the data comparison will take place.
- 18 • Attachment C, Section C-5a(1), WWIS – Removed text referring to the Data Dictionary.
19 The waste information system required elements are clearly delineated in Table C-3
20 without the use of this term. This change will eliminate confusion and streamline the text
21 in the Permit. The requirements for sites to populate data structures are the same for
22 small and large waste inventories. Editorial change to move "automatically" after "will."
23 Clarified that corrected data may be submitted as new or corrected data prior to
24 acceptance of the waste at the WIPP. Replaced "data fields" with "required information"
25 as a result of the change to the title of Table C-3. Clarified text regarding the waste
26 container data report. Clarified the description for the change log. This change will help
27 streamline the Permit and eliminate confusing text. Deleted text beginning "who will
28 control the WWIS..." This information is covered in WIPP standard operating
29 procedures. Deleted text beginning ", and only until the data..." This text is duplicative to
30 the third paragraph in Attachment C, Section C-5a(1). Deleted the text beginning "The
31 WWIS has a Change Log..." It is duplicative to the change log bulleted item.
- 32 • Attachment C, Section C-5b Phase II Waste Shipment Screening and Verification –
33 Deleted "electronically" in two places. This change is being made to accommodate
34 manual data entry when needed. Changed "supplied" to "accepted by the waste
35 information system." These changes will streamline the Permit and clarify the process of
36 data submittal to the waste information system.
- 37 • Attachment C, Section C-5b(1), Examination of the EPA Uniform Hazardous Waste
38 Manifest and Associated Waste Tracking Information – Deleted "electronically." This
39 change is being made to accommodate manual data entry when needed. Editorial
40 change to delete "already."
- 41 • Attachment C, Section C-5b(3), Verification – Removed text referring to verifying
42 containers. The information is duplicative and is more adequately covered in the two
43 previous sentences. Editorial change from "barcode reader" to "Permittees."
- 44 • Attachment C, Table C-3, WIPP Waste Information System Data Fields – Changed the
45 table title from "WIPP Waste Information System Data Fields" to "Waste Information
46 System Required Elements." This change will eliminate confusion and streamline the

1 Permit. Revised the table to compile the required waste information into one list and
2 removed confusing and unnecessary text related to modules. Changed “Haz. Manifest
3 Number” to “Manifest Document Number” to be consistent with the text in Part 4, Section
4 4.8.2. Added “NDE Method (Radiography or VE)” to the list. Changed “NDE Complete”
5 to “NDE Date.” The NDE date is more descriptive. Deleted “Visual Exam Container.”
6 This information is duplicative to the “NDE Method” and “NDE Date” information. Deleted
7 unnecessary and descriptive footnotes. This will eliminate confusing text and help
8 streamline the Permit.

- 9 • Attachment C3, Section C3-6b(4) WIPP Waste Information System (WWIS) Data
10 Reporting – Clarified text and removed the term “Data Dictionary.” The WWIS Data
11 Dictionary is not a RCRA requirement or necessary to ensure compliance with the
12 Permit, and the on-line help functions provided by the WDS have rendered the Data
13 Dictionary obsolete. This change will eliminate confusion and streamline the text in the
14 Permit.
- 15 • Attachment D, Section D-4b Identification of Hazardous Materials - Removed text
16 referring to the location where the Resource Conservation and Recovery Act (**RCRA**)
17 Emergency Coordinator will have access to the waste information system. This change
18 is needed because there may be situations where Operations or the Facility Shift
19 Manager’s Office is not accessible due to emergency situations or in the event those
20 areas are not operational. Other locations may be configured as needed for access to
21 the waste information system.
- 22 • Attachment F1, RCRA Hazardous Waste Management Job Titles and Descriptions –
23 Removed WWIS DA. The role of the WWIS DA is relative to waste information system
24 administration and support. The WWIS DA’s role does not involve implementing facility
25 hazardous waste management procedures per 20.4.1.500 NMAC (incorporating 40 CFR
26 264.16) nor does it involve responding to the emergencies described in 20.4.1.500
27 NMAC (incorporating 40 CFR 264.16). Therefore, the Permittees have determined the
28 job of the WWIS DA is not a RCRA hazardous waste management job and need not be
29 included in the Permit.
- 30 • Attachment F2, Training Course and Qualification Card Outlines – See explanation for
31 Attachment F1 above.

32 **4. 20.4.1.900 NMAC (incorporating 40 CFR 270.42 (b)(1)(iv)), requires the applicant to**
33 **provide the applicable information required by 40 CFR 270.13 through 270.21,**
34 **270.62 and 270.63.**

35 The regulatory crosswalk describes the portions of the Permit that are affected by this PMR.
36 Where applicable, regulatory citations in this modification reference 20.4.1 NMAC, revised
37 March 1, 2009, incorporating 40 CFR Parts 264 and 270. 40 CFR §§270.16 through 270.21,
38 270.62 and 270.63 are not applicable at the WIPP facility. Consequently, they are not listed in
39 the regulatory crosswalk table.

40 **5. 20.4.1.900 NMAC (incorporating 40 CFR 270.11(d)(1) and 40 CFR 270.30(k)),**
41 **requires that any person signing under paragraph a and b must certify the**
42 **document in accordance with 20.4.1.900 NMAC.**

43 The transmittal letter for this PMR contains the signed certification statement in accordance with
44 the Permit, Part 1, Section 1.9.

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Regulatory Crosswalk

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
§270.13		Contents of Part A permit application	Attachment B Part A		✓
§270.14(b)(1)		General facility description	Attachment A		✓
§270.14(b)(2)	§264.13(a)	Chemical and physical analyses	Part 2.3.1 Attachment C	✓	
§270.14(b)(3)	§264.13(b)	Development and implementation of waste analysis plan	Part 2.3.1.1 Attachment C	✓	
	§264.13(c)	Off-site waste analysis requirements	Part 2.2.1 Attachment C	✓	
§270.14(b)(5)	§264.15(a-d)	General inspection requirements	Part 2.7 Attachment E-1a		✓
	§264.174	Container inspections	Attachment E-1b(1)		✓
§270.23(a)(2)	§264.602	Miscellaneous units inspections	Attachment E-1b Attachment E-1b(1)		✓
§270.14(b)(6)		Request for waiver from preparedness and prevention requirements of Part 264 Subpart C	NA		✓
§270.14(b)(7)	264 Subpart D	Contingency plan requirements	Part 2.12 Attachment D		✓
	§264.51	Contingency plan design and implementation	Part 2.12.1 Attachment D		✓
	§264.52 (a) & (c-f)	Contingency plan content	Attachment D	✓	
	§264.53	Contingency plan copies	Part 2.12.2 Attachment D		✓
	§264.54	Contingency plan amendment	Part 2.12.3 Attachment D		✓
	§264.55	Emergency coordinator	Part 2.12.4 Attachment D-4a(1)		✓
	§264.56	Emergency procedures	Attachment D-4		✓
§270.14(b)(8)		Description of procedures, structures or equipment for:	Attachment A Part 2.11		✓
§270.14(b)(8)(i)		Prevention of hazards in unloading operations (e.g., ramps and special forklifts)	Part 2.11		✓
§270.14(b)(8)(ii)		Runoff or flood prevention (e.g., berms, trenches, and dikes)	Attachment A1-1c(1) Part 2.11		✓
§270.14(b)(8)(iii)		Prevention of contamination of water supplies	Part 2.11		✓
§270.14(b)(8)(iv)		Mitigation of effects of equipment failure and power outages	Part 2.11		✓
§270.14(b)(8)(v)		Prevention of undue exposure of personnel (e.g., personal protective equipment)	Part 2.11		✓
§270.14(b)(8)(vi) §270.23(a)(2)	§264.601	Prevention of releases to the atmosphere	Part 2.11 Part 4.4 Attachment D-4e Attachment G-1a		✓
	264 Subpart C	Preparedness and Prevention	Part 2.10		✓
	§264.31	Design and operation of facility	Part 2.1		✓

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
	§264.32	Required equipment	Part 2.10.1 Attachment D		✓
	§264.33	Testing and maintenance of equipment	Part 2.10.2 Attachment E-1a		✓
	§264.34	Access to communication/alarm system	Attachment E-1a Part 2.10.3		✓
	§264.35	Required aisle space	Part 2.10.4		✓
	§264.37	Arrangements with local authorities	Attachment D-4a(3)		✓
§270.14(b)(9)	§264.17(a-c)	Prevention of accidental ignition or reaction of ignitable, reactive, or incompatible wastes	Part 2.9		✓
§270.14(b)(10)		Traffic pattern, volume, and controls, for example: Identification of turn lanes Identification of traffic/stacking lanes, if appropriate Description of access road surface Description of access road load-bearing capacity Identification of traffic controls	Attachment A4		✓
§270.14(b)(11)(i) and (ii)	§264.18(a)	Seismic standard applicability and requirements	Attachment G2-2.2 Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(11)(iii-v)	§264.18(b)	100-year floodplain standard	Attachment A1-1c(1) Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(12)	§264.16(a-e)	Personnel training program	Part 2.8 Attachment F	✓	
§270.14(b)(13)	264 Subpart G	Closure and post-closure plans	Part 6 & 7 Attachment G & H		✓
§270.14(b)(13)	§264.111	Closure performance standard	Attachment G-1a		✓
§270.14(b)(13)	§264.112(a), (b)	Written content of closure plan	Attachment G-1		✓
§270.14(b)(13)	§264.112(c)	Amendment of closure plan	Part 6.3 Attachment G-1d(4)		✓
§270.14(b)(13)	§264.112(d)	Notification of partial and final closure	Attachment G-2a		✓
§270.14(b)(13)	§264.112(e)	Removal of wastes and decontamination/dismantling of equipment	Attachment G-1e(2)		✓
§270.14(b)(13)	§264.113	Time allowed for closure	Part 6.5 Attachment G-1d		✓
§270.14(b)(13)	§264.114	Disposal/decontamination	Part 6.6 Attachment G-1e(2)		✓
§270.14(b)(13)	§264.115	Certification of closure	Part 6.7 Attachment G-2a		✓
§270.14(b)(13)	§264.116	Survey plat	Part 6.8 Attachment G-2b		✓

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
§270.14(b)(13)	§264.117	Post-closure care and use of property	Part 7.3 Attachment H-1a		✓
§270.14(b)(13)	§264.118	Post-closure plan; amendment of plan	Part 7.5 Attachment H-1a (1)		✓
§270.14(b)(13)	§264.178	Closure/containers	Part 6.9 Attachment A1-1h Attachment G-1		✓
§270.14(b)(13)	§264.601	Environmental performance standards-miscellaneous units	Attachment A-4 Attachment D-1 Attachment G-1a		✓
§270.14(b)(13)	§264.603	Post-closure care	Part 7.3 Attachment G-1a(3)		✓
§270.14(b)(14)	§264.119	Post-closure notices	Part 7.4 Attachment H-2		✓
§270.14(b)(15)	§264.142	Closure cost estimate	NA		✓
	§264.143	Financial assurance	NA		✓
§270.14(b)(16)	§264.144	Post-closure cost estimate	NA		✓
	§264.145	Post-closure care financial assurance	NA		✓
§270.14(b)(17)	§264.147	Liability insurance	NA		✓
§270.14(b)(18)	§264.149-150	Proof of financial coverage	NA		✓
§270.14(b)(19)(i), (vi), (vii), and (x)		Topographic map requirements Map scale and date Map orientation Legal boundaries Buildings Treatment, storage, and disposal operations Run-on/run-off control systems Fire control facilities	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(ii)	§264.18(b)	100-year floodplain	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(iii)		Surface waters	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(iv)		Surrounding land use	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
§270.14(b)(19)(v)		Wind rose	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(viii)	§264.14(b)	Access controls	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(ix)		Injection and withdrawal wells	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(xi)		Drainage on flood control barriers	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(xii)		Location of operational units	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(20)		Other federal laws Wild and Scenic Rivers Act National Historic Preservation Act Endangered Species Act Coastal Zone Management Act Fish and Wildlife Coordination Act Executive Orders	Attachment B Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.15	§264 Subpart I	Containers	Part 3 Part 4.3 Attachment A1		✓
	§264.171	Condition of containers	Part 3.3 Attachment A1		✓
	§264.172	Compatibility of waste with containers	Part 3.4 Attachment A1		✓
	§264.173	Management of containers	Part 3.5 Attachment A1		✓
	§264.174	Inspections	Part 3.7 Attachment E-1 Attachment A1-1e		✓

Update the WIPP Waste Information System
DRAFT 11-26-2013

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
§270.15(a)	§264.175	Containment systems	Part 3.6 Attachment A1		✓
§270.15(c)	§264.176	Special requirements for ignitable or reactive waste	Attachment A1-1g Permit Part 2.1		✓
§270.15(d)	§264.177	Special requirements for incompatible wastes	Attachment A1-1g Permit Part 2.3.3.4		✓
	§264.178	Closure	Part 6 Attachment G		✓
§270.15(e)	§264.179	Air emission standards	Part 4.4.2 Attachment N		✓
§270.23	264 Subpart X	Miscellaneous units	Part 1.3.1 Attachment A2-1 Attachment G1.3.1		✓
§270.23(a)	§264.601	Detailed unit description	Part 4 Part 5 Attachment A2 Attachment L		✓
§270.23(b)	§264.601	Hydrologic, geologic, and meteorologic assessments	Part 4 Part 5 Attachment A2 Attachment L		✓
§270.23(c)	§264.601	Potential exposure pathways	Part 4 Part 5 Attachment A2 Attachment N Attachment L		✓
§270.23(d)		Demonstration of treatment effectiveness	Part 4 Attachment A2 Attachment N		✓
	§264.602	Monitoring, analysis, inspection, response, reporting, and corrective action	Part 4 Part 5 Attachment A2 Attachment E-1 Attachment N Attachment L		✓
	§264.603	Post-closure care	Attachment H Attachment H1		✓
	264 Subpart E	Manifest system, record keeping, and reporting	Permit Part 1 Permit Part 2.13 & 2.14 Permit Part 4 Attachment C	✓	
§270.30(j)(2)	§264.73(b)	Ground-water records	Part 1		✓
	264 Subpart F	Releases from solid waste management units	Part 5 & 7 Attachment G2 & L		✓
	§264.90	Applicability	Part 5 Attachment L		✓
	§264.91	Required programs	Attachment L		✓
	§264.92	Ground-water protection standard	Attachment L		✓
	§264.93	Hazardous constituents	Attachment L		✓

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
	§264.94	Concentration limits	Part 5 Attachment L		✓
	§264.95	Point of compliance	Part 5 Attachment L		✓
	§264.96	Compliance period	Attachment L		✓
	§264.97	General ground-water monitoring requirements	Part 5 Attachment L		✓
	§264.98	Detection monitoring program	Part 5 Attachment L		✓
	§264.99	Compliance monitoring program	Part 5 Attachment L		✓
	§264.100	Corrective action program	Part 5 Attachment L		✓
	§264.101	Corrective action for solid waste management units	Part 8 Attachment L		✓
	264 Appendix IX	Ground-water Monitoring List	Part 5 Attachment L		✓

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Appendix A
Table of Changes

Table of Changes

Affected Permit Section	Explanation of Changes
Part 2, Table of Contents	Changed "WIPP Waste Information System (WWIS) Database" to "WIPP Waste Information System"
Part 2, Section 2.3.1.7.	<p>Changed "WIPP Waste Information System (WWIS) Database" to "WIPP Waste Information System"</p> <p>Changed "The Permittees shall provide the Secretary access to the WWIS database as necessary to determine compliance with the WAP." to "The Permittees shall maintain TRU mixed waste information system."</p> <p>Changed "The WWIS" to "The waste information system "</p> <p>Changed "all" to "the"</p> <p>Changed "The Secretary's access to the WWIS shall be direct, read-only (via modem or Internet) to all query and reporting functions of the Characterization, Certification, Shipping, and Inventory modules of the WWIS database." to "The Permittees will provide NMED direct read-only access to the waste information system via the Internet to Permit-required information described in Section C-5a(1), Table C-3."</p> <p>Deleted "Beginning on December 31, 2005, the Permittees instituted a public database containing certain information from the WWIS."</p> <p>Deleted "continue to"</p> <p>Deleted "such"</p> <p>Added "to certain output from the waste information system"</p>
Part 3, Section 3.1.2.6.	Changed "the WIPP Waste Information System (WWIS) database" to "waste information system"
Part 4, Section 4.8.2.	<p>Changed ", using the following fields from the WWIS data dictionary" to ". The record will include the following information"</p> <p>Deleted "Code"</p>
Attachment A1-1d(1)	Changed "WWIS database" to "waste information system"
Attachment A1-1d(2)	<p>Changed "WIPP Waste Information System (WWIS)" to "waste information system"</p> <p>Changed "WWIS" to "waste information system " in two places</p>
Attachment A1-1d(3)	Changed "WWIS" to "waste information system" in two places
Attachment A1-1d(4)	Changed "WWIS" to "waste information system"
Attachment C, Table of Contents	Changed "WWIS" to "waste information system"
Attachment C, List of Tables	Changed "WIPP Waste Information System Data Fields" to "Waste Information System Required Elements"
Attachment C, Section C-4a(5)	<p>Deleted "electronically"</p> <p>Changed "WIPP Waste Information System (WWIS)" to "waste information system"</p> <p>Deleted "Data will be entered into the WWIS in the exact format required by the database"</p> <p>Changed "WWIS" to "the waste information system"</p> <p>Deleted "and the Waste Data System User's Manual (DOE, 2009) for the WWIS data fields and format requirements"</p> <p>Changed "WWIS" to "waste information system"</p>
Attachment C, Section C-5a	<p>Changed "WWIS" to "waste information system" in two places</p> <p>Changed "entered" to "submitted"</p> <p>Deleted "NMED will have read-only access to the WWIS as necessary to determine compliance with the WAP."</p> <p>Changed "WWIS" to "the waste information system"</p> <p>Deleted "The Permittees will compare"</p> <p>Capitalized "ongoing" to read "Ongoing"</p> <p>Changed "WWIS" to "waste information system will be compared"</p> <p>Added "at the time of container data submittal"</p>

Affected Permit Section	Explanation of Changes
Attachment C, Section C-5a(1)	<p>Changed "WWIS" to "Waste Information System"</p> <p>Changed "WWIS" to "waste information system"</p> <p>Changed "The WWIS Data Dictionary includes all of the data fields, the field format and the limits associated with the data as established by this WAP." to "The required waste information system data is listed in Table C-3."</p> <p>Changed "database, as defined in the <i>Waste Data System User's Manual</i> (DOE, 2009)" to "system"</p> <p>Deleted "with large waste inventories and large databases"</p> <p>Changed "data dictionary fields" to "information"</p> <p>Changed "are" to "is"</p> <p>Deleted "The Permittees will access these data via the Internet to ensure an efficient transfer of this data. Small quantity sites will be given a similar data structure by the Permittees that is tailored to their types of waste."</p> <p>Deleted "with very small quantities of waste"</p> <p>Changed "WWIS" to "waste information system" in two places</p> <p>Changed "WWIS" to "waste information system"</p> <p>Deleted "automatically"</p> <p>Added "automatically"</p> <p>Added "new or"</p> <p>Changed "data by the WWIS" to "waste at the WIPP facility"</p> <p>Deleted "Read-only access to the WWIS will be provided to the NMED."</p> <p>Changed "the data fields" to "required elements"</p> <p>Changed "WWIS" to "waste information"</p> <p>Changed "are" to "is"</p> <p>Changed "WWIS" to "waste information" in two places</p> <p>Changed "contain the data listed in the Characterization Module on Table C-3" to "include the applicable container-specific information from Table C-3"</p> <p>Changed "attached to" to "stored with"</p> <p>Deleted "for inclusion"</p> <p>Changed "Reports of" to "Data"</p> <p>Changed "This will consist of a short report that lists the user ID and the fields changed. The report will also include a reason for the change. A longer report will list the information provided on the short report and" to "A record of a change to data after the data have been accepted will be captured by the waste information system. This record shall include the date, time, user, and reason for the change. The report will also"</p> <p>Changed "These reports" to "This record of changes"</p> <p>Changed "WWIS" to "waste information system"</p> <p>Deleted "who will control the WWIS users based on approval from management personnel"</p> <p>Deleted ", and only until the data have been formally accepted by the Permittees"</p> <p>Deleted "The WWIS has a Change Log that requires a reason for the change from the DA prior to accepting the change. The data change information, the user ID of the authorized DA making the change, and the date of the change will be recorded in the data change log automatically."</p>
Attachment C, Section C-5a(2)	<p>Changed "WWIS" to "waste information system"</p> <p>Changed "WWIS" to "data in the waste information system"</p>
Attachment C, Section C-5b	<p>Deleted "electronically"</p> <p>Changed "WWIS" to "waste information system"</p> <p>Deleted "electronically"</p> <p>Changed "WWIS" to "waste information system"</p>

Affected Permit Section	Explanation of Changes
Attachment C, Section C-5b(1)	<p>Changed "WWIS database" to "waste information system" Changed "WWIS" to "waste information system" Changed "WWIS database" to "waste information system" Deleted "electronically" Deleted "already" Changed "WWIS" to "waste information system" Changed "WWIS" to "Permittees" Changed "provided by the Permittees" to "in the waste information system " Changed "WWIS" to "waste information system " in two places Deleted "WWIS" Added "." after "container(s)" Deleted "WWIS" in two places Changed "WWIS" to "waste information system "</p>
Attachment C, Section C-5b(2)	<p>Changed "WWIS" to "waste information system "</p>
Attachment C, Section C-5b(3)	<p>Changed "WWIS" to "waste information system " in two places Deleted "WWIS" Deleted "This check also verifies that the containers included in the shipment are those for which approved shipping data already exist in the WWIS Transportation Data Module (Table C-3)." Deleted "standard waste boxes" Deleted parentheticals around "SWBs" Deleted "ten drum overpacks" Deleted parentheticals around "TDOPs" Changed "WWIS" to "waste information system " Changed "barcode reader" to "Permittees" Deleted "WWIS" in two places</p>
Attachment C, Section C-7	<p>Changed "on the WWIS" to "from the waste information system " Changed "WIPP WWIS" to "The"</p>
Attachment C, Section C-9	<p>Deleted "U.S. Department of Energy (DOE), 2009, 'Waste Data System User's Manual,' DOE/WIPP 09-3427, U.S. Department of Energy"</p>
Attachment C, Table C-3	<p>Changed "WIPP Waste Information System Data Fields" to "Waste Information System Required Data" Deleted module names in each section of the table Deleted footnotes b through f Added "NDE Method (Radiography or VE)" Changed "Haz. Manifest Number" to "Manifest Document Number" Changed "NDE Complete ^e" to "NDE Date" Deleted "Visual Exam Container ^e" Deleted "Contact Handled" from "Contact Handled Package Number" to read "Package Number" Sorted footnotes by name and compiled into one list Added "ing" to "list" to read "listing" Added "information contained in" Changed "WWIS data fields" to "waste information system "</p>
Attachment C, Figure C-2	<p>Changed "WWIS" to "waste information system "</p>
Attachment C, Figure C-3	<p>Changed "WWIS" to "waste information system " in two places</p>
Attachment C3, Table of Contents	<p>Changed "WIPP Waste Information System (WWIS) Data" to "Waste Information System"</p>
Attachment C3, Section C3-4c	<p>Changed "WWIS" to "the waste information system "</p>
Attachment C3, Section C3-6b(4)	<p>Changed "WIPP Waste Information System (WWIS) Data" to "Waste Information System" Changed "WWIS Data Dictionary includes all of the data fields, the field format and the limits associated with the data" to "waste information system , an electronic data processing system, will contain the data needed to identify the waste and to verify regulatory compliance" Added "waste information system" Deleted ", as defined in the <i>Waste Data System User's Manual</i> (DOE, 2009)"</p>

Affected Permit Section	Explanation of Changes
Attachment C6, Table C6-1	Changed "WWIS" to "waste information system " in three places
Attachment D, Section D-4b	Changed "WIPP Waste Information System (WWIS)" to "waste information system " Changed "WWIS" to "waste information system" in two places Changed "WWIS through Operations, or through the Facility Shift Manager's Office" to "waste information system "
Attachment D, Section D-4d(8)	Changed "WWIS" to "waste information system "
Attachment F1, Table of Contents	Deleted "WWIS Data Administrator"
Attachment F1	Deleted the WWIS Data Administrator and associated data
Attachment F2, Table of Contents	Deleted "WWIS Data Administrator"
Attachment F2	Deleted the WWIS Data Administrator and associated data

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Appendix B
Proposed Revised Permit Text

1 **Proposed Revised Permit Text:**

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4 2.2. WASTE SOURCES1
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14 2.3.1.5. Acceptable Knowledge3
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16 ~~2.3.1.7. WIPP Waste Information System (WWIS)~~
17 Database WIPP Waste Information System3
18

2.3.1.7. WIPP Waste Information System~~WIPP Waste Information System~~
~~(WWIS) Database~~

The Permittees shall maintain TRU mixed waste information in a waste information system. ~~The Permittees shall provide the Secretary access to the WWIS database as necessary to determine compliance with the WAP. The waste information system~~ WWIS shall meet ~~the~~ all requirements presented in Section C-5a(1) of the WAP, Permit Attachment C, prior to acceptance of TRU mixed waste. The Permittees will provide NMED direct read-only access to the waste information system via the Internet to Permit-required information described in Section C-5a(1), Table C-3. ~~The Secretary's access to the WWIS shall be direct, read-only (via modem or Internet) to all query and reporting functions of the Characterization, Certification, Shipping, and Inventory modules of the WWIS database.~~

~~Beginning on December 31, 2005, the Permittees instituted a public database containing certain information from the WWIS. The Permittees shall continue to provide such public access~~ to certain output from the waste information system through the WIPP Home Page at <http://www.wipp.energy.gov>.

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3.1.2.6. Storage Time Limit

The Permittees shall not store sealed Contact-Handled or Remote-Handled Packages in the Parking Area Unit for more than 59 days after the date the Inner Containment Vessel (ICV) of the Package was sealed at the generator site. Prior to storing a sealed Package, the Permittees shall verify that the ICV Closure Date for each Package is recorded in the waste information system described in Permit Attachment C (Waste Analysis Plan).

1 4.8.2. Disposal Waste Type and Location

2 The Permittees shall maintain, in the operating record, a record identifying the types and
3 quantities of TRU mixed waste in each Underground HWDU and the disposal location of
4 each container or container assembly (e.g., a 7-pack of standard 55-gallons drums) within
5 each Underground HWDU. The record will include the following information, using the
6 following fields from the WWIS data dictionary:

- 7 1. Panel Number
- 8 2. Room Number or Drift Number
- 9 3. Row Number (for CH TRU mixed waste) or Borehole Number (for RH TRU
10 mixed waste)
- 11 4. Column Number (for CH TRU mixed waste)
- 12 5. Column Height (for CH TRU mixed waste)
- 13 6. Container Type Code
- 14 7. Container Identification Number
- 15 8. Manifest Document Number
- 16 9. Disposal Date
- 17

1 A1-1d(1) Derived Waste

2 Some additional TRU mixed waste, such as used personal protective equipment, swipes, and
3 tools, may result from decontamination operations and off-normal events. Such waste will be
4 assumed to be contaminated with RCRA-regulated hazardous constituents in the TRU mixed
5 waste containers from which it was derived. Derived waste may be generated as the result of
6 decontamination activities during the waste handling process. Should decontamination activities be
7 performed, water and a cleaning agent such as those listed in Permit Attachment D will be used.
8 Derived waste will be considered acceptable for management at the WIPP facility, because any
9 TRU mixed waste shipped to the facility will have already been determined to be acceptable and
10 because no new constituents will be added. Data on the derived waste will be entered into the
11 waste information system ~~WWIS database~~. Derived waste will be contained in standard DOT
12 approved Type A containers.

13 A1-1d(2) CH TRU Mixed Waste Handling

14 Decontamination activities will use water and cleaning agents (see Permit Attachment D) so as to
15 not generate any waste that cannot be considered derived waste. Items that are radiologically
16 contaminated are also assumed to be contaminated with the hazardous wastes that are in the
17 container involved in the spill or release. A complete listing of these waste components can be
18 obtained from the waste information system ~~WIPP Waste Information System (WWIS)~~, as
19 described in Permit Attachment C, for the purpose of characterizing derived waste.

20 **For area contamination**, once the area is cleaned up and is shown to be radiologically clean, it
21 will be sampled for the presence of hazardous waste residues. If the area is large, a sampling plan
22 will be developed which incorporates the guidance of EPA's SW 846 in selecting random samples
23 over large areas. Selection of constituents for sampling analysis will be based on information (in
24 the waste information system ~~WWIS~~) about the waste that was spilled and information on cleanup
25 procedures. If the area is small, swipes will be used. If the results of the analysis show that residual
26 contamination remains, a decision will be made whether further cleaning will be beneficial or
27 whether final clean up shall be deferred until closure. For example, if hazardous constituents react
28 with the floor coating and are essentially nonremovable without removing the coating, then clean
29 up will be deferred until closure when the coatings will be stripped. In any case, appropriate
30 notations will be entered into the operating record to assure proper consideration of formerly
31 contaminated areas at the time of closure. Furthermore, measures such as covering, barricading,
32 and/or placarding will be used as needed to mark areas that remain contaminated.

33 For inventory control purposes, TRU mixed waste container identification numbers will be verified
34 against the Uniform Hazardous Waste Manifest and the waste information system ~~WWIS~~.
35 Inconsistencies will be resolved with the generator before TRU mixed waste is emplaced.
36 Discrepancies that are not resolved within 15 days will be reported to the NMED in accordance
37 with 20.4.1.500 NMAC (incorporating 40 CFR §264.72).

38 A1-1d(3) RH TRU Mixed Waste Handling

39 The Hot Cell Bridge Crane connects to an empty Facility Canister, places it into a sleeve at the
40 inspection station, and removes the canister lid. The Overhead Powered Manipulator or Hot Cell
41 Crane lifts one drum from the drum carriage unit. The Hot Cell Manipulators collect swipe samples
42 from the drum and transfer the swipes via the Transfer Drawer to the Hot Cell Gallery for counting.
43 If the 55-gallon drums are contaminated, the Permittees may decontaminate the 55-gallon drums
44 or return them to the generator/storage site or another site for remediation. The drum identification

1 | number is recorded, and the recorded numbers are verified against the waste information
2 | system WWIS. If there are any discrepancies, the drum(s) in question are stored within the Hot Cell,
3 | and the generator/storage site is contacted for resolution. Discrepancies that are not resolved
4 | within 15 days will be reported to the NMED as required by 20.4.1.500 NMAC (incorporating 40
5 | CFR §264.72).

6 | For canisters received at the WIPP from the generator site in a RH-TRU 72-B cask, the
7 | identification number is verified using cameras, which also provide images of the canister surfaces
8 | during the lifting operation. Identification numbers are verified against the waste information
9 | system WWIS. If there are any discrepancies, the canister is returned to the RH-TRU 72-B cask,
10 | returned to the Parking Area Unit, and the generator is contacted for resolution. Discrepancies that
11 | are not resolved within 15 days will be reported to the NMED as required by 20.4.1.500 NMAC
12 | (incorporating 40 CFR §264.72). As the canister is being lifted from the RH-TRU 72-B cask into the
13 | Facility Cask, additional swipe samples may be taken.

14 | A1-1d(4) Handling Waste in Shielded Containers

15 | Once the shielded container assembly is on the facility pallet, the TRU mixed waste container
16 | identification numbers will be verified against the Uniform Hazardous Waste Manifest and the
17 | waste information system WWIS. Inconsistencies will be resolved as discussed in Section A1-1d(2).
18 | Up to two three-pack assemblies of shielded containers will be placed on a facility pallet. The use
19 | of facility pallets will elevate the waste at least 6 in. (15 cm) from the floor surface. Pallets of waste
20 | will then be relocated to the CH Bay Storage Area of the WHB Unit for normal storage or will be
21 | transported to the conveyance loading room as described in Section A1-1d(2).

22

1 C-4a(5) Data Transmittal

2 The generator/storage site will transmit waste container information electronically via the waste
3 information system WIPP Waste Information System (WWIS). ~~Data will be entered into the WWIS in~~
4 ~~the exact format required by the database. Refer to Section C-5a(1) for the waste information~~
5 system WWIS reporting requirements and the ~~Waste Data System User's Manual (DOE, 2009) for~~
6 ~~the WWIS data fields and format requirements.~~

7 Once a waste stream is characterized, the Site Project Manager will also submit to the Permittees
8 a WSPF (Figure C-1) accompanied by the CIS for that waste stream which includes reconciliation
9 with DQOs (Sections C3-6b(1) and C3-6b(2)). The WSPF, the CIS, and information from the waste
10 information system WWIS will be used as the basis for acceptance of waste characterization
11 information on TRU mixed wastes to be disposed of at the WIPP.

12

1 C-5a Phase I Waste Stream Screening and Verification

2 Audits of generator/storage sites will be conducted as part of the Audit and Surveillance Program
3 (Permit Attachment C6). The RCRA portion of the generator/storage site audit program will provide
4 on-site verification of waste characterization procedures; BDR preparation; and record keeping to
5 ensure that all applicable provisions of the WAP requirements are met. As part of the waste
6 characterization data submittal, the generator/storage site will also transmit the data on a container
7 basis via the waste information system WWIS. This data submittal can occur at any time as the
8 data are being collected, but will be complete for each container prior to shipment of that container.
9 The waste information system WWIS will conduct internal edit/limit checks as the data are ~~entered~~
10 submitted, and the data will be available to the Permittees as supporting information for WSPF
11 review. ~~NMED will have read-only access to the WWIS as necessary to determine compliance with~~
12 ~~the WAP.~~ The initial WSPF check performed by the Permittees will include the waste information
13 system WWIS data submitted by the generator/storage site for each waste container submitted for
14 the WSPF review and the CIS. ~~The Permittees will compare o~~ngoing characterization data
15 obtained and submitted via the ~~WWIS~~ waste information system will be compared to the approved
16 WSPF at the time of container data submittal. If this comparison shows that containers have
17 hazardous wastes not reported on the WSPF, or a different Waste Matrix Code applies, the data
18 are rejected and the waste containers are not accepted for shipment until a new or revised WSPF
19 is submitted to the Permittees and approved by DOE.

20 C-5a(1) Waste Information System WWIS Description

21 All generator/storage sites planning to ship TRU mixed waste to WIPP will supply the required data
22 to the waste information system WWIS. The required waste information system elements are listed
23 in Table C-3. ~~The WWIS Data Dictionary includes all of the data fields, the field format and the~~
24 ~~limits associated with the data as established by this WAP.~~ These data will be subjected to edit and
25 limit checks that are performed automatically by the system database, as defined in the *Waste*
26 *Data System User's Manual* (DOE, 2009).

27 The Permittees will coordinate the data transmission with each generator/storage site. Actual data
28 transmission will use appropriate technology to ensure the integrity of the data transmissions. The
29 Permittees will require sites ~~with large waste inventories and large databases~~ to populate a data
30 structure provided by the Permittees that contains the required information data dictionary fields
31 that ~~are is~~ appropriate for the waste stream (or waste streams) at that site. ~~The Permittees will~~
32 ~~access these data via the Internet to ensure an efficient transfer of this data.~~ Small quantity sites
33 ~~will be given a similar data structure by the Permittees that is tailored to their types of waste.~~ Sites
34 ~~with very small quantities of waste~~ will be provided with the ability to assemble the data
35 interactively to this data structure on the waste information system WWIS.

36 The Permittees will use the waste information system WWIS to verify that all of the supplied data
37 meet the edit and limit checks prior to the shipment of any TRU mixed waste to WIPP. The waste
38 information system WWIS ~~automatically~~ will automatically notify the generator/storage site if any of
39 the supplied data fails to meet the requirements of the edit and limit checks via an appropriate error
40 message. The generator/storage site will be required to correct the discrepancy with the waste or
41 the waste data and re-transmit the new or corrected data prior to acceptance of the waste at the
42 WIPP facility. ~~data by the WWIS.~~ The Permittees will review data reported for each container of
43 each shipment prior to providing notification to the shipping generator/storage site that the
44 shipment is acceptable. ~~Read-only access to the WWIS will be provided to NMED.~~ Table C-3
45 contains a listing of the data fields required elements information contained in the waste information
46 system WWIS that are required as part of this Permit.

1 The waste information system WWIS will generate the following:

2 • Waste Emplacement Report

3 This report will be added to the operating record to track the quantities of waste, date of
4 emplacement, and location of authorized containers or container assemblies in the
5 repository. The Permittees will document the specific panel room or drift that an individual
6 waste container is placed in as well as the row/column/height coordinates location of the
7 container or containers assembly. This report will be generated on a weekly basis.
8 Locations of containers or container assemblies will also be placed on a map separate from
9 the waste information system WWIS. Reports and maps that are included as part of the
10 operating record will be retained at the WIPP site, for the life of the facility.

11 • Shipment Summary Report

12 This report will contain the container identification numbers (**IDs**) of every container in the
13 shipment, listed by Shipping Package number and by assembly number (for seven-packs,
14 four-packs, and three-packs), for every assembly in the Shipping Package. This report is
15 used by the Permittees to verify containers in a shipment and will be generated on a
16 shipment basis.

17 • Waste Container Data Report

18 This report will be generated on a waste stream basis and will be used by the Permittees
19 during the WSPF review and DOE approval process. This report will ~~contain the data listed~~
20 ~~in the Characterization Module on Table C-3~~ include the applicable container-specific
21 information from Table C-3. This report will be generated and stored with ~~attached to the~~
22 WSPF ~~for inclusion in the facility operating record and will be kept for the life of the facility.~~

23 • ~~Reports of~~ Data Change Log

24 A record of a change to data after the data have been accepted will be captured by the
25 waste information system. This record shall include the date, time, user, and reason for the
26 change. The report will also ~~This will consist of a short report that lists the user ID and the~~
27 ~~fields changed. The report will also include a reason for the change. A longer report will list~~
28 ~~the information provided on the short report and include a before and after image of the~~
29 ~~record for each change, a before-record for each deletion, and the new information for~~
30 ~~added records. These reports~~ This record of changes will provide an auditable trail for the
31 data in the waste information system database.

32 Access to the waste information system WWIS will be controlled by the Permittees' Data
33 Administrator (**DA**) ~~who will control the WWIS users based on approval from management~~
34 ~~personnel.~~

35 The TRU mixed waste generator/storage sites will only have access to data that they have
36 supplied, ~~and only until the data have been formally accepted by the Permittees.~~ After the data
37 have been accepted, the data will be protected from indiscriminate change and can only be
38 changed by an authorized DA.

39 ~~The WWIS has a Change Log that requires a reason for the change from the DA prior to accepting~~
40 ~~the change. The data change information, the user ID of the authorized DA making the change,~~
41 ~~and the date of the change will be recorded in the data change log automatically.~~ The data change
42 log cannot be revised by any user, including the DA. The data change log will be subject to internal

1 and external audits and will provide an auditable trail for all changes made to previously approved
2 data.

3 C-5a(2) Examination of the Waste Stream Profile Form and Container Data Checks

4 Waste data transferred via the waste information system WWIS after WSPF approval will be
5 compared with the approved WSPF. Any container from an approved hazardous waste stream with
6 a description different from its WSPF will not be managed, stored, or disposed at WIPP.

7 The Permittees will also verify that three different types of data specified below are available for
8 every container holding TRU mixed waste before that waste is managed, stored, or disposed at
9 WIPP: 1) an assignment of the waste stream's waste description (by Waste Matrix Codes) and
10 Waste Matrix Code Group; 2) a determination of ignitability, reactivity, and corrosivity; and 3) a
11 determination of compatibility. The verification of waste stream description will be performed by
12 reviewing the WWIS data in the waste information system for consistency in the waste stream
13 description and WSPF. The CIS will indicate if the waste has been checked for the characteristics
14 of ignitability, corrosivity, and reactivity. The final verification of waste compatibility will be
15 performed using Appendix C1 of the WIPP RCRA Part B Permit Application (DOE, 1997), the
16 compatibility study.

17 C-5b Phase II Waste Shipment Screening and Verification

18 This information shall also be supplied ~~electronically~~ to the waste information system WWIS. The
19 container-specific information will be supplied ~~electronically~~ as described in Section C-5a(1), and
20 shall be accepted by the system supplied prior to the Permittees' management, storage, or disposal
21 of the waste.

22 The Permittees will verify each approved shipment upon receipt at WIPP against the data on the
23 waste information system WWIS shipment summary report to ensure containers have the required
24 information. A Waste Receipt Checklist will be used to document the verification.

25 C-5b(1) Examination of the EPA Uniform Hazardous Waste Manifest and Associated Waste
26 Tracking Information

27 Upon receipt of a TRU mixed waste shipment, the Permittees will make a determination of EPA
28 Uniform Hazardous Waste Manifest completeness and sign the manifest to allow the driver to
29 depart. For CH TRU mixed waste, the Permittees will then make a determination of waste
30 shipment completeness by checking the unique, bar-coded identification number found on each
31 container holding TRU mixed waste against the waste information system WWIS database after
32 opening the Shipping Package.

33 The waste information system WWIS links the bar-coded identification numbers of all containers in
34 a specific waste shipment to the waste assembly (for 7-packs, 4-packs, 3-packs and 5-drum
35 carriages) and to the shipment identification number, which is also written on the EPA Hazardous
36 Waste Manifest.

37 For shipments in the RH-TRU 72B cask, the identification number of the single payload container
38 is read during cask-to-cask transfer in the Transfer Cell and then checked against the waste
39 information system WWIS database. For shipments in the CNS 10-160B cask, the Permittees will
40 make a determination of waste shipment completeness by checking the unique identification

1 number found on each container holding TRU mixed waste in the Hot Cell against the waste
2 information system ~~WWIS~~ database after unloading the cask.

3 Generators electronically transmit the waste shipment information to the waste information system
4 ~~WWIS~~ before the TRU mixed waste shipment is transported. Once a TRU mixed waste shipment
5 arrives, the Permittees verify the identity of each cask or container (or one container in a bound 7-
6 pack, 4-pack, or 3-pack) using the data already in the waste information system ~~WWIS~~.

7 The Permittees ~~WWIS~~ will maintain waste container receipt and emplacement information in the
8 waste information system ~~provided by the Permittees~~. It will include, among other items, the
9 following information associated with each container of TRU mixed waste:

- 10 • Package inner containment vessel or shipping cask closure date
- 11 • Package (container or canister) receipt date
- 12 • Overpack identification number (if appropriate)
- 13 • Package (container or canister) emplacement date
- 14 • Package (container or canister) emplacement location

15 Manifest discrepancies will be identified during manifest examination and container bar-code waste
16 information system ~~WWIS~~ data comparison. A manifest discrepancy is a difference between the
17 quantity or type of hazardous waste designated on the manifest and the quantity or type of
18 hazardous waste the WIPP facility actually receives. The generator/storage site technical contact
19 (as listed on the manifest) will be contacted to resolve the discrepancy. If the discrepancy is
20 identified prior to the containers being removed from the package or shipping cask, the waste will
21 be retained in the parking area. If the discrepancy is identified after the waste containers are
22 removed from the package or cask, the waste will be retained in the Waste Handling Building
23 (**WHB**) until the discrepancy is resolved. Errors on the manifest can be corrected by the WIPP
24 facility with a verbal (followed by a mandatory written) concurrence by the generator/storage site
25 technical contact. All discrepancies that are unresolved within fifteen (15) days of receiving the
26 waste will be immediately reported to NMED in writing. Notifications to NMED will consist of a letter
27 describing the discrepancies, discrepancy resolution, and a copy of the manifest. If the manifest
28 discrepancies have not been resolved within thirty (30) days of waste receipt, the shipment will be
29 returned to the generator/storage facility. If it becomes necessary to return waste containers to the
30 generator/storage site, a new EPA Uniform Hazardous Waste Manifest may be prepared by the
31 Permittees.

32 Documentation of the returned containers will be recorded in the waste information system ~~WWIS~~.
33 Changes will be made to the ~~WWIS~~ data to indicate the current status of the container(s). The
34 reason for the ~~WWIS~~ data change and the record of the ~~WWIS~~ data change will be maintained in
35 the change log of the waste information system ~~WWIS~~, which will provide an auditable record of the
36 returned shipment.

37 C-5b(2) Examination of the Land Disposal Restriction (LDR) Notice

38 This information is the applicable information taken from column "268.7(a)(4)" of the "Generator
39 Paperwork Requirements Table" in 20.4.1.800 NMAC (incorporating 40 CFR §268.7(a)(4)). Note
40 that item "5" from the "Generator Paperwork Requirements Table" is not applicable since waste
41 analysis data are provided electronically via the waste information system ~~WWIS~~ and item "7" is not
42 applicable since waste designated by the Secretary of Energy for disposal at WIPP is exempted
43 from the treatment standards.

1 C-5b(3) Verification

2 The Permittees will make a determination of TRU mixed waste shipment irregularities. The
3 following items will be inspected for each TRU mixed waste shipment arriving at the WIPP facility:

- 4 • Whether the number and type of containers holding TRU mixed waste match the
5 information in the waste information system WWIS
- 6 • Whether the containers are in good condition

7 The Permittees will verify that the containers (as identified by their container ID numbers) are the
8 containers for which accepted data already exists in the waste information system WWIS. A check
9 will be performed by the Permittees comparing the data on the WWIS Shipment Summary Report
10 for the shipment to the actual shipping papers (including the EPA Hazardous Waste Manifest). ~~This~~
11 ~~check also verifies that the containers included in the shipment are those for which approved~~
12 ~~shipping data already exist in the WWIS Transportation Data Module (Table C-3). For standard~~
13 ~~waste boxes (SWBs) and ten drum overpacks (TDOPs), this check will include comparing the~~
14 ~~barcode on the container with the container number on the shipping papers and the data on the~~
15 waste information system WWIS Shipment Summary Report. For 7-pack assemblies, one of the
16 seven container barcodes will be read by the ~~barcode reader~~ Permittees and compared to the
17 assembly information for this container on the WWIS Shipment Summary Report. This will
18 automatically identify the remaining six containers in the assembly.

19 This process enables the Permittees to identify all of the containers in the assembly with minimum
20 radiological exposure. If all of the container IDs and the information on the shipping papers agree
21 with the WWIS Shipment Summary Report, and the shipment was subject to waste confirmation by
22 the Permittees prior to shipment to WIPP pursuant to Permit Attachment C7, the containers will be
23 approved for storage and disposal at the WIPP facility.

24 C-7 Records Management and Reporting

25 The following records will be maintained for waste characterization and waste confirmation
26 purposes as part of the WIPP facility operating record:

- 27 • Completed WIPP WSPFs and accompanying CIS, including individual container data as
28 transferred ~~on the WWIS~~ from the waste information system (or received as hard-copy) and
29 any discrepancy-related documentation as specified in Section C-5a
- 30 • Radiography and visual examination records (data sheets, packaging logs, and video and
31 audio recordings) of waste confirmation activities
- 32 • Completed Waste Receipt Checklists and discrepancy-related documentation as specified
33 in Section C-5b
- 34 • ~~WIPP WWIS~~ The Waste Emplacement Report as specified in Section C-5a(1)
- 35 • Audit reports and corrective action reports from the Audit and Surveillance Program audits
36 as specified in Section C-5a(3) and Permit Attachment C6
- 37 • CARs and closure information for corrective actions taken due to nonconforming waste
38 being identified during waste confirmation by the Permittees

39 These records will be maintained for all TRU mixed waste managed at the WIPP facility.
40

1 C-9 List of References

2 ~~U.S. Department of Energy (DOE), 2009, "Waste Data System User's Manual", DOE/WIPP 09-~~
3 ~~3427, U.S. Department of Energy.~~

4 U.S. Department of Energy (DOE), 1997, Resource Conservation and Recovery Act Part B Permit
5 Application for the Waste Isolation Pilot Plant", Revision 6.5, U.S. Department of Energy.

6 U.S. Environmental Protection Agency (EPA), April 1994, "Waste Analysis at Facilities that
7 Generate, Treat, Store, and Dispose of Hazardous Waste, a Guidance Manual," OSWER 9938.4-
8 03, Office of Solid Waste and Emergency Response, Washington, D.C.

9 U.S. Environmental Protection Agency (EPA), April 1980. "A Method for Determining the
10 Compatibility of Hazardous Wastes," EPA-600/2-80-076, California Department of Health Services
11 and the U.S. Environmental Protection Agency, Office of Research and Development.

12

1
2

Table C-3
WIPP Waste Information System Data Fields Waste Information System Required Elements

Characterization Module Data Fields ^b	
<u>Assembly Number</u> <u>NDE Method (Radiography or VE)</u> Container ID ^e <u>Container Type</u> <u>Container Weight</u> <u>Container Dose Rate</u> <u>Container Certification Date</u> <u>Container Closure Date</u> <u>Disposal Date</u> <u>Disposal Location</u> Generator EPA ID Generator Address Generator Name Generator Contact <u>Handling Code</u> Hazardous Code <u>ICV Closure Date</u> Layers of Packaging Liner Exists Liner Hole Size Filter Model Number of Filters Installed Item Description Code Haz. Manifest Number <u>Manifest Document Number</u> NDE Complete ^e <u>NDE Date</u>	<u>Package Number</u> <u>Receive Date</u> <u>Ship Date</u> Transporter EPA ID Transporter Name Visual Exam Container ^e Waste Material Parameter ^d Waste Material Weight ^d Waste Matrix Code Waste Matrix Code Group Waste Stream Profile Number
Certification Module Data Fields	
Container ID ^e Container type Container Weight Contact Dose Rate Container Certification date Container Closure Date	Handling Code
Transportation Data Module	
Contact Handled Package Number Assembly Number ^f Container IDs ^{e,d} ICV Closure Date	Ship Date Receive Date
Disposal Module Data	
Container ID ^e Disposal Date Disposal Location	

^a This is not a complete listing of information contained in the waste information system WWIS data fields.
^b Some of the fields required for characterization are also required for certification and/or transportation.
^e Container ID is the main relational field in the WWIS Database.
^d This is a multiple-occurring field for each waste material parameter, nuclide, etc.
^e These are logical fields requiring only a yes/no.
^f Required for 7-packs of 55-gal drums, 4-packs of 85-gal drums, or 3-packs of 100-gal drums to tie all of the drums in that assembly together. This facilitates the identification of waste containers in a shipment without need to breakup the assembly.

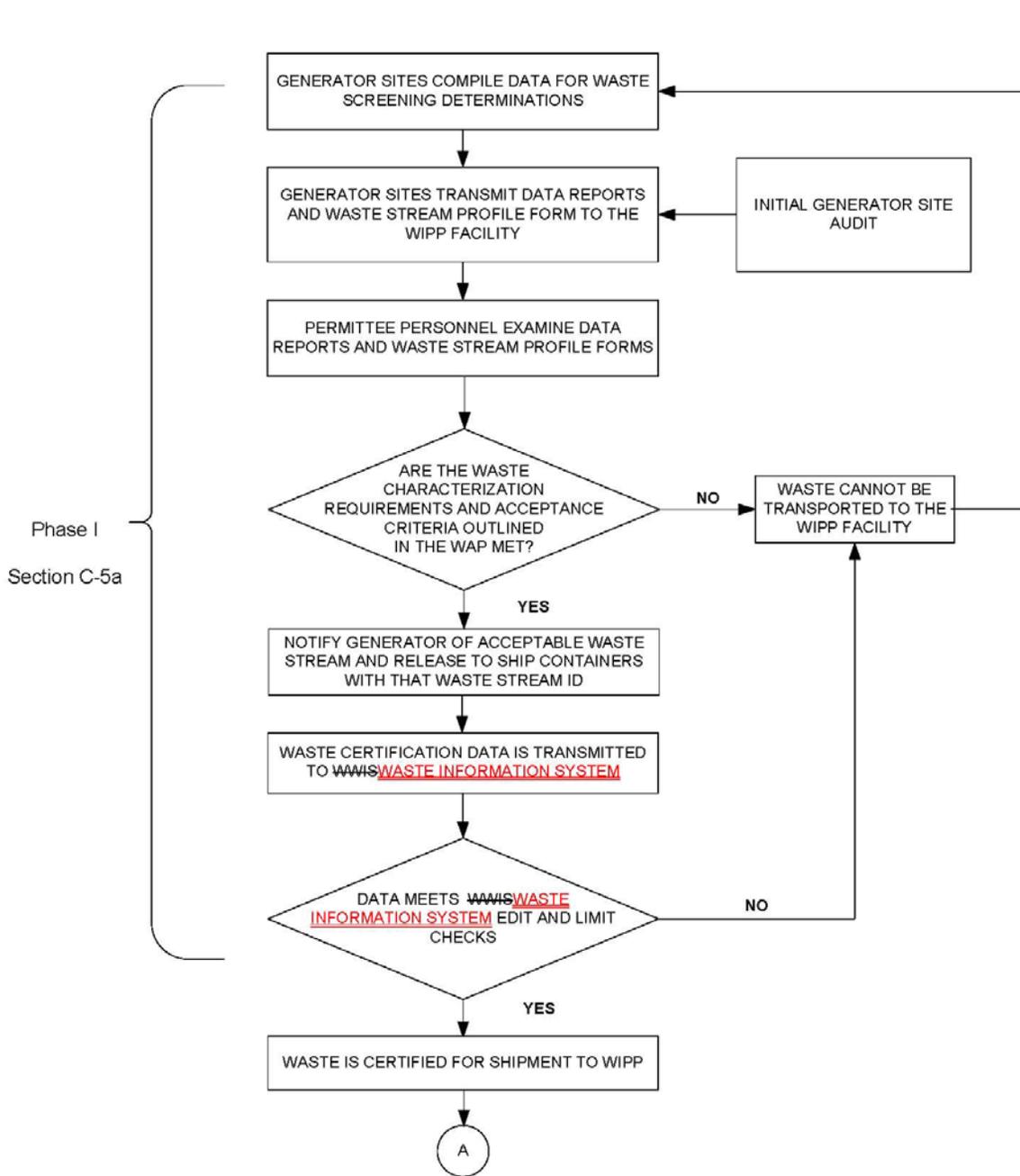


Figure C-3
TRU Mixed Waste Screening and Verification

ATTACHMENT C3

**QUALITY ASSURANCE OBJECTIVES AND DATA VALIDATION TECHNIQUES
FOR WASTE CHARACTERIZATION SAMPLING AND ANALYTICAL METHODS**

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1 C3-4c Permittee Level

2 For each Waste Stream Profile Form (**WSPF**) submitted for approval, DOE must verify that each
3 submittal (i.e., WSPF and Characterization Information Summary) is complete and notify the
4 originating site in writing of the WSPF approval. DOE will maintain the data as appropriate for use
5 in the regulatory compliance programs. For subsequent shipments made after the initial WSPF
6 approval, the verification will also include the waste information system WWIS internal limit checks
7 (Attachment C, Section C-5a(1)).

8 C3-6b(4) WIPP Waste Information System (**WWIS**) Data Waste Information System Reporting

9 The ~~WWIS Data Dictionary~~ includes all of the data fields, the field format and the limits associated
10 ~~with the data~~ waste information system, an electronic data processing system, will contain the data
11 needed to identify the waste and to verify regulatory compliance as established by this WAP.
12 These data will be subjected to edit and limit checks that are performed automatically by the waste
13 information system database, as defined in the ~~Waste Data System User's Manual~~ (DOE, 2009).

14

Table C6-1 Waste Analysis Plan (WAP) Checklist

	WAP Requirement ¹	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
Data Transmittal						
50	Are procedures in place to ensure that the generator/storage site inputs the data into the waste information system WWIS-manually or electronically? (Section C-4a(5))					
51	Are procedures in place to ensure that the generator/storage site enters the data into the waste information system WWIS in the exact format required by the system database? (Section C-4a(5))					
52	Are procedures in place to ensure all of the data presented on Table C- 3 of the Permit is transmitted to the waste information system WWIS? (Table C-3)					

D-4b Identification of Hazardous Materials

Sources of information available to identify the hazardous wastes, substances, or materials involved in a fire, an explosion, or a release at the WIPP facility include operator/supervisor knowledge of their work areas, materials used, and work activities underway; the waste information system ~~WIPP Waste Information System (WWIS)~~, which identifies the location within the facility of emplaced TRU mixed waste, including emplaced derived waste; and waste manifests and other waste characterization information in the operating record. The waste information system ~~WWIS~~ also includes information on wastes that are in the waste handling process. Also available are MSDSs for hazardous material in the various user areas throughout the facility, waste acceptance records, and materials inventories for buildings and operating groups at the WIPP facility. Information or data from the derived waste accumulation areas, the hazardous waste staging area, satellite staging areas, and nonregulated waste accumulation areas are included.

Information required for identifying TRU mixed hazardous constituents in case of an incident is readily available through the waste information system ~~WWIS~~ and the waste acceptance records. Waste accepted at WIPP is already known to be compatible with all materials used to respond to an emergency. All non-TRU mixed waste materials received on site, other than those listed in Table D-1, are in such small quantities that no reaction could develop which would trigger an Incident Level II or III response.

The RCRA Emergency Coordinator will have access to the waste information system ~~WWIS~~ through Operations, or through the Facility Shift Manager's Office.

D-4d(8) Roof Fall

12. Replace the removed and derived waste containers into the waste stack as appropriate and update the waste information system ~~WWIS~~.

ATTACHMENT F1

**RCRA HAZARDOUS WASTE MANAGEMENT JOB TITLES AND
DESCRIPTIONS**

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ATTACHMENT F1

RCRA HAZARDOUS WASTE MANAGEMENT JOB TITLES AND DESCRIPTIONS

RCRA Hazardous Management Job Titles
Hazardous Waste Worker TRU Mixed Waste Handlers Underground Hazardous Waste Worker Site-Generated Waste Handlers Transportation Engineer WWIS Data Administrator Manager, Waste Handling Manager, Shipping Coordination
Radiological Control Technician Manager, Radiation Control
Technical Trainer Manager, Technical Training
Emergency Services Technician
Quality Assurance Technician Team Leader, Inspection Services Facility Inspection, Repair, and Service Team (FIRST) Leader Facility Inspection, Repair, and Service Team (FIRST)
Sampling Team Member Sampling Team Assistant Manager, Environmental Compliance
Facility Shift Engineer Facility Shift Manager Central Monitoring Room Operator
Waste Hoist Operator Waste Hoist Shaft Tender Waste Hoisting Manager
Chief Office Warden Assistant Chief Office Warden
Mine Rescue Team Member First Line Initial Response Team member Emergency Response Team Fire Brigade Fire Protection Technician
Radiographer (Radiography Independent Technical Reviewer) Visual Examination Operator/Expert (VE Independent Technical Reviewer) DOE Management Representative

~~RCRA HAZARDOUS WASTE MANAGEMENT JOB DESCRIPTIONS~~

Position Title: WWIS Data Administrator

Duties:

- Supervise the day to day operation of the WWIS
- Review and approve waste characterization, certification, and shipping data
- Manage the WWIS, including data change control, archival of the database, and reporting functions
- Review Waste Stream Profile Forms (WSPF) and compare with WWIS data on specific containers. Make approval/rejection recommendations to the WSPF review team

Requisite Skills, Experience and Education:

Bachelor of Science degree with technical courses in nuclear waste management, chemistry and health physics, or equivalent.

Training (Type/Amount):

- ~~General Employee Training (GET-19X/GET-20X/GET-21X)~~
 - ~~Subject Matter Expert/On-The-Job Training (TRG-293/298)~~

ATTACHMENT F2

TRAINING COURSE AND QUALIFICATION CARD OUTLINES

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CH Waste Handling Engineer (WH-02)	115
RH Waste Handling Technician (RH-01A, RH-01B, RH-01C)	117
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Radiological Control Technician (RCT)	119
EST-01 Emergency Services Technician	120
FPT-01 Fire Protection Technician.....	122
Quality Assurance Inspector	124
Facility Operations Roving Watch	126
Central Monitoring Room Operator	128
Facility Operations Shift Supervisor	130
WWIS Data Administrator	132

QUALIFICATION CARD:	WWIS Data Administrator
DURATION:	Two years
CLASSROOM TRAINING:	Various classroom courses are utilized to provide the WWIS Data Administrator with the knowledge and background on the WIPP waste operations. OJT connected with the everyday operation of the database will be provided by the WWIS SME. The candidate must satisfactorily complete the classroom training courses and the OJT prior to qualification.
SCOPE:	The WWIS Qualification Card provides the minimum knowledge and competency requirements for qualification. The requirements of the qualification must be completed to the satisfaction of the current WWIS SME prior to the candidate performing any of the WWIS data functions without direct supervision by a qualified WWIS DA.
REFERENCES:	WWIS Data Administrator Qualification Card

QUALIFICATION CARD DESCRIPTION (by category)

1. Equipment Knowledge Requirements

Demonstrate knowledge of the following WWIS hardware and software systems:

- General computer operation principles and communication terminal techniques
- IBM PC and Internet techniques
 - Bar Code Reader System operation

2. Equipment Operation Practical

- Obtain and maintain local and Internet IDs
- Access WWIS and produce reports
 - Demonstrate operation of bar code reader interface to WWIS

3. Integrated Process Knowledge Requirements

Demonstrate knowledge of the following project document data requirements:

- WIPP Waste Acceptance Criteria
- WIPP Quality Assurance Program Plan
 - Waste Analysis Plan

Demonstrate knowledge of the following WWIS Specific documentation:

- WWIS Software Requirements Specification
- WWIS Software Configuration Management Plan
- WWIS Software Quality Assurance Plan
 - WWIS Software Design Description

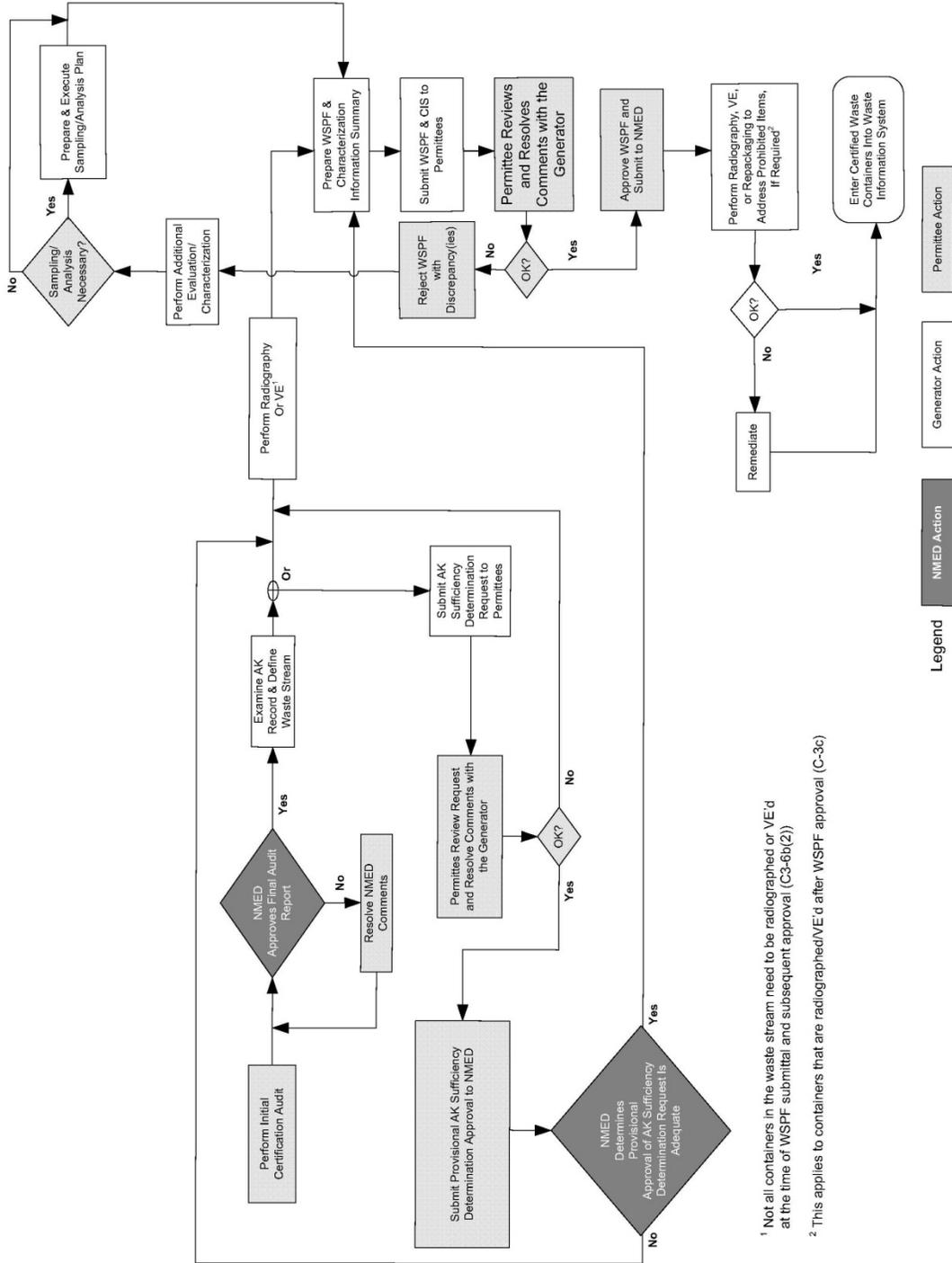
4. ~~Integrated Process Practical Requirements~~

~~Demonstrate competency in performing the administrative duties of the WWIS DA~~

~~Demonstrate competency in accessing the local area network (LAN) and the Internet.~~

~~Demonstrate the WIPP data interface to the WWIS via a walkdown of the receipt and emplacement operations that provide data to the database.~~

Appendix C
Proposed Revised Permit Figures
with Redline/Strikeout Incorporated



¹ Not all containers in the waste stream need to be radiographed or VE'd at the time of WSPF submittal and subsequent approval (C3-6b(2))
² This applies to containers that are radiographed/VE'd after WSPF approval (C-3c)

**Figure C-2
 Waste Characterization Process**

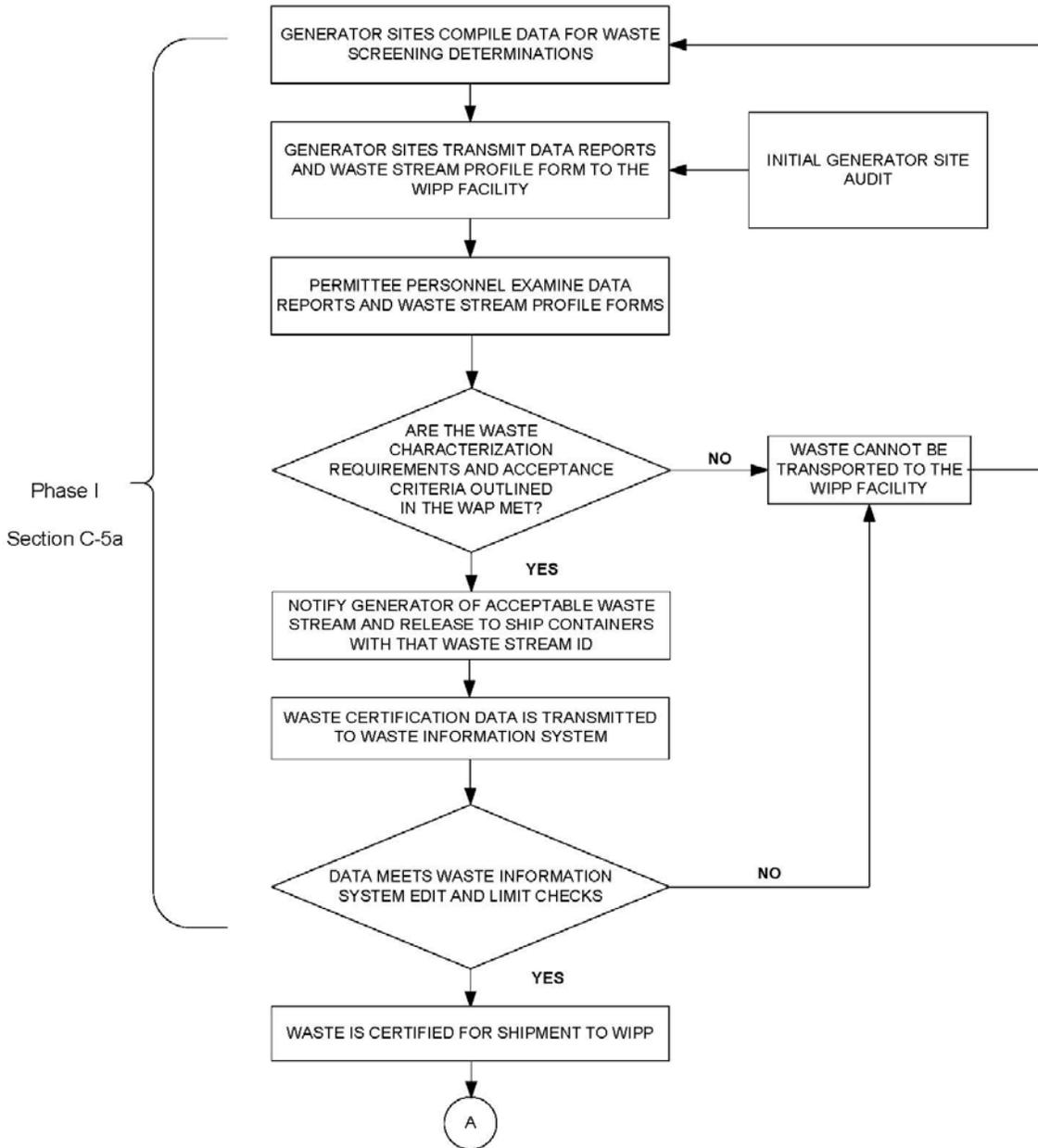


Figure C-3
TRU Mixed Waste Screening and Verification

Item 2

Class 2 Permit Modification Request

Clarify Language Pertaining to Acceptable Knowledge Compilation

**Waste Isolation Pilot Plant
Carlsbad, New Mexico**

WIPP HWFP Number - NM4890139088-TSDF

November 2013

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10

Acronyms and Abbreviations

1		
2	AK	acceptable knowledge
3	CAR	Corrective Action Report
4	CFR	Code of Federal Regulations
5	DOE	U.S. Department of Energy
6	HWFP	Hazardous Waste Facility Permit
7	NMAC	New Mexico Administrative Code
8	NWP	Nuclear Waste Partnership LLC
9	Permit	Hazardous Waste Facility Permit
10	Permittees	DOE and NWP
11	PMR	Permit Modification Request
12	TRU	transuranic
13	WAP	Waste Analysis Plan
14	WIPP	Waste Isolation Pilot Plant
15		

Overview of the Permit Modification Request

This document contains a Class 2 Permit Modification Request (**PMR**) for the Waste Isolation Pilot Plant (**WIPP**) Hazardous Waste Facility Permit (**Permit**), Permit Number NM4890139088-TSDF.

This PMR is being submitted by the U.S. Department of Energy (**DOE**) and Nuclear Waste Partnership LLC (**NWP**), collectively referred to as the **Permittees**, in accordance with the Permit, Part 1, Section 1.3.1. (20.4.1.900 New Mexico Administrative Code (**NMAC**) incorporating Title 40 Code of Federal Regulations (**CFR**) 270.42(b)). The modification to the Permit is being requested for the following item:

- Clarify language pertaining to audits of acceptable knowledge (**AK**) specifically that associated with the identification of deficiencies in AK compilation. In addition, clarify language that describes under which circumstances the Permittees will not manage, store, or dispose of transuranic (**TRU**) mixed waste until all corrective actions have been implemented and all applicable requirements of the Waste Analysis Plan (**WAP**) have been met.

These changes do not reduce the ability of the Permittees to provide continued protection to human health and the environment.

The requested modification to the Permit and related supporting documents are provided in this PMR. The proposed modification to the text of the Permit has been identified using red text and a double underline for new text and a ~~strikeout~~ font for deleted information. The following information specifically addresses how compliance has been achieved with the Permit, Part 1, Section 1.3.1., for submission of this Class 2 PMR.

1. 20.4.1.900 NMAC (incorporating 40 CFR §270.42(b)(1)(i)) requires the applicant to describe the exact change to be made to the Permit conditions and supporting documents referenced by the Permit.

This modification proposes to revise the Permit, Attachment C4, Section C4-3g, as follows:

- Clarify language related to AK compilation and under which circumstances the Permittees would suspend waste shipments if deficiencies are identified.
- Remove references to *waste summary category* and replace with *waste stream(s)*. Add clarification related to the evaluation of the extent of condition of the deficiency.

The Table of Changes (Appendix A) and the redline ~~strikeout~~ in this modification (Appendix B) describe each change that is being proposed.

2. 20.4.1.900 NMAC (incorporating 40 CFR 270.42(b)(1)(ii)), requires the applicant to identify that the modification is a Class 2 modification.

The proposed modification is classified as a Class 2 Modification for the reason indicated below:

20.4.1.900 New Mexico Administrative Code (incorporating 40 CFR §270.42, Appendix I, Item B.) "*General Facility Standards, 1. Changes to waste sampling or analysis methods:...d. Other changes...2*"

1 **3. 20.4.1.900 NMAC (incorporating 40 CFR 270.42(b)(1)(iii)), requires the applicant to**
2 **explain why the modification is needed.**

3 The required AK information that must be compiled for each waste stream is listed in Permit
4 Sections C4-2b and C4-2c, as applicable. If during an audit, the auditor discovers that the
5 minimum AK information required by Permit Section C4-2 has not been compiled, a corrective
6 action report (**CAR**) may be issued. There are instances when an auditor may issue a CAR
7 against generator/storage site AK standard operating procedures, which delineate the process
8 for compilation of AK, for deficiencies not associated with the completeness of the AK
9 information. These instances may be considered significant conditions adverse to quality by the
10 DOE quality assurance program for reasons other than compliance with the requirements of the
11 WAP. For example, failure to complete administrative tasks per the AK procedures such as
12 signing documents, checking appropriate boxes, and placing copies in required repositories
13 does not constitute a failure to collect the minimum information required for waste
14 characterization per Permit Section C4-2. Therefore, in order to avoid such a broad
15 interpretation of AK completeness, clarification is needed. The necessary clarification is
16 provided in the proposed revisions to Permit Attachment C4, Section C4-3g.

17 The Permit currently states, in Attachment C4, Section C4-3g, that the Permittees will “not
18 manage, store, or dispose TRU mixed waste for the subject waste summary category” if, during
19 the audits of generator/storage sites, CARs are identified associated with AK compilation. The
20 Permit further states that Permittees will not resume such activities until the DOE determines
21 that all corrective actions have been implemented. As described in Section C4-3c of the Permit,
22 the AK documentation that comprises the auditable record is assembled by waste stream. If a
23 deficiency in AK compilation is identified for a particular waste stream, the DOE corrective
24 action process requires that the responsible organization evaluates the extent of the condition
25 associated with the resulting CAR. Through this evaluation, the Permittees can clearly identify
26 which waste streams are impacted by the audit finding(s); therefore, it is not necessary for the
27 cessation of TRU mixed waste management, storage, or disposal to extend to the entire waste
28 summary category group but rather to the specific waste streams that are affected by the
29 observed deficiency. Revisions to Permit Attachment C4, Section C4-3g are necessary to
30 provide these clarifications and to remove references to “waste summary category” and replace
31 with “waste stream(s).”

32 **4. 20.4.1.900 NMAC (incorporating 40 CFR 270.42 (b)(1)(iv)), requires the applicant to**
33 **provide the applicable information required by 40 CFR 270.13 through 270.21,**
34 **270.62 and 270.63.**

35 The regulatory crosswalk describes those portions of the Permit that are affected by this PMR.
36 Where applicable, regulatory citations in this modification reference 20.4.1 NMAC, revised
37 March 1, 2009, incorporating 40 CFR Parts 264 and 270. 40 CFR §§270.16 through 270.21,
38 270.62, and 270.63 are not applicable at the WIPP facility. Consequently, they are not listed in
39 the regulatory crosswalk table.

40 **5. 20.4.1.900 NMAC (incorporating 40 CFR 270.11(d)(1) and 40 CFR 270.30(k)),**
41 **requires that any person signing under paragraph a and b must certify the**
42 **document in accordance with 20.4.1.900 NMAC.**

43 The transmittal letter for this PMR contains the signed certification statement in accordance with
44 the Permit, Part 1, Section 1.9.

Regulatory Crosswalk

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
§270.13		Contents of Part A permit application	Attachment B Part A		✓
§270.14(b)(1)		General facility description	Attachment A		✓
§270.14(b)(2)	§264.13(a)	Chemical and physical analyses	Part 2.3.1 Attachment C		✓
§270.14(b)(3)	§264.13(b)	Development and implementation of waste analysis plan	Part 2.3.1.1 Attachment C	✓	
	§264.13(c)	Off-site waste analysis requirements	Part 2.2.1 Attachment C	✓	
§270.14(b)(5)	§264.15(a-d)	General inspection requirements	Part 2.7 Attachment E-1a		✓
	§264.174	Container inspections	Attachment E-1b(1)		✓
§270.23(a)(2)	§264.602	Miscellaneous units inspections	Attachment E-1b Attachment E-1b(1)		✓
§270.14(b)(6)		Request for waiver from preparedness and prevention requirements of Part 264 Subpart C	NA		✓
§270.14(b)(7)	264 Subpart D	Contingency plan requirements	Part 2.12 Attachment D		✓
	§264.51	Contingency plan design and implementation	Part 2.12.1 Attachment D		✓
	§264.52 (a) & (c-f)	Contingency plan content	Attachment D		✓
	§264.53	Contingency plan copies	Part 2.12.2 Attachment D		✓
	§264.54	Contingency plan amendment	Part 2.12.3 Attachment D		✓
	§264.55	Emergency coordinator	Part 2.12.4 Attachment D-4a(1)		✓
	§264.56	Emergency procedures	Attachment D-4		✓
§270.14(b)(8)		Description of procedures, structures or equipment for:	Attachment A Part 2.11		✓
§270.14(b)(8)(i)		Prevention of hazards in unloading operations (e.g., ramps and special forklifts)	Part 2.11		✓
§270.14(b)(8)(ii)		Runoff or flood prevention (e.g., berms, trenches, and dikes)	Attachment A1-1c(1) Part 2.11		✓
§270.14(b)(8)(iii)		Prevention of contamination of water supplies	Part 2.11		✓
§270.14(b)(8)(iv)		Mitigation of effects of equipment failure and power outages	Part 2.11		✓
§270.14(b)(8)(v)		Prevention of undue exposure of personnel (e.g., personal protective equipment)	Part 2.11		✓
§270.14(b)(8)(vi) §270.23(a)(2)	§264.601	Prevention of releases to the atmosphere	Part 2.11 Part 4.4 Attachment D-4e Attachment G-1a		✓
	264 Subpart C	Preparedness and Prevention	Part 2.10		✓
	§264.31	Design and operation of facility	Part 2.1		✓

Clarify Language Pertaining to Acceptable Knowledge Compilation
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Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
	§264.32	Required equipment	Part 2.10.1 Attachment D		✓
	§264.33	Testing and maintenance of equipment	Part 2.10.2 Attachment E-1a		✓
	§264.34	Access to communication/alarm system	Attachment E-1a Part 2.10.3		✓
	§264.35	Required aisle space	Part 2.10.4		✓
	§264.37	Arrangements with local authorities	Attachment D-4a(3)		✓
§270.14(b)(9)	§264.17(a-c)	Prevention of accidental ignition or reaction of ignitable, reactive, or incompatible wastes	Part 2.9		✓
§270.14(b)(10)		Traffic pattern, volume, and controls, for example: Identification of turn lanes Identification of traffic/stacking lanes, if appropriate Description of access road surface Description of access road load-bearing capacity Identification of traffic controls	Attachment A4		✓
§270.14(b)(11)(i) and (ii)	§264.18(a)	Seismic standard applicability and requirements	Attachment G2-2.2 Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(11)(iii-v)	§264.18(b)	100-year floodplain standard	Attachment A1-1c(1) Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(12)	§264.16(a-e)	Personnel training program	Part 2.8 Attachment F		✓
§270.14(b)(13)	264 Subpart G	Closure and post-closure plans	Part 6 & 7 Attachment G & H		✓
§270.14(b)(13)	§264.111	Closure performance standard	Attachment G-1a		✓
§270.14(b)(13)	§264.112(a), (b)	Written content of closure plan	Attachment G-1		✓
§270.14(b)(13)	§264.112(c)	Amendment of closure plan	Part 6.3 Attachment G-1d(4)		✓
§270.14(b)(13)	§264.112(d)	Notification of partial and final closure	Attachment G-2a		✓
§270.14(b)(13)	§264.112(e)	Removal of wastes and decontamination/dismantling of equipment	Attachment G-1e(2)		✓
§270.14(b)(13)	§264.113	Time allowed for closure	Part 6.5 Attachment G-1d		✓
§270.14(b)(13)	§264.114	Disposal/decontamination	Part 6.6 Attachment G-1e(2)		✓
§270.14(b)(13)	§264.115	Certification of closure	Part 6.7 Attachment G-2a		✓
§270.14(b)(13)	§264.116	Survey plat	Part 6.8 Attachment G-2b		✓

Clarify Language Pertaining to Acceptable Knowledge Compilation
DRAFT 11-26-2013

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
§270.14(b)(13)	§264.117	Post-closure care and use of property	Part 7.3 Attachment H-1a		✓
§270.14(b)(13)	§264.118	Post-closure plan; amendment of plan	Part 7.5 Attachment H-1a (1)		✓
§270.14(b)(13)	§264.178	Closure/containers	Part 6.9 Attachment A1-1h Attachment G-1		✓
§270.14(b)(13)	§264.601	Environmental performance standards-miscellaneous units	Attachment A-4 Attachment D-1 Attachment G-1a		✓
§270.14(b)(13)	§264.603	Post-closure care	Part 7.3 Attachment G-1a(3)		✓
§270.14(b)(14)	§264.119	Post-closure notices	Part 7.4 Attachment H-2		✓
§270.14(b)(15)	§264.142	Closure cost estimate	NA		✓
	§264.143	Financial assurance	NA		✓
§270.14(b)(16)	§264.144	Post-closure cost estimate	NA		✓
	§264.145	Post-closure care financial assurance	NA		✓
§270.14(b)(17)	§264.147	Liability insurance	NA		✓
§270.14(b)(18)	§264.149-150	Proof of financial coverage	NA		✓
§270.14(b)(19)(i), (vi), (vii), and (x)		Topographic map requirements Map scale and date Map orientation Legal boundaries Buildings Treatment, storage, and disposal operations Run-on/run-off control systems Fire control facilities	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(ii)	§264.18(b)	100-year floodplain	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(iii)		Surface waters	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(iv)		Surrounding land use	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓

Clarify Language Pertaining to Acceptable Knowledge Compilation
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Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
§270.14(b)(19)(v)		Wind rose	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(viii)	§264.14(b)	Access controls	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(ix)		Injection and withdrawal wells	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(xi)		Drainage on flood control barriers	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(xii)		Location of operational units	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(20)		Other federal laws Wild and Scenic Rivers Act National Historic Preservation Act Endangered Species Act Coastal Zone Management Act Fish and Wildlife Coordination Act Executive Orders	Attachment B Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.15	§264 Subpart I	Containers	Part 3 Part 4.3 Attachment A1		✓
	§264.171	Condition of containers	Part 3.3 Attachment A1		✓
	§264.172	Compatibility of waste with containers	Part 3.4 Attachment A1		✓
	§264.173	Management of containers	Part 3.5 Attachment A1		✓
	§264.174	Inspections	Part 3.7 Attachment E-1 Attachment A1-1e		✓

Clarify Language Pertaining to Acceptable Knowledge Compilation
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Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
§270.15(a)	§264.175	Containment systems	Part 3.6 Attachment A1		✓
§270.15(c)	§264.176	Special requirements for ignitable or reactive waste	Attachment A1-1g Permit Part 2.1		✓
§270.15(d)	§264.177	Special requirements for incompatible wastes	Attachment A1-1g Permit Part 2.3.3.4		✓
	§264.178	Closure	Part 6 Attachment G		✓
§270.15(e)	§264.179	Air emission standards	Part 4.4.2 Attachment N		✓
§270.23	264 Subpart X	Miscellaneous units	Part 1.3.1 Attachment A2-1 Attachment G1.3.1		✓
§270.23(a)	§264.601	Detailed unit description	Part 4 Part 5 Attachment A2 Attachment L		✓
§270.23(b)	§264.601	Hydrologic, geologic, and meteorologic assessments	Part 4 Part 5 Attachment A2 Attachment L		✓
§270.23(c)	§264.601	Potential exposure pathways	Part 4 Part 5 Attachment A2 Attachment N Attachment L		✓
§270.23(d)		Demonstration of treatment effectiveness	Part 4 Attachment A2 Attachment N		✓
	§264.602	Monitoring, analysis, inspection, response, reporting, and corrective action	Part 4 Part 5 Attachment A2 Attachment E-1 Attachment N Attachment L		✓
	§264.603	Post-closure care	Attachment H Attachment H1		✓
	264 Subpart E	Manifest system, record keeping, and reporting	Permit Part 1 Permit Part 2.13 & 2.14 Permit Part 4 Attachment C		✓
§270.30(j)(2)	§264.73(b)	Ground-water records	Part 1		✓
	264 Subpart F	Releases from solid waste management units	Part 5 & 7 Attachment G2 & L		✓
	§264.90	Applicability	Part 5 Attachment L		✓
	§264.91	Required programs	Attachment L		✓
	§264.92	Ground-water protection standard	Attachment L		✓
	§264.93	Hazardous constituents	Attachment L		✓

Clarify Language Pertaining to Acceptable Knowledge Compilation
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Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
	§264.94	Concentration limits	Part 5 Attachment L		✓
	§264.95	Point of compliance	Part 5 Attachment L		✓
	§264.96	Compliance period	Attachment L		✓
	§264.97	General ground-water monitoring requirements	Part 5 Attachment L		✓
	§264.98	Detection monitoring program	Part 5 Attachment L		✓
	§264.99	Compliance monitoring program	Part 5 Attachment L		✓
	§264.100	Corrective action program	Part 5 Attachment L		✓
	§264.101	Corrective action for solid waste management units	Part 8 Attachment L		✓
	264 Appendix IX	Ground-water Monitoring List	Part 5 Attachment L		✓

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Appendix A
Table of Changes

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Table of Changes

Affected Permit Section	Explanation of Changes
Attachment C4, Section C4-3g	Replace "are identified associated with" with "identify a deficiency in the." Add "process (i.e., the minimum required information in Section C4-2 has not been collected and organized to present the required information on the subject waste stream(s))" after "acceptable knowledge compilation." Delete the comma before "and/or." Replace "characterization" with "number assignment." Replace "summary category" with "stream(s)." Add two new sentences: "Attachment C3 of the Permit, Section C3-13, requires the responsible organization(s) to review CARs and evaluate the extent of the condition. If, during the corrective action process, the extent of the condition is determined to be applicable to other waste stream(s), the Permittees will not manage, store, or dispose of TRU mixed waste from those affected waste stream(s)." Replace "the subject" with "all affected." Replace "summary category" with "stream(s)."

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Appendix B
Proposed Revised Permit Text

1 **Proposed Revised Permit Text:**

2 C4-3g Audits of Acceptable Knowledge

3 After the audit is complete, DOE will provide the site with preliminary results at a close-out
4 meeting. DOE will prepare a final audit report that includes all observations and findings
5 identified during the audit. Sites shall respond to all audit findings and identify corrective actions.
6 Audit results will be included in the final audit report (Permit Attachment C6). If acceptable
7 knowledge procedures do not exist, the required information is not available, or corrective
8 actions (i.e., CARs) identify a deficiency in the ~~are identified associated with~~ acceptable
9 knowledge compilation process (i.e., the minimum required information in Section C4-2 has not
10 been collected and organized to present the required information on the subject waste
11 stream(s)), and/or hazardous waste number assignment ~~characterization~~, the Permittees will not
12 manage, store, or dispose TRU mixed waste for the subject waste stream(s) ~~summary category~~.
13 Attachment C3 of the Permit, Section C3-13, requires the responsible organization(s) to review
14 CARs and evaluate the extent of the condition. If, during the corrective action process, the
15 extent of the condition is determined to be applicable to other waste stream(s), the Permittees
16 will not manage, store, or dispose of TRU mixed waste from those affected waste stream(s).
17 Management, storage, or disposal of all affected ~~the subject waste~~ stream(s) ~~summary category~~
18 at WIPP will not resume until DOE finds that all corrective actions have been implemented and
19 the site complies with all applicable requirements of the WAP.

Item 3

Class 2 Permit Modification Request

Streamline Waste Stream Profile Form (WSPF) and Associated Requirements

**Waste Isolation Pilot Plant
Carlsbad, New Mexico**

WIPP Permit Number - NM4890139088-TSDF

November 2013

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10

Acronyms and Abbreviations

1		
2	AK	acceptable knowledge
3	ATWIR	Annual Transuranic Waste Inventory Report
4	CFR	Code of Federal Regulations
5	CIS	Characterization Information Summary
6	DOE	U.S. Department of Energy
7	NMAC	New Mexico Administrative Code
8	NMED	New Mexico Environment Department
9	NWP	Nuclear Waste Partnership LLC
10	Permit	Hazardous Waste Facility Permit
11	Permittees	DOE and NWP
12	PMR	Permit Modification Request
13	TRU	transuranic
14	TRUCON	transuranic content
15	TWBIR	Transuranic Waste Baseline Report
16	WIPP	Waste Isolation Pilot Plant
17	WSPF	Waste Stream Profile Form
18		

1 **Overview of the Permit Modification Request**

2 This document contains a Class 2 Permit Modification Request (**PMR**) for the Waste Isolation
3 Pilot Plant (**WIPP**) Hazardous Waste Facility Permit (**Permit**), Permit Number NM4890139088-
4 TSDf.

5 This PMR is being submitted by the U.S. Department of Energy (**DOE**) and Nuclear Waste
6 Partnership LLC (**NWP**), collectively referred to as the **Permittees**, in accordance with the
7 Permit, Part 1, Section 1.3.1. (20.4.1.900 New Mexico Administrative Code (**NMAC**)
8 incorporating Title 40 Code of Federal Regulations (**CFR**) §270.42(b)). A modification to the
9 Permit is being requested for the following item:

- 10 • Simplify the Waste Stream Profile Form (**WSPF**) and remove redundant content
11 requirements between the WSPF and the Characterization Information Summary
12 (**CIS**).

13 These changes do not reduce the ability of the Permittees to provide continued protection to
14 human health and the environment.

15 The requested modification to the Permit and related supporting documents are provided in this
16 PMR. The proposed modification to the text of the Permit has been identified using red text and
17 a double underline for new text and a ~~strikeout~~ font for deleted information. The following
18 information specifically addresses how compliance has been achieved with the Permit, Part 1,
19 Section 1.3.1., for submission of this Class 2 PMR.

- 20 **1. 20.4.1.900 NMAC (incorporating 40 CFR §270.42(b)(1)(i)) requires the applicant to**
21 **describe the exact change to be made to the Permit conditions and supporting**
22 **documents referenced by the Permit.**

23 This modification proposes to revise the Permit, Attachments C, C3, and C6, to simplify and
24 streamline the content requirements for the WSPF and the CIS. The proposed changes pertain
25 to the following attachments of the Permit:

- 26 • Attachment C, Waste Analysis Plan, Figure C-1
- 27 • Attachment C3, Quality Assurance Objectives and Data Validation Techniques for Waste
28 Characterization Sampling and Analytical Methods, Sections C3-6b(1) and C3-6b(2)
- 29 • Attachment C6, Audit and Surveillance Program, Table C6-1

30 The Table of Changes (Appendix A) and the redline ~~strikeout~~ in this modification (Appendix B)
31 describe each change that is being proposed.

1 **2. 20.4.1.900 NMAC (incorporating 40 CFR 270.42(b)(1)(ii)), requires the applicant to**
2 **identify that the modification is a Class 2 modification.**

3 The proposed modification is classified as a Class 2 Modification for the reason indicated below:

4 20.4.1.900 New Mexico Administrative Code (incorporating 40 CFR §270.42, Appendix I,
5 Item B.) *“General Facility Standards, 1. Changes to waste sampling or analysis*
6 *methods:...d. Other changes...2”*

7 **3. 20.4.1.900 NMAC (incorporating 40 CFR 270.42(b)(1)(iii)), requires the applicant to**
8 **explain why the modification is needed.**

9 Permit Attachment C, Section C-0c, requires generator/storage sites to complete a WSPF and
10 an associated CIS as specified in Permit Attachment C3, Sections C3-6b(1) and C3-6b(2), for
11 each waste stream to be shipped for disposal at the WIPP facility. The completed WSPF and
12 associated CIS are transmitted to the Permittees for review and approval. Shipment of a waste
13 stream is not authorized until the WSPF and associated CIS have been approved by the
14 Permittees.

15 Several items identified in Permit Attachment C3, Sections C3-6b(1) and C3-6b(2), are
16 duplicated resulting in the same information presented in both the WSPF and the associated
17 CIS. Additionally, the example WSPF presented in Permit Attachment C, Figure C-1, includes
18 many items that are not described in Permit Attachment C3, Section C3-6b(1). Furthermore,
19 many of these items identified on the example WSPF are also duplicated in the associated
20 Acceptable Knowledge (AK) Summation that is required to be included as part of the CIS.

21 The reporting of the same information more than once serves no useful purpose and may lead
22 to confusion. It also makes the review and approval process of WSPFs and associated CISs
23 more cumbersome since the review must include ensuring that the duplicative information is
24 reported consistently. Furthermore, inclusion of information not specified in Permit Attachment
25 C3, Section C3-6b(1) complicates the WSPF approval process and provides no added value.
26 Justifications for the proposed changes are presented as follows with respect to the specific
27 Permit attachment being modified.

28 Attachment C, Waste Analysis Plan, Figure C-1

29 The example WSPF provided in Figure C-1 is being proposed for revision and replacement with
30 a new form that eliminates information not specifically required by Permit Attachment C3,
31 Section C3-6b(1). This change is needed so that the example WSPF presented in Figure C-1 is
32 consistent with the WSPF requirements presented in Permit Attachment C3, Section C3-6b(1).
33 Items not specifically listed in Sections C3-6b(1) are proposed for deletion from Figure C-1.

34 Attachment C3, Section C3-6b(1)

35 The items listed below are proposed for deletion from the WSPF because they are currently
36 required or are proposed to be included in the CIS as specified in Permit Attachment C3,
37 Section C3-6b(2). Therefore these items are redundant and do not need to be recorded on both
38 the WSPF and the CIS.

- 39
- Summary Category Group

- 1 • Waste Matrix Code Group
- 2 • Waste Material Parameter Weight Estimates per unit of waste
- 3 • A description of the waste stream
- 4 • Applicable **TRUCON** codes
- 5 • The waste characterization procedures used and the reference and date of the
- 6 procedure

7 The item regarding the date of audit report approval by New Mexico Environment Department
8 (**NMED**) is being clarified to read “Date of most recent applicable audit report approval by
9 NMED.” It is only the most recent applicable audit report approval that is relevant with respect to
10 review and approval of a WSPF and associated CIS. The applicable audit report refers to the
11 audit report that pertains to and encompasses the summary category group as specified on the
12 WSPF. Deletion of the words “if obtained” is being proposed because a WSPF cannot be
13 approved without an applicable audit report approval by the NMED.

14 The item pertaining to “The Waste Stream WIPP Identification Number” is being changed to
15 “Unique Waste Stream Profile Number.” This change is proposed to clarify that each waste
16 stream profile form must be uniquely identified to prevent duplication and to make the
17 requirements listed in Attachment C3, Section C3-6b(1), consistent with the example WSPF
18 provided in Attachment C, Figure C-1.

19 The item regarding a listing of AK documentation is being proposed to be replaced with
20 “Acceptable Knowledge Summary Report title, number, revision and date.” Adding this
21 information to the WSPF incorporates by reference the AK documentation used to identify the
22 waste stream and is sufficient to facilitate the review of the WSPF and associated CIS.

23 Attachment C3, Section C3-6b(2)

24 The following item is proposed to be added to Attachment C3, Section C3-6b(2) to identify the
25 Waste Stream Profile Form that is associated with the CIS:

- 26 • Unique Waste Stream Profile Number

27 The following item is proposed to be moved from Attachment C3, Section C3-6b(1), to
28 Attachment C3, Section C3-6b(2), because it is more appropriate and consistent to identify
29 waste characterization procedures that are used in the CIS, instead of the WSPF:

- 30 • The waste characterization procedures used and the reference and date of the
- 31 procedure

32 The item associated with the complete AK summary is being proposed for revision for the
33 following reasons:

- 34 • Deletion of the words “complete” and “all” because an AK summary is complete if it
- 35 includes the required items specified. An AK summary must include references to
- 36 source documents that were used to generate it and identify the waste stream as
- 37 specified in the item.

- 1 • Replacing the outdated acronym for Transuranic Waste Baseline Inventory Report
2 (TWBIR) with the current acronym for Annual Transuranic Waste Inventory Report
3 (ATWIR). The ATWIR reflects the current baseline inventory of transuranic (TRU)
4 waste streams.
- 5 • Addition of two new components, defense waste assessment and historical waste
6 management, to be included in an AK summary. The new component pertaining to
7 historical waste management is already required to be part of an AK summary by
8 reference to Permit Attachment C4, Section C4-2b; however, it is being added here for
9 completeness and clarity. The other new component pertaining to defense waste
10 assessment is being added to allow the Permittees to review and ensure that the
11 waste stream is derived from at least one defense waste activity.
- 12 • The word “Weights” is being changed to “Weight Estimates” to accurately reflect that
13 the waste material parameter weights are estimates and to be consistent with Permit
14 Attachment C4, Sections C4-1, C4-2b, and C4-3b.

15 Attachment C6, Audit and Surveillance Program, Table C6-1

16 The changes proposed to Attachment C6, Table C6-1, were made to ensure consistency with
17 the changes proposed to Attachment C3, Sections C3-6b(1) and C3-6b(2).

- 18 **4. 20.4.1.900 NMAC (incorporating 40 CFR 270.42 (b)(1)(iv)), requires the applicant to**
19 **provide the applicable information required by 40 CFR 270.13 through 270.21,**
20 **270.62 and 270.63.**

21 The regulatory crosswalk describes those portions of the WIPP Permit that are affected by this
22 PMR. Where applicable, regulatory citations in this modification reference 20.4.1 NMAC, revised
23 March 9, 2009, incorporating 40 CFR Parts 264 and 270. 40 CFR §§270.16 through 270.21,
24 270.62, and 270.63 are not applicable at the WIPP facility. Consequently, they are not listed in
25 the regulatory crosswalk table.

- 26 **5. 20.4.1.900 NMAC (incorporating 40 CFR 270.11(d)(1) and 40 CFR 270.30(k)),**
27 **requires that any person signing under paragraph a and b must certify the**
28 **document in accordance with 20.4.1.900 NMAC.**

29 The transmittal letter for this PMR contains the signed certification statement in accordance with
30 the Permit, Part 1, Section 1.9.

31

1

Regulatory Crosswalk

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
§270.13		Contents of Part A permit application	Attachment B Part A		✓
§270.14(b)(1)		General facility description	Attachment A		✓
§270.14(b)(2)	§264.13(a)	Chemical and physical analyses	Part 2.3.1 Attachment C		✓
§270.14(b)(3)	§264.13(b)	Development and implementation of waste analysis plan	Part 2.3.1.1 Attachment C	✓	
	§264.13(c)	Off-site waste analysis requirements	Part 2.2.1 Attachment C	✓	
§270.14(b)(5)	§264.15(a-d)	General inspection requirements	Part 2.7 Attachment E-1a		✓
	§264.174	Container inspections	Attachment E-1b(1)		✓
§270.23(a)(2)	§264.602	Miscellaneous units inspections	Attachment E-1b Attachment E-1b(1)		✓
§270.14(b)(6)		Request for waiver from preparedness and prevention requirements of Part 264 Subpart C	NA		✓
§270.14(b)(7)	264 Subpart D	Contingency plan requirements	Part 2.12 Attachment D		✓
	§264.51	Contingency plan design and implementation	Part 2.12.1 Attachment D		✓
	§264.52 (a) & (c-f)	Contingency plan content	Attachment D		✓
	§264.53	Contingency plan copies	Part 2.12.2 Attachment D		✓
	§264.54	Contingency plan amendment	Part 2.12.3 Attachment D		✓
	§264.55	Emergency coordinator	Part 2.12.4 Attachment D-4a(1)		✓
	§264.56	Emergency procedures	Attachment D-4		✓
§270.14(b)(8)		Description of procedures, structures or equipment for:	Attachment A Part 2.11		✓
§270.14(b)(8)(i)		Prevention of hazards in unloading operations (e.g., ramps and special forklifts)	Part 2.11		✓

Streamline Waste Stream Profile Form
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Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
§270.14(b)(8)(ii)		Runoff or flood prevention (e.g., berms, trenches, and dikes)	Attachment A1-1c(1) Part 2.11		✓
§270.14(b)(8)(iii)		Prevention of contamination of water supplies	Part 2.11		✓
§270.14(b)(8)(iv)		Mitigation of effects of equipment failure and power outages	Part 2.11		✓
§270.14(b)(8)(v)		Prevention of undue exposure of personnel (e.g., personal protective equipment)	Part 2.11		✓
§270.14(b)(8)(vi) §270.23(a)(2)	§264.601	Prevention of releases to the atmosphere	Part 2.11 Part 4.4 Attachment D-4e Attachment G-1a		✓
	264 Subpart C	Preparedness and Prevention	Part 2.10		✓
	§264.31	Design and operation of facility	Part 2.1		✓
	§264.32	Required equipment	Part 2.10.1 Attachment D		✓
	§264.33	Testing and maintenance of equipment	Part 2.10.2 Attachment E-1a		✓
	§264.34	Access to communication/alarm system	Attachment E-1a Part 2.10.3		✓
	§264.35	Required aisle space	Part 2.10.4		✓
	§264.37	Arrangements with local authorities	Attachment D-4a(3)		✓
§270.14(b)(9)	§264.17(a-c)	Prevention of accidental ignition or reaction of ignitable, reactive, or incompatible wastes	Part 2.9		✓
§270.14(b)(10)		Traffic pattern, volume, and controls, for example: Identification of turn lanes Identification of traffic/stacking lanes, if appropriate Description of access road surface Description of access road load-bearing capacity Identification of traffic controls	Attachment A4		✓
§270.14(b)(11)(i) and (ii)	§264.18(a)	Seismic standard applicability and requirements	Attachment G2-2.2 Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓

Streamline Waste Stream Profile Form
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Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
§270.14(b)(11)(iii-v)	§264.18(b)	100-year floodplain standard	Attachment A1-1c(1) Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(12)	§264.16(a-e)	Personnel training program	Part 2.8 Attachment F		✓
§270.14(b)(13)	264 Subpart G	Closure and post-closure plans	Part 6 & 7 Attachment G & H		✓
§270.14(b)(13)	§264.111	Closure performance standard	Attachment G-1a		✓
§270.14(b)(13)	§264.112(a), (b)	Written content of closure plan	Attachment G-1		✓
§270.14(b)(13)	§264.112(c)	Amendment of closure plan	Part 6.3 Attachment G-1d(4)		✓
§270.14(b)(13)	§264.112(d)	Notification of partial and final closure	Attachment G-2a		✓
§270.14(b)(13)	§264.112(e)	Removal of wastes and decontamination/dismantling of equipment	Attachment G-1e(2)		✓
§270.14(b)(13)	§264.113	Time allowed for closure	Part 6.5 Attachment G-1d		✓
§270.14(b)(13)	§264.114	Disposal/decontamination	Part 6.6 Attachment G-1e(2)		✓
§270.14(b)(13)	§264.115	Certification of closure	Part 6.7 Attachment G-2a		✓
§270.14(b)(13)	§264.116	Survey plat	Part 6.8 Attachment G-2b		✓
§270.14(b)(13)	§264.117	Post-closure care and use of property	Part 7.3 Attachment H-1a		✓
§270.14(b)(13)	§264.118	Post-closure plan; amendment of plan	Part 7.5 Attachment H-1a(1)		✓
§270.14(b)(13)	§264.178	Closure/containers	Part 6.9 Attachment A1-1h Attachment G-1		✓
§270.14(b)(13)	§264.601	Environmental performance standards-miscellaneous units	Attachment A-4 Attachment D-1 Attachment G-1a		✓

Streamline Waste Stream Profile Form
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Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
§270.14(b)(13)	§264.603	Post-closure care	Part 7.3 Attachment G-1a(3)		✓
§270.14(b)(14)	§264.119	Post-closure notices	Part 7.4 Attachment H-2		✓
§270.14(b)(15)	§264.142	Closure cost estimate	NA		✓
	§264.143	Financial assurance	NA		✓
§270.14(b)(16)	§264.144	Post-closure cost estimate	NA		✓
	§264.145	Post-closure care financial assurance	NA		✓
§270.14(b)(17)	§264.147	Liability insurance	NA		✓
§270.14(b)(18)	§264.149-150	Proof of financial coverage	NA		✓
§270.14(b)(19)(i), (vi), (vii), and (x)		Topographic map requirements Map scale and date Map orientation Legal boundaries Buildings Treatment, storage, and disposal operations Run-on/run-off control systems Fire control facilities	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(ii)	§264.18(b)	100-year floodplain	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(iii)		Surface waters	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(iv)		Surrounding land use	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓

Streamline Waste Stream Profile Form
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Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
§270.14(b)(19)(v)		Wind rose	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(viii)	§264.14(b)	Access controls	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(ix)		Injection and withdrawal wells	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(xi)		Drainage on flood control barriers	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(xii)		Location of operational units	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(20)		Other federal laws Wild and Scenic Rivers Act National Historic Preservation Act Endangered Species Act Coastal Zone Management Act Fish and Wildlife Coordination Act Executive Orders	Attachment B Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.15	§264 Subpart I	Containers	Part 3 Part 4.3 Attachment A1		✓
	§264.171	Condition of containers	Part 3.3 Attachment A1		✓

Streamline Waste Stream Profile Form
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Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
	§264.172	Compatibility of waste with containers	Part 3.4 Attachment A1		✓
	§264.173	Management of containers	Part 3.5 Attachment A1		✓
	§264.174	Inspections	Part 3.7 Attachment E-1 Attachment A1-1e		✓
§270.15(a)	§264.175	Containment systems	Part 3.6 Attachment A1		✓
§270.15(c)	§264.176	Special requirements for ignitable or reactive waste	Attachment A1-1g Permit Part 2.1		✓
§270.15(d)	§264.177	Special requirements for incompatible wastes	Attachment A1-1g Permit Part 2.3.3.4		✓
	§264.178	Closure	Part 6 Attachment G		✓
§270.15(e)	§264.179	Air emission standards	Part 4.4.2 Attachment N		✓
§270.23	264 Subpart X	Miscellaneous units	Part 1.3.1 Attachment A2-1 Attachment G1.3.1		✓
§270.23(a)	§264.601	Detailed unit description	Part 4 Part 5 Attachment A2 Attachment L		✓
§270.23(b)	§264.601	Hydrologic, geologic, and meteorologic assessments	Part 4 Part 5 Attachment A2 Attachment L		✓
§270.23(c)	§264.601	Potential exposure pathways	Part 4 Part 5 Attachment A2 Attachment N Attachment L		✓
§270.23(d)		Demonstration of treatment effectiveness	Part 4 Attachment A2 Attachment N		✓

Streamline Waste Stream Profile Form
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Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
	§264.602	Monitoring, analysis, inspection, response, reporting, and corrective action	Part 4 Part 5 Attachment A2 Attachment E-1 Attachment N Attachment L		✓
	§264.603	Post-closure care	Attachment H Attachment H1		✓
	264 Subpart E	Manifest system, record keeping, and reporting	Permit Part 1 Permit Part 2.13 & 2.14 Permit Part 4 Attachment C		✓
§270.30(j)(2)	§264.73(b)	Ground-water records	Part 1		✓
	264 Subpart F	Releases from solid waste management units	Part 5 & 7 Attachment G2 & L		✓
	§264.90	Applicability	Part 5 Attachment L		✓
	§264.91	Required programs	Attachment L		✓
	§264.92	Ground-water protection standard	Attachment L		✓
	§264.93	Hazardous constituents	Attachment L		✓
	§264.94	Concentration limits	Part 5 Attachment L		✓
	§264.95	Point of compliance	Part 5 Attachment L		✓
	§264.96	Compliance period	Attachment L		✓
	§264.97	General ground-water monitoring requirements	Part 5 Attachment L		✓
	§264.98	Detection monitoring program	Part 5 Attachment L		✓
	§264.99	Compliance monitoring program	Part 5 Attachment L		✓
	§264.100	Corrective action program	Part 5 Attachment L		✓
	§264.101	Corrective action for solid waste management units	Part 8 Attachment L		✓
	264 Appendix IX	Ground-water Monitoring List	Part 5 Attachment L		✓

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Appendix A
Table of Changes

Table of Changes

Affected Permit Section	Explanation of Changes
Attachment C, Figure C-1	Replaced the figure in its entirety.
Attachment C3, Section C3-6b(1)	<p>Added "most recent applicable" before "audit report" and deleted "(if obtained)" after NMED"</p> <p>Replaced "The Waste Stream WIPP Identification Number" with "Unique Waste Stream Profile Number"</p> <p>Replaced "A listing of acceptable knowledge documentation used to identify the waste stream" with "Acceptable Knowledge Summary Report title, number, revision, and date"</p> <p>Deleted the following items because they are, or will be, required to be included in the CIS as specified in Attachment C3, Section C3-6b(2):</p> <ul style="list-style-type: none"> • "Summary Category Group • Waste Matrix Code Group • Waste Material Parameter Weight Estimates per unit of waste • A description of the waste stream • Applicable TRUCON codes • The waste characterization procedures used and the reference and date of the procedure"
Attachment C3, Section C3-6b(2)	<p>Added the following items that were deleted from Attachment C3, Section 3-6b(1):</p> <ul style="list-style-type: none"> • "Unique Waste Stream Profile Number" • "The waste characterization procedures used and the reference and date of the procedure" <p>Deleted "Complete" before "AK summary"</p> <p>Replaced "other TWBIR information" with "ATWIR number"</p> <p>Added "defense waste assessment," after "generating processes,"</p> <p>Added "historical waste management," after "RCRA determinations,"</p> <p>Deleted "all" before "references"</p> <p>Replaced "Weights" with "Weight Estimates"</p>
Attachment C6, Table C6-1, Item 56	<p>Added "most recent applicable" before "audit report" and deleted "(if obtained)" after NMED"</p> <p>Replaced "Waste Stream WIPP Identification Number" with "Unique Waste Stream Profile Number"</p> <p>Replaced "A listing of acceptable knowledge documentation used to identify the waste stream" with "Acceptable Knowledge Summary Report title, number, revision, and date"</p> <p>Deleted the following items because they are or will be required to be included in the CIS as specified in Attachment C3, Section C3-6b(2):</p> <ul style="list-style-type: none"> • "Summary Category Group • Waste Matrix Code Group • Waste Material Parameter Weight Estimates per unit of waste • A description of the waste stream • Applicable TRUCON codes • The waste characterization procedures used and the reference and date of the procedure"

Affected Permit Section	Explanation of Changes
Attachment C6, Table C6-1, Item 56a	<p>Added the following items that were deleted from Attachment C3, Section 3-6b(1):</p> <ul style="list-style-type: none"> • “Unique Waste Stream Profile Number” • “The waste characterization procedures used and the reference and date of the procedure” <p>Deleted “Complete” before “AK summary” Replaced “other TWBIR information” with “ATWIR number” Added “defense waste assessment,” after “generating processes,” Added “historical waste management,” after “RCRA determinations,” Deleted “all” before “references” Replaced “Weights” with “Weight Estimates”</p>

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Appendix B
Proposed Revised Permit Text

1 Proposed Revised Permit Text:

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**ATTACHMENT C
WASTE ANALYSIS PLAN**

Page 1 of 2

WASTE STREAM PROFILE FORM

Waste Stream Profile Number: _____
Generator Site Name: _____ Technical Contract: _____
Generator Site EPA ID: _____ Technical Contact Phone Number: _____
Date of audit report approval by NMED: _____
Title, version number and date of documents used for WAP Certification: _____

Did your facility generate this waste? Yes No
If no, provide the name and EPA ID of the original generator: _____

WIPP ID: _____ Summary Category Group: _____
Waste Stream Name: _____
Description from the WTWBIR: _____

Defense Waste: Yes No Check one: CH RH
Number of SWBs _____ Number of Drums _____ Number of Canisters _____
Batch Data Report numbers supporting this waste stream characterization: _____
List applicable EPA Hazardous Waste Numbers ⁽²⁾ _____
Applicable TRUCON Content Numbers: _____

Acceptable Knowledge Information⁽¹⁾
(For the following, enter supporting documentation used (i.e., references and dates))

Required Program Information

- Map of site: _____
- Facility mission description: _____
- Description of operations that generate waste: _____
- Waste identification/categorization schemes: _____
- Types and quantities of waste generated: _____
- Correlation of waste streams generated from the same building and process, as applicable: _____
- Waste certification procedures: _____

Required Waste Stream Information

- Area(s) and building(s) from which waste stream was generated: _____
- Waste stream volume and time period of generation: _____
- Waste generating process description for each building: _____
- Waste process flow diagrams: _____
- Material inputs or other information identifying chemical/radionuclide content and physical waste form: _____
- Waste material parameter estimates per unit of waste: _____
- Which Defense Activity generated the waste: (check one)
 - Weapons activities including defense inertial confinement fusion
 - Naval reactors development
 - Verification and control technology
 - Defense research and development
 - Defense nuclear waste and material by products management
 - Defense nuclear material production
 - Defense nuclear waste and materials security and safeguards and security investigations

Figure C-1
WIPP Waste Stream Profile Form (Example Only)

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WASTE STREAM PROFILE FORM

Supplemental Documentation

Process design documents: _____
Standard operating procedures: _____
Safety Analysis Reports: _____
Waste packaging logs: _____
Test plans/research project reports: _____
Site data bases: _____
Information from site personnel: _____
Standard industry documents: _____
Previous analytical data: _____
Material safety data sheets: _____
Sampling and analysis data from comparable/surrogate waste: _____
Laboratory notebooks: _____

Confirmation Information⁽²⁾

[For the following, when applicable, enter procedure title(s), number(s), and date(s)]

Radiography: _____

Visual Examination: _____

Waste Stream Profile Form Certification

I hereby certify that I have reviewed the information in this Waste Stream Profile Form, and it is complete and accurate to the best of my knowledge. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature of Site Project Manager

Printed Name and Title

Date

NOTE:

- (1) Use back of sheet or continuation sheets, if required.
- (2) If, radiography, visual examination were used to confirm EPA Hazardous Waste Numbers, attach signed Characterization Information Summary documenting this determination.

Figure C-1
WIPP Waste Stream Profile Form (Example Only—Continued)

WASTE STREAM PROFILE FORM

Unique Waste Stream Profile Number: _____

Waste Stream Name: _____

Generator Site Name: _____

Generator Site EPA ID: _____

Technical Contact: _____ Phone Number: _____

Date of most recent applicable audit report approval by NMED: _____

Did your facility generate this waste? Yes No

If no, provide the name and EPA ID of the original generator: _____

Check one: CH RH

List applicable EPA Hazardous Waste Numbers: _____

Acceptable Knowledge Summary Report title, number, version and date:

Waste Stream Profile Form Certification

I hereby certify that I have reviewed the information in this Waste Stream Profile Form, and it is complete and accurate to the best of my knowledge. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature of Site Project Manager Printed Name and Title Date

Figure C-1
WIPP Waste Stream Profile Form (Example Only)

1 C3-6b(1) Waste Stream Profile Form

2 The Waste Stream Profile Form (WSPF, Figure C-1) shall include the following information:

- 3 • Generator/storage site name
- 4 • Generator/storage site EPA ID
- 5 • Date of most recent applicable audit report approval by NMED ~~(if obtained)~~
- 6 • Original generator of waste stream
- 7 • Whether waste is Contact-Handled or Remote-Handled
- 8 • Unique Waste Stream Profile Number ~~The Waste Stream WIPP Identification Number~~
- 9 • ~~Summary Category Group~~
- 10 • ~~Waste Matrix Code Group~~
- 11 • ~~Waste Material Parameter Weight Estimates per unit of waste~~
- 12 • Waste stream name
- 13 • ~~A description of the waste stream~~
- 14 • Applicable EPA hazardous waste numbers
- 15 • ~~Applicable TRUCON codes~~
- 16 • Acceptable Knowledge Summary Report title, number, revision, and date ~~A listing of~~
- 17 ~~acceptable knowledge documentation used to identify the waste stream~~
- 18 • ~~The waste characterization procedures used and the reference and date of the~~
- 19 ~~procedure~~
- 20 • Certification signature of Site Project Manager, name, title, and date signed

21 C3-6b(2) Characterization Information Summary

22 The Characterization Information Summary shall include the following elements, if applicable:

- 23 • Unique Waste Stream Profile Number
- 24 • The waste characterization procedures used and the reference and date of the
- 25 procedure
- 26 • Data reconciliation with DQOs

- 1 • Radiography and VE summary to document that all prohibited items are absent in the
2 waste and to verify that the physical form of the waste matches the waste stream
3 description as determined by AK (if applicable).
- 4 • A justification for the selection of radiography and/or/VE as an appropriate method for
5 characterizing the waste.
- 6 • A complete listing of all container identification numbers used to generate the WSPF,
7 cross-referenced to each Batch Data Report
- 8 • ~~Complete~~ AK summary, including stream name and number, point of generation,
9 waste stream volume (current and projected), generation dates, TRUCON codes,
10 Summary Category Group, Waste Matrix Code(s) and Waste Matrix Code Group,
11 ~~other TWBIR information~~ ATWIR number, waste stream description, areas of operation,
12 generating processes, defense waste assessment, RCRA determinations, historical
13 waste management, radionuclide information, ~~all~~ references used to generate the AK
14 summary, and any other information required by Permit Attachment C4, Section C4-
15 2b.
- 16 • Method for determining Waste Material Parameter ~~Weights~~ Weight Estimates per unit
17 of waste.
- 18 • List of any AK Sufficiency Determinations requested for the waste stream.
- 19 • Certification through acceptable knowledge or testing and/or analysis that any waste
20 assigned the hazardous waste number of U134 (hydrofluoric acid) no longer exhibits
21 the characteristic of corrosivity. This is verified by ensuring that no liquid is present in
22 U134 waste.

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Table C6-1 Waste Analysis Plan (WAP) Checklist

	WAP Requirement ¹	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
Records and Record Management						
55	Are procedures in place to ensure that the generator/storage site's hard copy and/or electronic data reports follow the Permittees' format requirements? (Section C-4a(4))					
56	<p>Are procedures in place to ensure that hard copy or electronic Waste Stream Profile Form will include the following</p> <ul style="list-style-type: none"> • Generator/storage site name • Generator/storage site EPA ID • Date of most recent applicable audit report approval by NMED (if obtained) • Original generator of waste stream • Whether waste is Contact-Handled or Remote-Handled • Unique Waste Stream Profile Number Waste Stream WIPP Identification Number • Summary Category Group • Waste Matrix Code Group • Waste Material Parameter Weight Estimates per unit of waste • Waste stream name • A description of the waste stream • Applicable EPA hazardous waste numbers • Applicable TRUCON codes • Acceptable Knowledge Summary Report title, number, revision, and date A listing of acceptable knowledge documentation used to identify the waste stream • The waste characterization procedures used and the reference and date of the procedure • Certification signature of Site Project Manager, name, title, and date signed <p>(Section C3-6b(1))</p>					

	WAP Requirement¹	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last
56a	<p>Are procedures in place to ensure that hard copy or electronic Characterization Information Summary will include the following:</p> <ul style="list-style-type: none"> • <u>Unique Waste Stream Profile Number</u> • <u>The waste characterization procedures used and the reference and date of the procedure</u> • Data reconciliation with DQOs • Radiography and visual examination summary to document that all prohibited items are absent in the waste and to verify that the physical form of the waste matches its waste stream description as determined by AK (if applicable) • A complete listing of all container identification numbers used to generate the Waste Stream Profile Form, cross-referenced to each Batch Data Report • Complete AK summary, including stream name and number, point of generation, waste stream volume (current and projected), generation dates, TRUCON codes, Summary Category Group, Waste Matrix Code(s) and Waste Matrix Code Group, other TWBIR information <u>ATWIR number</u>, waste stream description, areas of operation, generating processes, <u>defense waste assessment</u>, RCRA determinations, <u>historical waste management</u>, radionuclide information, all references used to generate the AK summary, and any other information required by Permit Attachment C4, Section C4-2b. • Method for determining Waste Material Parameter Weights <u>Weight Estimates</u> per unit of waste. • List of any AK Sufficiency Determinations requested for the waste stream. • Certification through acceptable knowledge or testing and/or analysis that any waste assigned the hazardous waste number of U134 (hydrofluoric acid) no longer exhibits the characteristic of corrosivity. This is verified by ensuring that no liquid is present in U134 waste. • A justification for the selection of radiography and/or VE as an appropriate method of characterizing the waste. <p>(Section C3-6b(2))</p>					

Item 4

Class 2 Permit Modification Request

**Remove the Quarterly Repeat of Data Generation Review, Validation, and
Verification**

**Waste Isolation Pilot Plant
Carlsbad, New Mexico**

WIPP HWFP Number - NM4890139088-TSDF

November 2013

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Acronyms and Abbreviations

CFR	Code of Federal Regulations
DGL	data generation level
DOE	U.S. Department of Energy
HWFP	Hazardous Waste Facility Permit
ITR	independent technical review
NMAC	New Mexico Administrative Code
NWP	Nuclear Waste Partnership LLC
Permit	Hazardous Waste Facility Permit
Permittees	DOE and NWP
PMR	Permit Modification Request
SPM	Site Project Manager
TRU	transuranic
WIPP	Waste Isolation Pilot Plant

Overview of the Permit Modification Request

This document contains one Class 2 permit modification request (**PMR**) for the Waste Isolation Pilot Plant (**WIPP**) Hazardous Waste Facility Permit (**Permit**), Permit Number NM4890139088-TSDF.

This PMR is being submitted by the U.S. Department of Energy (**DOE**) and Nuclear Waste Partnership LLC (**NWP**), collectively referred to as the **Permittees**, in accordance with the Permit, Part 1, Section 1.3.1. (20.4.1.900 New Mexico Administrative Code (**NMAC**) incorporating Title 40 Code of Federal Regulations (**CFR**) §270.42(d)). This modification request proposes the following change:

- Remove the requirement for data generation level (**DGL**) review, validation, and verification on the data for a minimum of one randomly chosen waste container on a quarterly basis.

This change does not reduce the ability of the Permittees to provide continued protection to human health and the environment.

The requested modification to the Permit and related supporting documents are provided in this PMR. The proposed modification to the text of the Permit has been identified using red text and a double underline for new text and a ~~strikeout~~ font for deleted information. The following information specifically addresses how compliance has been achieved with the Permit, Part 1, Section 1.3.1., for submission of this Class 2 PMR.

- 20.4.1.900 NMAC (incorporating 40 CFR §270.42(b)(1)(i)), requires the applicant to describe the exact change to be made to the permit conditions and supporting documents referenced by the Permit.**

This PMR proposes to eliminate the requirement to repeat the DGL review, validation, and verification on the data for a minimum of one randomly chosen waste container on a quarterly basis (every three months) from Permit Attachment C3, Section C3-4b.

The proposed changes are in the following parts and attachments of the Permit:

- Attachment C3, Section C3-4b
- Attachment C6, Table C6-1, Item 42.

The Table of Changes (Appendix A) and the redline strikeout in this modification (Appendix B) describe each change that is being proposed.

- 20.4.1.900 NMAC (incorporating 40 CFR §270.42(b)(1)(ii)), requires the applicant to identify that the modification is a Class 2 modification.**

The proposed modification is classified as a Class 2 permit modification for the reason indicated below:

20 4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, Item B) “*General Facility Standards...1. Changes to waste sampling or analysis methods...d. Other changes...2*”

1 **3. 20.4.1.900 NMAC (incorporating 40 CFR §270.42(b)(1)(iii)), requires the applicant to**
2 **explain why the modification is needed.**

3 Multiple reviews of waste characterization data are required by the Permit in order to ensure
4 waste is adequately characterized. These reviews are specified in Attachment C3, Section C3-
5 10, and include DGL reviews, independent technical reviews (ITR), project level reviews
6 performed by the Site Project Manager (SPM), and Permittee level reviews. This PMR is
7 needed to remove an SPM review from the Permit that does not impact the adequacy of the
8 waste characterization process. Attachment C3, Section C3-4b(1) includes the requirement for
9 SPM review, validation, and verification of waste characterization data prior to certification of
10 waste for shipment. This is the point in time where such reviews impact the waste
11 characterization process by ensuring that nonconformances are identified and addressed before
12 shipment. The quarterly repeat review described in Attachment C3, Section C3-4b, is redundant
13 to the SPM review required by Section C3-4b(1), and due to the quarterly nature of this
14 requirement, the review cannot impact the waste characterization process. This is because this
15 review is conducted after waste characterization is complete and, typically, after waste has been
16 shipped and emplaced, therefore providing no benefit to the characterization process.

17 In addition to the reviews identified herein, the generator/storage site is required, in accordance
18 with Attachment C, Section C-2, to develop internal procedures to ensure the quality of waste
19 characterization data including: "Identify the oversight procedures and frequency of actions to
20 verify compliance with waste characterization and certification procedures." This requirement
21 encompasses the data reviews listed above. Furthermore, Attachment C6, the Audit and
22 Surveillance Program is used for ensuring that procedures are properly implemented including
23 procedures for DGL review, validation, and verification. Audits conducted in accordance with
24 Attachment C6 occur initially at the outset of the characterization program and subsequently as
25 prescribed by the Permit.

26 Finally, transuranic (TRU) Waste Confirmation required by Attachment C7 provides
27 documentation that key components of characterization are performed appropriately by
28 generator/storage sites. TRU Waste Confirmation requires that a minimum of 7% of randomly
29 selected containers from each TRU mixed waste stream shipment are confirmed to ensure that
30 the physical characteristics of the TRU mixed waste corresponds with its waste stream
31 description and that the waste does not contain compressed gases or liquid in excess of the
32 treatment, storage, and disposal facility waste acceptance criteria. Confirmation is performed
33 prior to shipment to the WIPP facility and is similar to the ITR of data. This confirmation activity
34 occurs prior to waste shipment and provides assurance that generator/storage site procedures
35 for DGL review, validation, and verification are implemented appropriately, including verifying
36 that nonconformance reports have been addressed prior to shipment.

37 Therefore, Permit required controls other than the quarterly repeat serve as more frequent and
38 timely indicators of whether DGL reviews, verification, and validation are being performed in
39 accordance with implementing procedures.

40 **4. 20.4.1.900 NMAC (incorporating 40 CFR §270.42(b)(1)(iv)), requires the applicant to**
41 **provide the applicable information required by 40 CFR §§270.13 through 270.21,**
42 **270.62, and 270.63.**

43 The regulatory crosswalk describes the portions of the Permit that are affected by this PMR.
44 Where applicable, regulatory citations in this modification reference 20.4.1 NMAC, revised
45 March 1, 2009, incorporating 40 CFR Parts 264 and 270. 40 CFR §§270.16 through 270.21,

1 270.62, and 270.63 are not applicable at the WIPP facility. Consequently, they are not listed in
2 the regulatory crosswalk.

3 **5. 20.4.1.900 NMAC (incorporating 40 CFR §270.11(d)(1) and 40 CFR §270.30(k)),**
4 **requires any person signing under paragraphs a and b to certify the document in**
5 **accordance with 20.4.1.900 NMAC.**

6 The transmittal letter for this PMR contains the signed certification statement in accordance with
7 the Permit, Part 1, Section 1.9.

8

1

Regulatory Crosswalk

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
§270.13		Contents of Part A permit application	Attachment B Part A		✓
§270.14(b)(1)		General facility description	Attachment A		✓
§270.14(b)(2)	§264.13(a)	Chemical and physical analyses	Part 2.3.1 Attachment C	✓	
§270.14(b)(3)	§264.13(b)	Development and implementation of waste analysis plan	Part 2.3.1.1 Attachment C	✓	
	§264.13(c)	Off-site waste analysis requirements	Part 2.2.1 Attachment C		✓
§270.14(b)(5)	§264.15(a-d)	General inspection requirements	Part 2.7 Attachment E-1a		✓
	§264.174	Container inspections	Attachment E-1b(1)		✓
§270.23(a)(2)	§264.602	Miscellaneous units inspections	Attachment E-1b Attachment E-1b(1)		✓
§270.14(b)(6)		Request for waiver from preparedness and prevention requirements of Part 264 Subpart C	NA		✓
§270.14(b)(7)	264 Subpart D	Contingency plan requirements	Part 2.12 Attachment D		✓
	§264.51	Contingency plan design and implementation	Part 2.12.1 Attachment D		✓
	§264.52 (a) & (c-f)	Contingency plan content	Attachment D		✓
	§264.53	Contingency plan copies	Part 2.12.2 Attachment D		✓
	§264.54	Contingency plan amendment	Part 2.12.3 Attachment D		✓
	§264.55	Emergency coordinator	Part 2.12.4 Attachment D-4a(1)		✓
	§264.56	Emergency procedures	Attachment D-4		✓
§270.14(b)(8)		Description of procedures, structures or equipment for:	Attachment A Part 2.11		✓
§270.14(b)(8)(i)		Prevention of hazards in unloading operations (e.g., ramps and special forklifts)	Part 2.11		✓

Remove the Quarterly Repeat of Data Generation Review, V&V
DRAFT 11-26-2013

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
§270.14(b)(8)(ii)		Runoff or flood prevention (e.g., berms, trenches, and dikes)	Attachment A1-1c(1) Part 2.11		✓
§270.14(b)(8)(iii)		Prevention of contamination of water supplies	Part 2.11		✓
§270.14(b)(8)(iv)		Mitigation of effects of equipment failure and power outages	Part 2.11		✓
§270.14(b)(8)(v)		Prevention of undue exposure of personnel (e.g., personal protective equipment)	Part 2.11		✓
§270.14(b)(8)(vi) §270.23(a)(2)	§264.601	Prevention of releases to the atmosphere	Part 2.11 Part 4.4 Attachment D-4e Attachment G-1a		✓
	264 Subpart C	Preparedness and Prevention	Part 2.10		✓
	§264.31	Design and operation of facility	Part 2.1		✓
	§264.32	Required equipment	Part 2.10.1 Attachment D		✓
	§264.33	Testing and maintenance of equipment	Part 2.10.2 Attachment E-1a		✓
	§264.34	Access to communication/alarm system	Attachment E-1a Part 2.10.3		✓
	§264.35	Required aisle space	Part 2.10.4		✓
	§264.37	Arrangements with local authorities	Attachment D-4a(3)		✓
§270.14(b)(9)	§264.17(a-c)	Prevention of accidental ignition or reaction of ignitable, reactive, or incompatible wastes	Part 2.9		✓
§270.14(b)(10)		Traffic pattern, volume, and controls, for example: Identification of turn lanes Identification of traffic/stacking lanes, if appropriate Description of access road surface Description of access road load-bearing capacity Identification of traffic controls	Attachment A4		✓
§270.14(b)(11)(i) and (ii)	§264.18(a)	Seismic standard applicability and requirements	Attachment G2-2.2 Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓

Remove the Quarterly Repeat of Data Generation Review, V&V
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Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
§270.14(b)(11)(iii-v)	§264.18(b)	100-year floodplain standard	Attachment A1-1c(1) Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(12)	§264.16(a-e)	Personnel training program	Part 2.8 Attachment F		✓
§270.14(b)(13)	264 Subpart G	Closure and post-closure plans	Part 6 & 7 Attachment G & H		✓
§270.14(b)(13)	§264.111	Closure performance standard	Attachment G-1a		✓
§270.14(b)(13)	§264.112(a), (b)	Written content of closure plan	Attachment G-1		✓
§270.14(b)(13)	§264.112(c)	Amendment of closure plan	Part 6.3 Attachment G-1d(4)		✓
§270.14(b)(13)	§264.112(d)	Notification of partial and final closure	Attachment G-2a		✓
§270.14(b)(13)	§264.112(e)	Removal of wastes and decontamination/dismantling of equipment	Attachment G-1e(2)		✓
§270.14(b)(13)	§264.113	Time allowed for closure	Part 6.5 Attachment G-1d		✓
§270.14(b)(13)	§264.114	Disposal/decontamination	Part 6.6 Attachment G-1e(2)		✓
§270.14(b)(13)	§264.115	Certification of closure	Part 6.7 Attachment G-2a		✓
§270.14(b)(13)	§264.116	Survey plat	Part 6.8 Attachment G-2b		✓
§270.14(b)(13)	§264.117	Post-closure care and use of property	Part 7.3 Attachment H-1a		✓
§270.14(b)(13)	§264.118	Post-closure plan; amendment of plan	Part 7.5 Attachment H-1a (1)		✓
§270.14(b)(13)	§264.178	Closure/containers	Part 6.9 Attachment A1-1h Attachment G-1		✓
§270.14(b)(13)	§264.601	Environmental performance standards-miscellaneous units	Attachment A-4 Attachment D-1 Attachment G-1a		✓

Remove the Quarterly Repeat of Data Generation Review, V&V
DRAFT 11-26-2013

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
§270.14(b)(13)	§264.603	Post-closure care	Part 7.3 Attachment G-1a(3)		✓
§270.14(b)(14)	§264.119	Post-closure notices	Part 7.4 Attachment H-2		✓
§270.14(b)(15)	§264.142	Closure cost estimate	NA		✓
	§264.143	Financial assurance	NA		✓
§270.14(b)(16)	§264.144	Post-closure cost estimate	NA		✓
	§264.145	Post-closure care financial assurance	NA		✓
§270.14(b)(17)	§264.147	Liability insurance	NA		✓
§270.14(b)(18)	§264.149-150	Proof of financial coverage	NA		✓
§270.14(b)(19)(i), (vi), (vii), and (x)		Topographic map requirements Map scale and date Map orientation Legal boundaries Buildings Treatment, storage, and disposal operations Run-on/run-off control systems Fire control facilities	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(ii)	§264.18(b)	100-year floodplain	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(iii)		Surface waters	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(iv)		Surrounding land use	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓

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Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
§270.14(b)(19)(v)		Wind rose	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(viii)	§264.14(b)	Access controls	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(ix)		Injection and withdrawal wells	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(xi)		Drainage on flood control barriers	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(xii)		Location of operational units	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(20)		Other federal laws Wild and Scenic Rivers Act National Historic Preservation Act Endangered Species Act Coastal Zone Management Act Fish and Wildlife Coordination Act Executive Orders	Attachment B Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.15	§264 Subpart I	Containers	Part 3 Part 4.3 Attachment A1		✓
	§264.171	Condition of containers	Part 3.3 Attachment A1		✓

Remove the Quarterly Repeat of Data Generation Review, V&V
DRAFT 11-26-2013

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
	§264.172	Compatibility of waste with containers	Part 3.4 Attachment A1		✓
	§264.173	Management of containers	Part 3.5 Attachment A1		✓
	§264.174	Inspections	Part 3.7 Attachment E-1 Attachment A1-1e		✓
§270.15(a)	§264.175	Containment systems	Part 3.6 Attachment A1		✓
§270.15(c)	§264.176	Special requirements for ignitable or reactive waste	Attachment A1-1g Permit Part 2.1		✓
§270.15(d)	§264.177	Special requirements for incompatible wastes	Attachment A1-1g Permit Part 2.3.3.4		✓
	§264.178	Closure	Part 6 Attachment G		✓
§270.15(e)	§264.179	Air emission standards	Part 4.4.2 Attachment N		✓
§270.23	264 Subpart X	Miscellaneous units	Part 1.3.1 Attachment A2-1 Attachment G1.3.1		✓
§270.23(a)	§264.601	Detailed unit description	Part 4 Part 5 Attachment A2 Attachment L		✓
§270.23(b)	§264.601	Hydrologic, geologic, and meteorologic assessments	Part 4 Part 5 Attachment A2 Attachment L		✓
§270.23(c)	§264.601	Potential exposure pathways	Part 4 Part 5 Attachment A2 Attachment N Attachment L		✓
§270.23(d)		Demonstration of treatment effectiveness	Part 4 Attachment A2 Attachment N		✓

Remove the Quarterly Repeat of Data Generation Review, V&V
DRAFT 11-26-2013

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
	§264.602	Monitoring, analysis, inspection, response, reporting, and corrective action	Part 4 Part 5 Attachment A2 Attachment E-1 Attachment N Attachment L		✓
	§264.603	Post-closure care	Attachment H Attachment H1		✓
	264 Subpart E	Manifest system, record keeping, and reporting	Permit Part 1 Permit Part 2.13 & 2.14 Permit Part 4 Attachment C		✓
§270.30(j)(2)	§264.73(b)	Ground-water records	Part 1		✓
	264 Subpart F	Releases from solid waste management units	Part 5 & 7 Attachment G2 & L		✓
	§264.90	Applicability	Part 5 Attachment L		✓
	§264.91	Required programs	Attachment L		✓
	§264.92	Ground-water protection standard	Attachment L		✓
	§264.93	Hazardous constituents	Attachment L		✓
	§264.94	Concentration limits	Part 5 Attachment L		✓
	§264.95	Point of compliance	Part 5 Attachment L		✓
	§264.96	Compliance period	Attachment L		✓
	§264.97	General ground-water monitoring requirements	Part 5 Attachment L		✓
	§264.98	Detection monitoring program	Part 5 Attachment L		✓
	§264.99	Compliance monitoring program	Part 5 Attachment L		✓
	§264.100	Corrective action program	Part 5 Attachment L		✓
	§264.101	Corrective action for solid waste management units	Part 8 Attachment L		✓
	264 Appendix IX	Ground-water Monitoring List	Part 5 Attachment L		✓

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Attachment A
Table of Changes

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Table of Changes

Affected Permit Section	Explanation of Changes
Attachment C3, Section C3-4b	Delete second paragraph of this section.
Attachment C6, Table C6-1, Item 42	Delete Item 42 in its entirety.

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Attachment B
Proposed Revised Permit Text

1 **Proposed Revised Permit Text:**

2 C3-4b Project Level

3 Data validation and verification at this level involves scrutiny and signature release from the Site
4 Project Manager (or designee). The Permittees shall require each site to meet the following
5 minimum requirements for each waste container. Any nonconformance identified during this
6 process shall be documented on a nonconformance report (Section C3-7).

7 ~~The Site Project Manager shall ensure that a repeat of the data generation level review,~~
8 ~~validation, and verification is performed on the data for a minimum of one randomly chosen~~
9 ~~waste container quarterly (every three months). This exercise will document that the data~~
10 ~~generation level review, validation, and verification is being performed according to~~
11 ~~implementing procedures.~~

Table C6-1 Waste Analysis Plan (WAP) General Checklist for Use at DOE'S Generator/Storage Sites

	WAP Requirement ¹	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
40	<p>Are procedures in place to ensure that 100 percent of all batch data reports receive a Site Project Manager signature release with an associated review checklist prior to characterization of the associated waste and shipment to the WIPP. This release shall ensure the following:</p> <p>Testing batch QC checks were properly performed. Radiography data are complete and acceptable based on evidence of videotape review of one waste container per day or once per testing batch, whichever is less frequent</p> <p>Data generation level independent technical review, validation, and verification have been performed as evidenced by the completed review checklists and appropriate signature releases.</p> <p>Independent technical reviewers were not involved in the generation or recording of the data under review.</p> <p>Batch Data review checklists are complete</p> <p>Batch Data Reports are complete and data properly reported</p> <p>Verify that data are within established data assessment criteria and meet all applicable QAOs</p> <p>(Section C3-4b(1))</p>					
42	<p>Are procedures in place to ensure that a repeat of the data review process at the data generation level will be performed on a minimum of one randomly chosen waste container every quarter to determine if the verification and validation is performed according to documented procedures? (Section C3-4b)</p>					
43	<p>Are procedures in place and checklists are available to prepare a Site Project Manager (SPM) Summary and a Data Validation Summary (the summaries may be in the same document)? The SPM Summary includes a validation checklist for each batch that is of sufficient detail to document all aspects of a batch data report that could affect data quality. The Data Validation Summary must identify each Batch Data Report reviewed , describe how the validation was performed, identify all problems, and identify all acceptable and unacceptable data. Summaries must include release signatures. (Section C3-4b(2))</p>					

Item 5

Class 2 Permit Modification Request

Revise Waste Stream Definition

**Waste Isolation Pilot Plant
Carlsbad, New Mexico**

WIPP HWFP Number NM4890139088-TSDF

November 2013

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10

Acronyms and Abbreviations

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AK	acceptable knowledge
BNFP	Barnwell Nuclear Fuel Plant
CFR	Code of Federal Regulations
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
HWN	hazardous waste number
NMAC	New Mexico Administrative Code
NWP	Nuclear Waste Partnership LLC
Permit	Hazardous Waste Facility Permit
Permittees	DOE and NWP
PMR	Permit Modification Request
RCRA	Resource Conservation and Recovery Act
TRU	Transuranic
TSDf	Treatment, Storage, and Disposal Facility
VE	Visual Examination
WAC	Waste Acceptance Criteria
WIPP	Waste Isolation Pilot Plant

1 **Overview of the Permit Modification Request**

2 This document contains a Class 2 Permit Modification Request (**PMR**) for the Waste Isolation
3 Pilot Plant (**WIPP**) Hazardous Waste Facility Permit (**Permit**), Permit Number NM4890139088-
4 TSDF.

5 This PMR is being submitted by the U.S. Department of Energy (**DOE**) and Nuclear Waste
6 Partnership LLC (**NWP**), collectively referred to as the **Permittees**, in accordance with the
7 Permit, Part 1, Section 1.3.1. (20.4.1.900 New Mexico Administrative Code (**NMAC**)
8 incorporating Title 40 Code of Federal Regulations (**CFR**) 270.42(b)). A modification to the
9 Permit is being requested for the following items:

- 10 • Revise the definition of a waste stream
- 11 • Remove references to “Waste Matrix Code Group(s)”

12 These changes do not reduce the ability of the Permittees to provide continued protection to
13 human health and the environment.

14 The requested modification to the Permit and related supporting documents are provided in this
15 PMR. The proposed modification to the text of the Permit has been identified using red text and
16 a double underline for new text and a ~~strikeout~~ font for deleted information. The following
17 information specifically addresses how compliance has been achieved with the Permit, Part 1,
18 Section 1.3.1., for submission of this Class 2 PMR.

19 **1. 20.4.1.900 NMAC (incorporating 40 CFR §270.42(b)(1)(i)) requires the applicant to**
20 **describe the exact change to be made to the Permit conditions and supporting**
21 **documents referenced by the Permit.**

22 This modification proposes to revise the definition of a waste stream and remove references to
23 “Waste Matrix Code Group(s).” The Permit sections affected by this change are as follows:

- 24 • Attachment C, Section C-0a
- 25 • Attachment C, Section C-5a(2)
- 26 • Attachment C, Table C-1
- 27 • Attachment C, Table C-3
- 28 • Attachment C3, Section C3-6b(1)
- 29 • Attachment C3, Section C3-6b(2)
- 30 • Attachment C6, Table C6-1

31 The Table of Changes (Appendix A) and the redline ~~strikeout~~ in this PMR (Appendix B) describe
32 each change that is being proposed.

1 **2. 20.4.1.900 NMAC (incorporating 40 CFR 270.42(b)(1)(ii)), requires the applicant to**
2 **identify that the modification is a Class 2 modification.**

3 The proposed modification is classified as a Class 2 Modification for the reason indicated below:

4 20.4.1.900 New Mexico Administrative Code (incorporating 40 CFR §270.42, Appendix I,
5 Item B.) *“General Facility Standards, 1. Changes to waste sampling or analysis*
6 *methods:...d. Other changes...2”*

7 **3. 20.4.1.900 NMAC (incorporating 40 CFR 270.42(b)(1)(iii)), requires the applicant to**
8 **explain why the modification is needed.**

9 The Resource Conservation and Recovery Act (RCRA) regulations do not define the term
10 “waste stream.” Section C-0a of the Permit, “Waste Characterization,” states that
11 characterization requirements for individual containers of TRU mixed waste are specified on a
12 waste-stream basis. The current Permit, however, requires that all waste be characterized in
13 the same manner using acceptable knowledge (AK) and that all waste containers undergo
14 radiography and/or visual examination (VE) prior to shipment. The Permit also states that a
15 waste stream must be comprised of waste materials generated from “a single process or
16 activity.” Since there is no requirement to categorize waste into waste streams for the purposes
17 of characterization, it is only necessary to group waste at a generator/storage site into waste
18 streams based upon assignment of the similar U.S. Environmental Protection Agency (EPA)
19 hazardous waste numbers (HWNs) and physical form (i.e., waste matrix code). Defining waste
20 streams in this manner allows for grouping waste into broader waste streams, yet still provides a
21 mechanism by which to review and approve waste for compliant transport and disposal at the
22 WIPP facility using the established waste stream profile form review and approval process. The
23 Permittees intend to apply the proposed waste-stream definition primarily to new waste streams
24 (i.e., not previously approved waste streams). It is not the intent of the Permittees to revise or
25 combine existing Waste Stream Profile Forms whereby waste streams have already been
26 identified and approved for shipment.

27 The proposed change to the waste stream definition provides more flexibility in categorizing
28 waste into waste streams and still provides a means to ensure that enough information is known
29 beforehand to store and dispose of transuranic (TRU) mixed waste at the WIPP facility in a
30 manner that is protective of human health and the environment. Revising the definition of a
31 waste stream to remove the requirement that it be generated “from a single process or activity”
32 would improve the efficiency of the waste characterization process, minimize the overall number
33 of acceptable AK summary reports and waste stream profile forms, and streamline the
34 compilation of the AK record. The primary benefit of this PMR is to reduce the administrative
35 burden of segregating AK information into many waste streams. All required AK information
36 must still be compiled as currently described in the Permit because no changes are being
37 proposed to Permit Attachment C4, “TRU Mixed Waste Characterization Using Acceptable
38 Knowledge.”

39 Currently, the Permit requires waste characterization to be conducted primarily through the use
40 of AK. Per the Permit, Section C-3a, AK is used to characterize TRU mixed waste as follows:

- 41
- To delineate TRU mixed waste streams

- 1 • To assess whether TRU mixed wastes comply with the Treatment, Storage, and
2 Disposal Facility – Waste Acceptance Criteria (**TSDF-WAC**)
- 3 • To assess whether TRU mixed wastes exhibit a hazardous characteristic
- 4 • To assess whether TRU mixed wastes are listed hazardous waste
- 5 • To estimate waste material parameter weights

6 Acceptable Knowledge documentation must be compiled into an auditable record, on a waste
7 stream basis, such that the waste stream can be sufficiently characterized as described above.
8 The AK for a given waste stream contains the required information about the chemicals and
9 materials that were used in the processes that generated the waste. Each AK summary report
10 contains a reference listing of AK source documentation which must be included in the record.
11 If waste streams with similar physical form and hazardous constituents could be effectively
12 combined, this would streamline the process of compiling the AK by reducing the overall
13 number of AK summary reports, thereby reducing the duplication of many source documents in
14 individual AK records. Regardless of the size of a waste stream, or whether it originated from a
15 single process or a combination of processes, a waste stream must be bounded by its
16 associated AK. Because the AK for a waste stream must be complete and sufficient in order to
17 adequately characterize the waste, it is not necessary to define waste streams according to a
18 “single process or activity.” Waste streams originating from a single process or activity are
19 managed no differently at the WIPP facility than more broadly-defined waste streams generated
20 from multiple activities at a generator/storage site.

21 Except for waste streams with an approved AK Sufficiency Determination Request, one-
22 hundred percent of the waste containers in each waste stream undergo either radiography or
23 VE to ensure that the physical form of the waste matches the associated waste-stream
24 description and that there are no prohibited items present in the waste. The Permit states that
25 “a testing batch can be up to 20 waste containers without regard to waste matrix.” Therefore, a
26 radiography or VE batch can be comprised of waste containers from multiple waste streams.
27 Radiography and VE operators must be well-versed in the AK in order to accurately verify the
28 physical attributes of each waste stream (e.g., waste matrix code, potential prohibited items).
29 Reducing the overall number of waste streams by allowing for larger, more broadly-defined
30 waste streams would result in more testing batches of containers from the same waste stream
31 and reduce the number of AK summaries that operators would have to be familiar with at one
32 time.

33 In the past waste streams comprised of waste materials from more than one activity at a site,
34 but with similar physical form and hazardous constituents, have been shipped to the WIPP
35 facility and safety stored and disposed. The AK record for these waste streams fully describes
36 all processes which occurred with each activity, and all chemical and material inputs to the
37 processes. The applicable EPA HWNs were assigned to the waste streams, and prior to
38 shipment to the WIPP facility, all containers underwent radiography and/or VE to verify the
39 physical form of the waste and ensure that no prohibited items were present. Examples of
40 these waste streams include Savannah River Site waste streams SR-AGNS-HET and SR-
41 AGNS-HOM, which delineate the debris and homogenous waste, respectively, from the Hot and
42 Cold Laboratory Area at the Barnwell Nuclear Fuel Plant (**BNFP**). According to the AK
43 summary report, both waste streams were comprised of wastes generated from several different

1 research and development and decontamination and decommissioning activities at the BNFP.
2 However, the wastes were similar in hazardous constituents, meaning the applicable EPA
3 HWNs were similar across the population of the waste, and in physical form (i.e., either all
4 heterogenous debris waste or homogenous solids waste).

5 Supercompacted debris waste streams BN510 and BN510.1, generated at the Advanced Mixed
6 Waste Treatment Facility, are the result of the compaction of feedstock debris waste from
7 multiple waste streams at several generator/storage sites, including Rocky Flats, Mound Plant,
8 Battelle Columbus, and Hanford. The “activity” which generated the waste streams is
9 supercompaction; however, the waste originated from many different processes and activities at
10 the individual sites. The AK compiled for these supercompacted waste streams includes all the
11 AK associated with the individual waste streams from which the waste was originally derived.
12 All feedstock waste streams and resulting supercompacted waste are debris waste. The EPA
13 HWNs assigned to the supercompacted debris waste include the EPA HWNs associated with
14 the feedstock debris as originally compiled in the baseline documents. This is an ideal example
15 of a broadly-defined waste stream comprised of waste, from multiple processes and activities,
16 with similar hazardous constituents and of similar physical form. Most importantly, BN510 and
17 BN510.1 have been successfully and safety managed, stored, and disposed at the WIPP facility
18 since 2005 and 2010, respectively.

19 The Savannah River Site has developed waste stream profile forms for very small waste
20 streams (i.e., less than ten containers each) that were the same summary category group and
21 had the same, or nearly the same, EPA HWNs associated with them as larger waste streams.
22 However, because the process which generated the wastes was not identical to the process or
23 activity described in the AK summary for the larger waste stream, a separate waste stream was
24 delineated. This resulted in an additional waste stream profile form development and approval
25 process. An example of a small waste stream is SR-W026-221F-HET-A, which consisted of five
26 55-gallon drums and could have been combined with SR-W026-221F-HET if the waste stream
27 definition had been broader.

28 This PMR also proposes to remove the term “Waste Matrix Code Group” from the Permit.
29 Assignment of appropriate Waste Matrix Code Group (i.e., solidified inorganics, solidified
30 organics, salt waste, contaminated soil/debris, uncategorized metal, lead/cadmium waste,
31 inorganic nonmetal waste, combustible waste, graphite waste, heterogeneous debris waste, and
32 composite filter waste) to a waste stream is not the primary mechanism for describing the
33 physical form of the waste. The physical form of the waste is described by its Waste Matrix
34 Code, which is documented and verified through radiography and/or visual examination. The
35 Waste Matrix Code, as determined through radiography and/or visual examination, ensures that
36 the waste container has been assigned to the appropriate waste stream. A waste stream’s
37 Waste Matrix Code designation is also verified during the Phase I waste stream screening and
38 verification process described in Permit Section C-5a. Additionally, the Waste Matrix Code of a
39 waste stream is confirmed by the Permittees as part of the TRU Waste Confirmation Program
40 described in Permit Attachment C7. None of the verification or confirmation activities described
41 in the Permit pertain to the waste stream’s assigned Waste Matrix Code Group, and the Waste
42 Matrix Code Group is not used to make any decisions regarding the management, storage, and
43 disposal of TRU mixed waste at the WIPP facility. Therefore, all references to “Waste Matrix
44 Code Group” should be removed from the Permit.

- 1 **4. 20.4.1.900 NMAC (incorporating 40 CFR 270.42 (b)(1)(iv)), requires the applicant to**
2 **provide the applicable information required by 40 CFR 270.13 through 270.21,**
3 **270.62 and 270.63.**

4 The regulatory crosswalk describes those portions of the Permit that are affected by this PMR.
5 Where applicable, regulatory citations in this modification reference 20.4.1 NMAC, revised
6 March 1, 2009, incorporating 40 CFR Parts 264 and 270. 40 CFR §§270.16 through 270.21,
7 270.62, and 270.63 are not applicable at the WIPP facility. Consequently, they are not listed in
8 the regulatory crosswalk table.

- 9 **5. 20.4.1.900 NMAC (incorporating 40 CFR 270.11(d)(1) and 40 CFR 270.30(k)),**
10 **requires that any person signing under paragraph a and b must certify the**
11 **document in accordance with 20.4.1.900 NMAC.**

12 The transmittal letter for this PMR contains the signed certification statement in accordance with
13 the Permit, Part 1, Section 1.9.

14

1

Regulatory Crosswalk

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit or Permit Application	Yes	No
§270.13		Contents of Part A permit application	Attachment B Part A		✓
§270.14(b)(1)		General facility description	Attachment A		✓
§270.14(b)(2)	§264.13(a)	Chemical and physical analyses	Part 2.3.1 Attachment C		✓
§270.14(b)(3)	§264.13(b)	Development and implementation of waste analysis plan	Part 2.3.1.1 Attachment C	✓	
	§264.13(c)	Off-site waste analysis requirements	Part 2.2.1 Attachment C	✓	
§270.14(b)(5)	§264.15(a-d)	General inspection requirements	Part 2.7 Attachment E-1a		✓
	§264.174	Container inspections	Attachment E-1b(1)		✓
§270.23(a)(2)	§264.602	Miscellaneous units inspections	Attachment E-1b Attachment E-1b(1)		✓
§270.14(b)(6)		Request for waiver from preparedness and prevention requirements of Part 264 Subpart C	NA		✓
§270.14(b)(7)	264 Subpart D	Contingency plan requirements	Part 2.12 Attachment D		✓
	§264.51	Contingency plan design and implementation	Part 2.12.1 Attachment D		✓
	§264.52 (a) & (c-f)	Contingency plan content	Attachment D		✓
	§264.53	Contingency plan copies	Part 2.12.2 Attachment D		✓
	§264.54	Contingency plan amendment	Part 2.12.3 Attachment D		✓
	§264.55	Emergency coordinator	Part 2.12.4 Attachment D-4a(1)		✓
	§264.56	Emergency procedures	Attachment D-4		✓
§270.14(b)(8)		Description of procedures, structures or equipment for:	Attachment A Part 2.11		✓
§270.14(b)(8)(i)		Prevention of hazards in unloading operations (e.g., ramps and special forklifts)	Part 2.11		✓
§270.14(b)(8)(ii)		Runoff or flood prevention (e.g., berms, trenches, and dikes)	Attachment A1-1c(1) Part 2.11		✓
§270.14(b)(8)(iii)		Prevention of contamination of water supplies	Part 2.11		✓
§270.14(b)(8)(iv)		Mitigation of effects of equipment failure and power outages	Part 2.11		✓
§270.14(b)(8)(v)		Prevention of undue exposure of personnel (e.g., personal protective equipment)	Part 2.11		✓

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit or Permit Application	Yes	No
§270.14(b)(8)(vi) §270.23(a)(2)	§264.601	Prevention of releases to the atmosphere	Part 2.11 Part 4.4 Attachment D-4e Attachment G-1a		✓
	264 Subpart C	Preparedness and Prevention	Part 2.10		✓
	§264.31	Design and operation of facility	Part 2.10		✓
	§264.32	Required equipment	Part 2.10.1 Attachment D		✓
	§264.33	Testing and maintenance of equipment	Part 2.10.2 Attachment E-1a		✓
	§264.34	Access to communication/alarm system	Part 2.10.3 Attachment E-1a		✓
	§264.35	Required aisle space	Part 2.10.4		✓
	§264.37	Arrangements with local authorities	Attachment D-4a(3)		✓
§270.14(b)(9)	§264.17(a-c)	Prevention of accidental ignition or reaction of ignitable, reactive, or incompatible wastes	Part 2.9		✓
§270.14(b)(10)		Traffic pattern, volume, and controls, for example: Identification of turn lanes Identification of traffic/stacking lanes, if appropriate Description of access road surface Description of access road load-bearing capacity Identification of traffic controls	Attachment A4		✓
§270.14(b)(11)(i) and (ii)	§264.18(a)	Seismic standard applicability and requirements	Attachment G2-2.2 Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(11)(iii-v)	§264.18(b)	100-year floodplain standard	Attachment A1-1c(1) Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(12)	§264.16(a-e)	Personnel training program	Part 2.8 Attachment F		✓
§270.14(b)(13)	264 Subpart G	Closure and post-closure plans	Part 6 & 7 Attachment G & H		✓
§270.14(b)(13)	§264.111	Closure performance standard	Attachment G-1a		✓
§270.14(b)(13)	§264.112(a), (b)	Written content of closure plan	Attachment G-1		✓
§270.14(b)(13)	§264.112(c)	Amendment of closure plan	Part 6.3 Attachment G-1d(4)		✓
§270.14(b)(13)	§264.112(d)	Notification of partial and final closure	Attachment G-2a		✓
§270.14(b)(13)	§264.112(e)	Removal of wastes and decontamination/dismantling of equipment	Attachment G-1e(2)		✓

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit or Permit Application	Yes	No
§270.14(b)(13)	§264.113	Time allowed for closure	Part 6.5 Attachment G-1d		✓
§270.14(b)(13)	§264.114	Disposal/decontamination	Part 6.6 Attachment G-1e(2)		✓
§270.14(b)(13)	§264.115	Certification of closure	Part 6.7 Attachment G-2a		✓
§270.14(b)(13)	§264.116	Survey plat	Part 6.8 Attachment G-2b		✓
§270.14(b)(13)	§264.117	Post-closure care and use of property	Part 7.3 Attachment H-1a		✓
§270.14(b)(13)	§264.118	Post-closure plan; amendment of plan	Part 7.5 Attachment H-1a (1)		✓
§270.14(b)(13)	§264.178	Closure/containers	Part 6.9 Attachment A1-1h Attachment G-1		✓
§270.14(b)(13)	§264.601	Environmental performance standards-miscellaneous units	Attachment A-4 Attachment D-1 Attachment G-1a		✓
§270.14(b)(13)	§264.603	Post-closure care	Part 7.3 Attachment G-1a(3)		✓
§270.14(b)(14)	§264.119	Post-closure notices	Part 7.4 Attachment H-2		✓
§270.14(b)(15)	§264.142	Closure cost estimate	NA		✓
	§264.143	Financial assurance	NA		✓
§270.14(b)(16)	§264.144	Post-closure cost estimate	NA		✓
	§264.145	Post-closure care financial assurance	NA		✓
§270.14(b)(17)	§264.147	Liability insurance	NA		✓
§270.14(b)(18)	§264.149-150	Proof of financial coverage	NA		✓
§270.14(b)(19)(i), (vi), (vii), and (x)		Topographic map requirements Map scale and date Map orientation Legal boundaries Buildings Treatment, storage, and disposal operations Run-on/run-off control systems Fire control facilities	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(ii)	§264.18(b)	100-year floodplain	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit or Permit Application	Yes	No
§270.14(b)(19)(iii)		Surface waters	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(iv)		Surrounding land use	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(v)		Wind rose	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(viii)	§264.14(b)	Access controls	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(ix)		Injection and withdrawal wells	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(xi)		Drainage on flood control barriers	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(xii)		Location of operational units	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit or Permit Application	Yes	No
§270.14(b)(20)		Other federal laws Wild and Scenic Rivers Act National Historic Preservation Act Endangered Species Act Coastal Zone Management Act Fish and Wildlife Coordination Act Executive Orders	Attachment B Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.15	§264 Subpart I	Containers	Part 3 Part 4.3 Attachment A1		✓
	§264.171	Condition of containers	Part 3.3 Attachment A1		✓
	§264.172	Compatibility of waste with containers	Part 3.4 Attachment A1		✓
	§264.173	Management of containers	Part 3.5 Attachment A1		✓
	§264.174	Inspections	Part 3.7 Attachment E-1 Attachment A1-1e		✓
§270.15(a)	§264.175	Containment systems	Part 3.6 Attachment A1		✓
§270.15(c)	§264.176	Special requirements for ignitable or reactive waste	Attachment A1-1g Permit Part 2.1		✓
§270.15(d)	§264.177	Special requirements for incompatible wastes	Attachment A1-1g Permit Part 2.3.3.4		✓
	§264.178	Closure	Part 6 Attachment G		✓
§270.15(e)	§264.179	Air emission standards	Part 4.4.2 Attachment N		✓
§270.23	264 Subpart X	Miscellaneous units	Part 1.3.1 Attachment A2-1 Attachment G1 3.1		✓
§270.23(a)	§264.601	Detailed unit description	Part 4 Part 5 Attachment A2 Attachment L		✓
§270.23(b)	§264.601	Hydrologic, geologic, and meteorologic assessments	Part 4 Part 5 Attachment A2 Attachment L		✓
§270.23(c)	§264.601	Potential exposure pathways	Part 4 Part 5 Attachment A2 Attachment N Attachment L		✓
§270.23(d)		Demonstration of treatment effectiveness	Part 4 Attachment A2 Attachment N		✓

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit or Permit Application	Yes	No
	§264.602	Monitoring, analysis, inspection, response, reporting, and corrective action	Part 4 Part 5 Attachment A2 Attachment E Attachment N Attachment L		✓
	§264.603	Post-closure care	Attachment H Attachment H1		✓
	264 Subpart E	Manifest system, record keeping, and reporting	Permit Part 1 Permit Part 2.13 & 2.14 Permit Part 4 Attachment C		✓
§270.30(j)(2)	§264.73(b)	Ground-water records	Part 1		✓
	264 Subpart F	Releases from solid waste management units	Part 5 & 7 Attachment G2 & L		✓
	§264.90	Applicability	Part 5 Attachment L		✓
	§264.91	Required programs	Attachment L		✓
	§264.92	Ground-water protection standard	Attachment L		✓
	§264.93	Hazardous constituents	Attachment L		✓
	§264.94	Concentration limits	Part 5 Attachment L		✓
	§264.95	Point of compliance	Part 5 Attachment L		✓
	§264.96	Compliance period	Attachment L		✓
	§264.97	General ground-water monitoring requirements	Part 5 Attachment L		✓
	§264.98	Detection monitoring program	Part 5 Attachment L		✓
	§264.99	Compliance monitoring program	Part 5 Attachment L		✓
	§264.100	Corrective action program	Part 5 Attachment L		✓
	§264.101	Corrective action for solid waste management units	Part 8 Attachment L		✓
	264 Appendix IX	Ground-water Monitoring List	Part 5 Attachment L		✓

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Appendix A
Table of Changes

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Table of Changes

Affected Permit Section	Explanation of Changes
Attachment C, Section C-0a	<p>Change “A waste stream is defined as waste materials that have common physical form, that contain similar hazardous constituents, and that are generated from a single processor activity” to “A waste stream is defined as waste materials from a single generator/storage site that have common physical form and contain similar hazardous constituents.”</p> <p>Change “Waste Matrix Code Groups” to “Waste Matrix Codes.”</p> <p>Delete “The Waste Matrix Code Groups are solidified inorganics, solidified organics, salt waste, soils, lead/cadmium metal, inorganic nonmetal waste, combustible waste, graphite, filters, heterogeneous debris waste, and uncategorized metal.”</p>
Attachment C, Section C-5a(2)	<p>First paragraph, change “Waste Matrix Code Group” to “Waste Matrix Code.”</p> <p>Fifth paragraph, change “1) an assignment of the waste stream’s waste description (by Waste Matrix Codes) and Waste Matrix Code Group” to “1) an assignment of the waste stream’s waste description (by Waste Matrix Code).”</p>
Attachment C, Table C-1	Delete column entitled “Waste Matrix Code Groups.”
Attachment C, Table C-3	Delete “Waste Matrix Code Group.”
Attachment C3, Section C3-6b(1)	Delete “Waste Matrix Code Group.”
Attachment C3, Section C3-6b(2)	Fifth bullet, change “Waste Matrix Code(s) and Waste Matrix Code Group” to “Waste Matrix Code.”
Attachment C6, Table C6-1	<p>Item 3, change “Are procedures in place to ensure that the generator/storage site assigns Waste Matrix Code Groups (e.g., solidified inorganics, solidified organics, salt waste, soils, combustible waste, filters, graphite, heterogeneous debris waste, inorganic nonmetal waste, lead/cadmium metal, uncategorized metal) to each waste stream?” to “Are procedures in place to ensure that the generator/storage site assigns a Waste Matrix Code to each waste stream?”</p> <p>Item 56, delete “Waste Matrix Code Group.”</p> <p>Item 56a, fourth bullet, change “Waste Matrix Code(s) and Waste Matrix Code Group” to “Waste Matrix Code.”</p>

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Appendix B
Proposed Revised Permit Text

1 **Proposed Revised Permit Text:**

2 C-0a Waste Characterization

3 Characterization requirements for individual containers of TRU mixed waste are specified on a
4 waste stream basis. A waste stream is defined as waste materials from a single
5 generator/storage site that have common physical form, and ~~that~~ contain similar hazardous
6 constituents, ~~and that are generated from a single process or activity~~. Waste streams are
7 grouped by Waste Matrix Code s ~~Groups~~ related to the physical and chemical properties of the
8 waste. Generator/storage sites shall use the characterization techniques described in this WAP
9 to assign appropriate Waste Matrix Code s ~~Groups~~ to waste streams for WIPP disposal. ~~The~~
10 ~~Waste Matrix Code Groups are solidified inorganics, solidified organics, salt waste, soils,~~
11 ~~lead/cadmium metal, inorganic nonmetal waste, combustible waste, graphite, filters,~~
12 ~~heterogeneous debris waste, and uncategorized metal.~~ Waste Matrix Code s ~~Groups~~ can be
13 grouped into three Summary Category groups: Homogeneous Solids (Summary Category
14 S3000), Soil/Gravel (Summary Category S4000), and Debris Waste (Summary Category
15 S5000).

16 C-5a(2) Examination of the Waste Stream Profile Form and Container Data Checks

17 The Permittees will verify the completeness and accuracy of the Waste Stream Profile Form
18 (Section C3-6b(1)). Figure C-2 includes the waste characterization and waste stream approval
19 process. The assignment of the waste stream description, Waste Matrix Code ~~Group~~, and
20 Summary Category Groups; the acceptable knowledge summary documentation; the methods
21 used for characterization; the DOE certification, and appropriate designation of EPA hazardous
22 waste number(s) will be examined by the Permittees. If the WSPF is inaccurate, efforts will be
23 made to resolve discrepancies by contacting the generator/storage site in order for the waste
24 stream to be eligible for shipment to the WIPP facility. If discrepancies in the waste stream are
25 detected at the generator/storage site, the generator/storage site will implement a non-
26 conformance program to identify, document, and report discrepancies (Permit Attachment C3).

27 The WSPF shall pass all verification checks by the Permittees in order for the waste stream to
28 be approved by DOE for shipment to the WIPP facility. The WSPF check against waste
29 container data will occur during the initial WSPF approval process (Section C-5a).

30 The EPA hazardous waste numbers for the wastes that appear on the Waste Stream Profile
31 Form will be compared to those in Table C-5 to ensure that only approved wastes are accepted
32 for management, storage, or disposal at WIPP. Some of the waste may also be identified by
33 unique state hazardous waste codes or numbers. These wastes are acceptable at WIPP as
34 long as the TSDF-WAC are met. The CIS will be reviewed by the Permittees to verify that the
35 waste has been classified correctly with respect to the assigned EPA hazardous waste
36 numbers. The Permittees will verify that the applicable requirements of the TSDF-WAC have
37 been met by the generator/storage site.

38 Waste data transferred via the WWIS after WSPF approval will be compared with the approved
39 WSPF. Any container from an approved hazardous waste stream with a description different
40 from its WSPF will not be managed, stored, or disposed at WIPP.

1 The Permittees will also verify that three different types of data specified below are available for
2 every container holding TRU mixed waste before that waste is managed, stored, or disposed at
3 WIPP: 1) an assignment of the waste stream's waste description (by Waste Matrix Codes) ~~and~~
4 ~~Waste Matrix Code Group~~; 2) a determination of ignitability, reactivity, and corrosivity; and 3) a
5 determination of compatibility. The verification of waste stream description will be performed by
6 reviewing the WWIS for consistency in the waste stream description and WSPF. The CIS will
7 indicate if the waste has been checked for the characteristics of ignitability, corrosivity, and
8 reactivity. The final verification of waste compatibility will be performed using Appendix C1 of the
9 WIPP RCRA Part B Permit Application (DOE, 1997), the compatibility study.

10 Any container with unresolved discrepancies associated with hazardous waste characterization
11 will not be managed, stored, or disposed at the WIPP facility until the discrepancies are
12 resolved. If the discrepancies cannot be resolved, DOE will revoke the approval status of the
13 waste stream, suspend shipments of the waste stream, and notify NMED. Waste stream
14 approval will not be reinstated until the generator/storage site demonstrates all corrective
15 actions have been implemented and the generator/storage site waste characterization program
16 is reassessed by DOE.

17

Table C-1
Summary of Parameters, Characterization Methods, and Rationale for Transuranic Mixed Waste

Waste Matrix Code Summary Categories	Waste Matrix Code Groups	Characterization Parameter	Method	Rationale
S3000-Homogeneous Solids	<ul style="list-style-type: none"> • Solidified inorganics • Salt waste • Solidified organics 	Physical waste form	Acceptable knowledge, radiography and/or visual examination	<ul style="list-style-type: none"> • Determine waste matrix • Demonstrate compliance with waste acceptance criteria (e.g., no liquid in excess of TSDf-WAC limits, no incompatible wastes, no compressed gases)
S4000-Soil/Gravel	<ul style="list-style-type: none"> • Contaminated soil/debris 			
S5000-Debris Waste	<ul style="list-style-type: none"> • Uncategorized metal (metal waste other than lead/cadmium) • Lead/cadmium waste • Inorganic nonmetal waste • Combustible waste • Graphite waste • Heterogeneous debris waste • Composite filter waste 			

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Table C-3
WIPP Waste Information System Data Fields^a

Characterization Module Data Fields ^b	
Container ID ^c Generator EPA ID Generator Address Generator Name Generator Contact Hazardous Code Layers of Packaging Liner Exists Liner Hole Size Filter Model Number of Filters Installed Item Description Code Haz. Manifest Number NDE Complete ^e	Transporter EPA ID Transporter Name Visual Exam Container ^e Waste Material Parameter ^d Waste Material Weight ^d Waste Matrix Code Waste Matrix Code Group Waste Stream Profile Number
Certification Module Data Fields	
Container ID ^c Container type Container Weight Contact Dose Rate Container Certification date Container Closure Date	Handling Code
Transportation Data Module	
Contact Handled Package Number Assembly Number ^f Container IDs ^{c,d} ICV Closure Date	Ship Date Receive Date
Disposal Module Data	
Container ID ^c Disposal Date Disposal Location	

- ^a This is not a complete list of the WWIS data fields.
- ^b Some of the fields required for characterization are also required for certification and/or transportation.
- ^c Container ID is the main relational field in the WWIS Database.
- ^d This is a multiple occurring field for each waste material parameter, nuclide, etc.
- ^e These are logical fields requiring only a yes/no.
- ^f Required for 7-packs of 55-gal drums, 4-packs of 85-gal drums, or 3-packs of 100-gal drums to tie all of the drums in that assembly together. This facilitates the identification of waste containers in a shipment without need to breakup the assembly.

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1 C3-6b(1) Waste Stream Profile Form

2 The Waste Stream Profile Form (WSPF, Figure C-1) shall include the following information:

- 3 • Generator/storage site name
- 4 • Generator/storage site EPA ID
- 5 • Date of audit report approval by NMED (if obtained)
- 6 • Original generator of waste stream
- 7 • Whether waste is Contact-Handled or Remote-Handled
- 8 • The Waste Stream WIPP Identification Number
- 9 • Summary Category Group
- 10 • ~~Waste Matrix Code Group~~
- 11 • Waste Material Parameter Weight Estimates per unit of waste
- 12 • Waste stream name
- 13 • A description of the waste stream
- 14 • Applicable EPA hazardous waste numbers
- 15 • Applicable TRUCON codes
- 16 • A listing of acceptable knowledge documentation used to identify the waste stream
- 17 • The waste characterization procedures used and the reference and date of the
- 18 procedure
- 19 • Certification signature of Site Project Manager, name, title, and date signed

20 C3-6b(2) Characterization Information Summary

21 The Characterization Information Summary shall include the following elements, if applicable:

- 22 • Data reconciliation with DQOs
- 23 • Radiography and VE summary to document that all prohibited items are absent in
- 24 the waste and to verify that the physical form of the waste matches the waste
- 25 stream description as determined by AK (if applicable).
- 26 • A justification for the selection of radiography and/or VE as an appropriate method
- 27 for characterizing the waste.

- 1 • A complete listing of all container identification numbers used to generate the
2 WSPF, cross-referenced to each Batch Data Report

- 3 • Complete AK summary, including stream name and number, point of generation,
4 waste stream volume (current and projected), generation dates, TRUCON codes,
5 Summary Category Group, Waste Matrix Code(s) and ~~Waste Matrix Code Group~~,
6 other TWBIR information, waste stream description, areas of operation, generating
7 processes, RCRA determinations, radionuclide information, all references used to
8 generate the AK summary, and any other information required by Permit
9 Attachment C4, Section C4-2b.

- 10 • Method for determining Waste Material Parameter Weights per unit of waste.

- 11 • List of any AK Sufficiency Determinations requested for the waste stream.

- 12 • Certification through acceptable knowledge or testing that any waste assigned the
13 hazardous waste number of U134 (hydrofluoric acid) no longer exhibits the
14 characteristic of corrosivity. This is verified by ensuring that no liquid is present in
15 U134 waste.

1 **Table C6-1 Waste Analysis Plan (WAP) General Checklist for use at DOE’S Generator/Storage Sites**

	WAP Requirement ¹	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
Waste Stream Identification						
1	Does the generator/storage site define “waste stream” as waste materials that have common physical form, that contain similar hazardous constituents, and that are generated from a single process or activity? (Attachment C Section C-0a)					
2	Are procedures in place to ensure that the generator/storage site assigns one of the Summary Category Groups (S3000-homogeneous solids, S4000-soils/gravel, S5000-debris waste) to each waste stream? (Section C-1b)					
3	Are procedures in place to ensure that the generator/storage site assigns a Waste Matrix Code Groups (e.g., solidified inorganics, solidified organics, salt waste, soils, combustible waste, filters, graphite, heterogeneous debris waste, inorganic nonmetal waste, lead/cadmium metal, uncategorized metal) to each waste stream? (Section C-0a)					
4	Are procedures in place to ensure that the generator/storage site assigns a Waste Stream WIPP Identifier (ID) to each waste stream? (Section C3-6b(1))					

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3

56	<p>Are procedures in place to ensure that hard copy or electronic Waste Stream Profile Form will include the following</p> <ul style="list-style-type: none"> • Generator/storage site name • Generator/storage site EPA ID • Date of audit report approval by NMED (if obtained) • Original generator of waste stream • Whether waste is Contact-Handled or Remote-Handled • Waste Stream WIPP Identification Number • Summary Category Group • Waste Matrix Code Group • Waste Material Parameter Weight Estimates per unit of waste • Waste stream name • A description of the waste stream • Applicable EPA hazardous waste numbers • Applicable TRUCON codes • A listing of acceptable knowledge documentation used to identify the waste stream • The waste characterization procedures used and the reference and date of the procedure • Certification signature of Site Project Manager, name, title, and date signed <p>(Section C3-6b(1))</p>					
----	---	--	--	--	--	--

56a	<p>Are procedures in place to ensure that hard copy or electronic Characterization Information Summary will include the following:</p> <ul style="list-style-type: none"> • Data reconciliation with DQOs • Radiography and visual examination summary to document that all prohibited items are absent in the waste and to verify that the physical form of the waste matches its waste stream description as determined by AK (if applicable). • A complete listing of all container identification numbers used to generate the Waste Stream Profile Form, cross-referenced to each Batch Data Report • Complete AK summary, including stream name and number, point of generation, waste stream volume (current and projected), generation dates, TRUCON codes, Summary Category Group, Waste Matrix Code(s) and Waste Matrix Code Group, other TWBIR information, waste stream description, areas of operation, generating processes, RCRA determinations, radionuclide information, all references used to generate the AK summary, and any other information required by Permit Attachment C4, Section C4-2b. • Method for determining Waste Material Parameter Weights per unit of waste. • List of any AK Sufficiency Determinations requested for the waste stream. • Certification through acceptable knowledge or testing that any waste assigned the hazardous waste number of U134 (hydrofluoric acid) no longer exhibits the characteristic of corrosivity. This is verified by ensuring that no liquid is present in U134 waste. • A justification for the selection of radiography and/or VE as an appropriate method of characterizing the waste. <p>(Section C3-6b(2))</p>					
56b	<p>Are procedures in place to assure that ongoing container characterization results are cross referenced to Batch Data Reports? Section C3-6b</p>					

Item 6

Class 2 Permit Modification Request

Revise Waste Confirmation Program

**Waste Isolation Pilot Plant
Carlsbad, New Mexico**

WIPP Permit Number - NM4890139088-TSDF

November 2013

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Acronyms and Abbreviations

1		
2	CFR	Code of Federal Regulations
3	DOE	U.S. Department of Energy
4	MOC	Management and Operating Contractor
5	NMAC	New Mexico Administrative Code
6	NMED	New Mexico Environment Department
7	NWP	Nuclear Waste Partnership LLC
8	Permit	Hazardous Waste Facility Permit
9	Permittees	DOE and NWP
10	PMR	Permit Modification Request
11	QAO	quality assurance objective
12	QAP	Quality Assurance Program
13	RCRA	Resource Conservation and Recovery Act
14	VE	visual examination
15	WAP	Waste Analysis Plan
16	WIPP	Waste Isolation Pilot Plant
17		

Overview of the Permit Modification Request

This document contains one Class 2 Permit Modification Request (**PMR**) for the Waste Isolation Pilot Plant (**WIPP**) Hazardous Waste Facility Permit (**Permit**), Permit Number NM4890139088-TSDF.

This PMR is being submitted by the U.S. Department of Energy (**DOE**) and Nuclear Waste Partnership LLC (**NWP**), collectively referred to as the **Permittees**, in accordance with the Permit, Section 1.3.1. (20.4.1.900 New Mexico Administrative Code (**NMAC**) incorporating Title 40 Code of Federal Regulations (**CFR**) 270.42(b)). The modification request proposes the following changes:

- The Permittees are requesting removal of the Level 2 radiography and visual examination (**VE**) personnel in Attachment C7, F1, and F2.
- The Permittees are requesting the removal of the DOE Management Representative review of waste confirmation records as specified in Attachment C7.

The requested modification to the Permit and related supporting documents are provided in this PMR. The proposed modification to the text of the Permit has been identified using red text and a double underline and a ~~strikeout~~ font for deleted information. The following information specifically addresses how compliance has been achieved with the Permit, Part 1, Section 1.3.1., for submission of this Class 2 PMR.

- 1. 20.4.1.900 NMAC (incorporating 40 CFR §270.42(b)(1)(i)), requires the applicant to describe the exact change to be made to the permit conditions and supporting documents referenced by the Permit.**

The Permittees are proposing the following changes in this PMR:

1. The Permittees are removing the requirements that waste confirmation personnel be qualified to perform radiography or VE which are defined as Level 2 qualifications. Attachment C7, Section C7-1a(1), indicates that, *Waste confirmation personnel **may** be trained to either review radiography/visual examination media and records (Level 1) **or** to perform actual radiography/visual examination on the waste container(s) (Level 2).* The Permittees have evaluated this requirement and can find no situation which would require waste confirmation personnel to perform radiography or VE at a generator/storage site rather than to review radiography/VE media and records. Therefore, the requirements and training pertaining to Level 2 waste confirmation personnel is not required. It is proposed that the Level 2 requirements and some of the associated descriptive information for radiography and VE be removed from Attachments C7, F1, and F2. The Permittees are also proposing to delete the quality assurance objectives (**QAOs**) for radiography and VE to address removal of Level 2 requirements.
2. The Permittees are also removing the requirement for a DOE Management Representative to review the data generated during the waste confirmation process. Attachment C7, Section C7-1e(2), requires that the DOE evaluate radiography and VE data forms and independent technical review checklists prior

1 to waste emplacement. This requirement is not necessary to implement waste
2 confirmation in accordance with the Resource Conservation and Recovery Act
3 (**RCRA**) and is duplicative of work already performed by waste confirmation
4 personnel on behalf of the Permittees. It is proposed that the DOE Management
5 Representative Review will be removed from Attachment C7.

- 6 3. The Permittees are clarifying language in Attachment C, Section C-0b and
7 Attachment C4-3d that the generator/storage site must provide a description of
8 how Waste Confirmation is to be accomplished per the requirements of
9 Attachment C7.

10 The Table of Changes (Appendix A) and the redline strikeout in this modification (Appendix B)
11 describe each change that is being proposed.

12
13 **2. 20.4.1.900 NMAC (incorporating 40 CFR §270.42(b)(1)(ii)), requires the applicant to**
14 **identify that the modification is a Class 2 modification.**

15 In accordance with 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I) this
16 modification is classified as a Class 2 as indicated in Appendix I, Item B.1.d, which states
17 “*Changes to the waste sampling or analysis methods: Other changes...2*” These changes apply
18 to the WIPP Waste Analysis Plan (**WAP**). In addition, this PMR proposes to decrease the
19 amount of training given to employees and such changes are defined as Class 2 by Appendix I,
20 Item B.5.a, which states “*Changes in the training plan:... That affect the type or decrease the*
21 *amount of training given to employees...2.*”

22 **3. 20.4.1.900 NMAC (incorporating 40 CFR §270.42(b)(1)(iii)), requires the applicant to**
23 **explain why the modification is needed.**

24 There are several requirements in Attachment C7 which are no longer needed as part of the
25 current waste confirmation program and are proposed to be removed.

26 The first requirement pertains to the requirement to have waste confirmation personnel qualified
27 to perform actual radiography and VE. Since the inception of the confirmation program in 2006,
28 there has been no situation whereby confirmation personnel were required to perform physical
29 radiography or VE on waste containers. Generator/storage sites routinely provide radiography
30 or VE records of sufficient quality to allow confirmation personnel to perform the required waste
31 confirmation activity. This is because the WAP provides the instructions and quality assurance
32 objectives for radiography and VE that must be implemented by the generator/storage sites.
33 The Permittees do not anticipate a change in this practice in the future. Level 1 training is
34 sufficient to perform waste confirmation activities. Therefore, the requirements to perform
35 radiography or VE and to maintain Level 2 waste confirmation personnel are proposed to be
36 removed from the affected portions of the Permit. The descriptive information associated with
37 radiography and VE in Attachment C7, Section C7-1b and Section C7-1c, is proposed for
38 deletion because they pertain to performing radiography and/or VE operations which are no
39 longer needed for performance of confirmation activities with the deletion of Level 2
40 requirements. The Permittees are also proposing to delete the QAOs for radiography and VE to
41 address removal of Level 2 requirements. This change is required because the QAOs are
42 specific to performance of radiography and VE (i.e., data generation) and do not apply to the
43 review of media and records.

1 The second change affects the requirement that the DOE provide a DOE Management
2 Representative to review and evaluate radiography and VE data forms and independent
3 technical review checklists prior to waste emplacement. This requirement was placed in the
4 Permit by the New Mexico Environment Department (**NMED**) when the Permit was renewed in
5 2010 “...to achieve the intention of the RCRA regulations, which is to have the disposal site
6 independently determine that wastes are acceptable under its permit.”¹ However, the
7 requirement serves to establish independence between the two Permittees and not between the
8 Permittees and the generator/storage site. This independence is unnecessary due to the
9 contractual relationship between the DOE and the Management and Operating Contractor
10 (**MOC**). That is to say the contractual relationship has well established oversight and audit
11 functions, and additional measures as part of the Permit are unnecessary and only result in
12 delays and unneeded paperwork. Over the two years since this provision went into effect, the
13 Permittees have performed over 1,800 confirmations with the additional step of the DOE
14 Management Review. This review has not resulted in the discovery of any procedural errors
15 requiring rework or change.

16 Independence between the Permittees and the generator/storage site is maintained through the
17 implementation of the DOE Quality Assurance Program (**QAP**). Under the QAP, independence
18 means independent of the work being reviewed or assessed. In other words, an individual
19 cannot perform an independent review of work he performed; however, a qualified co-worker
20 can if the co-worker did not participate in the work being evaluated. Independence does not
21 require separate organizations or even departments. Because the confirmation team does not
22 characterize the waste, their review of the characterization results is independent. This meets
23 the QAP intention of independence and further requirements are not warranted.

24 The Permittees believe that there is no regulatory reason to continue the DOE Management
25 Representative review of confirmation data. Independence in the confirmation program is
26 provided by the DOE QAP and frequent audits of the implementation of the QAP. For these
27 reasons the requirements specified in Attachment C7, Section C7-1e(2), are proposed for
28 removal by this PMR.

29 **4. 20.4.1.900 NMAC (incorporating 40 CFR §270.42(b)(1)(iv)), requires the applicant to**
30 **provide the applicable information required by 40 CFR §§270.13 through 270.21,**
31 **270.62, and 270.63.**

32 The regulatory crosswalk describes the portions of the Permit that are affected by this PMR.
33 Where applicable, regulatory citations in this modification reference 20.4.1 NMAC, revised
34 March 1, 2009, incorporating 40 CFR Parts 264 and 270. 40 CFR §§270.16 through 270.21,
35 270.62, and 270.63 are not applicable at the WIPP facility. Consequently, they are not listed in
36 the regulatory crosswalk.

37 **5. 20.4.1.900 NMAC (incorporating 40 CFR §270.11(d)(1) and 40 CFR §270.30(k)),**
38 **requires any person signing under paragraphs a and b to certify the document in**
39 **accordance with 20.4.1.900 NMAC.**

40 The transmittal letter for this PMR contains the signed certification statement in accordance with
41 the Permit, Part 1, Section 1.9.

42 _____
¹ James Bearzi, August 10, 2010, State of New Mexico before the Secretary of Environment No. HWB 10-26(P) In the Matter of the Renewed Hazardous Waste Facility Permit for the Waste Isolation Pilot Plant, Transcript of Proceedings, Volume 2, Page 191, lines 12-15.

1

Regulatory Crosswalk

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the Permit or Permit Application	Yes	No
§270.13		Contents of Part A permit application	Attachment B, Part A		✓
§270.14(b)(1)		General facility description	Attachment A		
§270.14(b)(2)	§264.13(a)	Chemical and physical analyses	Part 2.3.1 Attachment C		✓
§270.14(b)(3)	§264.13(b)	Development and implementation of waste analysis plan	Part 2.3.1.1 Attachment C		✓
	§264.13(c)	Off-site waste analysis requirements	Part 2.2.1 Attachment C	✓	
§270.14(b)(5)	§264.15(a-d)	General inspection requirements	Part 2.7 Attachment E-1a		✓
	§264.174	Container inspections	Attachment E-1b(1)		✓
§270.23(a)(2)	§264.602	Miscellaneous units inspections	Attachment E-1b Attachment E-1b(1)		✓
§270.14(b)(6)		Request for waiver from preparedness and prevention requirements of Part 264 Subpart C	NA		✓
§270.14(b)(7)	264 Subpart D	Contingency plan requirements	Part 2.12 Attachment D		✓
	§264.51	Contingency plan design and implementation	Part 2.12.1 Attachment D		✓
	§264.52 (a) & (c-f)	Contingency plan content	Attachment D		✓
	§264.53	Contingency plan copies	Part 2.12.2 Attachment D		✓
	§264.54	Contingency plan amendment	Part 2.12.3 Attachment D		✓
	§264.55	Emergency coordinator	Part 2.12.4 Attachment D-4a(1)		✓
	§264.56	Emergency procedures	Attachment D-4		✓
§270.14(b)(8)		Description of procedures, structures or equipment for:	Attachment A Part 2.11		✓
§270.14(b)(8) (i)		Prevention of hazards in unloading operations (e.g., ramps and special forklifts)	Part 2.11		✓
§270.14(b)(8) (ii)		Runoff or flood prevention (e.g., berms, trenches, and dikes)	Attachment A1-1c(1) Part 2.11		✓

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the Permit or Permit Application	Yes	No
§270.14(b)(8) (iii)		Prevention of contamination of water supplies	Part 2.11		✓
§270.14(b)(8) (iv)		Mitigation of effects of equipment failure and power outages	Part 2.11		✓
§270.14(b)(8) (v)		Prevention of undue exposure of personnel (e.g., personal protective equipment)	Part 2.11		✓
§270.14(b)(8) (vi) §270.23(a)(2)	§264.601	Prevention of releases to the atmosphere	Part 2.11 Part 4.4 Attachment D-4e Attachment G-1a		✓
	264 Subpart C	Preparedness and Prevention	Part 2.10		✓
	§264.31	Design and operation of facility	Part 2.1		✓
	§264.32	Required equipment	Part 2.10.1 Attachment D		✓
	§264.33	Testing and maintenance of equipment	Part 2.10.2 Attachment E-1a		✓
	§264.34	Access to communication/alarm system	Attachment E-1a Part 2.10.3		✓
	§264.35	Required aisle space	Part 2.10.4		✓
	§264.37	Arrangements with local authorities	Attachment D-4a(3)		✓
§270.14(b)(9)	§264.17(a-c)	Prevention of accidental ignition or reaction of ignitable, reactive, or incompatible wastes	Part 2.9		✓
§270.14(b) (10)		Traffic pattern, volume, and controls, for example: Identification of turn lanes Identification of traffic/stacking lanes, if appropriate Description of access road surface Description of access road load-bearing capacity Identification of traffic controls	Attachment A4		✓
§270.14(b) (11)(i) and (ii)	§264.18(a)	Seismic standard applicability and requirements	Attachment G2-2.2 Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the Permit or Permit Application	Yes	No
§270.14(b) (11)(iii-v)	§264.18(b)	100-year floodplain standard	Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b) (12)	§264.16(a-e)	Personnel training program	Part 2.8 Attachment F	✓	
§270.14(b) (13)	264 Subpart G	Closure and post-closure plans	Part 6 & 7 Attachment G & H		✓
§270.14(b)(13)	§264.111	Closure performance standard	Attachment G-1a		✓
§270.14(b)(13)	§264.112(a), (b)	Written content of closure plan	Attachment G-1		✓
§270.14(b)(13)	§264.112(c)	Amendment of closure plan	Part 6.3 Attachment G-1d(4)		✓
§270.14(b)(13)	§264.112(d)	Notification of partial and final closure	Attachment G-2a		✓
§270.14(b)(13)	§264.112(e)	Removal of wastes and decontamination/dismantling of equipment	Attachment G-1e(2)		✓
§270.14(b)(13)	§264.113	Time allowed for closure	Part 6.5 Attachment G-1d		✓
§270.14(b)(13)	§264.114	Disposal/decontamination	Part 6.6 Attachment G-1e(2)		✓
§270.14(b)(13)	§264.115	Certification of closure	Part 6.7 Attachment G-2a		✓
§270.14(b)(13)	§264.116	Survey plat	Part 6.8 Attachment G-2b		✓
§270.14(b)(13)	§264.117	Post-closure care and use of property	Part 7.3 Attachment H-1a		✓
§270.14(b)(13)	§264.118	Post-closure plan; amendment of plan	Part 7.5 Attachment H-1a(1)		✓
§270.14(b)(13)	§264.178	Closure/ containers	Part 6.9 Attachment A1-1h Attachment G-1		✓
§270.14(b)(13)	§264.601	Environmental performance standards-Miscellaneous units	Attachment A-4 Attachment D-1 Attachment G-1a		✓
§270.14(b)(13)	§264.603	Post-closure care	Part 7.3 Attachment G-1a(3)		✓
§270.14(b)(14)	§264.119	Post-closure notices	Part 7.4 Attachment H-2		✓
§270.14(b)(15)	§264.142	Closure cost estimate	NA		✓

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the Permit or Permit Application	Yes	No
	§264.143	Financial assurance	NA		✓
§270.14(b)(16)	§264.144	Post-closure cost estimate	NA		✓
	§264.145	Post-closure care financial assurance	NA		✓
§270.14(b)(17)	§264.147	Liability insurance	NA		✓
§270.14(b)(18)	§264.149-150	Proof of financial coverage	NA		✓
§270.14(b)(19)(i) , (vi), (vii), and (x)		Topographic map requirements Map scale and date Map orientation Legal boundaries Buildings Treatment, storage, and disposal operations Run-on/run-off control systems Fire control facilities	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(ii))	§264.18(b)	100-year floodplain	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(iii))		Surface waters	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(iv))		Surrounding Land use	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(v))		Wind rose	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the Permit or Permit Application	Yes	No
§270.14(b)(19)(vi ii)	§264.14(b)	Access controls	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(ix)		Injection and withdrawal wells	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(xi)		Drainage on flood control barriers	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(xi i)		Location of operational units	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(20)		Other federal laws Wild and Scenic Rivers Act National Historic Preservation Act Endangered Species Act Coastal Zone Management Act Fish and Wildlife Coordination Act Executive Orders	Attachment B Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.15	§264 Subpart I	Containers	Part 3 Part 4.3 Attachment A1		✓
	§264.171	Condition of containers	Part 3.3 Attachment A1		✓
	§264.172	Compatibility of waste with containers	Part 3.4 Attachment A1		✓
	§264.173	Management of containers	Part 3.5 Attachment A1		✓

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the Permit or Permit Application	Yes	No
	§264.174	Inspections	Part 3.7 Attachment E-1 Attachment A1-1e		✓
§270.15(a)	§264.175	Containment systems	Part 3.6 Attachment A1		✓
§270.15(c)	§264.176	Special requirements for ignitable or reactive waste	Attachment A1-1g Part 2.1		✓
§270.15(d)	§264.177	Special requirements for incompatible wastes	Attachment A1-1g Part 2.3.3.4		✓
	§264.178	Closure	Part 6 Attachment G		✓
§270.15(e)	§264.179	Air emission standards	Part 4.4.2 Attachment N		✓
§270.23	264 Subpart X	Miscellaneous units	Part 1.3.1 Attachment A2-1 Attachment G1.3.1		✓
§270.23(a)	§264.601	Detailed unit description	Part 4 Part 5 Attachment A2 Attachment L		✓
§270.23(b)	§264.601	Hydrologic, geologic, and meteorologic assessments	Part 4 Part 5 Attachment A2 Attachment L		✓
§270.23(c)	§264.601	Potential exposure pathways	Part 4 Part 5 Attachment A2 Attachment N Attachment L		✓
§270.23(d)		Demonstration of treatment effectiveness	Part 4 Attachment A2 Attachment N		✓
	§264.602	Monitoring, analysis, inspection, response, reporting, and corrective action	Part 4 Part 5 Attachment A2 Attachment E-1 Attachment N Attachment L		✓

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the Permit or Permit Application	Yes	No
	§264.603	Post-closure care	Attachment H Attachment H1		✓
	264 Subpart E	Manifest system, record keeping, and reporting	Part 1 Parts 2.13 and 2.14 Part 4 Attachment C		✓
§270.30(j)(2)	§264.73(b)	Ground-water records	Part 1		✓
	264 Subpart F	Releases from solid waste management units	Part 5 & 7 Attachment G2 & L		✓
	§264.90	Applicability	Part 5 Attachment L		✓
	§264.91	Required programs	Attachment L		✓
	§264.92	Ground-water protection standard	Attachment L		✓
	§264.93	Hazardous constituents	Attachment L		✓
	§264.94	Concentration limits	Part 5 Attachment L		✓
	§264.95	Point of compliance	Part 5 Attachment L		✓
	§264.96	Compliance period	Attachment L		✓
	§264.97	General ground-water monitoring requirements	Part 5 Attachment L		✓
	§264.98	Detection monitoring program	Part 5 Attachment L		✓
	§264.99	Compliance monitoring program	Part 5 Attachment L		✓
	§264.100	Corrective action program	Part 5 Attachment L		✓
	§264.101	Corrective action for solid waste management units	Part 8 Attachment L		✓
	264 Appendix IX	Ground-water Monitoring List	Part 5 Attachment L		✓

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Attachment A
Table of Changes

Table of Changes

Affected Permit Section	Explanation of Changes
Attachment C, Section C-0	Added text "a review of" Added text "and/" Added text "media and records"
Attachment C, Section C-0b	Added text "The generator/storage site must provide a description of how Waste Confirmation is to be accomplished per the requirements of Attachment C7."
Attachment C, Section C-0d	Deleted text "radiography" Deleted text "VE," Added text "and/"
Attachment C, Section C4-3d	Added text "The generator/storage site must provide a description of how Waste Confirmation is to be accomplished per the requirements of Attachment C7."
Attachment C7, Section C7-1a	Added text "the review of" Added text "media and records" Added text "through" Deleted text "use" Added text "review" Added text "media and/or records"
Attachment C7, Section C7-1a(1)	Deleted text "performing actual radiography/visual examination on the waste container(s) or by" Deleted text "may" Added text "shall" Deleted "either" and "of" Added text "in accordance with the requirements of Permit Attachment F1." Deleted text "or to perform actual radiography/visual examination on the waste container(s) (Level 2). Level 2 personnel may also perform waste confirmation by review of media and records."

Affected Permit Section	Explanation of Changes
Attachment C7, Section C7-1b	<p>Added text “review of” and “media and record”</p> <p>Deleted text “These SOPs shall include instructions specific to the radiography system(s) used by the Permittees at an off-site facility (e.g., the generator/storage site). For example, to detect liquid, some systems require the container to be rotated back and forth while other systems require the container to be tilted.”</p> <p>Deleted text “A radiography system (e.g., real time radiography, digital radiography/computed tomography) normally consists of an X-ray-producing device, an imaging system, an enclosure for radiation protection, a waste container handling system, a video and audio recording system, and an operator control and data acquisition station. Although these six components are required, it is expected there will be some variation within a given component between radiography systems. The radiography system shall have controls or an equivalent process which allow the operator to control image quality. On some radiography systems, it should be possible to vary the voltage, typically between 150 to 400 kilovolts (kV), to provide an optimum degree of penetration through the waste. For example, high-density material should be examined with the X-ray device set on the maximum voltage. This ensures maximum penetration through the waste container. Low-density material should be examined at lower voltage settings to improve contrast and image definition. The imaging system typically utilizes either a fluorescent screen and a low-light television camera or x-ray detectors to generate the image.</p> <p>To perform radiography, the waste container is scanned while the operator views the television screen. A video and audio recording is made of the waste container scan and is maintained in the WIPP facility operating record as a non-permanent record. A radiography data form is also used to document the Waste Matrix Code, ensure that the waste container contains no ignitable, corrosive, or reactive waste by documenting the absence of liquid in excess of TSDF-WAC limits or compressed gases, and verify that the physical form of the waste is consistent with the waste stream description documented on the WSPF. Containers whose contents prevent full examination of the remaining contents shall be subject to visual examination unless the Permittees certify that visual examination would provide no additional relevant information for that container based on the acceptable knowledge information for the waste stream. Such certification shall be documented in the WIPP facility operating record.”</p> <p>Deleted text “may” and replaced with “shall”</p>
Attachment C7, Section C7-1b(1)	<p>Deleted text “The radiography system involves qualitative and semiquantitative evaluations of visual displays. Operator training and experience are the most important considerations for ensuring quality controls in regard to the operation of the radiography system and for interpretation and disposition of radiography results. Only trained personnel shall be allowed to operate radiography equipment.</p> <p>The Permittee radiography operators performing waste confirmation shall be trained in accordance with the requirements of Permit Attachment F1.”</p>
Attachment C7, Section C7-1b(2)	<p>Changed the Section due to the deletion of C7-1b(1). This section will now become C7-1b(1).</p> <p>Added text “radiography audio/video recording of a”</p> <p>Deleted “scanned” and replaced with “reviewed”</p> <p>Deleted text “2” and replaced with “1”</p> <p>Deleted text “video and audio media”</p> <p>Added text “same recording”</p> <p>Deleted text “Imaging system characteristics shall be verified on a routine basis.”</p>

Affected Permit Section	Explanation of Changes
Attachment C7, Section C7-1c	<p>Added text "The review of"</p> <p>Added text "media and records"</p> <p>Deleted text "may also" and replaced with "shall"</p> <p>Added text "The"</p> <p>Added text "media and/or record review"</p> <p>Added text "be able to identify and"</p> <p>Deleted text ".Visual examination shall be conducted to identify and describe all waste items"</p> <p>Added text "The review of"</p> <p>Deleted text "may" and replaced with "media and records shall"</p> <p>Added text "at generator sites"</p> <p>Deleted text "This form of waste confirmation may be performed by the Permittees at a generator/storage site."</p> <p>Deleted text "In order to keep radiation doses as low as reasonably achievable at generator/storage sites, the Permittees may use their own trained VE operators to perform VE for waste confirmation by reviewing generator/storage site VE data, which includes VE data forms, waste packaging records, and may also include audio/video media. The Permittees shall document their review of generator/storage site VE data on confirmation data forms."</p> <p>Deleted text "If the Permittees perform waste confirmation by review of audio/video media,"</p>
Attachment C7, Section C7-1c(1)	<p>Deleted text "<u>C7-1c(1) Visual Examination Training</u></p> <p>The Permittees 's VE operators performing waste confirmation shall be trained in accordance with the requirements of Permit Attachment F1."</p>
Attachment C7, Section C7-1c(2)	<p>Changed Section "C7-1c(2) to C7-1c(1)"</p>
Attachment C7, Section C7-1d	<p>Deleted text "<u>C7-1d Quality Assurance Objectives (QAOs) for Radiography and Visual Examination</u></p> <p>The QAOs the Permittees must meet for radiography and visual examination are detailed in this section. If the QAOs described below are not met, the corrective action as specified in Permit Attachment C3, Section C3-13 shall be taken."</p>

Affected Permit Section	Explanation of Changes
Attachment C7, Section C7-1d(1)	<p>Deleted text "<u>C7-1d(1)</u> <u>Radiography QAOs</u></p> <p>The QAOs for radiography are detailed in this section. If the QAOs described below are not met, then corrective action shall be taken.</p> <p>Data to meet these objectives must be obtained from a video and audio recorded scan provided by trained radiography operators. Results must also be recorded on a radiography data form. The precision, accuracy, representativeness, completeness, and comparability objectives for radiography data are presented below.</p> <p><u>Precision</u></p> <p>Precision is maintained by reconciling any discrepancies between two radiography operators with regard to the waste stream waste confirmation, identification of liquid in excess of TSDF-WAC limits, and identification of compressed gases through independent replicate scans and independent observations.</p> <p><u>Accuracy</u></p> <p>Accuracy is obtained by using a target to tune the image for maximum sharpness and by requiring operators to successfully identify 100 percent of the required items in a training container during their initial qualification and subsequent requalification.</p> <p><u>Representativeness</u></p> <p>Representativeness is ensured by performing radiography on a random sample of waste containers from each waste stream in each shipment.</p> <p><u>Completeness</u></p> <p>A video and audio media recording of the radiography examination and a validated radiography data form will be obtained for 100 percent of the waste containers subject to radiography.</p> <p><u>Comparability</u></p> <p>The comparability of radiography data from different operators shall be enhanced by using standardized radiography procedures and operator qualifications."</p>
Attachment C7, Section C7-1d(2)	<p>Deleted text "<u>C7-1d(2)</u> <u>Visual Examination QAOs</u></p> <p>Results must be recorded on a VE data form. The precision, accuracy, representativeness, completeness, and comparability objectives for VE data are presented below.</p> <p><u>Precision</u></p> <p>Precision is maintained by reconciling any discrepancies between the operator and the independent technical reviewer with regard to the waste stream waste confirmation, identification of liquid in excess of TSDF-WAC limits, and identification of compressed gases.</p> <p><u>Accuracy</u></p> <p>Accuracy is maintained by requiring operators to pass a comprehensive examination and demonstrate satisfactory performance in the presence of the VE expert during their initial qualification. VE operators shall be requalified as specified in Permit Attachment F2.</p> <p><u>Representativeness</u></p> <p>Representativeness is ensured by performing VE on a random sample of waste containers within each waste stream in each shipment.</p> <p><u>Completeness</u></p> <p>A validated VE data form will be obtained for 100 percent of the waste containers subject to VE.</p> <p><u>Comparability</u></p> <p>The comparability of VE data from different operators shall be enhanced by using standardized VE procedures and operator qualifications."</p>

Affected Permit Section	Explanation of Changes
Attachment C7, Section C7-1e(2)	<p>Deleted text "<u>C7-1e(2) DOE Management Representative Review</u></p> <p>The radiography and/or visual examination data forms and independent technical review checklist (confirmation data package) for each shipment shall receive a DOE management review. This review will be performed before the affected waste shipment is disposed of at the WIPP. The review shall be performed by a designated representative of DOE management. The review will be performed in accordance with approved DOE SOPs and will be documented on a review checklist. The reviewer(s) must approve the confirmation data package as evidenced by signature, and as a consequence, ensure the following:</p> <ul style="list-style-type: none"> • The data are technically reasonable based on the technique used. • The data have received independent technical review. • The data indicate that the waste examined contained no ignitable, corrosive, or reactive waste and that the physical form of the waste was consistent with the waste stream description in the WSPF. • QC checks have been performed (e.g., replicate scans, image quality checks). • The data meet the established QAOs <p>Upon completion of the DOE management representative review, the waste confirmation data for the shipment shall be submitted to the WIPP facility operating record as non-permanent records. Waste confirmation data includes radiography and VE data forms, video/audio media, and review checklists."</p>
Attachment C7, Section C7-2	Deleted text "at a generator/storage site"
Attachment F1, Radiographer Level 2	Delete text "Radiographer Level 2 (Radiography Independent Technical Reviewer)" and all associated data.
Attachment F1, Visual Examination Operator/Expert Level 2	Delete text "Visual Examination Operator/Expert Level 2 (VE Independent Technical Reviewer)" and all associated data.
Attachment F1, DOE Management Representative	Delete text "DOE Management Representative" and all associated data.
Attachment F2, Radiography (Level 2)	Delete text "Course: Radiography (Level 2)" and all associated data.
Attachment F2, Visual Examination (Level 2)	Delete text "Course: Visual Examination (Level 2)" and all associated data.

1
2

Attachment B
Proposed Revised Permit Text

1 **Proposed Revised Permit Text:**

2 C-0 Introduction and Attachment Highlights

3 Waste characterization is defined in Part 1 as the activities performed by the waste generator to
4 satisfy the general waste analysis requirements of 20.4.1.500 NMAC (incorporating 40 CFR
5 §264.13(a)) before waste containers have been certified for disposal at WIPP. The
6 characterization process for WIPP waste is presented in Figure C-2. Generator site waste
7 characterization programs are first audited by DOE, with NMED approving the final audit report.
8 After this, generator sites determine whether AK alone is sufficient for characterization, or
9 whether radiography or VE in conjunction with AK is necessary to adequately characterize
10 wastes. If an AK Sufficiency Determination is sought, information is provided to the Permittees
11 for their review and DOE's provisional approval; NMED determination of adequacy of the AK
12 information is required before final approval by DOE. If the radiography or VE route is chosen,
13 sites proceed to perform radiography or VE in conjunction with AK and in accordance with this
14 WAP. Once an AK Sufficiency Determination is obtained, or when required radiography or VE
15 data are obtained, sites would then prepare and submit the Waste Stream Profile Form for
16 DOE's approval. Once the WSPF is approved, a site may ship waste to WIPP. The Permittees
17 will perform waste confirmation prior to shipment of the waste from the generator/storage site to
18 WIPP pursuant to Permit Attachment C7, by performing a review of radiography and/or visual
19 examination media and records of a representative subpopulation of certified waste containers,
20 to ensure that the wastes meet the applicable requirements of the TSDF-WAC.

21
22 C-0b AK Sufficiency Determination

23 Generator/storage sites may submit a request to the Permittees for an AK Sufficiency
24 Determination (Determination Request) to be exempt from the requirement to perform
25 radiography or visual examination (VE) based on AK. The contents of the Determination
26 Request are specified in Permit Attachment C4, Section C4-3d.

27 The Permittees shall evaluate the Determination Request for completeness and technical
28 adequacy. This evaluation shall include, but not be limited to whether the Determination
29 Request is technically sufficient for the following:

- 30 • The Determination Request must include all information specified in Permit Attachment
31 C4, Section C4-3d
- 32 |
- 33 • The AK Summary must identify relevant hazardous constituents, and must correctly
34 identify all toxicity characteristic and listed hazardous waste numbers.
- 35 |
- 36 • All hazardous waste number assignments must be substantiated by supporting data
37 and, if not, whether this lack of substantiation compromises the interpretation.
- 38 |
- 39 • Resolution of data discrepancies between different AK sources must be technically
40 correct and documented.
- 41 |
- 42 • The AK Summary must include all the identification of waste material parameter weights
43 by percentage of the material in the waste stream, and determinations must be
44 technically correct.

- 1
- 2 | • All prohibited items specified in the TSDf-WAC should be addressed, and conclusions
- 3 | drawn must be technically adequate and substantiated by supporting information.
- 4
- 5 | • If the AK record includes process control information specified in Permit Attachment C4,
- 6 | Section C4-3b, the information should include procedures, waste manifests, or other
- 7 | documentation demonstrating that the controls were adequate and sufficient.
- 8
- 9 | • The generator/storage site must provide a description of how Waste Confirmation is to
- 10 | be accomplished per the requirements of Attachment C7.
- 11
- 12 | • The site must provide the supporting information necessary to substantiate technical
- 13 | conclusions within the Determination Request, and this information must be correctly
- 14 | interpreted.
- 15

16 C-0d Waste Confirmation

17 The Permittees will perform waste confirmation on a representative subpopulation of each
18 waste stream shipment after certification and prior to shipment pursuant to Permit Attachment
19 C7. The Permittees will use radiography, review of radiography audio/video recordings, ~~VE,~~
20 and/or review of VE records (e.g., VE data sheets or packaging logs) to examine at least 7
21 percent of each waste stream shipment to confirm that the waste does not contain ignitable,
22 corrosive, or reactive waste. Waste confirmation will be performed by the Permittees prior to
23 shipment of the waste from the generator/storage site to WIPP.

24

25 C4-3d AK Sufficiency Determination Request Contents

26 Generator/storage sites may submit an AK Sufficiency Determination Request (**Determination**
27 **Request**) to meet all or part of the waste characterization requirements. The Determination
28 Request shall include, at a minimum:

- 29 • A complete AK Summary that addresses the following technical requirements:
30
 - 31 - Executive Summary;
 - 32
 - 33 - Waste Stream Identification Summary, including a demonstration that the waste
34 stream has been properly delineated and meets the Permit definition of waste stream
35 (Permit Attachment C, Introduction);
 - 36
 - 37 - Mandatory Program Information (including, but not limited to, facility location and
38 description, mission, defense waste assessment, spent nuclear fuel and high-level
39 waste assessment, description of waste generating processes,
40 research/development [as necessary], facility support operations [as applicable],
41 types and quantities of TRU waste generated, correlation of waste streams to
42 buildings/processes, waste identification and categorization, physical form
43 identifiers);
 - 44

- 1 - Mandatory Waste Stream Information (including, but not limited to, Area and Building
2 of Generation, waste stream volume/period of generation (including, for newly
3 generated waste, the rate and quantity of waste to be generated), waste generating
4 activities, types of waste generated, material input related to physical form and
5 identification of percentage of each waste material parameter in the waste stream,
6 chemical content information including hazardous constituents and hazardous waste
7 identification, prohibited item content (including documented evidence that the waste
8 meets the TSDf-WAC Permit Sections 2.3.3.1 through 2.3.3.10), waste packaging,
9 presence of filter vents, number of layers of confinement);
10
11 - Types of additional information gathered;
12
13 - Container specific data (if available and relevant); and
14
15 - A complete reference list including all mandatory and additional information.
16
17
18 • An AK roadmap (defined as a cross reference between mandatory programmatic and
19 mandatory waste stream information, with references supporting these requirements).
20
21 • A complete reference list including all mandatory and additional documentation.
22
23 • Additional relevant information for the required programmatic and waste stream data
24 addressed in the AK Summary, examples of which are presented in Permit Attachment
25 C4, Section C4-2c.
26
27 • Identification of any mandatory requirements supported only by upper tier documents
28 (i.e., there is insufficient supporting data).
29
30 • Description or other means of demonstrating that the AK process described in the Permit
31 was followed (for example, AK personnel were appropriately trained; discrepancies were
32 documented, etc).
33
34 • Information showing that the generator/storage site has developed a written procedure
35 for compiling the AK information and assigning hazardous waste numbers as required in
36 Permit Attachment C4-3b.
37
38 • Information showing that the generator/storage site has assessed the AK process
39 (e.g. internal audits, Permit Attachment C4-3b).
40
41 • The generator/storage site must provide a description of how Waste Confirmation is to
42 be accomplished per the requirements of Attachment C7.

1 C7-1a Confirmation of a Representative Subpopulation of the Waste

2 The Permittees shall confirm that the waste contains no ignitable, corrosive, or reactive waste
3 through the review of radiography media and records (Section C7-1b) or through the use review
4 of visual examination media and/or records (Section C7-1c) of a statistically representative
5 subpopulation of the waste. Prior to shipment to WIPP, waste confirmation will be performed on
6 randomly selected containers from each CH and RH TRU mixed waste stream shipment. Figure
7 C7-1 presents the overall waste verification and confirmation process.

8 C7-1a(1) Confirmation Training Requirements

9 Waste confirmation may be completed by performing actual radiography/visual examination on
10 the waste container(s) or by a review of radiography/visual examination media and records.

11 Waste confirmation personnel shall ~~may~~ be trained to either review of radiography/visual
12 examination media and records (Level 1) in accordance with the requirements of Permit
13 Attachment F1, or to perform actual radiography/visual examination on the waste container(s)
14 (Level 2). Level 2 personnel may also perform waste confirmation by review of media and
15 records.

16 C7-1b Radiography Methods Requirements

17 Radiography has been developed by the Permittees specifically to aid in the examination and
18 identification of containerized waste. The Permittees shall describe all activities required to
19 achieve the review of radiography media and record objectives in standard operating
20 procedures (**SOPs**). ~~These SOPs shall include instructions specific to the radiography system(s)~~
21 ~~used by the Permittees at an off-site facility (e.g., the generator/storage site). For example, to~~
22 ~~detect liquid, some systems require the container to be rotated back and forth while other~~
23 ~~systems require the container to be tilted.~~

24 A radiography system (e.g., real time radiography, digital radiography/computed tomography)
25 normally consists of an X-ray producing device, an imaging system, an enclosure for radiation
26 protection, a waste container handling system, a video and audio recording system, and an
27 operator control and data acquisition station. Although these six components are required, it is
28 expected there will be some variation within a given component between radiography systems.
29 The radiography system shall have controls or an equivalent process which allow the operator
30 to control image quality. On some radiography systems, it should be possible to vary the
31 voltage, typically between 150 to 400 kilovolts (**kV**), to provide an optimum degree of
32 penetration through the waste. For example, high density material should be examined with the
33 X-ray device set on the maximum voltage. This ensures maximum penetration through the
34 waste container. Low density material should be examined at lower voltage settings to improve
35 contrast and image definition. The imaging system typically utilizes either a fluorescent screen
36 and a low-light television camera or x-ray detectors to generate the image.

37 To perform radiography, the waste container is scanned while the operator views the television
38 screen. A video and audio recording is made of the waste container scan and is maintained in
39 the WIPP facility operating record as a non-permanent record. A radiography data form is also
40 used to document the Waste Matrix Code, ensure that the waste container contains no
41 ignitable, corrosive, or reactive waste by documenting the absence of liquid in excess of TSDF-
42 WAC limits or compressed gases, and verify that the physical form of the waste is consistent
43 with the waste stream description documented on the WSPF. Containers whose contents

1 ~~prevent full examination of the remaining contents shall be subject to visual examination unless~~
2 ~~the Permittees certify that visual examination would provide no additional relevant information~~
3 ~~for that container based on the acceptable knowledge information for the waste stream. Such~~
4 ~~certification shall be documented in the WIPP facility operating record.~~

5 For containers that have been characterized using radiography by the generator/storage sites in
6 accordance with the method in Attachment C1, Section C1-3, the Permittees ~~shall~~ may perform
7 confirmation by review of the generator/storage site's radiography audio/video recordings.

8 For containers which contain classified shapes and undergo radiography, the radiography will
9 occur at a facility with appropriate security provisions and the video and audio recording will be
10 considered classified. The radiography data forms will not contain classified information.

11 C7-1b(1) Radiography Training

12 ~~The radiography system involves qualitative and semiquantitative evaluations of visual displays.~~
13 ~~Operator training and experience are the most important considerations for ensuring quality~~
14 ~~controls in regard to the operation of the radiography system and for interpretation and~~
15 ~~disposition of radiography results. Only trained personnel shall be allowed to operate~~
16 ~~radiography equipment.~~

17 ~~The Permittee radiography operators performing waste confirmation shall be trained in~~
18 ~~accordance with the requirements of Permit Attachment F1.~~

19 C7-1b(12) Radiography Oversight

20 The Permittees shall be responsible for monitoring the quality of the radiography data and
21 calling for corrective action, when necessary.

22 A radiography audio/video recording of a training drum with internal containers of various sizes
23 shall be reviewed ~~scanned~~ biennially by each Level 12 operator. The ~~video and audio media~~
24 same recording shall then be reviewed by a radiography subject matter expert to ensure that
25 operators' interpretations remain consistent and accurate. ~~Imaging system characteristics shall~~
26 ~~be verified on a routine basis.~~

27 C7-1c Visual Examination Methods Requirements

28 The review of visual examination (VE) media and records ~~may also~~ ~~shall~~ be used as a waste
29 confirmation method. The VE media and/or record review shall be conducted by the Permittees
30 in accordance with written SOPs to be able to identify and describe the contents of a waste
31 container. ~~Visual examination shall be conducted to identify and describe all waste items,~~
32 ~~packaging materials, and waste material parameters. The review of VE media and records shall~~
33 ~~may~~ be used to examine a statistically representative subpopulation of the waste certified for
34 shipment to WIPP to confirm that the waste contains no ignitable, corrosive, or reactive waste.
35 This is achieved by confirming that the waste contains no liquid in excess of TSDF-WAC limits
36 or compressed gases, and that the physical form of the waste matches the waste stream
37 description documented on the WSPF. During packaging at generator sites, the waste container
38 contents are directly examined by trained personnel. ~~This form of waste confirmation may be~~
39 ~~performed by the Permittees at a generator/storage site.~~ The VE may be documented on video
40 and audio media, or by using a second operator to provide additional verification by reviewing
41 the contents of the waste container to ensure correct reporting. When VE is performed using a

1 second operator, each operator performing the VE shall observe for themselves the waste being
2 placed in the waste container or the contents within the examined waste container when waste
3 is not removed. The results of all VE shall be documented on VE data forms, which are used to
4 document (1) the Waste Matrix Code, (2) that the waste container contains no ignitable,
5 corrosive, or reactive waste by documenting the absence of liquids in excess of TSDf-WAC
6 limits or compressed gases, and (3) that the physical form of the waste is consistent with the
7 waste stream description documented on the WSPF.

8 ~~In order to keep radiation doses as low as reasonably achievable at generator/storage sites, the~~
9 ~~Permittees may use their own trained VE operators to perform VE for waste confirmation by~~
10 ~~reviewing generator/storage site VE data, which includes VE data forms, waste packaging~~
11 ~~records, and may also include audio/video media. The Permittees shall document their review of~~
12 ~~generator/storage site VE data on confirmation data forms.~~

13 If the generator/storage site documented VE using audio/video media in accordance with Permit
14 Attachment C1, Section C1-2, the Permittees must use the audio/video media to perform
15 confirmation. ~~If the Permittees perform waste confirmation by review of audio/video media, The~~
16 ~~audio/video record of the VE must be sufficiently complete for the Permittees to confirm the~~
17 ~~Waste Matrix Code and waste stream description, and verify the waste contains no liquid in~~
18 ~~excess of TSDf-WAC limits or compressed gases. Generator/storage site VE video/audio~~
19 ~~media subject to review by the Permittees shall meet the following minimum requirements:~~

20 C7-1c(1) — Visual Examination Training

21 ~~The Permittees 's VE operators performing waste confirmation shall be trained in accordance~~
22 ~~with the requirements of Permit Attachment F1.~~

23 C7-1c(1~~2~~) — Visual Examination Oversight

25 C7-1d — Quality Assurance Objectives (QAOs) for Radiography and Visual Examination

26 ~~The QAOs the Permittees must meet for radiography and visual examination are detailed in this~~
27 ~~section. If the QAOs described below are not met, then corrective action as specified in Permit~~
28 ~~Attachment C3, Section C3-7 shall be taken.~~

29 C7-1d(1) — Radiography QAOs

30 ~~The QAOs for radiography are detailed in this section. If the QAOs described below are not met,~~
31 ~~then corrective action shall be taken.~~

32 ~~Data to meet these objectives must be obtained from a video and audio recorded scan provided~~
33 ~~by trained radiography operators. Results must also be recorded on a radiography data form.~~
34 ~~The precision, accuracy, representativeness, completeness, and comparability objectives for~~
35 ~~radiography data are presented below.~~

36 Precision

37 ~~Precision is maintained by reconciling any discrepancies between two radiography operators~~
38 ~~with regard to the waste stream waste confirmation, identification of liquid in excess of TSDf-~~

1 ~~WAC limits, and identification of compressed gases through independent replicate scans and~~
2 ~~independent observations.~~

3 Accuracy

4 ~~Accuracy is obtained by using a target to tune the image for maximum sharpness and by~~
5 ~~requiring operators to successfully identify 100 percent of the required items in a training~~
6 ~~container during their initial qualification and subsequent requalification.~~

7 Representativeness

8 ~~Representativeness is ensured by performing radiography on a random sample of waste~~
9 ~~containers from each waste stream in each shipment.~~

10 Completeness

11 ~~A video and audio media recording of the radiography examination and a validated radiography~~
12 ~~data form will be obtained for 100 percent of the waste containers subject to radiography.~~

13 Comparability

14 ~~The comparability of radiography data from different operators shall be enhanced by using~~
15 ~~standardized radiography procedures and operator qualifications.~~

16 C7-1d(2) — Visual Examination QAOs

17 ~~Results must be recorded on a VE data form. The precision, accuracy, representativeness,~~
18 ~~completeness, and comparability objectives for VE data are presented below.~~

19 Precision

20 ~~Precision is maintained by reconciling any discrepancies between the operator and the~~
21 ~~independent technical reviewer with regard to the waste stream waste confirmation,~~
22 ~~identification of liquid in excess of TSDF-WAC limits, and identification of compressed gases.~~

23 Accuracy

24 ~~Accuracy is maintained by requiring operators to pass a comprehensive examination and~~
25 ~~demonstrate satisfactory performance in the presence of the VE expert during their initial~~
26 ~~qualification. VE operators shall be requalified as specified in Permit Attachment F2.~~

27 Representativeness

28 ~~Representativeness is ensured by performing VE on a random sample of waste containers~~
29 ~~within each waste stream in each shipment.~~

30 Completeness

31 ~~A validated VE data form will be obtained for 100 percent of the waste containers subject to VE.~~

1 Comparability

2 The comparability of VE data from different operators shall be enhanced by using standardized
3 VE procedures and operator qualifications.

4 C7-1e(2) DOE Management Representative Review

5 The radiography and/or visual examination data forms and independent technical review
6 checklist (confirmation data package) for each shipment shall receive a DOE management
7 review. This review will be performed before the affected waste shipment is disposed of at the
8 WIPP. The review shall be performed by a designated representative of DOE management. The
9 review will be performed in accordance with approved DOE SOPs and will be documented on a
10 review checklist. The reviewer(s) must approve the confirmation data package as evidenced by
11 signature, and as a consequence, ensure the following:

- 12 ● The data are technically reasonable based on the technique used.
- 13 ● The data have received independent technical review.
- 14 ● The data indicate that the waste examined contained no ignitable, corrosive, or
15 reactive waste and that the physical form of the waste was consistent with the waste
16 stream description in the WSPF.
- 17 ● QC checks have been performed (e.g., replicate scans, image quality checks).
- 18 ● The data meet the established QAOs

19 Upon completion of the DOE management representative review, the waste confirmation data
20 for the shipment shall be submitted to the WIPP facility operating record as non-permanent
21 records. Waste confirmation data includes radiography and VE data forms, video/audio media,
22 and review checklists.

23 C7-2 Noncompliant Waste Identified During Waste Confirmation

24 If the Permittees identify noncompliant waste during waste confirmation at a generator/storage
25 site (i.e., the waste does not match the waste stream description documented in the WSPF or
26 there is liquid in excess of TSDf-WAC limits or compressed gases) the waste will not be
27 shipped. DOE will suspend further shipments of the affected waste stream and issue a CAR to
28 the generator/storage site. Shipments of affected waste streams shall not resume until the CAR
29 has been closed. NMED will be notified within 24 hours of any suspension of waste stream
30 shipments due to the identification of noncompliant waste during waste confirmation.

31

1 *Permit Attachment F1*

Position Title: Radiographer Level 2 (Radiography Independent Technical Reviewer)

Duties:

- Performs confirmation of waste using radiography
- Reviews radiography record performed by another radiographer

Requisite Skills, Experience and Education:

Academic or vocational high school diploma or equivalent.

Training (Type/Amount):

- ~~General Employee Training (GET-19X/GET-20X/GET-21X)~~
- ~~General Employee Training Refresher (GET-20XA/GET-21XA)~~
- ~~Radworker II (RAD-201)~~
- ~~Hazardous Waste Worker (HWW-101/102)~~
- ~~Respiratory Protection (SAF-630/631)~~
- ~~Conduct of Shift Operations (OPS 115) (Once)~~
- ~~Technical Safety Requirements (OPS 122) (Once)~~
- ~~Subject Matter Expert/On the Job Trainer (TRG 293/298) (Biennial)~~
- ~~Waste Handling Systems (STC-003) (Once)~~
- Radiography Training (Level 2)

2

1 *Permit Attachment F1*

Position Title: Visual Examination Operator/Expert Level 2 (VE Independent Technical Reviewer)

Duties:

- Performs confirmation of waste using visual examination or review of visual examination records
- Reviews visual examination or visual examination record review performed by another Visual Examination Expert.

Requisite Skills, Experience and Education:

Academic or vocational high school diploma or equivalent.

Training (Type/Amount):

- ~~General Employee Training (GET-19X/GET-20X/GET-21X)~~
- ~~General Employee Training Refresher (GET-20XA/GET-21XA)~~
- ~~Radworker II (RAD-201)~~
- ~~Hazardous Waste Worker (HWW-101/102)~~
- ~~Respiratory Protection (SAF-630/631)~~
- ~~Conduct of Shift Operations (OPS-115) (Once)~~
- ~~Technical Safety Requirements (OPS-122) (Once)~~
- ~~Subject Matter Expert/On the Job Trainer (TRG-293/298) (Biennial)~~
- ~~Waste Handling Systems (STC-003) (Once)~~
- Visual Examination (Level 2)

2

1 *Permit Attachment F1*

Position Title: ~~DOE Management Representative~~

Duties:

- ~~— Reviews confirmation data packages in accordance with SOPs~~
- ~~— Approves confirmation data packages to authorize shipments~~
- ~~— Takes action to suspend shipments and initiate corrective actions per Permit Attachment C7, Section C7-2~~

Requisite Skills, Experience and Education:

~~Academic or vocational high school diploma or equivalent, and shall be employed by DOE.~~

Training (Type/Amount):

- ~~• General Employee Training (GET-19X/GET-20X/GET-21X)~~
- ~~• General Employee Training Refresher (GET-20XA/GET-21XA)~~
- ~~• Required Reading~~

~~QAPD~~

~~Permit Attachments C through C7~~

~~Relevant DOE confirmation procedures~~

2

1 Permit Attachment F2

COURSE: Radiography (Level 2)

TYPE: Classroom/OJT

OBJECTIVES: Upon completion of this course, the student will be able to perform radiography in a safe manner and will be able to confirm whether waste contains ignitable, corrosive, or reactive waste.

Successfully pass a comprehensive exam based upon training enabling objectives. The comprehensive exam will address the radiography operation, documentation, and procedural elements stipulated in this WAP.

Perform practical capability demonstration in the presence of appointed site Permittee radiography subject matter expert.

REFRESHER: Biennially

COURSE DESCRIPTION

Level 2 radiography operators shall be instructed in the specific waste generating practices and typical packaging configurations expected to be found in each Waste Matrix Code at each site shipping waste to WIPP. The OJT and apprenticeship shall be conducted by an experienced, qualified radiography operator prior to qualification of the training candidate.

The Permittees' Level 2 radiography training program includes:

Formal Training

- ~~Project Requirements~~
- ~~State and Federal Regulations~~
- ~~Basic Principles of Radiography~~
- ~~Radiographic Image Quality~~
- ~~Radiographic Scanning Techniques~~
- ~~Application Techniques~~
- ~~Radiography of Waste Forms~~
- ~~Standards, Codes, and Procedures for Radiography~~
- ~~Waste Stream Specific Instruction~~

On-the-Job Training

- ~~System Operation~~
- ~~Identification of Packaging Configurations~~
- ~~Identification of Waste Material Parameters/Waste Matrix Codes~~
- ~~Identification of liquid in excess of the TSDF-WAC limits and compressed gases~~
- ~~Verification of waste stream description~~

A radiography training drum shall include items common to the waste streams to be confirmed by the Permittees. The training drums shall be divided into layers with varying packing densities or different drums may be used to represent different situations that may occur during radiography examination by the Permittees. The following elements will be in a radiography training drum(s):

- ~~Aerosol can with puncture~~
- ~~Horsetail bag~~
- ~~Pair of coveralls~~
- ~~Empty bottle~~
- ~~Irregular shaped pieces of wood~~
- ~~Empty one gallon paint can~~
- ~~Full container~~
- ~~Aerosol can with fluid~~
- ~~One gallon bottle with three tablespoons of fluid~~
- ~~One gallon bottle with one cup of fluid (upside down)~~
- ~~Leaded glove or leaded apron~~
- ~~Wrench~~

These items shall be successfully identified by the operator as part of the qualification process.

Requalification of operators shall be based upon evidence of continued satisfactory performance (primarily video/audio reviews) and shall be done at least every two years. Unsatisfactory performance will result in disqualification. Unsatisfactory performance is defined as the misidentification of liquid in excess of the limits (as defined in the TSDF-WAC) or compressed gases in a training drum or a score of less than eighty percent (80%) on the comprehensive exam. Retraining and demonstration of satisfactory performance are required before a disqualified operator is again allowed to operate the radiography system for the Permittees.

1 Permit Attachment F2

COURSE: Visual Examination (Level 2)

TYPE: Classroom/OJT

OBJECTIVES: Upon completion of this course, the student will be able to perform visual examination or a review of visual examination records in a safe manner and will be able to confirm whether waste contains ignitable, corrosive, or reactive waste.

Successfully pass a comprehensive exam based upon training enabling objectives. The comprehensive exam will address the visual examination operation, documentation, and procedural elements stipulated in this WAP.

Perform practical capability demonstration in the presence of appointed site Permittee visual examination subject matter expert.

REFRESHER: Biennially

COURSE DESCRIPTION

Level 2 visual examination operators shall be instructed in the specific waste generating processes, typical packaging configurations, and waste material parameters expected to be found in each Waste Matrix Code in the waste stream being confirmed using visual examination.

The OJT and apprenticeship shall be conducted by an operator experienced and qualified in visual examination prior to qualification of the candidate. The training shall be site waste stream specific to include the various waste configurations being confirmed. For example, the particular physical forms and packaging configurations at each site will vary so operators shall be trained on types of waste that are generated, stored, and/or characterized at that particular site.

Visual examination personnel shall be requalified once every two years.

The Level 2 visual examination training program includes:

Formal Training

- ~~Project Requirements~~
- ~~State and Federal Regulations~~
- ~~Batch Data Report Forms~~
- ~~Application Techniques~~
- ~~Waste Stream Specific Instruction (e.g., specific waste generating processes, typical packaging configurations, waste material parameters)~~

On-the-Job Training

- ~~Identification of Packaging Configurations~~
- ~~Identification of Waste Material Parameters/Waste Matrix Code~~
- ~~Identification of liquid in excess of the TSD/WAC limits and compressed gases~~
- ~~Verification of waste stream description~~

Item 7

Class 2 Permit Modification Request

**Modification to Revise Centralized Waste Analysis Plan (WAP) Characterization Program
Audit Frequency**

**Waste Isolation Pilot Plant
Carlsbad, New Mexico**

WIPP Permit Number - NM4890139088-TSDF

November 2013

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Acronyms and Abbreviations

1		
2	CCP	Central Characterization Project
3	CFR	Code of Federal Regulations
4	CH	contact-handled
5	DOE	U.S. Department of Energy
6	DQO	Data Quality Objective
7	FY	fiscal year
8	HSG	headspace gas
9	NMAC	New Mexico Administrative Code
10	NMED	New Mexico Environment Department
11	NWP	Nuclear Waste Partnership LLC
12	Permit	Hazardous Waste Facility Permit
13	Permittees	DOE and NWP
14	PMR	Permit Modification Request
15	QAPjP	quality assurance project plan
16	RTR	Real-Time Radiography
17	RH	remote-handled
18	SOP	standard operating procedure
19	TRU	transuranic
20	WAP	Waste Analysis Plan
21	WDS	Waste Data System
22	WIPP	Waste Isolation Pilot Plant
23	WWIS	WIPP Waste Information System
24		

Overview of the Permit Modification Request

This document contains a Class 2 Permit Modification Request (**PMR**) for the Waste Isolation Pilot Plant (**WIPP**) Hazardous Waste Facility Permit (**Permit**), Permit Number NM4890139088-TSDF.

This PMR is being submitted by the U.S. Department of Energy (**DOE**) and Nuclear Waste Partnership (**NWP**), collectively referred to as the **Permittees**, in accordance with the Permit, Part 1, Section 1.3.1. (20.4.1.900 New Mexico Administrative Code (**NMAC**), incorporating Title 40 Code of Federal Regulations (**CFR**) §270.42(b)). A modification to the Permit is being requested for the following item:

- Revise Permit language in Permit Attachment C, Waste Analysis Plan (**WAP**), and associated Attachments C4 and C6 to state that in cases where generator/storage sites are covered under a centralized WAP characterization program, those generator/storage sites will be audited at least biennially instead of annually.

These changes do not reduce the ability of the Permittees to provide continued protection to human health and the environment.

The requested modification to the Permit and related supporting documents are provided in this PMR. The proposed modification to the text of the WIPP Permit has been identified using red text and a double underline for new text and a ~~strikeout~~ font for deleted information. The following information specifically addresses how compliance has been achieved with the Permit, Part 1, Section 1.3.1., for submission of this Class 2 PMR.

1. 20.4.1.900 NMAC (incorporating 40 CFR §270.42(b)(1)(i)) requires the applicant to describe the exact change to be made to the permit conditions and supporting documents referenced by the Permit.

This modification proposes to revise text in Permit Attachments C, C4, and C6 to indicate that generator/storage sites that are covered under a centralized WAP characterization program (i.e., a WAP characterization program that is controlled by a single Quality Assurance Project Plan (**QAPjP**) and associated standard operating procedures (**SOPs**) and that is deployed at more than one generator/storage site), the generator/storage site will be audited at least biennially. Generator/storage sites with their own site-specific WAP characterization programs will continue to be audited at least annually.

The Table of Changes (Appendix A) and the redline ~~strikeout~~ section in this modification (Appendix B) describe each change that is being proposed.

2. 20.4.1.900 NMAC (incorporating 40 CFR 270.42(b)(1)(ii)), requires the applicant to identify that the modification is a Class 2 modification.

The proposed modification is classified as a Class 2 Modification for the reason indicated below:

20.4.1.900 NMAC (incorporating 40 CFR §270.42, Appendix I, Item B.) “*General Facility Standards, 1. Changes to waste sampling or analysis methods:...d. Other changes...2*”

1 20.4.1.500 NMAC (incorporating 40 CFR 264.13(a)(4) and (c)) states that off-site TSDFs must
2 inspect and, if necessary, analyze each hazardous waste movement received at the facility to
3 determine whether it matches the identity of the waste specified on the accompanying manifest
4 or shipping paper. These activities are often referred to as “fingerprint analyses” and are aimed
5 at corroborating information about the waste collected by the generators. The NMED considered
6 the Audit and Surveillance Program fingerprinting in their 1999 Direct Testimony Regarding
7 Regulatory Process and Imposed Conditions. The Audit and Surveillance Program was
8 included in the WAP when the Permit was originally issued in 1999. Therefore, the proposed
9 change affects a requirement outlined in the WAP and the general waste analysis standards of
10 40 CFR §264.13. As such, the change applies to “General Facility Standards,” and through a
11 process of elimination, it is determined to most appropriately relate to the “General Facility
12 Standards” pertaining to “[c]hanges to waste sampling or analysis methods.” The most
13 applicable item under the general facility standard for “[c]hanges to waste sampling or analysis
14 methods” is “[o]ther changes” since this PMR does not address changes to agency guidance or
15 regulations, incorporate changes associated with F039 sampling or analysis methods, or
16 incorporate changes associated with underlying hazardous constituents in ignitable or corrosive
17 wastes.

18 It should be noted that in October 2006, waste confirmation requirements were added to the
19 Permit . The Permittees now consider the waste confirmation program, described in Attachment
20 C7 of the Permit, to be the primary vehicle for accomplishing the required fingerprint analyses.
21 The Audit and Surveillance Program, described in Attachment C6 of the Permit, fulfills the
22 requirement of 20.4.1.500 NMAC (incorporating 40 CFR 264.13(b)(4)) that the written WAP
23 must specify “[t]he frequency with which the initial analysis of the waste will be reviewed or
24 repeated to ensure that the analysis is accurate and up to date...” The purpose of this PMR is
25 to change the audit frequency for generator/storage sites that are covered under a centralized
26 WAP characterization program from annually to biennially.

27 **3. 20.4.1.900 NMAC (incorporating 40 CFR 270.42(b)(1)(iii)), requires the applicant to**
28 **explain why the modification is needed.**

29 In written testimony presented at the original Permit hearing in 1999, the New Mexico
30 Environment Department (NMED) stated: “In recognition of the unique features of the WIPP and
31 the inclusion of general waste information in the permit application (Table C-2, Revision 6.0 of
32 the permit application), NMED concluded that the provision of detailed and representative
33 chemical and physical analyses could be obtained through implementation of the WAP at
34 generator Sites, as confirmed by audits conducted by the Applicants with NMED oversight.”
35 [NMED written testimony, “Audit Requirement,” March 1999] Because of this, when the Permit
36 was issued the premise was that each transuranic (TRU) waste generator/storage site would
37 develop its own WAP characterization program under the umbrella of a unique, site-specific
38 QAPjP and associated SOPs. Consequently, the Permit was initially written to require audits
39 and surveillances to be performed annually at each generator/storage site, which at that time
40 also corresponded to each site-specific WAP characterization program, to ensure compliance
41 with the WAP at each location where waste characterization was taking place. Implementing the
42 program in this fashion is consistent with the NMED’s statement in the written testimony that
43 “NMED expects to examine whether waste characterization methods have functioned as
44 designed, rather than examining actual waste characterization data. However, the audit criteria
45 must include the review of examples of actual characterization results in order to determine
46 whether a Site is complying with the WAP.”

1 A subsequent approach in implementing waste characterization resulted in the development of
 2 the Central Characterization Project (**CCP**). The CCP is a WAP characterization program
 3 designed to characterize and certify TRU waste from various TRU waste generator/storage sites
 4 under a standardized and centralized characterization program that operates in accordance with
 5 a single QAPJP and associated SOPs. Therefore, the CCP is a standardized WAP
 6 characterization program that is deployed at multiple sites. With the implementation of the CCP,
 7 the need to develop and implement a unique, site-specific WAP characterization program at the
 8 sites where it is deployed is not necessary. The CCP approach is also consistent with the
 9 NMED's desire to have a written waste characterization program that can be examined in lieu of
 10 examining actual characterization data.

11 The Permit modification changes the text in Attachments C, C4, and C6 of the Permit to state
 12 that in cases where generator/storage sites are covered under a centralized WAP
 13 characterization program deployed and certified at more than one site, those generator/storage
 14 sites will be audited at least biennially instead of annually. Generator/storage sites with their
 15 own site-specific WAP characterization programs will continue to be audited at least annually.
 16 This change will serve to remove some of the redundancy and resource expenditure associated
 17 with the CCP WAP characterization program undergoing multiple recertification audits each
 18 year (i.e., once for each generator/storage site where it is deployed), including:

- 19 1. Unnecessary redundancy in that the same program elements and SOPs are audited
 20 more than once annually and
- 21 2. Extra resource expenditure (in cost and personnel for both CCP and auditing/observer
 22 organizations) in support of the multiple annual audits.

23 Since centralized WAP characterization programs, such as the CCP, are deployed at more than
 24 one (i.e., at least two) generator/storage sites, Permit-required biennial audits will ensure that
 25 the CCP will be audited on an annual basis, as long as the generator/storage sites covered
 26 under the CCP are audited biennially on a rotating basis. Currently, all generator/storage sites
 27 with the exception of one are covered under the CCP WAP characterization program.

28 To illustrate the redundancy in auditing program elements, in fiscal year (**FY**) 2009 (from
 29 October 1, 2008 through September 30, 2009), four general CCP site recertification audits were
 30 conducted, one at the Savannah River Site, one at Oak Ridge National Laboratory, one at Los
 31 Alamos National Laboratory and one at the Idaho National Laboratory. Additionally, one initial
 32 CCP site audit was performed at the General Electric Vallecitos Nuclear Center during this
 33 same time period.

34 In FY 2010 (from October 1, 2009 through September 30, 2010), another four general CCP site
 35 recertification audits were conducted, one at the Savannah River Site, one at Los Alamos
 36 National Laboratory, one at Idaho National Laboratory and one at Argonne National Laboratory
 37 for remote-handled (**RH**) waste only. One initial CCP site audit was also conducted in FY 2010
 38 at the Hanford site.

39 The following table illustrates some of the redundancy that occurs under the current Permit text.

Program Element ¹	No. of Audits that Program Element was Audited	
	FY 2009 (5 Audits ²)	FY 2010 (5 Audits ³)
Quality Assurance Project Plan	5	5

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Program Element ¹	No. of Audits that Program Element was Audited	
	FY 2009 (5 Audits ²)	FY 2010 (5 Audits ³)
Waste Certification Plan	5	5
Training and Qualification Plan	5	5
Nonconforming Item Reporting and Control	5	5
Records Management	5	5
Laboratory Logbooks	0	4
Control of Measuring and Testing Equipment	0	3
Surveillance Program	5	5
Records Filing, Inventorying, Scheduling, and Dispositioning	5	5
Project Level Data Validation and Verification	5	5
Reconciliation of Data Quality Objectives (DQOs) and Reporting Characterization Data	5	5
Data Analysis for S3000, S4000, and S5000 Characterization	5	5
Acceptable Knowledge Documentation	5	5
Radiographic Test Drum and Training Container Constructions	4	4
Contact-Handled (CH) TRU Waste Certification and WIPP Waste Information System / Waste Data System (WWIS/WDS) Data Entry	4	4
Shipping of CH TRU Waste	4	4
Standard Real-Time Radiography (RTR) Inspection Procedure	4	4
Headspace Gas (HSG) Performance Demonstration Plan	3	2
Preparing and Handling Waste Containers for Headspace Gas Sampling	4	5
Sampling of TRU Waste Containers	5	5
Headspace Gas Sampling Batch Data Report Preparation	5	5
Standard Contact-Handled Waste Visual Examination	2	3
Random Selection of Containers for Headspace Gas Sampling and Analysis	5	0
Random Selection of Containers for Solids Sampling and Analysis	3	0
Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis	0	5
Analytical Sample Management	0	3
Remote-Handled (RH) Waste Visual Examination	4	3
RH TRU Waste Certification and WWIS/WDS Data Entry	4	3
Quality Assurance Independent Assessment Program	5	5

¹ Only those program elements that were audited at a frequency of 50% or greater in either FY 2009 or FY 2010 are listed in this table.

² Based on Audit Reports for audits: A-09-01, A-09-05, A-09-07, A-09-12, and A-09-14.

³ Based on Audit Reports for audits: A-10-01, A-10-07, A-10-14, A-10-16, and A-10-23.

1 This table clearly demonstrates that resource expenditure could be significantly reduced through
2 adoption of this PMR while still providing annual recertification audits of CCP WAP
3 characterization program elements. This reduction in resource expenditure would apply not only
4 to CCP resources, but also NMED and DOE auditing resources as well.

5 This proposed modification to the Permit can be accomplished without any impact to the
6 adequacy, effectiveness, and implementation of the WAP requirements, especially with respect
7 to the recertification audit process because no changes are proposed to any specific
8 characterization requirements.

9 **4. 20.4.1.900 NMAC (incorporating 40 CFR 270.42 (b)(1)(iv)), requires the applicant to**
10 **provide the applicable information required by 40 CFR 270.13 through 270.21,**
11 **270.62 and 270.63.**

12 The regulatory crosswalk describes those portions of the Permit that are affected by this PMR.
13 Where applicable, regulatory citations in this modification reference 20.4.1 NMAC, revised
14 March 1, 2009, incorporating 40 CFR Parts 264 and 270. 40 CFR §§270.16 through 270.21,
15 270.62, and 270.63 are not applicable at the WIPP facility. Consequently, they are not listed in
16 the regulatory crosswalk table.

17 **5. 20.4.1.900 NMAC (incorporating 40 CFR 270.11(d)(1) and 40 CFR 270.30(k)),**
18 **requires that any person signing under paragraph a and b must certify the**
19 **document in accordance with 20.4.1.900 NMAC.**

20 The transmittal letter for this PMR contains the signed certification statement in accordance with
21 the Permit, Part 1, Section 1.9.

22

1

Regulatory Crosswalk

Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
§270.13		Contents of Part A permit application	Attachment B Part A		✓
§270.14(b)(1)		General facility description	Attachment A		✓
§270.14(b)(2)	§264.13(a)	Chemical and physical analyses	Part 2.3.1 Attachment C		✓
§270.14(b)(3)	§264.13(b)	Development and implementation of waste analysis plan	Part 2.3.1.1 Attachment C	✓	
	§264.13(c)	Off-site waste analysis requirements	Part 2.2.1 Attachment C	✓	
§270.14(b)(5)	§264.15(a-d)	General inspection requirements	Part 2.7 Attachment E-1a		✓
	§264.174	Container inspections	Attachment E-1b(1)		✓
§270.23(a)(2)	§264.602	Miscellaneous units inspections	Attachment E-1b Attachment E-1b(1)		✓
§270.14(b)(6)		Request for waiver from preparedness and prevention requirements of Part 264 Subpart C	NA		✓
§270.14(b)(7)	264 Subpart D	Contingency plan requirements	Part 2.12 Attachment D		✓
	§264.51	Contingency plan design and implementation	Part 2.12.1 Attachment D		✓
	§264.52 (a) & (c-f)	Contingency plan content	Attachment D		✓
	§264.53	Contingency plan copies	Part 2.12.2 Attachment D		✓
	§264.54	Contingency plan amendment	Part 2.12.3 Attachment D		✓
	§264.55	Emergency coordinator	Part 2.12.4 Attachment D-4a(1)		✓
	§264.56	Emergency procedures	Attachment D-4		✓
§270.14(b)(8)		Description of procedures, structures or equipment for:	Attachment A Part 2.11		✓
§270.14(b)(8)(i)		Prevention of hazards in unloading operations (e.g., ramps and special forklifts)	Part 2.11		✓

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Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
§270.14(b)(8)(ii)		Runoff or flood prevention (e.g., berms, trenches, and dikes)	Attachment A1-1c(1) Part 2.11		✓
§270.14(b)(8)(iii)		Prevention of contamination of water supplies	Part 2.11		✓
§270.14(b)(8)(iv)		Mitigation of effects of equipment failure and power outages	Part 2.11		✓
§270.14(b)(8)(v)		Prevention of undue exposure of personnel (e.g., personal protective equipment)	Part 2.11		✓
§270.14(b)(8)(vi) §270.23(a)(2)	§264.601	Prevention of releases to the atmosphere	Part 2.11 Part 4.4 Attachment D-4e Attachment G-1a		✓
	264 Subpart C	Preparedness and Prevention	Part 2.10		✓
	§264.31	Design and operation of facility	Part 2.1		✓
	§264.32	Required equipment	Part 2.10.1 Attachment D		✓
	§264.33	Testing and maintenance of equipment	Part 2.10.2 Attachment E-1a		✓
	§264.34	Access to communication/alarm system	Attachment E-1a Part 2.10.3		✓
	§264.35	Required aisle space	Part 2.10.4		✓
	§264.37	Arrangements with local authorities	Attachment D-4a(3)		✓
§270.14(b)(9)	§264.17(a-c)	Prevention of accidental ignition or reaction of ignitable, reactive, or incompatible wastes	Part 2.9		✓
§270.14(b)(10)		Traffic pattern, volume, and controls, for example: Identification of turn lanes Identification of traffic/stacking lanes, if appropriate Description of access road surface Description of access road load-bearing capacity Identification of traffic controls	Attachment A4		✓
§270.14(b)(11)(i) and (ii)	§264.18(a)	Seismic standard applicability and requirements	Attachment G2-2.2 Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓

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Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
§270.14(b)(11)(iii-v)	§264.18(b)	100-year floodplain standard	Attachment A1-1c(1) Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(12)	§264.16(a-e)	Personnel training program	Part 2.8 Attachment F		✓
§270.14(b)(13)	264 Subpart G	Closure and post-closure plans	Part 6 & 7 Attachment G & H		✓
§270.14(b)(13)	§264.111	Closure performance standard	Attachment G-1a		✓
§270.14(b)(13)	§264.112(a), (b)	Written content of closure plan	Attachment G-1		✓
§270.14(b)(13)	§264.112(c)	Amendment of closure plan	Part 6.3 Attachment G-1d(4)		✓
§270.14(b)(13)	§264.112(d)	Notification of partial and final closure	Attachment G-2a		✓
§270.14(b)(13)	§264.112(e)	Removal of wastes and decontamination/dismantling of equipment	Attachment G-1e(2)		✓
§270.14(b)(13)	§264.113	Time allowed for closure	Part 6.5 Attachment G-1d		✓
§270.14(b)(13)	§264.114	Disposal/decontamination	Part 6.6 Attachment G-1e(2)		✓
§270.14(b)(13)	§264.115	Certification of closure	Part 6.7 Attachment G-2a		✓
§270.14(b)(13)	§264.116	Survey plat	Part 6.8 Attachment G-2b		✓
§270.14(b)(13)	§264.117	Post-closure care and use of property	Part 7.3 Attachment H-1a		✓
§270.14(b)(13)	§264.118	Post-closure plan; amendment of plan	Part 7.5 Attachment H-1a (1)		✓
§270.14(b)(13)	§264.178	Closure/containers	Part 6.9 Attachment A1-1h Attachment G-1		✓
§270.14(b)(13)	§264.601	Environmental performance standards-miscellaneous units	Attachment A-4 Attachment D-1 Attachment G-1a		✓

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Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
§270.14(b)(13)	§264.603	Post-closure care	Part 7.3 Attachment G-1a(3)		✓
§270.14(b)(14)	§264.119	Post-closure notices	Part 7.4 Attachment H-2		✓
§270.14(b)(15)	§264.142	Closure cost estimate	NA		✓
	§264.143	Financial assurance	NA		✓
§270.14(b)(16)	§264.144	Post-closure cost estimate	NA		✓
	§264.145	Post-closure care financial assurance	NA		✓
§270.14(b)(17)	§264.147	Liability insurance	NA		✓
§270.14(b)(18)	§264.149-150	Proof of financial coverage	NA		✓
§270.14(b)(19)(i), (vi), (vii), and (x)		Topographic map requirements Map scale and date Map orientation Legal boundaries Buildings Treatment, storage, and disposal operations Run-on/run-off control systems Fire control facilities	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(ii)	§264.18(b)	100-year floodplain	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(iii)		Surface waters	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(iv)		Surrounding land use	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓

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Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
§270.14(b)(19)(v)		Wind rose	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(viii)	§264.14(b)	Access controls	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(ix)		Injection and withdrawal wells	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(xi)		Drainage on flood control barriers	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(19)(xii)		Location of operational units	Attachment B2 Part A Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.14(b)(20)		Other federal laws Wild and Scenic Rivers Act National Historic Preservation Act Endangered Species Act Coastal Zone Management Act Fish and Wildlife Coordination Act Executive Orders	Attachment B Renewal App. Sep. 2009, 270.14 Contents of Part B: General Requirements		✓
§270.15	§264 Subpart I	Containers	Part 3 Part 4.3 Attachment A1		✓
	§264.171	Condition of containers	Part 3.3 Attachment A1		✓

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Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
	§264.172	Compatibility of waste with containers	Part 3.4 Attachment A1		✓
	§264.173	Management of containers	Part 3.5 Attachment A1		✓
	§264.174	Inspections	Part 3.7 Attachment E-1 Attachment A1-1e		✓
§270.15(a)	§264.175	Containment systems	Part 3.6 Attachment A1		✓
§270.15(c)	§264.176	Special requirements for ignitable or reactive waste	Attachment A1-1g Permit Part 2.1		✓
§270.15(d)	§264.177	Special requirements for incompatible wastes	Attachment A1-1g Permit Part 2.3.3.4		✓
	§264.178	Closure	Part 6 Attachment G		✓
§270.15(e)	§264.179	Air emission standards	Part 4.4.2 Attachment N		✓
§270.23	264 Subpart X	Miscellaneous units	Part 1.3.1 Attachment A2-1 Attachment G1.3.1		✓
§270.23(a)	§264.601	Detailed unit description	Part 4 Part 5 Attachment A2 Attachment L		✓
§270.23(b)	§264.601	Hydrologic, geologic, and meteorologic assessments	Part 4 Part 5 Attachment A2 Attachment L		✓
§270.23(c)	§264.601	Potential exposure pathways	Part 4 Part 5 Attachment A2 Attachment N Attachment L		✓
§270.23(d)		Demonstration of treatment effectiveness	Part 4 Attachment A2 Attachment N		✓

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Regulatory Citation(s) 20.4.1.900 NMAC (incorporating 40 CFR Part 270)	Regulatory Citation(s) 20.4.1.500 NMAC (incorporating 40 CFR Part 264)	Description of Requirement	Added or Clarified Information		
			Section of the WIPP Permit Application	Yes	No
	§264.602	Monitoring, analysis, inspection, response, reporting, and corrective action	Part 4 Part 5 Attachment A2 Attachment E-1 Attachment N Attachment L		✓
	§264.603	Post-closure care	Attachment H Attachment H1		✓
	264 Subpart E	Manifest system, record keeping, and reporting	Permit Part 1 Permit Part 2.13 & 2.14 Permit Part 4 Attachment C		✓
§270.30(j)(2)	§264.73(b)	Ground-water records	Part 1		✓
	264 Subpart F	Releases from solid waste management units	Part 5 & 7 Attachment G2 & L		✓
	§264.90	Applicability	Part 5 Attachment L		✓
	§264.91	Required programs	Attachment L		✓
	§264.92	Ground-water protection standard	Attachment L		✓
	§264.93	Hazardous constituents	Attachment L		✓
	§264.94	Concentration limits	Part 5 Attachment L		✓
	§264.95	Point of compliance	Part 5 Attachment L		✓
	§264.96	Compliance period	Attachment L		✓
	§264.97	General ground-water monitoring requirements	Part 5 Attachment L		✓
	§264.98	Detection monitoring program	Part 5 Attachment L		✓
	§264.99	Compliance monitoring program	Part 5 Attachment L		✓
	§264.100	Corrective action program	Part 5 Attachment L		✓
	§264.101	Corrective action for solid waste management units	Part 8 Attachment L		✓
	264 Appendix IX	Ground-water Monitoring List	Part 5 Attachment L		✓

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Appendix A
Table of Changes

Table of Changes

Affected Permit Section	Explanation of Changes
Attachment C, Section C-5a	Added "In cases where the generator/storage site is covered under a centralized WAP characterization program (i.e., a WAP characterization program comprised of WAP-implementing plans and procedures deployed at more than one generator/storage site), the generator/storage site will be audited at least biennially."
Attachment C, Section C-5a(3)	Added ", biennially at generator/storage sites covered under a centralized WAP characterization program"
Attachment C4, Section C4-3g	Added "or biennially by" Added ", biennially at generator/storage sites covered under a centralized WAP characterization program"
Attachment C6, Section C6-2	Added "/biennial"
Attachment C6, Section C6-3	Replace "involved in the waste characterization program" with ", biennially at generator/storage sites covered under a centralized WAP characterization program" Added "/biennial"

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Appendix B
Proposed Revised Permit Text

1 **Proposed Revised Permit Text:**

2 C-5a Phase I Waste Stream Screening and Verification

3 A generator/storage site must first prepare a QAPjP, which includes applicable WAP
4 requirements, and submit it to DOE for review and approval (Permit Attachment C5). Once
5 approved, a copy of the QAPjP is provided to NMED for examination. The generator/storage
6 site will implement the specific parameters of the QAPjP after it is approved. An initial audit will
7 be performed after QAPjP implementation and prior to the generator/storage site being certified
8 for shipment of waste to WIPP. Additional audits, focusing on the results of waste
9 characterization, will be performed at least annually. In cases where the generator/storage site
10 is covered under a centralized WAP characterization program (i.e., a WAP characterization
11 program that is controlled by a single QAPjP and associated standard operating procedures and
12 that is deployed and certified at more than one generator/storage site), the generator/storage
13 site will be audited at least biennially. DOE has the right to conduct unannounced audits and to
14 examine any records that are related to the scope of the audit. See Section C-5a(3) and Permit
15 Attachment C6 for further information regarding audits.

16 C-5a(3) Audit and Surveillance Program

17 DOE will perform an initial audit at each generator/storage site performing waste
18 characterization activities prior to the formal acceptance of the WSPFs and/or any waste
19 characterization data supplied by the generator/storage sites. Audits will be performed at least
20 annually thereafter, biennially at generator/storage sites covered under a centralized WAP
21 characterization program deployed and certified at more than one generator/storage site,
22 including the possibility of unannounced audits (i.e., not a regularly scheduled audit). These
23 audits will allow NMED to verify that the Permittees have implemented the WAP and that
24 generator/storage sites have implemented a QA program for the characterization of waste and
25 meet applicable WAP requirements. The accuracy of physical waste description and waste
26 stream assignment provided by the generator/storage site will be verified by review of the
27 radiography results, and visual examination of data records and radiography images (as
28 necessary) during audits conducted by DOE. More detail on this audit process is provided in
29 Permit Attachment C6.

30 C4-3g Audits of Acceptable Knowledge

31 DOE will conduct an initial audit of each site prior to certifying the site for shipment of TRU
32 mixed waste to the WIPP facility. This initial audit will establish an approved baseline that will be
33 reassessed annually DOE, biennially at generator/storage sites covered under a centralized
34 WAP characterization program deployed and certified at more than one generator/storage site.
35 These audits will verify compliance with the requirements specified in the WAP (Permit
36 Attachment C). The audits will be used to verify compliance with the compilation, application,
37 and interpretation requirements of acceptable knowledge information specified in this Permit at
38 all sites, and to evaluate the completeness and defensibility of site-specific acceptable
39 knowledge documentation related to hazardous waste characterization. Permit Attachment C6
40 gives a description of the overall audit program and a required checklist. Figure C4-2 includes
41 the primary steps associated with the audit process of acceptable knowledge.

42 DOE disseminates information regarding TRU mixed waste characterization requirements and
43 program status through the WIPP Home Page. The Permittees will use this web page to
44 disseminate information regarding TRU mixed waste streams, RCRA compliance, and

1 operational and programmatic issues, methods development, and waste characterization
2 information, including the application of acceptable knowledge. DOE is provided the required
3 waste characterization information prior to management, storage, or disposal of that waste at
4 WIPP and also will conduct audits at least annually, biennially at generator/storage sites
5 covered under a centralized WAP characterization program deployed and certified at more than
6 one generator/storage site. The Permittees will maintain an operating record for review during
7 regulatory agency audits. NMED may also review any information relevant to the scope of the
8 audit during site audits. DOE will notify NMED regarding any site's failure to implement
9 corrective actions associated with hazardous waste characterization as specified in Parts 1 and
10 2 and Permit Attachment C3.

11 C6-2 Audit Procedures

12 Approved procedures shall be used to describe audit activities and requirements. Procedures
13 define the responsibilities of specific positions necessary to manage this audit program. The
14 DOE manager who oversees the audit program shall ensure that the following tasks are
15 performed:

- 16 • Schedule audits
- 17 • Designate lead auditor(s)
- 18 • Appoint auditor and lead auditor trainees
- 19 • Maintain auditor training and qualification records
- 20 • Assure that all auditors have been given appropriate training, including training on the
21 WAP
- 22 • Assign auditors and lead auditors to perform annual/biennial certification audits

23 C6-3 Audit Position Functions

24 Audits will be conducted at least annually for each site, biennially at generator/storage sites
25 covered under a centralized WAP characterization program deployed and certified at more than
26 one generator/storage site ~~involved in the waste characterization program~~. Both announced and
27 unannounced audits will address the following:

- 28
- 29 • Results of previous audits
- 30 • Changes in programs or operations
- 31 • New programs or activities being implemented
- 32 • Changes in key personnel

33 Annual/biennial certification audits shall address contact-handled (**CH**) and remote-handled
34 (**RH**) waste characterization activities if the site has approval or is seeking approval for such
35 wastes. At a minimum, the audit shall evaluate acceptable knowledge documentation for CH
36 and RH waste separately by Summary Category Group, as applicable.