



**Department of Energy**  
Carlsbad Field Office  
P. O. Box 3090  
Carlsbad, New Mexico 88221  
December 15, 2021

Mr. Rick Shean, Chief  
Hazardous Waste Bureau  
New Mexico Environment Department  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, NM 87508-6303

Subject: Notification of Completion and Public Posting of the Second Triennial Review Report

Reference: The Settlement Agreement and Stipulated Final Order No. HWB-14-21 (CO), January 22, 2016

Dear Mr. Shean:

The purpose of this letter is to notify the New Mexico Environmental Department that the Second Triennial Review Report for the Waste Isolation Pilot Plant (WIPP) facility was completed and made available to the public as required by Paragraph 34b of the referenced Settlement Agreement and Stipulated Final Order. This report was made available to the public by posting it onto the WIPP Information Repository on December 15<sup>th</sup>, 2021.

Enclosed is the Second Triennial Review Report for the WIPP facility.

If you have any questions, please contact Mr. Martin Navarrete at (575) 706-0068.

Sincerely,

**Signatures on File**

Reinhard Knerr  
Manager  
Carlsbad Field Office

Sean Dunagan  
President and Project Manager  
Nuclear Waste Partnership LLC

Enclosure

cc: w/enclosure  
N. Barka, NMED \*ED  
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\*ED denotes electronic distribution



# **Second Triennial Review Report For the Waste Isolation Pilot Plant (WIPP)**

**Prepared for:  
Nuclear Waste Partnership LLC (NWP)**

**Prepared by:  
Firewater Associates, LLC**

**December 14, 2021**



## Table of Contents

<b>ACRONYMS AND ABBREVIATIONS .....</b>	<b>3</b>
<b>1. INTRODUCTION.....</b>	<b>5</b>
<b>2. REVIEW OBJECTIVES.....</b>	<b>5</b>
<b>3. SCOPE.....</b>	<b>6</b>
<b>4. REVIEW TEAM.....</b>	<b>7</b>
4.1 Personnel .....	7
4.2 Responsibilities.....	7
<b>5. METHODOLOGY.....</b>	<b>7</b>
5.1 Criteria Selection .....	8
5.2 Selection of Training Records and Inspection Forms for Review.....	11
<b>6. REVIEW ACTIVITIES .....</b>	<b>11</b>
6.1 Document Review .....	12
<b>7. FINDINGS, OBSERVATIONS AND RECOMMENDATIONS .....</b>	<b>22</b>
<b>8. CONCLUSIONS.....</b>	<b>27</b>

**Attachment A – WIPP Second Triennial Review Plan**

**Attachment B – Quality Assurance Plan**

**Attachment C – Criteria Checklists**

**Attachment D – Review Team Qualifications**

## ACRONYMS AND ABBREVIATIONS

CBFO	Carlsbad Field Office
CMR	Central Monitoring Room
CAA	Clean Air Act
CWA	Clean Water Act
CFR	Code of Federal Regulations
CH	contact-handled transuranic waste
DOE	United States Department of Energy
DP	Discharge Permit
EC	e. coli
EPCRA	Emergency Planning and Community Right to Know Act
EPA	United States Environmental Protection Agency
EHS	Extremely Hazardous Substances
GAO	United States General Accounting Office
GET	General Employee Training
GWQB	Ground Water Quality Bureau
HWA	Hazardous Waste Act
HWMU	Hazardous Waste Management Unit
ISMS	Integrated Safety Management System
LLC	Limited Liability Corporation
LOI	lines of inquiry
LEPC	Local Emergency Planning Committee
L&A	Longenecker & Associates
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NMSWA	New Mexico Solid Waste Act
NMWQA	New Mexico Water Quality Act
NSR	New Source Review
NWP	Nuclear Waste Partnership LLC
POC	point of contact
PWS	public water system
QAP	Quality Assurance Plan
RICE	Reciprocating Internal Combustion Engine
RH	remote-handled transuranic waste
RCRA	Resource Conservation and Recovery Act
SDWA	Safe Drinking Water Act
SDS	Safety Data Sheets
SSCVS	Safety Significant Confinement Ventilation System
SARA	Superfund Amendments and Reauthorization Act
SERC	State Emergency Response Commission
SOW	<i>Triennial Review Scope of Work and Guidelines</i>

SME	Subject Matter Expert
SEP	Supplemental Environmental Project
TC	total coliform
TRU	transuranic
TRUPACT	Transuranic Waste Transportation Container
TMF	TRUPACT Maintenance Facility
VOC	volatile organic compounds
WIPP	Waste Isolation Pilot Plant

## **Second Triennial Review Final Report**

**December 14, 2021**

### **1. INTRODUCTION**

This Second Triennial Review (or Review) of the Waste Isolation Pilot Plant (WIPP) is the result of a Settlement Agreement between the New Mexico Environment Department (NMED), the U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) and Nuclear Waste Partnership LLC (NWP) to resolve alleged violations of the New Mexico Hazardous Waste Act (HWA), NMSA 1978, Sections 74-4-1 to -14, the Hazardous Waste Management Regulations, 20.4.1 New Mexico Administrative Code (NMAC), and the WIPP Hazardous Waste Facility Permit (Permit). Specifically, Paragraph 34 of the Settlement Agreement and Stipulated Final Order (SFO) dated January 22, 2016, states *“DOE will fund independent, external triennial reviews of environmental regulatory compliance and operations at WIPP to ensure that any regulatory deficiencies are identified”*.

The Review is designed to be a systematic, independent, and documented process of objectively obtaining and evaluating evidence to determine whether specified environmental regulatory requirements are met at the WIPP. The Review is intended to evaluate the integrity of the regulatory compliance processes implemented at the WIPP facility under legislation, permits, DOE Orders, notices, and agreements.

The DOE CBFO has funded the independent, external Triennial Review in accordance with Paragraph 34 of the SFO. Through a competitive procurement process, Firewater Associates, LLC (Firewater) was selected as the independent firm to conduct the Second Triennial Review. In accordance with its contract with NWP, Firewater developed a Review Plan to conduct the WIPP Second Triennial Review. The Review Plan incorporates the requirements of the *Triennial Review Scope of Work and Guidelines* (SOW) – a document that the SFO required DOE and NWP to submit to NMED for approval. The Review Plan also specifies the methodologies that the Triennial Review Team (Review Team or Team) utilized to conduct the Review. This Second Final Triennial Review Report (Report) documents: 1) the Review objectives; 2) the Review scope, 3) the Review Team members; 4) the Review activities; and 5) the Review Team’s findings, observations, and recommendations.

### **2. REVIEW OBJECTIVES**

The primary objective of the Review was to determine whether specified regulatory requirements within the designated scope areas are being properly implemented at the WIPP facility. In those areas, the Review sought to identify potential regulatory deficiencies, potential

violations (for this report referred to as non-compliances), and deficiencies that could lead to non-compliances to applicable regulations (for this report referred to as “Findings” in Section 7).

The Review Team also attempted to identify areas of improvement that NWP could address and utilize to mitigate immediate risks, as well as make process improvements to prevent future risks (referred to as “Observations in Section 7). Further, the Review Team attempted to identify vulnerabilities (also included in the “Observations” in Section 7) that could be embedded in the current programs or that could involve unresolved issues that relate to current or future changes in regulations, personnel, procedures, or programs.

The Secondary objectives of the Review are to include the challenges regarding effective implementation of the environmental programs at the WIPP facility and the strengths that reflect the maturity of those programs.

This Review builds on the work performed on the First (initial) Triennial Review that was completed in 2018 and will be finalized during calendar year 2021. As required in the SOW, this Final Report will be submitted to NWP on or before December 20, 2021. One of the conditions of the Supplemental Environmental Project (SEP) that describes the Triennial Review process is that the Permittees will be given an opportunity to correct non-compliant conditions, identified from the Review, within 60 days of issuance of the Final Review Report or on another schedule approved by the NMED. Conditions corrected during the Review can be reassessed by the Review Team for adequacy.

### **3. SCOPE**

The Review focused on the following environmental statutes, regulations, and orders, consistent with the SOW:

- Resource Conservation and Recovery Act (RCRA) and implementation through the New Mexico Hazardous Waste Act (HWA)
- Clean Water Act (CWA) and the New Mexico Water Quality Act
- Clean Air Act (CAA) including the National Emission Standards for Hazardous Air Pollutants (NESHAPs) and the New Mexico Air Quality Act
- Safe Drinking Water Act (SDWA) and the New Mexico Drinking Water Regulations
- New Mexico Solid Waste Act (NMSWA)
- Emergency Planning and Community Right to Know Act (EPCRA) and the New Mexico Hazardous Chemicals Information Act

The Review Team evaluated current WIPP facility programs, plans and procedures for compliance with the above statutes, regulations, and orders at surface and underground structures/facilities at the WIPP facility.



## 4. REVIEW TEAM

### 4.1 Personnel

The Triennial Review Team was made of up five team members from two contractors - Firewater Associates, LLC (Firewater) and Longenecker & Associates (L&A). Their resumes can be found in Attachment D. The Review Team was comprised of a Program Manager and Subject Matter Experts (SMEs) that included the following individuals:

Team Member	Affiliation
Renee Echols	Firewater Associates, LLC Program Manager III
Gregory Edwards	Firewater Associates, LLC SME III
Kathryn Roberts	Longenecker & Associates SME II
David Wilson	Longenecker & Associates SME II
Ashley Meyer	Longenecker & Associates Engineering/Graduate Associate

### 4.2 Responsibilities

Each Team member was responsible for developing lines of inquiry (LOI) for each of the criteria assigned. Additionally, Review Team members considered the following factors when developing LOIs:

- Accuracy of reporting and documentation
- Identifying precursors of future non-compliances
- Lessons learned from previous DOE complex wide environmental violations
- Impacts on the client
- Schedule/timetable adherence
- Communication
- Confidentiality and information security

## 5. METHODOLOGY

The SOW required that a Quality Assurance Plan (QAP) be developed to describe the necessary controls required for the Review Team to identify and document their results and conclusions relative to the unique synergy between the various and complex environmental regulations and those organizations interacting to ensure that compliance is achieved. The QAP provided direction and guidance to the Review Team to incorporate cost-effective, and timely quality measures to promote efficient delivery of the Review that met the requirements outlined in SOW. The QAP provided the primary requirements for integration of quality functions into all aspects of the review process. Effective implementation of review methods and requirements supports the principles and functions of the DOE Integrated Safety Management System (ISMS), documented in DOE/CBFO-09-3442 *“CBFO Integrated Safety Management System Description”*.

The Team also developed for NWP approval a Review Plan that in concert with the QAP guided the methodologies used in the Review. In accordance with the Review Plan, the Review Team developed criteria checklists for each of the assigned areas (e.g., RCRA, CWA). The criteria checklists were reviewed by NWP for consistency with the NMED approved *Second Waste Isolation Plant Project Triennial Review Scope of Work and Guidelines* (scope of work and guidelines) prior to the on-site portion of the Review. The final criteria checklists were designed to guide on-site observations and help the Team assess whether collected evidence met the review criteria.

Due to the ongoing COVID-19 pandemic, preventive measures were implemented at the WIPP facility to minimize the spread of the coronavirus and meet public health emergency orders issued by the State of New Mexico Department of Health. Such measures include reductions in workforce density and curtailment of work activities, as needed. As a result, it was necessary to conduct the Second Triennial Review activities, using various technologies (e.g., WebEx meetings/interviews, electronic document transfer via Kiteworks) in lieu of a physical presence at the WIPP facility.

### **5.1 Criteria Selection**

This section describes the methodology employed by the Review Team in determining the specific criteria to be evaluated in each of the six areas (i.e., RCRA, CWA, CAA, SDWA, SWA, and EPCRA). In general, criteria were generated from specific language in the controlling document (i.e., will, shall, must), but other criteria were added based on the Review Team's evaluation of language that conveyed intent to require an action by NWP. In addition, the Review Team added criteria based on its experience with operations in regulated facilities and the associated risks. The language used in the "Required Program" (question to be answered) column of the associated Criteria Workbook also reflects that experience.

#### **Resource Conservation and Recovery Act (RCRA) and New Mexico implementation through the HWA**

Requirements listed in the Permit that do not directly relate to current activities at the WIPP facility (e.g., final closure, post-closure) were not included in the Review criteria. These determinations were made based on the Team's subject matter knowledge, in consultation with NWP and CBFO. Additionally, there were specific areas of the Permit (e.g., waste characterization at generator sites, transportation, packaging) that were outside the scope of the Second Triennial Review because they are not activities carried out at the WIPP facility and were therefore outside the scope of the SFO. Finally, most provisions identified in the Permit Attachments are referenced in the relevant Permit Parts. Therefore, the Team did not duplicate the criteria, but instead cross-referenced the applicable Permit Part or Attachment in the checklists where appropriate.

In addition to criteria developed from direct requirements of the Permit, criteria associated with non-Permit requirements associated with 40 Code of Federal Regulations (CFR) Part 262 and 40 CFR Part 761 directives were also included. Permit requirements related to remote-handled (RH) transuranic (TRU) waste management were not addressed, at the request of NWP, based on the

decision that RH TRU waste received in RH-TRU 72 B packaging would not be received at WIPP during this Review period.

The Team evaluated the Parts and Attachments of WIPP's Permit with the following exceptions:

- Permit Part 6 – Closure Requirements: The Team did not evaluate the majority of Permit Part 6 because the WIPP facility is still actively receiving waste. However, the Team did evaluate the closure requirements for the filled panels and those no longer receiving waste (Panels, 1, 2, 3, 4, 5, and 6), including commitments on closure methodology, design, and schedule.
- Permit Attachment A – General Facility Description and Process Information: The Team did not evaluate Permit Attachments A, A1, A2, A3 or A4 because these Attachments provide descriptive language about the facility, rather than Permit requirements. Furthermore, references to Attachments A1, A2, A3, and A4 are captured throughout the Permit Parts (particularly Permit Parts 3 & 4) and were addressed by the Team during the Review.
- Permit Attachment B – Part A Application: Attachment B is the WIPP facility's RCRA Part A Permit application provided as information within the regulatory record. As such, there are no requirements to be evaluated. The requirements resulting from this application are contained in the Permit itself and were evaluated during the Review.
- Permit Attachment I – Compliance Schedule: The Team did not evaluate Permit Attachment I because, currently, there is no Compliance Schedule.
- Permit Attachment J – Hazardous Waste Management Unit Tables: Attachment J is a table that lists the Hazardous Waste Management Units (HWMUs). There are no requirements listed in Attachment J. The requirements for each HWMU are addressed in the individual Permit Parts/Attachments and were evaluated during the Review.
- Permit Attachment M – Figures: The Team did not evaluate Permit Attachment M because, currently, this Attachment is reserved.

#### **Clean Water Act (CWA) and the New Mexico Water Quality Act**

Applicable sections of the New Mexico Water Quality Act (NMWQA) were reviewed. Additionally, Discharge Permit (DP) 831 was reviewed in its entirety, and the Permit provisions were evaluated with the following exceptions:

- Conditions 42-51 of DP 831 are common to all discharge permits issued by the NMED-Groundwater Quality Bureau (GWQB). These provisions outline administrative processes that must be followed, such as submitting modifications or amendments to the Permit or payment of fees. For the purposes of the Review, the Team focused on the process provisions of the Permit (rather than the administrative) because violations of these provisions could potentially result in releases to the environment. Preventing releases to the environment is the primary objective of the NMWQA and DP 831.

### **Clean Air Act (CAA) including the National Emission Standards for Hazardous Air Pollutants (NESHAPs) and the New Mexico Air Quality Act**

Applicable portions of the CAA Regulations, including NESHAPs, and the New Mexico Air Quality Act were reviewed. This included the standards of performance for new stationary sources (40 CFR, Part 60, Subpart IIII), the NESHAPs (40 CFR Part 61, Subpart H) and the national emissions standards for hazardous air pollutants for source categories (40 CFR Part 63, Subpart ZZZZ). The WIPP facility has two reciprocating internal combustion engine (RICE) generators on-site for emergency power backup-up as well as five new source review (NSR) diesel generators on-site to support power needs for capital projects (only two currently in use). Therefore, the Review focused on the monitoring, inspection and reporting requirements for these minor sources.

### **Safe Drinking Water Act (SDWA) and the New Mexico Drinking Water Regulations**

Applicable portions of the New Mexico Drinking Water Regulations and the adopted United States Environmental Protection Agency (USEPA) Regulations 40 CFR Part 141 were reviewed. This included the sampling requirements for the Revised Total Coliform Rule, the Lead and Copper Rule, and the Stage 2 Disinfectants and Disinfection Byproducts Rule. In addition, the utility operator certification requirements included in the New Mexico Utility Operator Certification Regulations were reviewed.

### **New Mexico Solid Waste Act (NMSWA)**

Applicable sections of the New Mexico Administrative Code (NMAC) were reviewed. This includes the requirements of the Solid Waste Management General Requirements (Title 20, Chapter 9, Part 2) and the Special Waste Requirements (Title 20, Chapter 9, Part 8). The NMAC is the official collection of current rules and regulations written and filed by state agencies to clarify and interpret laws passed by the State Legislature. The noted sections establish the requirements for a facility to properly manage any generated or received solid and special waste, as applicable to the WIPP facility.

### **Emergency Planning and Community Right to Know Act (EPCRA) and the New Mexico Hazardous Chemicals Information Act**

Applicable portions of the EPCRA and the New Mexico Hazardous Chemicals Information Act were reviewed. The EPCRA of 1986 was created to help communities plan for chemical emergencies. It also requires industry to report on the storage, use, and releases of hazardous substances to federal, state, and local governments. EPCRA requires state and local governments, and Indian tribes to use this information to prepare for and protect their communities from potential risks. For this Review, the Team focused on the implementing regulations at 40 CFR Part 355 – Emergency Planning and Notification. This part (40 CFR part 355) establishes requirements for a facility to provide information necessary for

developing and implementing State and local chemical emergency response plans, and requirements for emergency notification of chemical releases.

## **5.2 Selection of Training Records and Inspection Forms for Review**

In determining which inspection forms or which employees' training records within a training category should be examined to determine whether the regulatory requirements were being met, the Review Team used the following methodology:

- For determining the number of samples to be reviewed for various size sample populations (i.e., daily, weekly, monthly, and semi-annually), the Team chose values commonly used in statistical selection. These values were used to determine the number of records for selection from each group of records to achieve a high degree of confidence in the review results. A random number generator was then used to select which records from those groups would undergo an in-depth review.
- For documents (i.e., inspection forms), the Team first determined the timeframe that would establish the available population. The publication/production dates within each document frequency group (i.e., daily, weekly, monthly, and semi-annually) were sequentially numbered. A random number generator was then used to select the specific document dates to be reviewed.
- For selection of personnel for in-depth review of training compliance, the list of personnel for each training category as defined in Attachment F was numbered sequentially. A random number generator was then used to select the personnel from each training category to be examined in-depth.

## **6. REVIEW ACTIVITIES**

Team members performed a thorough document review (e.g., program plans, procedures, instructions, other documentation), conducted interviews of relevant NWP and CBFO personnel, and reviewed photo documentation. The Review Team evaluated 642 individual criteria across the six focus areas identified in the regulatory areas noted in Section 3 of this Report. These activities resulted in an initial listing of Findings, Recommendations and Observations that are included in Section 7 of this Report.

Below is a summary of the Review Team's activities that included document and photo review/assessment and personnel interviews.



## 6.1 Document Review

The Triennial Review Team reviewed the following documents:

<b>Table 1 – Document Review</b>	
<b>Criteria Area</b>	<b>Documents Reviewed</b>
RCRA Permit Part 1	<ul style="list-style-type: none"> <li>• WP 02-EC.06 - WIPP Site Effluent and Hazardous Waste Sampling Plan</li> <li>• WP 02-EC1001 Characterization Sampling, Shipping, and Documentation</li> <li>• WP 02-EC3506 Environmental Incident Reporting</li> <li>• WP 02-RC3112 Stakeholder Documents and E-mail Notification System</li> <li>• WP 02-EM.02 Integrated Sample Control Plan</li> <li>• WP 02-PC.03 - WIPP Hazardous Waste Facility Permit Reporting and Notifications Compliance Plan</li> <li>• WP 02-PC3005 Hazardous Waste Permit Notification and Reporting</li> <li>• WP 02-RC.01 Hazardous and Universal Waste Management Plan</li> <li>• WP 02-RC.05 - Low Level/Mixed Low Level Waste Management Plan</li> <li>• WP 02-RC3109 - Waste Accumulation Area Inspections</li> <li>• WP 02-RC3111 - Information Repository</li> <li>• WP 02-RC5000 - Site Environmental Compliance RCRA Operating Record</li> <li>• WP 04-CO.01-7 - Conduct of Operations Program - Notifications</li> <li>• WP 08-NT.12 - NWP Transportation Program</li> <li>• WP 12-15 - WIPP Emergency Management Notification and Communications Plan</li> <li>• WP 12-17 -WIPP Emergency Management Training Program</li> <li>• WP 12-ER.02 - WIPP Vital Records Program</li> <li>• WP 14-TR.01 - WIPP Training Program</li> <li>• WP 15-RM - WIPP Records Management Program</li> <li>• WP 15-RM3002 - Records Filing, Inventorying, Scheduling, and Dispositioning</li> <li>• WP 15-RM3003 - Disposal of Nonpermanent Records in Office</li> <li>• WP 15-RM3006 - Records Inventory and Disposition Schedule Review and Approval</li> </ul>

	<ul style="list-style-type: none"> <li>• DOE/WIPP-20-0217 Waste Isolation Pilot Plant 2019 Biennial Hazardous Waste Report for 2018-2019</li> <li>• EA12ER3907-1-0 - Emergency Notification Form</li> <li>• DOE/WIPP-2018-0371 - Waste Isolation Pilot Plant 2018 Waste Minimization Report</li> <li>• DOE/WIPP-2019-0270 - Waste Isolation Pilot Plant 2019 Waste Minimization Report</li> <li>• DOE/WIPP-2020-1503 - Waste Isolation Pilot Plant 2020 Waste Minimization Report</li> <li>• Guidance on which NWP Transmittals Require Certification - Signatures</li> <li>• Surface 90-day Accumulation Area Inspections</li> <li>• Surface Satellite Accumulation Inspection Reports</li> <li>• DOE/WIPP 2020/2021 Permit Modifications – Numerous Sections</li> </ul>
RCRA Permit Part 2	<ul style="list-style-type: none"> <li>• DOE/WIPP-02-3122 - Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant</li> <li>• WP 08-NT3020 - TRU Waste Receipt</li> <li>• WP 05-WH1039 – Derived Waste Container Data Entry in WDS</li> <li>• WP 05-WH1036 – Surface Site-Derived Mixed Waste Handling</li> <li>• WP 12-ER3907 – Operational Emergency Notifications</li> <li>• WP 02-RC5000 – RCRA Operating Record Maintenance</li> <li>• Responses to NMED Information Requests for 2019-2021</li> <li>• Protective Force Operations (Security) Non-compliances for 2018-2021</li> </ul>
RCRA Permit Part 3	<ul style="list-style-type: none"> <li>• DOE/ WIPP-02-3122 Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant</li> <li>• WP 05-WH1101 – Contact Handled (CH) Surface Transuranic Mixed Waste Handling Area Inspections</li> <li>• WP 05-WH1101 Attachment 2 – Parking Area Unit and CH Container Storage Area Weekly Inspection Record</li> <li>• WP 05-WH1101 Attachment 3 – TRU Mixed Waste Decontamination Equipment Annual Inspection Record</li> <li>• WP 05-WH1810 Attachment 1 – Preoperational Underground TRU Mixed Waste Disposal Area Inspections Record</li> <li>• WP 02-RC3109 – Waste Accumulation Area Inspections</li> <li>• WP 02-RC3109 Attachment 1 – Satellite Accumulation Area Weekly Inspection Checklist Record for 2020-2021</li> </ul>

	<ul style="list-style-type: none"> <li>• WP 02-RC3109 Attachment 2 – Hazardous Waste Accumulation (less than 90 day) Area Inspection Checklist Record</li> <li>• WP 02-RC3109 Attachment 3 – Universal and Other Waste Accumulation and Staging Area Inspection Checklist Record</li> <li>• WP 02-RC3109 Attachment 4 – Low-Level Waste Storage Area Inspection Checklist Record</li> <li>• WP 02-RC.05 – Low-Level and Mixed Low-Level Waste Management Plan</li> <li>• Waste Operations TRU Mixed Waste Inspections Records for 2020-2021</li> <li>• Building 474 90-day Accumulation Area Inspection Records for 2020-2021</li> <li>• Low-Level Waste Storage Area Inspections Records for 2020-2021</li> <li>• Universal Waste Inspections – Surface Records for 2020-2021</li> <li>• Universal Waste Inspections – Underground Records for 2020-2021</li> <li>• Assessment of Carlsbad Field Office Oversight of Transuranic Radioactive Waste Management Programs, August 26-30, 2019, Revised Interim Report</li> <li>• WP 05-WH.04 – WIPP Waste Handling Operations Training Program Plan</li> <li>• WP 05-WH1025 - CH Waste Downloading and Emplacement</li> </ul>
	<ul style="list-style-type: none"> <li>• WP 02-PC.03 WIPP Hazardous Waste Facility Permit Reporting and Notifications Compliance Plan</li> <li>• WP 02-PC3005 Hazardous Waste Facility Permit Notification and Reporting</li> <li>• WP 02-RC3111 Information Repository</li> <li>• WP 02-RC3112 Stakeholder Documents and E-Mail Notification System</li> <li>• WP 04-CO.01 Conduct of Operations</li> <li>• WP 12-VC.01 Volatile Organic Compounds Monitoring Plan</li> <li>• DWG #51-W-214-W - Underground Facilities Typical Panel Design</li> <li>• EN:20 Geo-mechanical Mine Stability Surveillance Report</li> </ul>

	<ul style="list-style-type: none"> <li>• WP 05-WH1810 Attachment 1 Preoperational Underground TRU Mixed Waste Disposal Area Inspections Form</li> <li>• ECN1736471 Panel 8 Mining</li> </ul>
RCRA Permit Part 5 & Attachment L:	<ul style="list-style-type: none"> <li>• DOE/WIPP-06-3339 – WIPP Groundwater Protection Program Plan</li> <li>• WP 02-1 – WIPP Groundwater Monitoring Program Plan</li> <li>• WP 02-EM1002 - Electric Submersible Pump Operation and Maintenance Purging</li> <li>• WP 02-EM1010 – Field Parameter Measurements and Final Sample Collection</li> <li>• WP 02-EM1014 - Groundwater Level Measurement</li> <li>• WP 02-EM1025 – Data Review for the Annual Culebra Groundwater Report</li> <li>• WP 02-EM1026 - Water Level Data Handling and Reporting</li> <li>• WP 02-PC3002 - WIPP Hazardous Waste Facility Permit Change Request and Modification Processing</li> <li>• WP 02-EC1003 – Low Flow Groundwater Purging and Sampling</li> <li>• WP 02-EM3003 - Data Verification and Validation of RCRA Results</li> <li>• WP 02-RC5000 – RCRA Operating Record Maintenance</li> <li>• WP 02-PC.03 - WIPP Hazardous Waste Facility Permit Reporting and Notifications Compliance Plan</li> <li>• WP 10-AD3029 - Calibration and Control of Monitoring and Data Collection Equipment</li> <li>• WP 13-1 - NWP LLC Quality Assurance Program Description</li> </ul>
RCRA Permit Parts 6-8, Attachments G, H and K:	<ul style="list-style-type: none"> <li>• DOE/WIPP-00-2001 - WIPP Facility Work Plan for Solid Waste Management Units and Areas of Concern</li> <li>• WP 05-WH.04 - WIPP Waste Operations Training Program Plan</li> <li>• WP 12-ER.02 - WIPP Vital Records Program</li> <li>• WP 15-RM- WIPP Records Management Program</li> </ul>
RCRA Permit Attachment C	<ul style="list-style-type: none"> <li>• Hazardous Waste Manifest Records for 2020-2021</li> <li>• WP 12-ER.02 WIPP Vital Records Program</li> <li>• WP 15-RM - WIPP Records Management Program</li> <li>• DOE/WIPP-18-3526 – Waste Isolation Pilot Plant Biennial Environmental Compliance Report</li> <li>• WP 13-1 – NWP LLC Quality Assurance Program Description</li> </ul>

<p>RCRA Permit Attachment D, EPCRA, and the New Mexico Hazardous Chemicals Information Act</p>	<ul style="list-style-type: none"> <li>• DOE/WIPP-17-3573 - WIPP Emergency Management Plan</li> <li>• RCRA Permit Attachment D – RCRA Contingency Plan</li> <li>• WP 12-11 – Development and Maintenance of the Emergency Planning Hazards</li> <li>• WP 12-13 - Development and Maintenance of Emergency Action Levels</li> <li>• WP 12-15, WIPP Emergency Management Notification and Communications Plan</li> <li>• WP-12-RP.01 –WIPP Emergency Planning Hazards Survey</li> <li>• WP 12-ER3002 - Emergency Operations Center Operations</li> <li>• WP 12-ER3907 - Operational Emergency Notifications</li> <li>• EA12ER3907-1-0 - Emergency Notification Form</li> <li>• EA12ER3907-2-0 - WIPP Emergency Notification Fax Coversheet</li> <li>• WP 12-ER4925 – CMR Incident Recognition and Initial Response</li> <li>• WP 12-ER4926 - CMR Expanded Staffing Operations</li> <li>• EA12ER4926-1-0 – CMR Expanded Staffing Checklist</li> <li>• EA12ER4926-5-0 – Environmental Release Worksheet</li> <li>• EA12ER4926-7-0 - RCRA Contingency Plan Implementation Decision Checklist</li> <li>• EA12ER4926 -8-0 – Notification of Implementation of the WIPP RCRA Contingency Plan</li> <li>• WP 15-CA-1010 – Reporting Occurrences in Accordance with DOE Order 232.2A</li> <li>• WP 02-EC3506 – Environmental Incident Reporting</li> <li>• RCRA Contingency Plan Implementation Reports for March 2021, January 2020, November 2019, and August 2019</li> <li>• WP 02-EC3005 – Superfund Amendments and Reauthorization Act (SARA) Tier II Emergency and Hazardous Chemical Inventory Reporting</li> <li>• SARA_Tier2_2020_Worksheet_Rev 3</li> </ul> <p><b>Photos:</b></p> <ul style="list-style-type: none"> <li>• 5754 (Universal Waste storage on pallet underground E140/N1400)</li> <li>• 5781 (Batteries in TMF)</li> <li>• 5782 (Batteries in TMF)</li> <li>• 5783 (Battery storage in TMF)</li> <li>• 5784 (Battery storage in TMF)</li> <li>• 5785 (Battery storage in TMF)</li> </ul>
<p>RCRA Permit Attachment E</p>	<ul style="list-style-type: none"> <li>• WP 05-WH1101 - CH Waste Processing</li> </ul>



	<ul style="list-style-type: none"> <li>• WP 05-WH1025 - CH Waste Downloading and Emplacement</li> <li>• WP 17-SPO1003, WIPP Fence, Gates, and Sign Daily Inspection Checklist</li> <li>• WP 04-ED1301, Diesel Generator Operation</li> <li>• Action Requests, Inspection Forms and Work Orders</li> <li>• DOE/WIPP-19-0203 2018 First Triennial Review for the Waste Isolation Pilot Plant Corrective Action Report</li> </ul> <p><b>Photos:</b></p> <ul style="list-style-type: none"> <li>• 5756 Empty Satellite Accumulation Area pallet</li> <li>• 5757 Used batteries for recycling on pallet</li> <li>• 5758 Used batteries for recycling on pallet</li> <li>• 5759 New batteries on pallets</li> <li>• 5760 Bins of used lantern batteries with signage</li> <li>• 5484 Perimeter Signage Front Gate</li> <li>• 5485 Perimeter Signage Front Gate</li> <li>• 5486 Perimeter Signage Front Gate</li> <li>• 5769 Universal Waste Storage Area Signage</li> <li>• 5770 Universal Waste Storage Area</li> <li>• 5771 Special Waste Container Label in Universal Waste Storage Area</li> <li>• 5772 Hazardous Waste Label on Accumulation Area Building 474 Area</li> <li>• 5773 Hazardous Waste Storage Area</li> <li>• 5774 Hazardous Waste Storage Area – Close Up View</li> <li>• 5775 Waste Storage Area Perimeter Signage</li> <li>• 5776 Used Battery Storage Area – Bldg 474 Area Bldg 474 in photo</li> <li>• 5777 Used Battery Storage Area – Bldg 474 Area Bldg 474 in photo</li> <li>• 5778 Used Battery Storage Area – Bldg 474 Area Bldg 474 in photo</li> <li>• 5779 Used Battery Storage Area – Bldg 474 Area Bldg 474 in photo</li> <li>• 5780 Used Battery Storage Area – Bldg 474 Area Bldg 474 in photo</li> <li>• 5796 Signage on North Gate</li> <li>• 5797 Signage on North Gate Trailer 904 in photo</li> <li>• 5798 Signage on North Gate</li> </ul>
RCRA Permit Attachment F	<ul style="list-style-type: none"> <li>• WP 05-WH.04 - WIPP Waste Handling Operations Training Program Plan</li> </ul>

	<ul style="list-style-type: none"> <li>• WP 12-17 - WIPP Emergency Management Training Program</li> <li>• WP 14-TR.01 - WIPP Training Program</li> <li>• Training Records Compliance Review of 84 Hazardous Waste Workers in 6 RCRA Hazardous Management Qualification Areas</li> <li>• Training Records Compliance Review of 21 Non- RCRA Workers</li> <li>• HWO-101 RCRA Regulations/Hazardous Facility Waste Overview Training</li> <li>• HWP-101 Permit Inspections and Recordkeeping Training</li> <li>• HWR Hazardous Waste Responder Training</li> <li>• HWS Hazardous Waste Worker Supervisor Training</li> <li>• HWW Hazardous Waste Worker Training</li> <li>• SAF-645 RCRA Contingency Plan Training</li> <li>• General Employee Training</li> <li>• DOE/WIPP-19-0203 2018 First Triennial Review for the Waste Isolation Pilot Plant Corrective Action Report</li> </ul>
RCRA Permit Attachment N	<ul style="list-style-type: none"> <li>• WIPP/DOE-99-2194 – WIPP Environmental Monitoring Plan</li> <li>• WP 12-VC1685 - Subatmospheric Air Sampling in Passivated Canisters</li> <li>• WP 02-PC3003 - EPA Compliance Programs Screening and Evaluation</li> <li>• WP 12-VC3209 - VOC Data Handling and Program Reporting</li> <li>• WP 12-VC.01 - VOC Monitoring Plan</li> <li>• WP 12-VC.02 – Quality Assurance Project Plan for VOC Monitoring</li> <li>• WIPP/DOE-99-2194 – WIPP Environmental Monitoring Plan</li> </ul>
RCRA Permit Attachment O	<ul style="list-style-type: none"> <li>• WP 04-VU2004 - Interim Ventilation System Testing and Balancing</li> <li>• WP 04-VU3003 - Supplemental Ventilation System Testing and Balancing</li> <li>• SDD VU00 - Underground Ventilation System Design Description (SDD)</li> <li>• WP 04-VU1612 - WIPP Mine Ventilation Rate Monitoring</li> <li>• WP 04-AD3008 - Preparation and Use of Round Sheets, Surveillance Data Sheets, and Critical Component/Equipment Status Sheets</li> <li>• EA04AD3008-36-0 - U/G Air Quality Round Sheet</li> <li>• WP 04-VU1614 - U/G Air Flow Volume Readings</li> </ul>

	<ul style="list-style-type: none"> <li>• WP 04-VU1615 - Abnormal Active Room Ventilation Flowrate Conditions &amp; Implementing Measures (This document is a draft)</li> <li>• WP IC413000 - Station B Mass Flow Measurement System Calibration</li> <li>• WP IC413005 - Calibration of Flow Indicating Transmitters for U/G Exhaust Fans</li> <li>• WP IC041087 - Calibration of Suction Flow Transmitters for 41-B-956 and 41-B-957</li> <li>• WP 10-AD3028 - Calibration and Control of Measurement and Test Equipment</li> <li>• WP 10-AD3029 - Calibration and Control of Monitoring and Data Collection Equipment</li> <li>• WP 02-PC.03 - WIPP Hazardous Waste Facility Permit Reporting and Notifications Compliance Plan (See Attachment 1 in particular)</li> <li>• WP 04-VU1612 - WIPP Mine Ventilation Rate Monitoring</li> <li>• WP 04-VU1615 - Abnormal Active Room Ventilation Flowrate Conditions &amp; Implementing Measures (this document is a draft)</li> </ul>
CWA/DP-831	<ul style="list-style-type: none"> <li>• Discharge Permit 831</li> <li>• WP 02-2 - WIPP Discharge Permit 831 Monitoring Plan</li> <li>• WP 02-EM1022 - Site Discharge Area Inspections</li> <li>• WP 02-RC.17 - DP-831 Contingency Plan</li> <li>• WP 10-WC3011 - Work Control Process</li> <li>• EA04AD3008-31-0 - Facility Operations Facultative Sewage Lagoons, Industrial Wastewater and Stormwater Ponds Round Sheet</li> <li>• Work Order 1744997- Measure the depth of the sediments in the Sewage Lagoons</li> <li>• Work Order 1745215- Measure the depth of the sediments in the three Salt Storage Ponds</li> <li>• Work Order 2153714- Perform liner repairs</li> <li>• WP 02-EM1014 - Groundwater Level Measurement</li> <li>• WP 02-EC1003 - Low Flow Groundwater Purging and Sampling</li> <li>• WP 02-EC3003 - DP-831 Semi-Annual Report Preparation</li> <li>• WP 02-EM1001 - Sewage Lagoon and Infiltration Controls Sampling</li> <li>• WP 02-EM3001 - Administrative Processes for Environmental Monitoring and Hydrology Programs</li> <li>• Records Inventory and Disposition Schedule</li> </ul>

	<b>Photos:</b> <ul style="list-style-type: none"> <li>• 5807 Storm Water runoff pond #3</li> <li>• 5808 Sewage Pond south of WIPP with Signage</li> <li>• 5810 Sewage Pond south of WIPP with Signage</li> <li>• 5811 Storm Water runoff pond #4 with Signage</li> <li>• 5813 Storm Water runoff pond #2 with Signage</li> </ul>
CAA, NESHAPs, and the New Mexico Air Quality Act	<ul style="list-style-type: none"> <li>• DOE/WIPP-00-3121- Implementation Plan for Title 40 CFR Part 191, Subpart A</li> <li>• DOE/WIPP-97-2238 - Periodic Confirmatory Measurement Protocol for the WIPP</li> <li>• DOE/WIPP-18-3607 Semi-Annual VOC, Hydrogen, and Methane Data Summary Report for 2018</li> <li>• DOE/WIPP-19-3614 Semi-Annual VOC, Hydrogen, and Methane Data Summary Report for 2019</li> <li>• DOE/WIPP-20-3621 Semi-Annual VOC, Hydrogen, and Methane Data Summary Report for 2020</li> <li>• NMED Air Quality Bureau #0310-M3 New Source Review Streamline Permit</li> <li>• NMED Air Quality Bureau #0310-M-2 Diesel Generator Permit</li> <li>• EA4AD3008-47-0 Facility Operations Diesel Generator Log (Monthly Inspections)</li> <li>• EA04AD3008-2-0 Diesel Generator #1 and #2 Roundsheet</li> </ul> <b>Photos:</b> <ul style="list-style-type: none"> <li>• 5476 (Two Backup diesel generators)</li> <li>• 5479 (Two Backup diesel generators)</li> <li>• 5767 (Air Permit for Backup diesel generators)</li> <li>• 5802 (NSR Generator at Utility Shaft Site)</li> <li>• 5803 (NSR Generator No. 2 at Utility Shaft Site)</li> <li>• 5816 (NSR Generator at the Safety Significant Confinement Ventilation System [SSCVS])</li> </ul>
SDWA and the New Mexico Drinking Water Regulations	<ul style="list-style-type: none"> <li>• WIPP Water System Sampling Plan</li> <li>• WP 02-EC1002 – Drinking Water Sampling</li> <li>• WP 12-IS1001 – Chlorine Sampling of WIPP Drinking Water</li> <li>• WP 12-IS1002 – Coliform Sampling of WIPP Drinking Water</li> <li>• WP 04-WD1010 – Domestic Water System Operation</li> <li>• WP 04-WD1020 – Free Chlorine Analyzer Operation</li> <li>• NMED 2018 Sanitary Survey Report</li> <li>• 2020 WIPP Triennial Lead and Copper Compliance Submittal</li> </ul>

	<ul style="list-style-type: none"> <li>• 2018, 2019, 2020 WIPP Annual Chlorine By-Products Compliance Submittals</li> <li>• Random Month Bacterial (Microbiological) Water Reports</li> <li>• Random Month Chlorine Residual Analytical Reports</li> <li>• Water Supply Operator Certifications</li> </ul>
NMSWA	<ul style="list-style-type: none"> <li>• WP 02-RC3109 – Waste Accumulation Area Inspections</li> <li>• WP 08-NT3020 – TRU Waste Receipt</li> <li>• WP 05-WH.04 – WIPP Waste Handling Operations Training Program Plan</li> <li>• WP 02-PC.03 – WIPP Hazardous Waste Facility Permit Reporting and Notifications Compliance Plan</li> <li>• WP 02-PC3002 – WIPP Hazardous Waste Facility Permit Change Request and Modification Processing</li> <li>• Hazardous Waste Manifest Records for 2020-2021</li> </ul> <p><b>Photos:</b></p> <ul style="list-style-type: none"> <li>• 5754 Universal Waste storage on pallet underground E140/N1400</li> <li>• 5770 Universal Waste Storage Area</li> <li>• 5771 Special Waste Container Label In Universal Waste Storage Area</li> <li>• 5773 Hazardous Waste Storage Area</li> <li>• 5774 Hazardous Waste Storage Area – Close Up View</li> <li>• 5775 Waste Storage Area Perimeter Signage</li> <li>• 5814 HalfPACT 510 Labels Operational Security obscured some of the information on the Hazardous Waste label</li> <li>• 5815 HalfPACT 510 Labels Close Up Operational Security obscured some of the information on the Hazardous Waste label</li> </ul>

The Triennial Review Team interviewed the following personnel during the Review:

<b>Table 2 – Interviews</b>	
<b>Criteria Area</b>	<b>Interviewees</b>
RCRA Permit Part 1	<ul style="list-style-type: none"> <li>• Stewart Jones, Deputy Manager ESH Programs, NWP</li> <li>• Bobby St. John, Communications Assistant Manager, NWP</li> </ul>
RCRA Permit Part 2	<ul style="list-style-type: none"> <li>• Rick Chavez, RES Manager</li> <li>• Angela Johnson, Transportation Management Manager, NWP</li> </ul>
RCRA Permit Part 3	<ul style="list-style-type: none"> <li>• Jeff Runyon, Site Environmental Compliance, RES</li> <li>• Cynthia Minjares, Site Environmental Compliance, RES</li> </ul>



RCRA Permit Part 5 & Attachment L:	<ul style="list-style-type: none"> <li>• Rick Salness, Environmental Monitoring &amp; Hydrology Program Manager, RES</li> </ul>
RCRA Permit Parts 6-8 and Attachments G, H and K	<ul style="list-style-type: none"> <li>• Stewart Jones, Deputy Manager Environmental Safety and Health Programs, NWP</li> </ul>
RCRA Permit Attachment C	<ul style="list-style-type: none"> <li>• Bill Jaco, Site Environmental Compliance Manager, RES</li> <li>• Rick Chavez, RES Manager</li> </ul>
RCRA Permit Attachment D	<ul style="list-style-type: none"> <li>• Rick Chavez, RES Manager</li> <li>• Michael Jones, RES Permitting</li> </ul>
RCRA Permit Attachment F	<ul style="list-style-type: none"> <li>• Victoria Holt, Team Lead (Training), NWP</li> </ul>
RCRA Permit Attachment N	<ul style="list-style-type: none"> <li>• Rick Salness, Environmental Monitoring &amp; Hydrology Program Manager, RES</li> <li>• Heather Patterson, VOC Monitoring Program Team Lead, RES</li> </ul>
RCRA Permit Attachment O	<ul style="list-style-type: none"> <li>• Forrest Queen Ventilation Manager, NWP</li> </ul>
CWA/DP-831	<ul style="list-style-type: none"> <li>• Bill Jaco, Site Environmental Compliance Manager, RES</li> </ul>
CAA	<ul style="list-style-type: none"> <li>• Bill Jaco, Site Environmental Compliance Manager, RES</li> </ul>
SDWA	<ul style="list-style-type: none"> <li>• Bill Jaco, Site Environmental Compliance Manager, RES</li> <li>• Mike Proctor, Facility Operations Manager, NWP</li> <li>• Eli Gerlach, Occupational Safety &amp; Health Program Manager</li> </ul>
NNSWA	<ul style="list-style-type: none"> <li>• Bill Jaco, Site Environmental Compliance Manager, RES</li> <li>• Angela Johnson, Transportation Management Manager, NWP</li> <li>• Jeff Runyon, Site Environmental Compliance, RES</li> </ul>
EPCRA	<ul style="list-style-type: none"> <li>• Katie Sterling, Emergency Preparedness Department Manager, NWP</li> <li>• Jeff Williams, Emergency Management Team Lead, NWP</li> <li>• John Sanford, Emergency Management Manager, NWP</li> </ul>

## 7. FINDINGS, OBSERVATIONS AND RECOMMENDATIONS

This section documents the non-compliances (potential violations), the findings (deficiencies that could lead to non-compliances of applicable regulations) and observations (i.e., areas of improvement and/or vulnerabilities) identified during the Review and the Review Team's recommendations for correcting non-compliances, findings, and observations and implementing improvements. For this report, these are issues that the Review Team identified that fall into one of the following categories: 1) non-compliances; 2) findings; or, 3) observations. For the purposes of this Report, the Review Team has also listed recommendations for NWP's consideration.

## **Observations**

### **1. Observation 1 – Scope of Training for non-RCRA Employees**

#### **Description**

##### **RCRA Permit Attachment F – Section F-1b (1)**

Section F-1b (1) of Attachment F describes the annual training requirements for both RCRA and non-RCRA employees, including specific reference to four areas related to Emergency Preparedness and Response, RCRA (including the Permit and the RCRA Contingency Plan), Fire Protection and Safety Signage. A review of training records for non-RCRA employees indicates that training is limited to General Employee Training (GET) and annual GET refreshers. The specificity of the language in the Permit is ambiguous and can be interpreted to indicate that training more than GET, especially for non-RCRA employees may be required.

#### **Recommendation**

Revise the Permit language to remove ambiguity.

### **2. Observation 2 – RCRA Permit Attachment F – Accuracy of RCRA Employee Lists**

#### **Description**

Attachment F-1b requires that an up-to-date list of personnel assigned to TRU mixed waste management and emergency response positions be maintained. In general, turnaround for requested lists of RCRA employees by training category requested during the Review were timely. However, the lists provided included former employees, which raises questions related to the up-to-date status of the lists.

#### **Recommendation**

It is recommended that NWP revisit the design of the software used to generate the up-to-date lists to assure that the lists are capturing all RCRA employees in each training category, but only those who are employed at the time of the query.

### **3. Observation 3 – RCRA Permit Attachment F GET Training Timeframe**

#### **Description**

Attachment A4, Section A4-2 A requires that non-RCRA employees complete GET training within 30 days of hire. However, a review of a selected group of non-RCRA employees indicated a small number completed GET training beyond the 30-day timeframe.

#### **Recommendation**

Nuclear Waste Partnership has indicated that the approved Class 2 Permit Modification Request (November 2017), revised Permit Attachment F to align with the regulatory training requirements of 40 CFR §264.16(b), removing the requirement to complete GET within 30 days of employment. However, the reference to the 30-day completion requirement for GET in Attachment A4 was inadvertently left in place. On October 12, 2021, NWP submitted a Class 1 Permit Modification Notification to NMED requesting revision of Permit Attachment A4, Section A4-2, to remove this requirement. The requirement was removed within seven days of submittal. The Permit Modification Notification was incorporated into the on-line Permit issued by NMED on October 27, 2021. This observation was addressed during the review.

#### **4. Observation 4 – CAA Permit Documentation Requirements**

##### **Description**

The Permittees currently have two permits under the CAA for the WIPP facility. The first is for two diesel back-up generators (Permit # 310-M-2- December 1993) and the Second is for five New Source Review (NSR), Minor Source diesel generators (Permit # 0310-M3, July 2019) of varying sizes that supply electricity to office trailers used by DOE and NWP personnel. These trailers are utilized to provide oversight of subcontracted work crews in support of multiple capital projects at the WIPP facility.

Although there are very few inspections and/or reporting requirements for either permit because none of the diesel generators exceed annual allowable emissions thresholds, it was indicated in several interviews and through document reviews that there are no formal policies or procedures that flow down the requirements from either permit. Additionally, regarding the NSR generators, facility personnel interviewed stated that typically on-site subcontractors were responsible for logging the run times for each NSR generator and reporting the results to NWP monthly. The Review Team inquired as to whether contract documents for subcontractors included any requirements related to the five NSR generators and it was stated that tracking of generator run times was not included as a requirement in subcontract documents. Direction to collect these data was typically given verbally or via email.

##### **Recommendation**

It is not a requirement that the Permittees flow-down permit requirements into procedure/policy documents. However, the Review Team strongly recommends the Permittees consider formalizing the inspection and data logging requirements in an operational policy/procedure or capture the requirement in subcontract documents. This will limit potential risk for future non-compliance.

#### **5. Observation 5 - Clean Water Act (CWA)/DP 831 Checklists**

**Description**

During the interview it was noted that WP 02-EC3003-DP-831 Semi-Annual Report Preparation was currently being modified in anticipation of the new discharge permit becoming effective.

**Recommendation**

It is recommended that Attachment 1 and Attachment 2 checklists be amended to verify that the meter used to comply with DP-831 condition 15 is operational and if not, that condition 34 has been met.

**6. Observation 6 - Safe Drinking Water Act Procedures****Description**

During document reviews the following conditions were noted:

- The drinking water sampling procedures (WP02-EC1002, WP12-IS1001, and WP12-IS1002) did not reference the applicable sections of the WIPP Water System Sampling Plan.
- The WIPP Water System Sampling Plan did not include how the City of Carlsbad would be notified of a positive total coliform (TC) or e. coli (EC) sample.
- There is not a Public Water System (PWS) Operation and Maintenance Plan that follows the NMED template.

**Recommendations**

It is recommended that the drinking water sampling procedures (WP02-EC1002, WP12-IS1001, and WP12-IS1002) be directly referenced in the appropriate sections of the WIPP Water System Sampling Plan. It is recommended that consideration is given to developing a procedure or instruction formally documenting the process for notification to the City of Carlsbad for any positive TC or EC sample. Although DOE has a Domestic Water System Operation Document (04-WD1010), it is recommended that consideration be given to developing a PWS Operation and Maintenance Plan consistent with the NMED template.

**7. Observation 7 – New Mexico Solid Waste Act Proper Waste Labeling****Description**

When asked during an interview about proper waste labeling, the interviewee stated that there is not a controlled procedure for labeling waste. The employee stated that the WIPP facility's RCRA training class addresses labeling, and the examples provided in the class are referenced, as necessary, when performing work at the WIPP facility. After requesting additional information and conducting follow-on questions, it was established that the labelling process for hazardous and universal waste is included in WP 02-RC.01, WP 02-RC3503, and WP 02-RC3109. However, the interviewee did not appear to be aware of these procedures and therefore was not using these procedures when performing

labeling work. It was also noted that new employees work with fully trained and experienced field technicians so that proper waste labeling is accomplished. Although no issues of improper labeling were identified, the Review Team believes that personnel being unaware of or unable to reference the official labelling procedures presents a compliance vulnerability.

### **Recommendation**

The Review Team recommends that the training for personnel responsible for labeling of hazardous and universal waste containers be evaluated and a determination of whether, at a minimum, a “read-confirm” of these procedures be performed.

## **8. Observation 8 – Emergency Planning and Community Right to Know Act Reportable Quantities**

### **Description**

The DOE is required to comply with the provisions outlined in 40 CFR §355.20(a-d) – Emergency Planning and Notification for reportable quantities (>1,000 pounds – per 40 CFR Part 355, Appendix A) of sulfuric acid (in battery form) on-site. Additionally, per 40 CFR Part 355, Appendix A, the Threshold Planning Quantity of sulfuric acid is 1,000 pounds.

Specifically, 40 CFR §355.20(c) requires that notice of any changes occurring at the facility that may be relevant to emergency planning must be made to the Local Emergency Planning Committee (LEPC) within 30 days after the changes occur.

When asked about this requirement, emergency planning personnel indicated that EPCRA Sections 311-312 are referenced in procedure WP 12-IH.02-04 - WIPP Industrial Hygiene Program – Hazard Communications and Hazardous Materials Management Plan. This Plan states that Safety Data Sheets (SDS) must be submitted to the State Emergency Response Commission (SERC), LEPC, and local fire department within 90 days after a chemical’s acquisition or change in process. Although this procedure correctly flows down the requirement in EPCRA Sections 311-312 to notify the SERC, LEPC and local fire department within 90 days after chemical acquisition and provide SDSs, it does not address the requirement in the implementing regulation at 40 CFR §355.20(c).

Additionally, personnel indicated that the SARA Title III Tier II Report, which documents quantities of extremely hazardous substances, is distributed annually to several entities, including the LEPC. Although the SARA Title III Tier II Report is being distributed as required, it does not address the requirement in the implementing regulation at 40 CFR §355.20(c). The requirement in 40 CFR §355.20(c) refers to notification of any changes relevant to emergency planning, which would include increases in inventory of an “extremely hazardous substance”. Examples of changes that can trigger notifications to

the LEPC were provided by the EPA in the preamble of the rule (73 FR 65452). These include (but are not limited to): i. when a facility is no longer in operation, ii. new Extremely Hazardous Substances (EHSs) are present at the facility, iii. EHSs are moved to a different location at the facility, and iv. EHSs are no longer present at the facility. As stated by EPA, these are examples of changes that can trigger the 30-day notification requirement, but it isn't intended to be an exhaustive list.

It was noted that there are ongoing informal communications between WIPP personnel and the Eddy County LEPC. Minutes from these informal meetings are distributed to the attendees, but it is unclear as to whether these communications and subsequent meeting minutes adequately address the 40 CFR §355.20(c) requirement. Because the notification requirement in 40 CFR §355.20(c) is subject to interpretation, the DOE is technically complying with the 30-day notification requirement as outlined in 40 CFR §355.20(c).

This observation revealed that DOE is only formally tracking compliance with the implementing regulations of the EPCRA at 40 CFR, Part 370 – Hazardous Chemical Reporting: Community Right to Know. However, the Review Team's LOIs for this focus area concentrated on 40 CFR, Part 355- Emergency Planning and Notification, rather than Part 370. This presents a compliance risk for DOE and should be addressed via the recommendation below.

#### **Recommendation**

The Review Team recommends that the DOE review the EPCRA implementing regulations outlined in 40 CFR §355. If there are requirements that are not currently addressed in a policy or operating procedure, the DOE should revise the appropriate procedure/policy documents to incorporate any missing requirements. At a minimum, DOE should consider formalizing the notification requirements of 40 CFR §355.20(c).

## **8. CONCLUSIONS**

The Review Team concluded that, overall, the WIPP facility has done an outstanding job of maintaining compliance in the regulatory areas evaluated as part of this Review. The Review Team evaluated 642 individual criteria across six different regulatory areas. The above observations were identified as part of the Review Team's document review and interviews with WIPP Facility personnel. The eight observations were identified as areas where improvements can be made to mitigate or eliminate areas of risk/vulnerability. The observations, while not required to be implemented by NWP, can be addressed by either implementing the Review Team's recommendations or by implementing solutions of NWP's design.

**ATTACHMENT A**

**WIPP TRIENNIAL REVIEW PLAN**



## WIPP SECOND TRIENNIAL REVIEW PLAN SUBCONTRACT DOE13-PO516049

Second Triennial Review Plan Submitted: May 6, 2021

Submitted By: Renee Echols, Program Manager,  
Firewater Associates, LLC

NWP Point of Contact: Michael Jones, RES

### Table of Contents

1. PURPOSE .....	2
2. INTRODUCTION.....	2
3. REVIEW OBJECTIVES.....	2
4. REVIEW CRITERIA .....	3
5. REVIEW SCOPE .....	3
6. SECOND TRIENNIAL REVIEW TEAM.....	4
6.1 Personnel and Qualifications .....	4
6.2 Program Manager – Ms. Renee Echols (Firewater) .....	5
6.3 Roles and Responsibilities.....	6
7. DELIVERABLES/TIMETABLE .....	6
7.1.1 Monthly Reports: .....	8
7.1.2 Review Checklists:.....	8
7.1.3 Draft Triennial Review Report:.....	8
7.1.4 Final Triennial Review Report: .....	8
7.1.5 Triennial Review Records:.....	9
8. SECOND TRIENNIAL REVIEW PROCESS.....	9
9. QUALITY PLAN.....	11
Table 1 Environmental Regulations/SOW.....	3
Table 2 Triennial Review Team Reporting Requirements to POC.....	6





## 1. PURPOSE

The purpose of this Review Plan (Plan) is to provide guidance and direction to the Firewater Triennial Review Team for performance of the Second Triennial Review of the U.S. Department of Energy (DOE) Waste Isolation Pilot Plant (WIPP) environmental programs. Performance of the Triennial Review is intended to ensure the Permittees (DOE Carlsbad Field Office (CBFO) and Nuclear Waste Partnership LLC (NWP)) regulatory deficiencies are identified with regard to the applicable regulations in areas that have been selected for review. The Second Triennial Review will utilize similar processes and personnel that resulted in successful completion of the First Triennial Review in 2018. These independent reviews are required to be funded and performed by DOE every three years to determine the integrity of the environmental regulatory compliance processes and operations programs implemented at the WIPP facility.

## 2. INTRODUCTION

Firewater Associates, LLC (Firewater) and our teaming Subcontractor Longenecker & Associates (L&A) have developed this Plan in accordance with the requirements of NWP Subcontract DOE13-PO516049, Revision 1 to the Statement of Work (SOW) dated April 2021. The review will be carried out by knowledgeable professionals using industry approved audit techniques, consensus standards and familiarity with applicable environmental regulations in accordance with the requirements of the referenced Subcontract (Review Team).

This Plan provides the flow-down requirements from the First Triennial Review SOW and Guidelines from the Settlement Agreement and Stipulated Final Order No. HWB-14-21 Supplemental Environmental Projects Paragraph 34(a), January 20, 2017, as amended by the Permittees and approved by the NMED on April 6, 2021. The Review will be conducted and finalized during calendar year 2021 and result in a final report available for public posting by the Permittees by December 31, 2021.

## 3. REVIEW OBJECTIVES

The Second Triennial Review (Review) will be a systematic, independent, and documented process of objectively obtaining and evaluating evidence to determine whether specified environmental regulatory and operations requirements at the WIPP facility are being met. This Review will build upon the work performed on the First Triennial Review that was completed in 2018 and was the result of a Settlement Agreement between the Permittees and the State of New Mexico Environment Department (NMED).

The objective of the Second Triennial Review is to determine whether specified environmental regulatory requirements within the designated areas are being properly implemented at the WIPP facility. In those areas, the Review's main goal is to identify potential regulatory deficiencies, potential regulatory violations, and deficiencies that could lead to violations of environmental regulations. The secondary objectives of the Review may also include the challenges regarding effective implementation of the environmental programs at the WIPP facility and the strengths that reflect the maturity of those programs.



#### 4. REVIEW CRITERIA

The Review Team will develop review criteria that will be used to evaluate WIPP facility environmental regulatory programs compliance. The criteria will include regulatory requirements, standards, guidelines, permit conditions, or any other specified requirements. Reference documents will include relevant permits, licenses, authorization, and similar documents that authorize work activities.

The Review Team will qualitatively identify current and future vulnerabilities and risks in the identified areas so that NWP can address and mitigate immediate risks as well as understand the potential and likelihood for future risks. The Review Team will deploy effective, consistent, and thorough review methods to provide smooth transition to any future Triennial Review.

#### 5. REVIEW SCOPE

The Review will focus on the following environmental statutes, regulations, and Orders, to the extent they apply to the WIPP facility, as required in Revision 1 of the SOW:

**Table 1 – Environmental Regulations/SOW**

Item	Applicable Environmental Statute or Regulation	Focus of the Review
1	Resource Conservation and Recovery Act (and New Mexico implementation through the New Mexico Hazardous Waste Act)	Processes and procedures to assure compliance to the operational requirements and compliance to requirements for the accumulation and retention of records and monitoring data. Corrective actions taken to prevent the recurrence of non-compliances
2	Clean Air Act (including the National Emission Standards for Hazardous Air Pollutants and the New Mexico Air Quality Act)	Processes and procedures to assure compliance and the accumulation of required monitoring data
3	Clean Water Act (and the New Mexico Water Quality Act)	Processes for controlling permitted discharges and the collection of monitoring data for reporting to the NMED
4	Safe Drinking Water Act (and the New Mexico Drinking Water Regulations)	Processes and procedures to assure timely sampling and reporting of facility drinking water quality and identification of and remediation of system repairs
5	New Mexico Solid Waste Act	Procedures for implementation and the reporting requirements
6	Emergency Planning and Community Right to Know Act (and the New Mexico Hazardous Chemicals Information Act)	Processes for reporting spills and the processes to accumulate and report the required information annually



The activities to be performed by the Review Team will include:

- Determine, through investigation, examination of records, and interviews, if the CBFO and NWP are in compliance with the terms and conditions of permits and authorizations implementing the environmental regulations that stem from the listed statutes. Review Team members reviewing NWP Security records and procedures shall comply with the requirements of DOE Order 470.4B, *Safeguards and Security Program, Attachment 2, Contractor Requirements Document Safeguards and Security Program Planning*.
- Determine, through investigation, examination of records, and interviews, if the CBFO and NWP have programs in place to identify and implement new environmental requirements when they are promulgated.
- Examine the status of the EMS with regard to completeness. Completeness is defined as including the major activities that impact the environment and providing a method for mitigation of the impacts.
- Determine, through investigation, examination of records, and interviews, the robustness of the oversight process(es) in place for the environmental programs at the WIPP facility to assure the technical content of the implementation programs is effectively controlled.
- Document findings in a written report that will be submitted to the Permittees through the NWP Point of Contact (POC) at the end of the review. All findings relating to NWP Security shall be submitted to NWP Security Manager for review and approval before publication or release. Upon discovery of a potential NWP Security finding, the Reviewer must immediately notify the NWP Security Manager.
- Perform the Triennial Review as outlined in section 10.0, *Triennial Review Guidelines* of the SOW. As required by the SOW, Review Team members will keep information relative to the Review Confidential. Review Team members will sign Nondisclosure Agreements that will be provided to the NWP POC prior to initiating the Review process.
- Provide guidance and support, as needed, to address/close findings and recommendations identified during the Triennial Review.

## 6. SECOND TRIENNIAL REVIEW TEAM

### 6.1 Personnel and Qualifications

The Second Triennial Review Team is made of up five team members from two contractors - Firewater Associates, LLC (Firewater) and Longenecker & Associates (L&A). Resumes for each Team member have been provided to NWP. An additional team member (David Yost of Firewater) is available if needed but is not intended to be an active participant in the Review.



The Review Team members and their contact information are as follows:

Team Member	Affiliation	Email	Phone
<b>Renee Echols</b>	Firewater Associates, LLC Program Manager	<a href="mailto:rechols@firewaterllc.com">rechols@firewaterllc.com</a>	(865) 599-4064
<b>Gregory Edwards</b>	Firewater Associates, LLC SME II	<a href="mailto:gedwardstn@aol.com">gedwardstn@aol.com</a>	(865) 368-3000
<b>Kathryn Roberts</b>	Longenecker & Associates SME II	<a href="mailto:kroberts@la-inc.com">kroberts@la-inc.com</a>	(505) 603-9216
<b>David Wilson</b>	Longenecker & Associates SME II	<a href="mailto:dwilson@la-inc.com">dwilson@la-inc.com</a>	(803) 730-1678
<b>Ashley Meyer</b>	Longenecker & Associates Engineering Apprentice	<a href="mailto:ameyer@la-inc.com">ameyer@la-inc.com</a>	(919) 888-1991

The Review Team will operate under the direction of the NWP Point of Contact (POC), Michael Jones.

Review Team members will possess the following capabilities:

- The necessary knowledge and skills to apply auditing principles, procedures, and techniques for undertaking compliance audits.
- The knowledge and ability to conduct reviews in accordance with the SOW and guidelines.
- Expertise and familiarity with major environmental regulations resulting from the following statutes and that are included in Table 1 of this Plan:
  - RCRA (and New Mexico implementation through the HWA).
  - CAA (including NESHAPs and the New Mexico Air Quality Act).
  - CWA (and New Mexico implementation through the New Mexico Water Quality Act).
  - Safe Drinking Water Act (and implementation through the New Mexico Drinking Water Requirements).
  - New Mexico Solid Waste Act.
  - Other areas of regulatory expertise may be required, pending scope changes as requested by the NMED.
- Experience with performing environmental compliance reviews.
- Meet the additional requirements and conditions included in the SOW (e.g., meet DOE security requirements to access OUO documentation, access to Controlled Unclassified Information, etc.).

## 6.2 Program Manager – Ms. Renee Echols (Firewater)

Ms. Renee Echols is the Program Manager/Team Lead for this Review and is responsible for the following:

- Task assignments to Review Team members
- Interfacing with the client
- Ensuring competence of the Review Team
- Ensuring integrity of the Review Process
- Preventing and resolving conflicts



- Assuring compliance and implementation with this Review Plan

### 6.3 Roles and Responsibilities

The Program Manager will assign each Review Team member a set of criteria in one or more of the six focus areas identified above. Furthermore, the Program Manager is responsible for ensuring that personnel are trained and qualified to do their assigned work in a manner that achieves performance levels or objectives, and their proficiencies are maintained in accordance with this Review Plan.

Each Team member will be responsible for developing and or updating Lines of Inquiry (LOI) for each of the criteria assigned. Additionally, Review Team members will consider the following factors when developing LOIs:

- Potential impacts to DOE and/or NWP.
- Schedule/timetable adherence.
- Communication.
- Accuracy of reporting and documentation.
- Confidentiality and information security.
- Lessons Learned from previous environmental violations.
- Identifying precursors of future violations.

The LOIs will be incorporated into Review Checklists for the Review. The Review Plan will be updated to reflect each team members' assigned criteria.

Additionally, the complexity of the Review necessitates responsive management of the interfaces among the Review Team, NWP Representatives, DOE Representatives and Subcontractors, as applicable, to maintain control of contractual work and to facilitate the flow of technical information. The Program Manager and the POC will be responsible for managing these interfaces.

## 7. DELIVERABLES/TIMETABLE

Per the requirements of the SOW, the Review Team will provide NWP with the following Table 2 reporting deliverables in writing. Note that dates for submission and final approval of some plans may be minimally impacted by a delay in the start of the Review, however the Review Team remains committed to provide the final deliverable by the end of CY2021.

**Table 2 – Triennial Review Team Reporting Requirements to POC**

Report Title	Content	Frequency	Due Date <sup>1</sup>
Progress Report	Progress made in completing contract tasks	Monthly	10th of the month for the previous month
On-site Review Progress (if applicable)	Summary of review progress and findings	Weekly	Friday of each week on-site (to be determined)



**Table 2 – Triennial Review Team Reporting Requirements to POC**

<b>Report Title</b>	<b>Content</b>	<b>Frequency</b>	<b>Due Date<sup>1</sup></b>
Review Plan (Draft and Final)	Outlines the review objectives, scope and timetable, and the products that the review will generate.	Once	Draft (for DOE/NWP review): April 23, 2021  Final (addressing comments): May 7, 2021
Review Checklist (Draft and Final)	Assists the reviewers in conducting a thorough, systematic, and consistent review. Used to guide observations and help the reviewer to assess whether evidence meets review criteria.	Once	Draft (for DOE/NWP review): May 31, 2021  Final (addressing comments): June 14, 2021
Close out Report	Summary of findings and recommendations from review	Final Review Progress Meeting	September 30, 2021
Draft Review Report	Summary of review process, information collection activities, findings, and recommendations	Once	November 12, 2021
Comment Resolution Summary (Draft and Final)	Detail summary of how comments on the draft report were resolved	Once	Draft (for DOE/NWP review): November 30, 2021  Final (addressing comments): December 14, 2021
Final Report <sup>2</sup>	Summary of review process, information collection activities, findings, and recommendations	Once	December 31, 2021

<sup>1</sup>Due to the public health emergency orders currently in place by the State of New Mexico, the NMED has granted an extension of time approval for the submittal of information required by the Permit (see [https://wipp.energy.gov/Library/Information\\_Repository\\_A/Extensions\\_of\\_Time/NMED\\_Approval\\_of\\_WIPP\\_Extension\\_of\\_Time\\_Request\\_4-2-2020.pdf](https://wipp.energy.gov/Library/Information_Repository_A/Extensions_of_Time/NMED_Approval_of_WIPP_Extension_of_Time_Request_4-2-2020.pdf)). Should the Triennial Review activities become delayed due to these orders, a similar extension of time request may be made by the Permittees.

<sup>2</sup>Note that the Final Report will be submitted to the NMED by the Permittees and posted on the Information Repository within five working days of submittal.

Documentation and deliverables will be provided to the NWP POC by the Program Manager for acceptability and accuracy and maintained to prevent breach of confidentiality and security. Records will be protected against damage, deterioration, or loss. Requirements and responsibilities for records transmittal, distribution retention, maintenance, and disposition will be established and documented as required by the Quality Assurance Plan (QAP). Following are the required deliverables for the Review:

#### 7.1.1 Monthly Reports:

Written monthly reports will be provided to NWP in a format agreed upon by NWP and the Review Team. Monthly reports will be submitted via email to the POC by the 10<sup>th</sup> of each month.

#### 7.1.2 Review Checklists:

Review Checklists will be developed to assist the reviewers with conducting a thorough, systematic, and consistent review. Checklists are used to guide observations and help the reviewer to assess whether evidence meets review criteria. These checklists will provide consistency and will be tracked to completion. Review Checklists will be provided to NWP for review and approval prior to commencing the review.

#### 7.1.3 Draft Triennial Review Report:

The Review Team will prepare the Draft Triennial Review Report remotely. The draft will be submitted to NWP for comments. The draft report will include the following items:

- Review objectives.
- Review scope.
- Identification of the reviewers.
- The dates and methods the review activities were undertaken.
- Review criteria.
- Review draft findings.
- Review draft conclusions.
- Draft recommendations for corrective or preventative action.

#### 7.1.4 Final Triennial Review Report:

The Review Team will prepare the Final Triennial Review Report remotely. The Final Report will include the following items with comments from the draft report resolved and/or incorporated:

- The review objectives,
- The review scope,
- Identification of the reviewers,
- The dates and places where the review activities were undertaken,
- The review criteria,
- The review draft findings,
- The review draft conclusions, and
- Recommendations for corrective or preventative action.



#### 7.1.5 Triennial Review Records:

The Review Team will submit copies of records (including electronic records) generated during the Review to NWP. Records will include copies of completed checklists, interview records, draft and final report, and non-NWP documents that were used during the Review. The Review Team will turn over all Security related working papers, logbooks, write ups, and materials generated by the Team or provided by NWP. Triennial Review records will be marked, “Official Use Only (OUO)”. The NWP POC may designate other documents as OUO, as necessary. The Review QAP will also provide guidance for records maintenance.

## 8. SECOND TRIENNIAL REVIEW PROCESS

The Review Team will utilize a variety of techniques such as, interviews, observations, document reviews, mostly conducted virtually due to the COVID-19 pandemic. There may be the need for a Review Team member to travel to the WIPP Site to conduct inspections of certain attributes that can only be adequately determined by field inspection, such as instrument calibration. Any travel to the WIPP Site will be closely coordinated with NWP beforehand. Due to travel restrictions from the COVID Pandemic, most of the work performed on this Review will be done remotely. Interviews of NWP personnel will be conducted via video calls to the extent possible. There may be a need for limited onsite review/inspections that will be conducted in close coordination with NWP.

The Review Team will conduct Pre-Review, Review, and Post-Review activities as detailed in the SOW include:

- **Pre-Review activities** include the development by the Review Team of a **Review Plan** that must be reviewed and approved by NWP prior to commencing Review activities. The second Pre-Review activity is to **collect and review background information** to assemble relevant information that can be used to meet the objectives of the review. The collection and review will enable reviewers to become familiar with the WIPP facility operations, the statutory requirements, and other regulations or guidelines that may apply. The final Pre-Review step is to finalize a **review checklist** to assist the reviewers in conducting a thorough, systematic, and consistent review. Checklists are used to guide assessments and help the reviewer to determine whether evidence meets review criteria.
- **Review activities** (and any on-site activities) begin with completing requisite **safety and security training**, as applicable. The Review may take 60 to 90 days to perform depending on the scope. As required by the SOW, Review Team members will keep information relative to the Review Confidential. Review Team members will sign Nondisclosure Agreements that will be provided to the NWP POC prior to initiating the Review process. The **collection and recording of information** completed during the review should include the following activities. It is often not possible to check every document or record. Each reviewer should consider how much documentation should be viewed. The Review Team may choose to sample a statistically representative number of documented results.





- Gather information.
- One important way of collecting information is to interview facility personnel. Information collected during interviews needs to be verified by supporting information from independent sources, such as observations and records. The Review Team will prepare questions in advance to keep the interview focused.
- Complete checklists.
- Checklists should be used to prepare for the interview, but only as a starting point. A reviewer need not feel restricted by the checklist.
- Document any observed environmental concerns, particularly those which were not anticipated during the preparation of the checklists.
- Request a photographic record as appropriate.

The final review activity is for the Review Team to **prepare summaries of findings and conclusions**. This summarization is to occur at a frequency not to exceed weekly during the Review. At the outset of the Review, however, daily summaries may be useful. One of the conditions of the Supplemental Environmental Project (SEP) that describes this Triennial Review is that the Permittees will be given an opportunity to correct non-compliant conditions within 60 days or on another schedule approved by the NMED. Conditions corrected during the review can be reassessed by the Review Team for adequacy.

- **Post-Review Activities** include the Review Team's preparation of the draft and final report. The final report represents the final step in the Triennial Review Process. The final report shall include the following items with comments from the draft report resolved and/or incorporated:
  - The review objectives,
  - The review scope,
  - Identification of the reviewers,
  - The dates and places where the review activities were undertaken,
  - The review criteria,
  - The review findings,
  - The review conclusions, and
  - Recommendations for corrective or preventative action.

Once compliance with each requirement has been assessed, findings will be documented in a table format. This table will then be used as a basis for compiling the Second Triennial Review Report. Each Team member will designate each requirement as compliant or non-compliant. If there is insufficient evidence to make this determination, the Review Team member will designate the requirement as "undetermined". Consistent with the SOW, NWP may perform further research to facilitate a final determination. The Review Team may recommend alternative methods to achieve compliance or methods to improve current practices; however, implementation of these recommendations is at the discretion of NWP.

Non-compliant conditions shall be brought to the attention of the NWP POC, and any other NWP management that the POC directs to be contacted, immediately for the purposes of assessing the significance and to address the deficiency. The Program Manager will confirm that the information related to the potential non-compliance is adequately provided to NWP for their review and action if necessary.



## 9. QUALITY PLAN

A Quality Assurance (QA) Plan, Revision 0 dated April 23, 2021, has been developed to ensure the integrity of the Triennial Review. The QA Plan identifies quality assurance procedures that will be undertaken during the Triennial Review. The QA Plan will be submitted to NWP as a draft for comment prior to the Review Team issuing a final QA Plan.

**ATTACHMENT B**

**QUALITY ASSURANCE PLAN**



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**Quality Assurance Plan  
Waste Isolation Pilot Plant Project (WIPP)  
Second Triennial Review  
For  
Nuclear Waste Partnership, LLC  
Subcontract No. DOE13-PO516049**

**May 27, 2021**

**Revision 1**

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## REVISION LOG

Rev No.	Date	Description	Total Pages	Affected Pages
0	04/23/21	Draft	21	All
1	05/27/21	Final with NWP comments incorporated	23	All

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## APPROVALS

Approval:

Signature



6/7/2021  
Date

Michael Jones

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NWP-RES

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## TABLE OF CONTENTS

<b>QUALITY ASSURANCE PLAN POLICY STATEMENT .....</b>	<b>6</b>
<b>1.0 BACKGROUND .....</b>	<b>6</b>
<b>2.0 SCOPE AND GUIDELINES .....</b>	<b>7</b>
<b>3.0 PURPOSE .....</b>	<b>10</b>
<b>4.0 OBJECTIVES .....</b>	<b>11</b>
<b>5.0 QUALITY MANAGEMENT SYSTEM .....</b>	<b>11</b>
5.1 PROGRAM .....	12
5.2 TRAINING .....	12
5.3 IMPROVEMENT .....	13
5.4 DOCUMENTS AND RECORDS.....	13
5.5 WORK PROCESSES .....	15
5.6 DESIGN .....	15
5.7 PROCUREMENT.....	15
5.8 INSPECTION AND ACCEPTANCE TESTING.....	15
5.9 MANAGEMENT/ SELF-ASSESSMENT.....	15
5.10 INDEPENDENT ASSESSMENT .....	16
<b>6.0 TRIENNIAL REVIEW SCOPE .....</b>	<b>16</b>
6.1 METHOD .....	17
6.2 CRITERIA .....	19
6.3 IMPACT OF REVIEW ON CLIENT.....	19
<b>7.0 PERSONNEL ROLES &amp; RESPONSIBILITIES .....</b>	<b>19</b>
7.1 PERSONNEL.....	19
7.2 ROLES & RESPONSIBILITIES .....	20
<b>7.3 INTERFACE CONTROLS .....</b>	<b>21</b>
<b>8.0 REPORTING AND DOCUMENTATION.....</b>	<b>21</b>
<b>9.0 REFERENCES.....</b>	<b>21</b>

### TABLES

Table 1 – Environmental Regulations*/SOW.....	9
Table 2 – Second Triennial Review Team.....	19
Table 3 – Quality Assurance Plan Reference Documents.....	21



## ACRONYMS AND ABBREVIATIONS

ASME	American Society of Mechanical Engineers
CBFO	Carlsbad Field Office
CAA	Clean Air Act
CWA	Clean Water Act
CFR	Code of Federal Regulations
DOE	Department of Energy
DOE EM	Department of Energy Office of Environmental Management
EMS	Environmental Management System
EPA	Environmental Protection Agency
HWA	Hazardous Waste Act
ISMS	Integrated Safety Management System
L&A	Longenecker & Associates
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NMSA	New Mexico Statutes Annotated
NQA-1	Nuclear Quality Assurance
NWP	Nuclear Waste Partnership LLC
POC	Point of Contact
QA	Quality Assurance
QAP	Quality Assurance Program
QMS	Quality Management System
RA	Risk Assessment
RCRA	Resource Conservation and Recovery Act
SDWA	Safe Drinking Water Act
SWA	Solid Waste Act
SOW	Statement of Work
SFO	Stipulated Final Order
SEP	Supplemental Environmental Project
WIPP	Waste Isolation Pilot Plant





## QUALITY ASSURANCE PLAN POLICY STATEMENT

The Second Triennial Review Team (Review Team) of Firewater Associates, LLC (Firewater) and Longenecker & Associates (L&A) is committed to performing the Waste Isolation Pilot Plant Project (WIPP) Second Triennial Review in a manner that minimizes risk and environmental impacts and maximizes safety, reliability, and performance in accordance with the Nuclear Waste Partnership LLC (NWP) Subcontract Statement of Work (SOW) dated April 2021.

The Firewater Quality Assurance Plan (QAP) is intended to provide an effective management system tailored to the assessment process through the deliberate and graded application of Quality Assurance (QA) elements. The QAP will include the verification and control of information and documentation, recordkeeping, and reporting. The graded approach determines the degree of application of controls commensurate with importance and relative risk to safety and regulatory compliance, among other factors. As with Nuclear Waste Partnership (NWP) policy, it is Firewater's policy for the Review Team to participate in establishing, implementing, assessing, and improving its QA program. Each individual is responsible for the quality of his or her own work. Nuclear Waste Partnership along with Firewater management verifies the achievement of quality through periodic management assessments.

## EXECUTIVE SUMMARY

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This QAP provides the primary requirements for the integration of quality functions into the appropriate aspects of the Review Team functional and project activities while conducting the majority of the Second Triennial Review remotely. Effective implementation of QA requirements supports the principles and functions of the Integrated Safety Management System (ISMS).

This QAP promotes and integrates a Safety Conscious Work Environment, in which personnel feel that:

- They are empowered to raise safety questions without fear of retaliation.
- Management wants and willingly listens to their concerns.
- Issues they identify are managed through constructive and timely processes.

The Safety Conscious Work Environment Policy is strongly supported by the leadership of both Firewater and L&A.

## 1.0 BACKGROUND

The Second Triennial Review is a systematic, independent, and documented process of objectively obtaining and evaluating evidence to determine whether specified environmental regulatory and operations requirements are met at the WIPP Facility. The scope of the Second Triennial Review is limited to an evaluation of implementation of environmental regulatory requirements that apply to the WIPP Facility.



Firewater, and its partner L&A, conducted the First (initial) Triennial Review in 2018 using similar processes and standards that will be utilized by the Second Triennial Review Team (Review Team). The Review Team is composed of knowledgeable professionals using industry approved audit techniques, consensus standards and familiarity with applicable environmental regulations to conduct the Review in a manner that meets the NWP referenced subcontract requirements.

The Second Triennial Review QAP incorporates the applicable requirements from DOE Order 414.1D, *Quality Assurance*; Title 10 Code of Federal Regulations (CFR) Part 830, Subpart A, *Quality Assurance Requirements*; 10 CFR Part 71, Subpart H, *Quality Assurance*, and DOE EM-QA-001, *EM Quality Assurance Program* for conducting activities that affect, or may affect, nuclear safety at DOE nuclear facilities. The same ten criteria, using the "graded approach," are applied to non-nuclear facilities and activities with the potential to cause harm from radiological or other hazards regardless of where they may occur. This QAP will identify the quality assurance procedures to be utilized during the Review. The Review will be managed by the Review Team Lead with oversight from NWP.

## 2.0 SCOPE AND GUIDELINES

This QAP will ensure that the Review Team meets the Review requirements and key performance parameters from the SOW and guidelines. The scope and guidelines document resulted from a settlement agreement between the New Mexico Environment Department (NMED) and the Permittees. The requirement to perform Triennial Reviews for WIPP resulted from a settlement agreement between the NMED, the Department of Energy (DOE) Carlsbad Field Office (CBFO), and NWP to resolve alleged violations of the New Mexico Hazardous Waste Act (HWA), New Mexico Statutes Annotated (NMSA) 1978, Sections 74-4-1 to -14, the Hazardous Waste Management Regulations, 20.4.1 New Mexico Administrative Code (NMAC), and the WIPP Hazardous Waste Facility Permit EPA I.D. Number NM 4890139088-TSDF (Permit), as identified in an Administrative Compliance Order issued by the NMED on December 6, 2014. Specifically, Paragraph 34 of the Settlement Agreement and Stipulated Final Order (SFO) resolving Compliance Order No. HWB-14-21, dated January 22, 2016, requires a Triennial Review. Paragraph 34 states:

*“DOE will fund independent, external triennial reviews of environmental regulatory compliance and operations at WIPP to ensure that any regulatory deficiencies are identified. Each member of the triennial review team shall meet all applicable WIPP facility security, access, environmental, safety, and health protocols and training requirements associated with access to the WIPP site and WIPP records. The results of the triennial reviews shall be made available to the Respondents, NMED and the public. The Respondents, their constituent agencies, contractors and affiliates agree to address any potential regulatory violations, or operational deficiencies, that could lead to potential environmental regulatory violations, identified in the triennial reviews. NMED agrees to refrain from taking any enforcement action against the Respondents, their constituent agencies, contractors and affiliates for any potential regulatory violations, or operational deficiencies, that could lead to potential environmental regulatory*

*violations, identified in the triennial reviews so long as the Respondents and their facility operators correct any deficiencies identified in the course of such reviews within sixty (60) calendar days of the finalization of each triennial review report, or for good cause shown, within another period of time beyond sixty (60) calendar days, if approved by NMED. DOE and NMED shall agree on a mechanism to procure and select a third party to perform the independent triennial reviews.”*

Consistent with the SFO and the requirements for the first Triennial Review, the second Triennial Review applicable to this SOW will be conducted during Fiscal Year 2021, with the final report available for public posting no later than December 31, 2021. The scope of the second Triennial Review is based on an analysis of the environmental regulations applicable to the Permittees, including their constituent agencies, contractors, and affiliates, as they apply to the WIPP facility.

The analysis resulted in the following specific recommendations regarding the Triennial Review:

- **Recommendation 1:** This recommendation resulted in a list of specific applicable environmental regulations that should be considered in the general scope of the review. Implementation of these regulations can be assessed because compliance relies on documented processes, procedures, training, management oversight, and in some cases, the collection of monitoring data.
- **Recommendation 2:** This recommendation resulted in a list of specific applicable environmental regulations that should be excluded from this review for various reasons indicated in the analysis. Some of these may be included in future scope statements if there is benefit to the Permittees or to the NMED.
- **Recommendation 3:** This recommendation identified trends that are indicated by the non-compliances reported by the Permittees. One trend has to do with the adequacy of procedures and processes for performing and documenting inspections required by the Permit. The effectiveness of the corrective actions should be examined by the Review Team. The second trend has to do with preparing and submitting required reports in a timely manner. The Review Team may wish to evaluate the mechanisms that trigger the preparation and submittal of both periodic and non-periodic reports. Other issues are associated with incomplete awareness of the requirements imposed by a specific regulation. This may indicate a less than robust process for identifying applicable regulations or changes in regulations and transforming them into operational activities. The Review Team may wish to evaluate this process.
- **Recommendation 4:** This recommendation identified the implementation of the Environmental Management System (EMS) as a topic for the Second Triennial Review. This Review will go beyond the factors considered in the program certification and will include the people, parts, and processes of implementation and the Review Team may choose to evaluate the management oversight process.



The scope of the Second Triennial Review shall encompass implementation of the environmental regulations indicated in Table 1 below to the extent they apply to the WIPP facility. NMED has been consulted and has agreed with the scope of the Review and the areas of regulatory compliance to be examined. The primary focus of the Second Triennial Review shall be those areas of regulatory compliance for which NMED, or the Environmental Protection Agency (EPA) have regulatory responsibility. Additionally, as indicated in the footnote to Table 1, the scope may include evaluations of the continued effectiveness of corrective actions taken to address findings/observations that resulted from the First Triennial Review.

**Table 1 – Environmental Regulations\*/SOW**

Item	Applicable Environmental Statute or Regulation	Focus of the Review
1	Resource Conservation and Recovery Act (RCRA) (and New Mexico implementation through the New Mexico Hazardous Waste Act)	Processes and procedures to assure compliance to the operational requirements and compliance to requirements for the accumulation and retention of records and monitoring data. Corrective actions taken to prevent the recurrence of non-compliances
2	Clean Air Act (CAA) (including the National Emission Standards for Hazardous Air Pollutants and the New Mexico Air Quality Act)	Processes and procedures to assure compliance and the accumulation of required monitoring data
3	Clean Water Act (CWA) (and the New Mexico Water Quality Act)	Processes for controlling permitted discharges and the collection of monitoring data for reporting to the NMED
4	Safe Drinking Water Act (SDWA) (and the New Mexico Drinking Water Regulations)	Processes and procedures to assure timely sampling and reporting of facility drinking water quality and identification of and remediation of system repairs
5	New Mexico Solid Waste Act (SWA)	Procedures for implementation and the reporting requirements
6	Emergency Planning and Community Right to Know Act (and the New Mexico Hazardous Chemicals Information Act)	Processes for reporting spills and the processes to accumulate and report the required information annually

\*Additionally, the scope may include evaluations of the continued effectiveness of corrective actions taken to address findings/observations that resulted from the first Triennial Review.

### 3.0 PURPOSE

Nuclear Waste Partnership has determined that a QAP should be written to more precisely describe the necessary controls required for the Review Team to identify and document their results and conclusions relative to the unique synergy between the various and complex environmental regulations and those organizations interacting to ensure that compliance is achieved.

The purpose of this QAP is to provide direction and guidance to the Review Team and identifies and incorporates cost-effective, and timely quality measures to promote efficient delivery of the Review that meets the requirements outlined in the Second Triennial Review SOW.

This QAP provides the primary requirements for the integration of quality functions into all aspects of the review process. Effective implementation of review methods and requirements supports the principles and functions of the DOE ISMS, documented in DOE/CBFO-09-3442 *“CBFO Integrated Safety Management System Description”*.

This QAP is the written directive of the Firewater President and Program Manager to accomplish the planned tasks and to implement procedures that provide the controls and sound management practices needed to ensure that contractual obligations are met. This QAP is designed to use training, procedures, assessments, and surveillance functions as management tools to ensure that functional and project activities, including subcontract work, are executed in a quality and safe manner that will protect workers, public health, and the environment, promote the success of the Department of Energy (DOE) Office of Environmental Management (EM) Carlsbad Field Office (CBFO) and NWP, and meet or exceed contract requirements. For subcontracted work, this is accomplished through a flow down of requirements and standards in procurement documents and subcontract terms and conditions.

A graded approach is the process by which the extent (level of rigor) of application of control is determined based on the importance of the activity or scope of work relative to public and worker safety, potential for environmental releases, working within facility performance boundaries, and achieving programmatic mission objectives. A graded approach is applied to meet customer expectations and utilize resources in a cost-effective manner. In addition, due to the ongoing COVID-19 pandemic, preventive measures have been implemented at the WIPP facility to minimize the spread of the coronavirus and meet public health emergency orders issued by the State of New Mexico Department of Health. Such measures include reductions in workforce density and curtailment of work activities, as needed. As a result, it will be necessary to conduct most Second Triennial Review activities virtually, using various technologies (e.g., WebEx meetings/interviews, electronic document transfer via Kiteworks or similar platform) in lieu of a physical presence at the WIPP facility. Limited site visits by certain Review Team members, however, may be necessary to assess and evaluate WIPP facility operations for compliance with regulatory requirements and adherence to standard operating procedures.



This QAP implements applicable requirements of DOE Order 226.1B, *Implementation of Department of Energy Oversight Policy*, in the areas of management and independent assessment, and integrates roles and responsibilities of the Triennial Review Team into the ISMS program.

## 4.0 OBJECTIVES

This plan outlines the approach for the Review and describes the roles and responsibilities of project personnel in performing QA functions. The objective of the Second Triennial Review is to identify:

- Potential regulatory deficiencies.
- Potential regulatory violations.
- Deficiencies that could lead to violations of environmental regulations.

The secondary objectives of the Review include identifying the challenges regarding effective implementation of the environmental programs at the WIPP facility and the strengths that reflect the maturity of those programs.

The QAP will ensure that the Review is conducted in accordance with the “WIPP Second Triennial Review Plan” dated May 6, 2021. Both the QAP and Review Plans are living documents that will be updated as required to ensure the Review is successful at meeting the plan’s objectives, as the Review progresses.

## 5.0 QUALITY MANAGEMENT SYSTEM

The Review Team will conduct most of its activities remotely in accordance with the Review Plan and schedule. The Review Team will identify potential deficiencies that could have adverse impact on the continued operation of the WIPP facility and communicate those immediately to the NWP Point of Contact (POC).

The Review Team will perform its review in accordance with DOE O 414.1D Quality Assurance Criterion 10 “Independent Assessment”. This QAP is structured to include these 10 criteria along with applicable requirements of American Society of Mechanical Engineers (ASME) Nuclear Quality Assurance (NQA-1) as well as relevant requirements of DOE EM-QA-001, *EM Quality Assurance Program* and its “adoptive” standard, NQA-1. Requirements of the international standards for establishing an Environmental Management System (EMS) (ISO 14001) and Quality Management Systems (QMS) (ISO 9001), will also be considered, as appropriate.

The following QA requirements apply in cooperation with the CBFO and NWP QA Programs. As is customary with the 10 criteria structure, this QAP has three major elements: management, performance, and assessment. If there are conflicts between the Review Team requirements and WIPP requirements, the Review Team Lead will determine the path forward in consultation with the NWP POC and appropriate NWP Regulatory Environmental Services Organization Management.

## **5.1 PROGRAM**

This QAP is flowed down from the Firewater Associates, LLC Quality Assurance Program. This QAP, in combination with the Review Plan, identifies the organization, functional responsibilities, and interfaces necessary to meet the goals and objectives described in the SOW. The Review Team consists of highly educated and experienced professionals led by a Program Manager with over 30 years of experience in a variety of nuclear environmental and waste management projects. Only certain criteria apply to the Review Team outside of independent assessment and those criteria are described within this QAP. If work (e.g., inspections) is performed on the WIPP Site, the Review Team will implement NWP quality requirements as applicable. The focus of the Review Team will be to fulfill the safety requirements of the WIPP facility while also fulfilling Contract obligations.

The Review Team will comply with NWP and DOE quality management systems as appropriate. The Review Team endorses the establishment and maintenance of a Quality Management System approach. Quality Assurance, as a management tool, provides valuable performance improvement initiatives. The Review Team will foster an unimpeded communication program to solicit feedback from members of the Review Team regarding opportunities for improvement. This QAP prompts early identification, documentation, classification, correction, elimination, and follow-up of items and processes that do not meet established requirements or objectives and do not result in the requisite or expected quality.

The Review Team will meet its objectives by utilizing an integrated quality approach to define quality standards and identify those elements with highest risks based upon a grading scheme, to measure and continuously improve quality.

One method employed by the Review Team will be qualitative risk assessment that will be used for each regulation or group of similar citations or activities. The Risk Assessment (RA) will become a project record that will be available for review upon completion. The purpose of the RA will be to ensure proper priority is placed on an activity such as potential for improper implementation of a procedure. Based on uncertainty relative to an activity and potential for failure within that activity, the Review Team will provide NWP with a list of deficiencies that could lead to violations of environmental regulations. In most cases, probability of failure cannot be fully quantified or qualified until the assessment of the regulation and area have been completed. Continuous Improvement is the goal of risk management.

## **5.2 TRAINING**

The Review Team consists of highly educated and experienced professionals with several members participating in the First Triennial Review. The Review Team's experience elevates it above the need to train to the "basics". The Review Team's experience gives each member structure and discipline above the novice level. Therefore, the need for redundant and step-by-step procedures is unnecessary for this Review.





The WIPP EMS is compliant with ISO 14001 and as such uses ISO 9001 as a system framework for implementation. Under the requirements of ISO 14001, procedures are only needed in certain areas such as document control and records as are the requirements of this QAP. Each member relies on their education, experience, discipline, and professionalism to guide them. Every review initiated for DOE does require some level of indoctrination and training.

The magnitude and importance of this Review makes it even more imperative that the Review Team understands the unique WIPP environmental, safety, and operational requirements. That is why the team has been assigned required reading not only relative to the assessment process, but to the myriad of documents and records that are relevant to this Review. Training assignments will be made by the Review Team Lead who tracks completion and effectiveness. Documented evidence of assignment completion is maintained at the Firewater corporate office as a Quality Record. Quality in the Review Team organization is achieved through clear understanding of the goals and objectives to be accomplished by each individual, as well as through each person's discipline training.

### **5.3 IMPROVEMENT**

The quality improvement process is established to ensure that the Review Team maintains focus on achieving Review objectives, and thus the Review Team will continuously focus on the objectives of this Second Triennial Review, and to reduce the risk of failure. Many factors affect risk such as increase or decrease in the probability of an event occurring or may increase or decrease the consequence resulting from the occurrence of an event. These factors, when appropriately applied, can reduce risks to acceptable levels. The improvement program will perform risk assessments at stages during the Review to determine whether the Review is focusing on aspects with the greatest risk of failure, and with greatest consequence. Improvements thus can be implemented and communicated to the Review Team resulting in an improved Review process.

Nonconformances may be identified in WIPP programs during this Review and if so, corrective actions may be developed along with causal analysis, corrective actions, and closure as directed by NWP.

### **5.4 DOCUMENTS AND RECORDS**

Documents, once approved and verified, will be maintained in hard copy, and electronic format backed up daily as records (NQA-1). The WIPP EMS is compliant with ISO 14001: 2015 and as such uses ISO 9001 as a system framework for implementation. Documents and Records will be managed in accordance with the NWP SOW and as further detailed in Section 8.0 below.

Records shall be protected against damage, deterioration, or loss. Requirements and responsibilities for records transmittal, distribution retention, maintenance, and



disposition will be developed as needed using the Firewater Quality Assurance Program and will be sensitive to contradicting site records management procedures.

Performance Documents are policies, procedures, directives, charters, and program descriptions that define the Review Team's management systems, programs, and processes. Processes as documented in Performance Documents, implement the requirements of this QAP and applicable QA requirements mandated by law and contract to provide the detail necessary for proper implementation of the QA management program using a graded approach. This ensures the level of documentation necessary to comply with a requirement is commensurate with the following:

- Relative importance to safety, safeguards, and security.
- Magnitude of any hazard involved as identified, analyzed, and controlled in the facility safety basis documents.
- Life-cycle stage of the facility/activity or project.
- Impact/consequences on programmatic mission of the facility/activity or project.
- Characteristics of the facility/activity or project.
- The nuclear safety classification or hazard category of the item or activity.
- Adequacy of existing safety documentation.
- Complexity of products or services involved.
- Environmental consequences and level of resource protection required.
- History of problems at a site, facility, or project.

Performance documents that contain or implement regulatory requirements or other commitments denote those requirements or commitments in the associated sections or steps of the document. Performance documents that are technical procedures incorporate job-specific hazard controls. The process for creation of specific documents that become "records" is defined in procedures, or other governing documents as required. These documents include or reference appropriate quantitative or qualitative acceptance criteria as appropriate for determining that results are satisfactory.

The word "shall" indicates mandatory requirements. The word "should" indicates a preferred or recommended approach. The word "may" indicates an acceptable or suggested means of accomplishment.

Review Team Procedures, checklists, and other appropriate means include the following:

- Organization Structure
- Risk Assessment Process
- Documents and Records Process
- Training Flow
- Lessons Learned Coordination
- Checklists
- Criteria Review and Approach Documents (CRADS)

Other instructions, procedures and appropriate means will be developed as needed.

## **5.5 WORK PROCESSES**

The Review process is planned, authorized, and performed by technically competent individuals who provide leadership, direction, and oversight. The Review process is performed using technical standards developed or adopted from commercial practice, policies, procedures, and other appropriate means and contain a level of detail commensurate with the complexity and importance of the work being performed (i.e., graded approach). Environmental, quality, safety, and health requirements are integrated into the Review Teamwork processes.

The Review Team will follow the guidelines established in the NWP SOW as detailed in Section 6.1 below. This Review QAP encompasses only the assessment process. The Review Team will be subject to WIPP Site requirements in most cases and will implement safe practices in all cases for any work performed on the WIPP Site.

## **5.6 DESIGN**

Design is not applicable to this work.

## **5.7 PROCUREMENT**

Procurement is not applicable to this work.

## **5.8 INSPECTION AND ACCEPTANCE TESTING**

Inspection and Acceptance Testing is not applicable to this work.

## **5.9 MANAGEMENT/ SELF-ASSESSMENT**

Periodic assessment of the Review process and progress will be performed by appropriate Firewater and L&A management.

The Review Team Management recognizes that there are risks associated with the performance of any item or performance of any activity. Risk is a quantitative or qualitative expression of possible loss or harm with consideration of the probability of occurrence of an unwanted event

and the consequences resulting from it. Consequences can include adverse impacts on (1) health and safety of facility personnel and the public, (2) the environment, and (3) NWP Management objectives.

### 5.10 INDEPENDENT ASSESSMENT

Independent Assessment specifies a uniform method for scheduling, conducting, and reporting independent assessments designed to evaluate compliance with environmental, health, safety, quality, and regulatory requirements; evaluate process performance; and promote improvement.

Independent assessments are part of the Review Team assessment and oversight program. Independent assessments are performed to evaluate compliance with environmental, health, safety, quality, and regulatory requirements and to determine the effectiveness of the QA Program. Independent assessments may also be used to verify or validate conditions or fulfill directed senior management investigations and verify the effectiveness of corrective actions for significant issues. Independent assessments focus on performance of work with significant consideration given to compliance with requirements and safely performing work while achieving the goals of the organization. Their purpose is to improve performance and process effectiveness through assessing item and service quality, measuring adequacy of work performed and promoting improvement. Independent assessments are conducted by technically qualified and knowledgeable staff not responsible for supervising or performing the work being reviewed.

## 6.0 TRIENNIAL REVIEW SCOPE

The Review Team will focus on the environmental statutes, regulations and Orders listed in Table 1 above. The activities to be performed by the Review Team will include:

- Determine, through investigation, examination of records, and interviews, if the CBFO and NWP comply with the terms and conditions of permits and authorizations implementing the environmental regulations that stem from the listed statutes. Review Team members reviewing NWP Security records and procedures shall comply with the requirements of DOE Order 470.4B, *Safeguards and Security Program*, Attachment 2, Contractor Requirements Document Safeguards and Security Program Planning.
- Determine, through investigation, examination of records, and interviews, if the CBFO and NWP have programs in place to identify and implement new environmental requirements when they are promulgated.
- Examine the status of the EMS with regard to completeness. Completeness is defined as including the major activities that impact the environment and providing a method for mitigation of the impacts.

- Determine, through investigation, examination of records, and interviews, the robustness of the oversight process(es) in place for the environmental programs at the WIPP facility to assure the technical content of the implementation programs is effectively controlled.
- Document findings in a written report that will be submitted to the Permittees through the NWP POC at the end of the Review. All findings relating to NWP Security shall be submitted to NWP Security Manager for review and approval before publication or release. Upon discovery of a potential NWP Security finding, the Reviewer must immediately notify the NWP Security Manager.
- Perform the Second Triennial Review as outlined in section 10.0, *Triennial Review Guidelines* of the SOW. As required by the SOW, Review Team members will keep information relative to the Review Confidential. Review Team members will sign Nondisclosure Agreements that will be provided to the NWP POC prior to initiating the Review process.
- Provide guidance and support, as needed, to address/close findings and recommendations identified during the Triennial Review.

## 6.1 METHOD

The Review Team will utilize a variety of techniques such as, interviews, observations, document reviews, mostly conducted virtually due to the COVID-19 pandemic. There may be the need for a Review Team member to travel to the WIPP Site to conduct inspections of certain attributes that can only be adequately determined by field inspection, such as instrument calibration. Any travel to the WIPP Site will be closely coordinated with NWP beforehand. Interviews of NWP personnel will be conducted via video calls to the extent possible. The personnel interviews will not be video or audio recorded.

The Review Team will conduct Pre-Review, Review, and Post-Review activities as detailed in the SOW.

- **Pre-Review activities** include the development by the Review Team of a Review Plan that must be reviewed and approved by NWP prior to commencing Review activities. The second Pre-Review activity is to collect and review background information to assemble relevant information that can be used to meet the objectives of the review. The collection and review will enable reviewers to become familiar with the WIPP facility operations, the statutory requirements, and other regulations or guidelines that may apply. The final Pre-Review step is to finalize a review checklist to assist the reviewers in conducting a thorough, systematic, and consistent review. Checklists are used to guide assessments and help the reviewer to determine whether evidence meets review criteria.
- **Review activities** (and any on-site activities) begin with completing requisite safety and security training, as applicable. The Review may take 60 to 90 days to perform depending on the scope. As required by the SOW, Review Team members will keep information

relative to the Review Confidential. Review Team members will sign Nondisclosure Agreements that will be provided to the NWP POC prior to initiating the Review process. The collection and recording of information completed during the review should include the following activities. It is often not possible to check every document or record. Each reviewer should consider how much documentation should be viewed. The Review Team may choose to sample a statistically representative number of documented results.

- Gather information.
  - One important way of collecting information is to interview facility personnel. Information collected during interviews needs to be verified by supporting information from independent sources, such as observations and records. The Review Team will prepare questions in advance as a starting point to keep the interview focused. A reviewer need not feel restricted by the prepared questions. Personnel interviews will not be video or audio recorded.
  - Complete checklists.
  - Document any observed environmental concerns, particularly those which were not anticipated during the preparation of the checklists.
  - Request a photographic record as appropriate. Photographs are subject to WIPP Security review and authorization.
  - Final Review Activity involves the Review Team preparing summaries of findings and conclusions. This summarization is to occur at a frequency not to exceed weekly during the Review. One of the conditions of the Supplemental Environmental Project (SEP) that describes the Triennial Review process is that the Permittees will be given an opportunity to correct non-compliant conditions within 60 days or on another schedule approved by the NMED. Conditions corrected during the Review can be reassessed by the Review Team for adequacy.
- **Post-Review Activities** include the Review Team's preparation of the draft and final report. The final report represents the final step in the Triennial Review Process. The final report shall include the following items with comments from the draft report resolved and/or incorporated:
  - Review objectives
  - Review scope
  - Identification of the reviewers,
  - Dates and places where the review activities were undertaken
  - Review criteria
  - Review findings
  - Review conclusions
  - Recommendations for corrective or preventative actions.



## 6.2 CRITERIA

Criteria include statutes, regulations, and DOE Orders as well as requirements from procedures and instructions that have been generated from regulations to carry out specific activities in demonstration of compliance.

The Review Team will bring any non-compliant conditions to the attention of the NWP POC immediately for the purpose of assessing the significance and to address the deficiency. Conditions that pose an immediate threat to human health or the environment must be reported to NMED within 24-hours of discovery.

## 6.3 IMPACT OF REVIEW ON CLIENT

Every effort will be made to minimize impact on WIPP operations and personnel. Activities such as virtual interviews, observations will be scheduled and adhered to.

# 7.0 PERSONNEL ROLES & RESPONSIBILITIES

## 7.1 PERSONNEL

The Second Triennial Review Team is made of up five team members from two contractors - Firewater Associates, LLC and Longenecker & Associates. Resumes for each Team member have been provided to NWP. An additional team member (David Yost of Firewater) is available if needed but is not intended to be an active participant in the Review.

The Review Team will operate under the direction of the NWP POC, Michael Jones. Review Team members and their contact information are as follows:

**Table 2 – Second Triennial Review Team**

Team Member	Affiliation	Email	Phone
<b>Renee Echols</b>	Firewater Associates, LLC Program Manager	<a href="mailto:rechols@firewaterllc.com">rechols@firewaterllc.com</a>	(865) 599-4064
<b>Gregory Edwards</b>	Firewater Associates, LLC SME II	<a href="mailto:gedwardstn@aol.com">gedwardstn@aol.com</a>	(865) 368-3000
<b>Kathryn Roberts</b>	Longenecker & Associates SME II	<a href="mailto:kroberts@la-inc.com">kroberts@la-inc.com</a>	(505) 603-9216

<b>David Wilson</b>	Longenecker & Associates SME II	<a href="mailto:dwilson@la-inc.com">dwilson@la-inc.com</a>	(803) 730-1678
<b>Ashley Meyer</b>	Longenecker & Associates Engineering Apprentice	<a href="mailto:ameyer@la-inc.com">ameyer@la-inc.com</a>	(919) 888-1991

## 7.2 ROLES & RESPONSIBILITIES

The Program Manager/Team Lead is responsible for ensuring that personnel are trained and qualified to do their assigned jobs in a manner that achieves performance levels and objectives. The Team Lead is also responsible for ensuring that required quality assurance indoctrination and training is successfully completed and that additional training needs are identified and met.

The Review Team possess the following capabilities:

- The necessary knowledge and skills to apply auditing principles, procedures, and techniques for undertaking compliance audits.
- The knowledge and ability to conduct reviews in accordance with the SOW and guidelines.
- Expertise and familiarity with major environmental regulations resulting from the following statutes, which are included in Table 1 of this QAP:
  - RCRA (and New Mexico implementation through the HWA).
  - CAA (including NESHAPs and the New Mexico Air Quality Act).
  - CWA (and New Mexico implementation through the New Mexico Water Quality Act).
  - Safe Drinking Water Act (and implementation through the New Mexico Drinking Water Requirements).
  - New Mexico Solid Waste Act.
  - Other areas of regulatory expertise may be required, pending scope changes as requested by the NMED.
- Experience with performing environmental compliance reviews.
- Meet the additional requirements and conditions included in the SOW (e.g., meet DOE security requirements to access Official Use Only documentation, access to Controlled Unclassified Information, etc.).



Review Team members are responsible for completing their tasks assigned by the Team Lead in accordance with the Review Plan and this QAP.

### 7.3 INTERFACE CONTROLS

The importance of the Second Triennial Review necessitates responsive management of the interfaces among the Review Team, NWP POC, and DOE representatives (as applicable) to maintain control of contractual work and to facilitate technical information flow. The procedures and plans identified by this QAP, and the Review Plan are on file in the Firewater corporate office and provide applicable interfaces.

## 8.0 REPORTING AND DOCUMENTATION

Documentation will be passed from the Review Team Program Manager to the NWP POC. The Program Manager will ensure that documentation meets the SOW requirements, is accurate, and does not breach confidentiality and security restrictions. Records shall be protected against damage, deterioration, or loss. Requirements and responsibilities for records transmittal, distribution, retention, maintenance, and disposition will include records in paper and/or electronic format and shall include copies of checklists, interview records, and non-Permittee documents that were used during the Review. The Review Team shall turn over all security-related working papers, logbooks, write ups, and materials generated during the Review process or those provided by NWP.

Compliance checklists and documented findings will be recorded using the templates provided in Attachments B and C of the SOW and used as a basis for compiling the draft Second Triennial Review Report. The Program Manager, Ms. Renee Echols, will have sole responsibility for formally transmitting deliverables to Mr. Michael Jones, NWP POC.

## 9.0 REFERENCES

Table 3 includes the requirement and documents utilized to perform the Review.

**Table 3 – Quality Assurance Plan Reference Documents**

DEVELOPMENTAL RESOURCES	TITLE
WP 13-1	Nuclear Waste Partnership LLC Quality Assurance Program Description
Title 10 CFR Part 21	Reporting of Defects and Noncompliance



DEVELOPMENTAL RESOURCES	TITLE
Title 10 CFR Part 71, Subpart H	Quality Assurance Packaging and Transportation of Radioactive Materials
Title 10 CFR Part 830, Subpart A	Quality Assurance Requirements
Title 10 CFR Part 71, Subpart H	Quality Assurance
Title 40 CFR Part 194	Criteria for the Certification and Re-Certification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR Part 191 Disposal Regulations
Title 40 CFR Part 261	Identification and Listing of Hazardous Waste
Title 48 CFR §970.5204-2	Laws, Regulations, and DOE Directives
ASME NQA-1-1989 Basic and Supplementary Requirements	Quality Assurance Program Requirements for Nuclear Facilities
ASME NQA-2a-1990 addenda, Part 2.7	Quality Assurance Requirements of Computer Software for Nuclear Facility Applications
ASME NQA-3-1989 (excluding Section 2.1(b) and (c), and Section 17.1)	Quality Assurance Program Requirements for the Collection of Scientific and Technical Information for Site Characterization of High-Level Nuclear Waste Repositories
NM4890139088 – TSDF Current Version	WIPP Hazardous Waste Facility Permit
NWP Subcontract DOE-13PO516049, dated April 1, 2021	Waste Isolation Pilot Plant Project Second Triennial Review Statement of Work

DEVELOPMENTAL RESOURCES	TITLE
DOE Order 226.1B	Implementation of Department of Energy Oversight Policy
DOE Order 414.1D	Quality Assurance
DOE Policy 450.4A	Integrated Safety Management Policy
DOE/CBFO-94-1012	Carlsbad Field Office (CBFO) Quality Assurance Program Document
DOE/CBFO-09-3442	Carlsbad Field Office (CBFO) Integrated Safety Management System Description
DOE EM-QA-001, Rev. 1	EM Quality Assurance Program
SNT-TC-1A-1980	American Society for Nondestructive Testing (ASNT) Recommended Practice No. SNT-TC-1A, Personnel Qualification and Certification in Nondestructive Testing, August 1980
DOE G 414.1-2B	Quality Assurance Program Guide
EPA QA/G-5	EPA Guidance for Quality Assurance Project Plans
New Mexico Environment Department Compliance Order No. HWB-14-21, dated January 22, 2016	Stipulated Final Order
Firewater QAP, Rev. 1, May 30, 2017	Firewater Quality Assurance Program

## **ATTACHMENT C**

### **CRITERIA CHECKLISTS**

<b>Second Triennial Review Checklist</b>						
<b>RCRA Non-Permit Generator Requirements</b>						
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Part 1</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
1	40 CFR §262.11 (20.4.1.300 NMAC) Hazardous Waste Determination	Is there a program in place to determine if a solid waste generated at the WIPP facility is hazardous as defined in 40 CFR Part 261?				
2	40 CFR §262.20 - 23 (20.4.1.300 NMAC) Manifest Requirements	Is there a program in place to assure compliance with the manifest requirements for shipping hazardous waste off-site?				
3	40 CFR §262.30 - 33 (20.4.1.300 NMAC) Packaging Requirements	Is there a program in place to assure EPA and DOT packaging requirements are met before shipping hazardous waste off-site?				
4	40 CFR §262.34(a)(1) – 34(a)(3) (20.4.1.300 NMAC) Accumulation Time	Is there a program in place to assure accumulation times are not exceeded?				
5	40 CFR §262.34(a)(4) (20.4.1.300 NMAC) Compliance with Preparedness and Prevention, Contingency Plan and Emergency Procedures, Training, and Waste Analysis Plan Requirements	Are there programs and procedures to assure compliance with preparedness and prevention and contingency requirements for large quantity generators?				
6	40 CFR §262.34(b) (20.4.1.300 NMAC) Extension of Storage Period	Is there a program in place to extend the 90-day storage period if needed?				
7	40 CFR §262.34(c) (20.4.1.300 NMAC) Restrictions and Requirements	Are there programs and procedures to manage satellite accumulation areas?				
8	40 CFR §262.40 (20.4.1.300 NMAC) Record-Keeping Requirements	Are there procedures to ensure manifests, test results, waste analyses, biennial reports, and exception reports are kept on-site for at least three years.				
9	40 CFR §262.41 (20.4.1.300 NMAC) Generator-Biennial Report	Has the most recent biennial report been submitted to the EPA by March 1 of the most recent even-numbered year?				
10	40 CFR §262.42 (20.4.1.300 NMAC) Exception Reporting	Is there a program in place to ensure exception reporting is done for unreturned manifests?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Part 1 - General Permit Conditions</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Part 1</b>				
	Citation	Required Program				
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
11	40 CFR §262.43 (20.4.1.300 NMAC) Additional Reporting	Has the NMED Secretary required additional reporting beyond what's required in the regulations?				
12	Permit Part 1 Section 1.7.7 Proper Operation and Maintenance	Are systems required to achieve compliance with the conditions of the permit adequately identified and maintained?				
13	Permit Part 1 Section 1.7.7 Proper Operation and Maintenance	Are there sufficient staff and is the training of the operating staff current?				
14	Permit Part 1 Section 1.7.8 Duty to Provide Information	Have the Permittees been asked to provide additional information and has that information been provided in a timely manner?				
15	Permit Part 1 Section 1.7.9.3 Inspection	Has NMED inspected the WIPP facility in the past year?				
16	Permit Part 1 Section 1.7.10.1 Representative Sampling	Have representative samples been taken as prescribed?				
17	Permit Part 1 Section 1.7.10.2 Record Retention	Is there a compliant records retention program?				
18	Permit Part 1 Section 1.7.10.2 Record Retention	Are the waste minimization certification records and records of all data used to complete the application for the RCRA Permit retained for a period of at least 3 years from the date of certification or application.				
19	Permit Part 1 Section 1.7.10.3 Monitoring Records	Do monitoring records contain the required information?				
20	Permit Part 1 Section 1.7.11.1 Reporting Planned Changes	Have the Permittees posted links to planned change notification transmittal letters?				
21	Permit Part 1 Section 1.7.11.2 Reporting Anticipated Noncompliance	Have the Permittees posted links to planned change notification transmittal letters?				
22	Permit Part 1 Section 1.7.11.2 Reporting and Anticipated Noncompliance	Has TRU Mixed Waste been stored or disposed of in any modified portion of the facility? If so, had the conditions specified in 20.4.1.900 NMAC (incorporating 40 CFR §270.30(l)(2)) been satisfied?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Part 1 - General Permit Conditions</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Part 1</b>				
	Citation	Required Program				
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
23	Permit Part 1 Section 1.7.13 24 Hour and Subsequent Reporting	Do the Permittees have processes in place to assure compliance with the 24 hour and subsequent reporting permit requirements?				
24	Permit Part 1 Section 1.7.13.4 Contingency Plan Implementation	Have the Permittees implemented the Contingency Plan in the past year and have they complied with the reporting requirements of Attachment D?				
25	Permit Part 1 Section 1.7.14 Other Noncompliance	Do the Permittees have a process in place to assure the reporting of other noncompliances in the annual monitoring report?				
26	Permit Part 1 Section 1.7.14 Other Noncompliance	Have other noncompliances been identified and reported?				
27	Permit Part 1 Section 1.7.15	Do the Permittees have a process in place to assure identification submittal, and posting of information as required?				
28	Permit Part 1 Section 1.9 Signatory Requirement	Do the Permittees have a process in place to assure documents are properly signed and certified?				
29	Permit Part 1 Section 1.10.1 Information Submittal	Do the Permittees have a process in place to assure proper information submittal?				
30	Permit Part 1 Section 1.11 Public E-Mail Notification List	Do the Permittees have a process in place to assure compliance with the Extension of Time requirements?				
31	Permit Part 1 Section 1.13 Documents to be Maintained at the Facility	Do the Permittees have a process in place to assure compliance with the Public E-Mail Notification requirements?				
32	Permit Part 1 Section 1.14 Information Repository	Are the listed documents (including amendments, revisions, and modifications) maintained at the WIPP facility and are there processes in place to assure maintenance?				
33	Permit Part 1 Section 1.14 Information Repository	Are the Permittees in compliance with the Information Repository requirements?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Part 1 - General Permit Conditions</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Part 1</b>				
	Citation	Required Program				
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
34	Permit Part 1 Section 1.15 Community Relations Plan	Do the Permittees have a process in place to assure compliance with the Community Relations Plan requirements?				
35	Permit Part 1 Section 1.15 Community Relations Plan	Are the Permittees in compliance with the Community Relations Plan requirements?				

	<b>Second Triennial Review Checklist</b>					
	<b>RCRA Permit Part 2 - General Facility Conditions</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Part 2</b>				
	Citation	Required Program				
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
1	Permit Part 2, Section 2.2.2 - Required Notification of Off-Site Sources	Have the Permittees provided the required notice of off-site sources of TRU mixed waste as required by 24.4.1.500 NMAC (incorporating 40 CFR § 264.12(b))?				
2	Permit Part 2, Section 2.3.5 (20.4.1.500 NMAC (incorporating 40 CFR § 264.13	Do the Permittees have processes to identify and characterize derived waste?				
3	Permit Part 2, Section 2.4 (20.4.1.500 NMAC (incorporating 40 CFR § 264.73(b)(9)	Do the Permittees have the required waste minimization program in place?				
4	Permit Part 2, Section 2.4 (20.4.1.500 NMAC (incorporating 40 CFR § 264.73(b)(9)	Have the Permittees submitted the required waste minimization report to the NMED?				
5	Permit Part 2, Section 2.6.1 (20.4.1.500 NMAC (incorporating 40 CFR § 264.14(b)(1)))	Is there a surveillance system comprised of security officers that provide protection 24 hours per day, every day?				
6	Permit Part 2, Section 2.6.1 (20.4.1.500 NMAC (incorporating 40 CFR § 264.14(b)(1)))	Do security officers continuously monitor and control personnel, vehicle, and material access/egress to the Property Protection Area (PPA)?				
7	Permit Part 2, Section 2.6.1 (20.4.1.500 NMAC (incorporating 40 CFR § 264.14(b)(1)))	During non-operational hours, do security officers conduct documented security patrols outside of the PPA, at a minimum rate of two per 12-hour shift?				
8	Permit Part 2, Section 2.6.1 (20.4.1.500 NMAC (incorporating 40 CFR § 264.14(b)(1)))	Whenever scheduled security patrols cannot be made, is the reason for missing the patrol documented in the security logbook?				
9	Permit Part 2, Section 2.6.2 (20.4.1.500 NMAC (incorporating 40 CFR § 264.14(b)(2)(i)))	Is the PPA enclosed by a permanent seven ft high chain-link fence topped by three strands of barbed wire, for a total height of eight ft.?				



	<b>Second Triennial Review Checklist</b>					
	<b>RCRA Permit Part 2 - General Facility Conditions</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Part 2</b>				
	Citation	Required Program				
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
10	Permit Part 2, Section 2.6.2 (20.4.1.500 NMAC (incorporating 40 CFR § 264.14(b)(2)(i)))	Does the fence completely surround all major surface structures on the active portion of the facility?				
11	Permit Part 2, Section 2.6.2 (20.4.1.500 NMAC (incorporating 40 CFR § 264.14(b)(2)(i)))	Is the fence inspected as specified in Permit Attachment E to ensure it remains in good repair?				
12	Permit Part 2, Section 2.6.3 (20.4.1.500 NMAC (incorporating 40 CFR § 264.14(b)(2)(ii)))	Do the Permittees control entry to the active portion of the facility at all times?				
13	Permit Part 2, Section 2.6.3 (20.4.1.500 NMAC (incorporating 40 CFR § 264.14(b)(2)(ii)))	Is entry into the PPA, through controlled gates and doors?				
14	Permit Part 2, Section 2.6.3 (20.4.1.500 NMAC (incorporating 40 CFR § 264.14(b)(2)(ii)))	Are only properly identified and authorized persons, vehicles, and property allowed entrance to and exit from the active portion of the facility?				
15	Permit Part 2, Section 2.6.4 (20.4.1.500 NMAC (incorporating 40 CFR § 264.14(c)))	Have the Permittees posted “No Trespassing” signs and “Danger: Authorized Personnel Only” signs in English and Spanish at approximately 50 ft intervals on the permanent chain-link fence surrounding the PPA.?				
16	Permit Part 2, Section 2.6.4 (20.4.1.500 NMAC (incorporating 40 CFR § 264.14(c)))	Are security signs and traffic control signs located on controlled gates?				
17	Permit Part 2, Section 2.6.4 (20.4.1.500 NMAC (incorporating 40 CFR § 264.14(c)))	Are signs legible from a distance of 25 ft and visible from any approach to the facility?				

<b>Second Triennial Review Checklist</b>						
<b>RCRA Permit Part 2 - General Facility Conditions</b>						
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Part 2</b>				
	Citation	Required Program				
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
18	Permit Part 2, Section 2.7.1 (20.4.1.500 NMAC (incorporating 40 CFR § 264.15(b))	Have the Permittees implemented the inspection schedule specified in Permit Attachment E to detect any malfunctions and deteriorations, operator errors, and discharges?				Requirements under this criterion have been evaluated as a part of the RCRA Permit Attachment E – Inspection Schedule, Process and Forms
19	Permit Part 2, Section 2.7.2 (20.4.1.500 NMAC (incorporating 40 CFR § 264.15(b))	Do the Permittees use the inspection logbooks and forms as specified in Permit Attachment E?				Requirements under this criterion have been evaluated as a part of the RCRA Permit Attachment E – Inspection Schedule, Process and Forms
20	Permit Part 2, Section 2.7.2 (20.4.1.500 NMAC (incorporating 40 CFR § 264.15(b))	Are original copies of these completed forms maintained in the Operating Record?				Requirements under this criterion have been evaluated as a part of the RCRA Permit Attachment E – Inspection Schedule, Process and Forms
21	Permit Part 2, Section 2.7.2 (20.4.1.500 NMAC (incorporating 40 CFR § 264.15(b))	Do the records include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions?				Requirements under this criterion have been evaluated as a part of the RCRA Permit Attachment E – Inspection Schedule, Process and Forms
22	Permit Part 2, Section 2.7.3 (20.4.1.500 NMAC (incorporating 40 CFR § 264.15(b))	Do the Permittees inspect monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment at the frequency specified in Tables E-1 and E-2 of Permit Attachment E?				Requirements under this criterion have been evaluated as a part of the RCRA Permit Attachment E – Inspection Schedule, Process and Forms
23	Permit Part 2, Section 2.7.4 (20.4.1.500 NMAC (incorporating 40 CFR § 264.15(c))	Do the Permittees have a program to remedy any deterioration or malfunction of equipment or structures which an inspection reveals?				Requirements under this criterion have been evaluated as a part of the RCRA Permit Attachment E – Inspection Schedule, Process and Forms
24	Permit Part 2, Section 2.7.5 (20.4.1.500 NMAC (incorporating 40 CFR § 264.15(d) and 264.73(b)(5))	Are the Permittees maintaining inspection logbooks and forms in the operating record until closure?				Requirements under this criterion have been evaluated as a part of the RCRA Permit Attachment E – Inspection Schedule, Process and Forms

<b>Second Triennial Review Checklist</b>						
<b>RCRA Permit Part 2 - General Facility Conditions</b>						
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Part 2</b>				
	Citation	Required Program				
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
25	Permit Part 2, Section 2.8.1 (20.4.1.500 NMAC (incorporating 40 CFR § 264.16)).	Have the Permittees implemented a personnel training program that includes the requirements specified in Permit Attachment F?				Observation 1 - Scope of training of non-RCRA employees - Section F-1b(1) Observation 3 - RCRA Permit Attachment F - GET training timeframe
26	Permit Part 2, Section 2.8.2 (20.4.1.500 NMAC (incorporating 40 CFR § 264.16)).	Are Permittees' employees that are involved in the management of TRU mixed waste trained in procedures relevant to the positions in which they are employed, as specified in Permit Attachment F1?				
27	Permit Part 2, Section 2.8.3 (20.4.1.500 NMAC (incorporating 40 CFR § 264.16(d) and (e))).	Do the Permittees maintain training documents and records, as required by the Permit?				
28	Permit Part 2, Section 2.8.4 (20.4.1.500 NMAC (incorporating 40 CFR § 264.16)).	Is refresher training completed by the end of the month of the anniversary date when the training was previously completed?				
29	Permit Part 2, Section 2.9 (20.4.1.500 NMAC (incorporating 40 CFR § 264.17)).	Do the Permittees have programs in place to assure no ignitable, corrosive, reactive, or incompatible wastes are managed, stored or disposed at the WIPP facility within the permitted units?				
30	Permit Part 2, Section 2.10.1.1 (20.4.1.500 NMAC (incorporating 40 CFR § 264.32(a))).	Do the Permittees have an internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel?				
31	Permit Part 2, Section 2.10.1.1 (20.4.1.500 NMAC (incorporating 40 CFR § 264.32(a))).	Do the Permittees internal communication systems include two-way communication by the public address (PA) system and its intercom phones, mobile phones, mine phones, plant base radios, and portable two-way radios.?				

	<b>Second Triennial Review Checklist</b>					
	<b>RCRA Permit Part 2 - General Facility Conditions</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Part 2</b>				
	Citation	Required Program				
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
32	Permit Part 2, Section 2.10.1.1 (20.4.1.500 NMAC (incorporating 40 CFR § 264.32(a))).	Does the Permittees internal communication systems include local and facility-wide alarm systems?				
33	Permit Part 2, Section 2.10.1.2 (20.4.1.500 NMAC (incorporating 40 CFR § 264.32(b))).	Do the Permittees have a communications device or system capable of summoning outside agencies for emergency assistance?				Requirements under this criterion have been evaluated as a part of the RCRA Permit Attachment E – Inspection Schedule, Process and Forms
34	Permit Part 2, Section 2.10.1.2 (20.4.1.500 NMAC (incorporating 40 CFR § 264.32(b))).	Do the external communication systems include the commercial telephone system and two-way radios?				Requirements under this criterion have been evaluated as a part of the RCRA Permit Attachment E – Inspection Schedule, Process and Forms
35	Permit Part 2, Section 2.10.1.3 (20.4.1.500 NMAC (incorporating 40 CFR § 264.32(c))).	Do the Permittees have portable fire extinguishers, fire control equipment, spill control equipment, and decontamination equipment as described in Permit Attachment D?				Requirements under this criterion have been evaluated as a part of the RCRA Permit Attachment E – Inspection Schedule, Process and Forms
36	Permit Part 2, Section 2.10.1.4 (20.4.1.500 NMAC (incorporating 40 CFR § 264.32(d))).	Do the Permittees have water at adequate volume and pressure to supply water-hose streams, foam- producing equipment, automatic sprinklers, or water-spray systems?				Requirements under this criterion have been evaluated as a part of the RCRA Permit Attachment E – Inspection Schedule, Process and Forms

<b>Second Triennial Review Checklist</b>						
<b>RCRA Permit Part 2 - General Facility Conditions</b>						
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Part 2</b>				
	Citation	Required Program				
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
37	Permit Part 2, Section 2.10.1.4 (20.4.1.500 NMAC (incorporating 40 CFR § 264.32(d))).	Does the permittees facility water system consist of water furnished by the City of Carlsbad capable of providing water at a rate of 6,000 gallons per minute; two water storage tanks, one 180,000 gallon capacity tank for use by the fire-water system and a second tank with a 100,000-gallon reserve; dedicated fire water pumps rated at 1,500 gallons per minute at 125 pounds per square inch; and a wet-pipe sprinkler system connected to surface buildings as described in Permit Attachment D?				Requirements under this criterion have been evaluated as a part of the RCRA Permit Attachment E – Inspection Schedule, Process and Forms
38	Permit Part 2, Section 2.10.1.5 (20.4.1.500 NMAC (incorporating 40 CFR § 264.32)).	Do the Permittees maintain dedicated batteries designed to supply power to a fully loaded uninterruptible power system (UPS) for 30 minutes?				
39	Permit Part 2, Section 2.10.1.5 (20.4.1.500 NMAC (incorporating 40 CFR § 264.32)).	Are the Permittees maintaining the back-up diesel generators?				
40	Permit Part 2, Section 2.10.1.5 (20.4.1.500 NMAC (incorporating 40 CFR § 264.32)).	Are there procedures in place to implement the following in the event of a loss of electrical power? <input type="checkbox"/> The underground ventilation filtration system operates as designed so that no releases of contaminated particulates will occur				

	<b>Second Triennial Review Checklist</b>					
	<b>RCRA Permit Part 2 - General Facility Conditions</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Part 2</b>				
	Citation	Required Program				
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
41	Permit Part 2, Section 2.10.1.5 (20.4.1.500 NMAC (incorporating 40 CFR § 264.32)).	Are there procedures in place to implement the following in the event of a loss of electrical power? <input type="checkbox"/> The UPS maintains monitoring systems and alarms in waste handling areas so that fires or pressure loss will be detected and an appropriate response initiated				
42	Permit Part 2, Section 2.10.1.5 (20.4.1.500 NMAC (incorporating 40 CFR § 264.32)).	Are there procedures in place to implement the following in the event of a loss of electrical power? <input type="checkbox"/> Generators are brought on line within 30 minutes, at which time hoisting can be initiated so that personnel do not have to stay underground for extended lengths of time.				
43	Permit Part 2, Section 2.10.1.5 (20.4.1.500 NMAC (incorporating 40 CFR § 264.32)).	Are there procedures in place to implement the following in the event of a loss of electrical power? <input type="checkbox"/> Decisions to evacuate underground personnel will be made in accordance with the requirements of the Mine Safety and Health Administration (MSHA)				
44	Permit Part 2, Section 2.10.1.5 (20.4.1.500 NMAC (incorporating 40 CFR § 264.32)).	Are there procedures in place to implement the following in the event of a loss of electrical power? <input type="checkbox"/> The waste hoist brakes set automatically so that loads do not fall				
45	Permit Part 2, Section 2.10.1.5 (20.4.1.500 NMAC (incorporating 40 CFR § 264.32)).	Are there procedures in place to implement the following in the event of a loss of electrical power? <input type="checkbox"/> Cranes retain their loads so that spills do not occur from dropped containers				

<b>Second Triennial Review Checklist</b>						
<b>RCRA Permit Part 2 - General Facility Conditions</b>						
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
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	Citation	Required Program				
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46	Permit Part 2, Section 2.10.1.5 (20.4.1.500 NMAC (incorporating 40 CFR § 264.32)).	Are there procedures in place to implement the following in the event of a loss of electrical power? <input type="checkbox"/> Communication systems are maintained				
47	Permit Part 2, Section 2.10.1.5 (20.4.1.500 NMAC (incorporating 40 CFR § 264.32)).	Are there procedures in place to implement the following in the event of a loss of electrical power? <input type="checkbox"/> The emergency operations center is powered if it is needed				
48	Permit Part 2, Section 2.10.2 (20.4.1.500 NMAC (incorporating 40 CFR § 264.33)).	Do the Permittees test and maintain the equipment specified in Permit Section 2.10.1, as necessary, to assure its proper operation in time of emergency, as specified in Permit Attachment E?				
49	Permit Part 2, Section 2.10.3 (20.4.1.500 NMAC (incorporating 40 CFR § 264.34)).	Do the Permittees maintain access to the communications and alarm systems specified in Permit Section 2.10.1?				
50	Permit Part 2, Section 2.10.4 (20.4.1.500 NMAC (incorporating 40 CFR § 264.35)).	Do the Permittees maintain aisle space in the WHB Unit and Parking Area Unit to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency?				
51	Permit Part 2, Section 2.10.5.1 (20.4.1.500 NMAC (incorporating 40 CFR § 264.37)(a) and 264.57(c))).	Do the Permittees maintain preparedness and prevention arrangements with state and local authorities, other mining operations, contractors, and other governmental agencies specified in Permit Attachment D, Section D-6?				

<b>Second Triennial Review Checklist</b>						
<b>RCRA Permit Part 2 - General Facility Conditions</b>						
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Part 2</b>				
	Citation	Required Program				
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
52	Permit Part 2, Section 2.10.5.2 (20.4.1.500 NMAC (incorporating 40 CFR § 264.37)(a))).	Are the Permittees arrangements either Memoranda of Understanding (MOUs) or Mutual Aid Agreements (MAAs) between the Permittees and the off-site cooperating agencies?				
53	Permit Part 2, Section 2.10.5.2 (20.4.1.500 NMAC (incorporating 40 CFR § 264.37)(a))).	Do the Permittees arrangements include the elements required by 20.4.1.500 NMAC (incorporating 40 CFR § 264.37)(a)?				
54	Permit Part 2, Section 2.10.5.2 (20.4.1.500 NMAC (incorporating 40 CFR § 264.37)(a))).	Are copies and descriptions of the Permittees MOUs and MAAs maintained at the facility in the operating record?				
55	Permit Part 2, Section 2.10.6	Have the Permittees developed and implemented Live Fire Extinguisher Training and Refresher and is it mandatory for unescorted access to the underground?				
56	Permit Part 2, Section 2.12.1 (20.4.1.500 NMAC (incorporating 40 CFR §264.51(b)))	Do the Permittees have procedures in place to immediately implement the Contingency Plan as specified in Permit Attachment D whenever there is a fire, explosion, or release of mixed or hazardous waste or hazardous waste constituents which could threaten human health or the environment, as required by.				
57	Permit Part 2, Section 2.12.2 (20.4.1.500 NMAC (incorporating 40 CFR §264.53))	Do the Permittees maintain copies of the Contingency Plan and all revisions and amendments to the Contingency Plan?				
58	Permit Part 2, Section 2.12.2 (20.4.1.500 NMAC (incorporating 40 CFR §264.53(b)))	Do the Permittees provide copies of the current Contingency Plan to the Secretary and all entities with which the Permittees have emergency MOUs or MAAs?				



<b>Second Triennial Review Checklist</b>						
<b>RCRA Permit Part 2 - General Facility Conditions</b>						
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Part 2</b>				
	Citation	Required Program				
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
59	Permit Part 2, Section 2.12.2 (20.4.1.500 NMAC (incorporating 40 CFR §264.53(b)))	Do the Permittees maintain at least one current paper copy of the Contingency Plan at the facility in a location readily accessible to the Emergency Coordinator?				
60	Permit Part 2, Section 2.12.3 (20.4.1.500 NMAC (incorporating 40 CFR §264.54))	Do the Permittees have a process in place to review and immediately amend, if necessary, the Contingency Plan, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.54)?				
61	Permit Part 2, Section 2.12.4 (20.4.1.500 NMAC (incorporating 40 CFR §264.55))	Do the Permittees assure that an Emergency Coordinator as specified in Table D-1 of Permit Attachment D is available at all times in case of an emergency?				
62	Permit Part 2, Section 2.12.4 (20.4.1.500 NMAC (incorporating 40 CFR §264.55))	Is the Permittees' Emergency Coordinator thoroughly familiar with the Contingency Plan?				
63	Permit Part 2, Section 2.12.4 (20.4.1.500 NMAC (incorporating 40 CFR §264.55))	Does the Permittees' Emergency Coordinator have the authority to commit the resources needed to implement the Contingency Plan?				
64	Permit Part 2, Section 2.12.4 (20.4.1.500 NMAC (incorporating 40 CFR §264.56))	In the event of an imminent or actual emergency, does the Emergency Coordinator implement the requirements Contingency Plan.				
65	Permit Part 2, Section 2.14.1 (20.4.1.500 NMAC (incorporating 40 CFR §§264.73(a)))	Do the Permittees maintain a written operating record at the facility?				

	<b>Second Triennial Review Checklist</b>					
	<b>RCRA Permit Part 2 - General Facility Conditions</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
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	Citation	Required Program				
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
66	Permit Part 2, Section 2.14.1 (20.4.1.500 NMAC (incorporating 40 CFR §§264.73(b)))	Does the Permittees' written operating record include all information required under 20.4.1.500 NMAC (incorporating 40 CFR §264.73(b)) subject to the limitations on the storage of classified information				
67	Permit Part 2, Section 2.14.1 (20.4.1.500 NMAC (incorporating 40 CFR §§264.73(a)))	For those portions of the Operating Record that are electronic, is the record unalterable by the user and capable of producing a paper copy?				
68	Permit Part 2, Section 2.14.1 (20.4.1.500 NMAC (incorporating 40 CFR §§264.73(a)))	Do the Permittees have a process in place to maintain the operating record until closure of the facility?				
69	Permit Part 2, Section 2.14.2 (20.4.1.500 NMAC (incorporating 40 CFR §§264.75))	Do the Permittees submit to the Secretary a biennial report?				
70	40 CFR §264.76 (20.4.1.500 NMAC) Unmanifested Waste Report	Have the Permittees handled unmanifested waste correctly?				
71	40 CFR §264.77 (20.4.1.500 NMAC) Additional Reports	Have the Permittees been required to submit additional reports to the NMED?				

	<b>Second Triennial Review Checklist</b>					
	<b>RCRA Permit Part 3 - Container Storage</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Permit Part 3</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
1	Permit Part 3, Section 3.1 – Designated Container Storage Units	Is there a program in place to ensure that TRU mixed waste containers are only stored in designated container storage units?				
2	Permit Part 3, Section 3.1.1.1 -Storage Containers	Is there a program in place to ensure only permitted containers are used for storage of TRU mixed waste in the WHB?				
3	Permit Part 3, Section 3.1.1.2 - Storage Locations and Quantities	Is there a program in place to ensure containers are stored in the authorized areas of the WHB?				
4	Permit Part 3, Section 3.1.1.2 - Storage Locations and Quantities	Is there a program in place to ensure containers do not exceed the authorized quantities when stored in the WHB?				
5	Permit Part 3, Section 3.1.1.3 - Use of CH Bay Surge Storage	Is there a program in place to ensure compliance with surge storage specification in Attachment A1, Section A1-1c(1)?				
6	Permit Part 3, Section 3.1.1.4 - Notification of CH Bay Surge Storage Use	Is there a program in place to ensure the NMED is informed when Surge Storage is used and to justify its use?				
7	Permit Part 3, Section 3.1.1.4 - Notification of CH Bay Surge Storage Use	Is there a program in place to ensure the e-mail notifications requirements for Surge Storage Use are met?				
8	Permit Part 3, Section 3.1.1.4 - Notification of CH Bay Surge Storage Use	Is there a program in place to ensure the annual report to the NMED regarding surge storage use is submitted timely?				
9	Permit Part 3, Section 3.1.1.5 - Storage on Pallets	Is there a program in place to ensure storage in the WHB is on pallets as applicable?				
10	Permit Part 3, Section 3.1.1.6 - Storage of Derived Waste	Is there a program in place to ensure derived waste is stored in accordance with the Permit?				
11	Permit Part 3, Section 3.1.1.7 - CH TRU Mixed Waste Storage Time Limit	Is there a program in place to ensure CH TRU waste is not stored for longer than 60 days in the WHB?				

	<b>Second Triennial Review Checklist</b>					
	<b>RCRA Permit Part 3 - Container Storage</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Permit Part 3</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
12	Permit Part 3, Section 3.1.1.8 - Minimum Aisle Space	Is there a program in place to ensure minimum aisle space of 44 inches is maintained between facility pallets or casks in storage areas?				
13	Permit Part 3, Section 3.1.2 - Parking Area Container Storage Unit	Is there a program in place to ensure the Permittees manage the Parking Area Container Storage Unit in compliance with the specifications in Permit Attachment A1, Figure A1-2?				
14	Permit Part 3, Section 3.1.2.1 - Storage Containers	Is there a program in place to ensure only permitted containers are used for storage of TRU mixed waste in sealed CH and RH Packages Described in Permit Attachment A1?				
15	Permit Part 3, Section 3.1.2.2 - Storage Locations and Quantities	Is there a program in place to ensure RH and CH TRU mixed waste packages are stored in the authorized areas of the PAU?				
16	Permit Part 3, Section 3.1.2.3 - Use of CH Bay Surge Storage	Is there a program in place to ensure compliance with surge storage specifications in Attachment A1, Section A1-1c(2)?				
17	Permit Part 3, Section 3.1.2.4 - Notification of Parking Area Surge Storage Use	Is there a program in place to ensure compliance with surge storage notification requirements?				
18	Permit Part 3, Section 3.1.2.5 - Prohibition on Opening Containers	Do the Permittees keep containers of off-site waste closed at all times?				
19	Permit Part 3, Section 3.1.2.6 - Storage Time Limits	Do the Permittees have a process in place to prevent exceeding storage times in the PAU?				
20	Permit Part 3, Section 3.1.2.7 - Minimum Aisle Space	Is there a program in place to ensure minimum spacing of 4 feet maintained between loaded CH or RH packages in the PAU?				
21	Permit Part 3, Section 3.3, 20.4.1.500 (incorporating 40 CFR §264.171)	Is there a program in place to ensure waste containers are in "good condition" and in compliance with 40 CFR 264.171?				

	<b>Second Triennial Review Checklist</b>					
	<b>RCRA Permit Part 3 - Container Storage</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Permit Part 3</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
22	Permit Part 3, Section 3.3.1 - Acceptable Storage Containers	Is there a program in place to ensure TRU mixed waste managed in the WHB and PAU are in approved containers?				
23	Permit Part 3, Section 3.3.1.8 Shielded Container	Are shielded containers managed as CH TRU mixed waste and counted towards the RH TRU mixed waste volume limits?				
24	Permit Part 3, Section 3.3.2 - Derived Waste Containers	Is there a program in place to ensure the Permittees only store derived waste in approved containers in the WHB?				
25	Permit Part 3, Section 3.5, 20.4.1.500 (incorporating 40 CFR §264.173)	Is there a program in place to ensure that containers remain closed during storage (except when adding waste to derived waste containers) in accordance with 40 CFR 264.173?				
26	Permit Part 3, Section 3.6, 20.4.1.500 (incorporating 40 CFR §264.175)	Is there a program in place to ensure that secondary containment systems are maintained for containers in the WHB and Parking Area container storage units in accordance with 40 CFR 264.175?				
27	Permit Part 3, Section 3.7, 20.4.1.500 (incorporating 40 CFR §264.174)	Is there a program and/or procedure in place to inspect the WHB and Parking Area container storage units at least weekly in accordance with 40 CFR 264.174?				
28	Permit Part 3, Section 3.8-Recordkeeping	Is there a program and/or procedure in place to ensure that results of waste analysis are placed in the operating record?				

	<b>Second Triennial Review Checklist</b>					
	<b>RCRA Permit Part 4 - Geologic Repository Disposal</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Part 4</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
1	Permit Part 4, Section 4.1 – Designated Disposal Units	Is there a program in place to ensure that waste is disposed of in appropriate locations?				
2	Permit Part 4, Section 4.1.1.2 - Disposal Locations and Quantities	Is there a program in place to ensure that the maximum waste capacity allowed for disposal in each Underground HWDUs is not exceeded?				
3	Permit Part 4, Section 4.1.1.2 - Disposal Locations and Quantities	Has the related Program/Procedure been modified to reflect the addition of calculations for LWA TRU Waste volume as defined in notes to Table 4.1.1?				
4	Permit Part 4, Section 4.2.1 -- Permitted Waste	Is there a program/procedure in place to ensure that only permitted waste is disposed in the Underground HWDUs?				
5	Permit Part 4, Section 4.2.2 -- Prohibited Waste	Is there a program/procedure in place to ensure that prohibited waste is not disposed in the Underground HWDUs?				
6	Permit Part 4, Section 4.2.2.2 -- Specific Prohibition	Is there a program/procedure in place to ensure that non-mixed TRU waste is adequately characterized prior to disposal in an Underground				
7	Permit Part 4, Section 4.3.2 – Condition of Containers	Is there a program/procedure in place to ensure that TRU mixed waste containers are in good condition prior to disposal in the Underground				
8	Permit Part 4, Section 4.4.1 – Room-Based Limits	Is there a program/procedure in place to ensure that the limits in Table 4.4.1 are not exceeded in each closed room of an active panel?				Requirements under this criterion have been evaluated as a part of the RCRA Permit Attachment N - Volatile Organic Compound Monitoring Plan
9	Permit Part 4, Section 4.4.2 – Determination of VOC Room-Based Limits	Is there a program in place to ensure that VOC concentrations and emission rate limits [such limits are not in Section 4.4.1] in Permit Section 4.4.1 are confirmed?				Requirements under this criterion have been evaluated as a part of the RCRA Permit Attachment N - Volatile Organic Compound Monitoring Plan

	<b>Second Triennial Review Checklist</b>					
	<b>RCRA Permit Part 4 - Geologic Repository Disposal</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Part 4</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
10	Permit Part 4, Section 4.5.1-4.5.2 20.4.1.500 NMAC (incorporating 40 CFR §264.601)	Is there a program in place to ensure each Underground HWDU is constructed in conformance with the requirements in Permit Attachments A2 and A3?				
11	Permit Part 4, Section 4.5.2.2 - Notification Requirements	Is there a program in place to ensure the NMED is notified 30 calendar days prior to beginning construction of a new HWDU? Is the notification posted for the most recent Panel (Panel 8)?				
12	Permit Part 4, Section 4.5.3.1 – Underground Traffic Flow	Is there a program/procedure in place separating the ventilation and traffic flow areas in the underground TRU mixed waste handling and disposal areas from the ventilation and traffic flow areas for mining and construction equipment (north of S-1600)?				
13	Permit Part 4, Section 4.5.3.1 – Underground Traffic Flow	Is there a program/procedure in place designating routes for the traffic flow of TRU mixed waste handling equipment and construction equipment?				
14	Permit Part 4, Section 4.5.3.1 – Underground Traffic Flow	Are the designated routes recorded on a mine map posted in a location where persons entering the underground can read it?				
15	Permit Part 4, Section 4.5.3.1 – Underground Traffic Flow	Are old copies of the mine map in the facility files?				
16	Permit Part 4, Section 4.5.3.2 – Ventilation	Is there a program/procedure in place to ensure that a minimum active room ventilation rate of 35,000 standard ft <sup>3</sup> /min is maintained during waste disposal activities and when workers are present in the room as specified in Permit Attachment A2, Section A2-2a(3)?				

	<b>Second Triennial Review Checklist</b>					
	<b>RCRA Permit Part 4 - Geologic Repository Disposal</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Part 4</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
17	Permit Part 4, Section 4.5.3.3 – Ventilation Barriers	Is there a program/procedure in place requiring construction of ventilation barricades in active Underground HWDUs to restrict the flow of mine ventilation air through full disposal rooms as specified in Permit Attachment A2, Section A2-2a(3)?				
18	Permit Part 4, Section 4.6.1- Geomechanical Monitoring (incorporating 40 CFR § 264.602)	Is there a program/procedure in place requiring Geomechanical Monitoring as specified in Permit Attachment A2, Section A2-5b(2)?				
19	Permit Part 4, Section 4.6.1.2- Reporting Requirements	Is there a program/procedure in place requiring submittal of an annual report (in October) of the Geomechanical Monitoring program to NMED?				
20	Permit Part 4, Section 4.6.1.3- Notification of Adverse Conditions	Is there a procedure in place ensuring that notification to NMED is made when the geomechanical monitoring system data identifies a trend towards unstable conditions?				
21	Permit Part 4, Section 4.6.1.3- Reporting Requirements	Is there a program/procedure in place to assure posting of a link to the adverse condition transmittal letter to the WIPP Home page and inform those on the e-mail notification list?				
22	Permit Part 4, Section 4.6.2.1 – Implementation of Repository VOC Monitoring	Is there a Repository VOC monitoring program in place?				Requirements under this criterion have been evaluated as a part of the RCRA Permit Attachment N - Volatile Organic Compound Monitoring Plan
23	Permit Part 4, Section 4.6.2.1 – Implementation of Repository VOC Monitoring	Is there a LPEP or proficiency testing program in place?				Requirements under this criterion have been evaluated as a part of the RCRA Permit Attachment N - Volatile Organic Compound Monitoring Plan
24	Permit Part 4, Section 4.6.2.2 – Reporting Requirements	Do the Permittees provide semi-annual reports in April and October?				Requirements under this criterion have been evaluated as a part of the RCRA Permit Attachment N - Volatile Organic Compound Monitoring Plan



<b>Second Triennial Review Checklist</b>						
<b>RCRA Permit Part 4 - Geologic Repository Disposal</b>						
WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST						
REVIEW TOPIC		<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Part 4</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
25	Permit Part 4, Section 4.6.2.3 – Notification Requirements	Is there a program in place to assure notification of a VOC exceedance to the NMED?				Requirements under this criterion have been evaluated as a part of the RCRA Permit Attachment N - Volatile Organic Compound Monitoring Plan
26	Permit Part 4, Section 4.6.2.4 – Remedial Action	Is there a program in place to assure remedial action is taken if there is a VOC exceedance requiring action?				
27	Permit Part 4, Section 4.6.3.1 – Disposal Room Volatile Organic Compound Monitoring	Is there a Disposal Room VOC monitoring Program in place?				Requirements under this criterion have been evaluated as a part of the RCRA Permit Attachment N - Volatile Organic Compound Monitoring Plan
28	Permit Part 4, Section 4.6.3.2 – Notification Requirements	Is there a program in place to assure notification of a VOC exceedance to the NMED?				Requirements under this criterion have been evaluated as a part of the RCRA Permit Attachment N - Volatile Organic Compound Monitoring Plan
29	Permit Part 4, Section 4.6.3.3 – Remedial Action	Is there a program in place to assure remedial action is taken if there is a VOC exceedance requiring action?				Requirements under this criterion have been evaluated as a part of the RCRA Permit Attachment N - Volatile Organic Compound Monitoring Plan
30	Permit Part 4, Section 4.6.4.1 –Implementation of Mine Ventilation Rate Monitoring Plan	Is the Mine Ventilation Rate Monitoring Plan required by Attachment O in place?				
31	Permit Part 4, Section 4.6.4.2 – Reporting Requirements	Is there a program in place to assure that the Permittees submit the required report in October?				
32	Permit Part 4, Section 4.6.4.3 – Notification Requirements	Is there a program in place to assure that the Permittees evaluate the minimum active room ventilation rate on a monthly basis and submit the required notification in the annual report?				

	<b>Second Triennial Review Checklist</b>					
	<b>RCRA Permit Part 4 - Geologic Repository Disposal</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Part 4</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
33	Permit Part 4, Section 4.7 – Inspection Schedules and Procedures	Is there a program in place ensuring that Underground HWDUs are inspected at least weekly to detect malfunctions, signs of deterioration, operator errors, discharges, or any other factors which have caused or may cause a release of hazardous waste or hazardous waste constituents or may compromise the ability of any HWDU to comply with the environmental performance standards?				
34	Permit Part 4, Section 4.8.1 – Recordkeeping- Underground HWDU Location Map	Do the Permittees have an up to date (i.e., within the last 6 months) map of the exact location and dimensions of each Underground HWDU?				
35	Permit Part 4, Section 4.8.2 – Recordkeeping- Disposal Waste Type and Location	Do the Permittees have a Record as well as a map identifying the types and quantities of TRU mixed waste in each Underground HWDU and the disposal location of each container or container assembly in accordance with the requirements in this Permit section?				
36	Permit Part 4, Section 4.8.3 – Recordkeeping- Ventilation	Do the Permittees have a Record identifying non- conformances to the ventilation rate specified in Permit section 4.5.3.2?				

<b>Second Triennial Review Checklist</b>						
<b>RCRA Permit Part 5 - Groundwater Detection Monitoring</b>						
WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST						
REVIEW TOPIC		<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Part 5</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
1	Permit Part 5, Section 5.1 - 20.4.1.500 NMAC (incorporating 40 CFR §§264.97 and 264.98)	Have the Permittees established a groundwater detection monitoring program in accordance with 40 CFR §§264.97 and 264.98?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan
2	Permit Part 5, Section 5.1, 20.4.1.500 NMAC (incorporating 40 CFR §264.601(a))	Does the detection monitoring program (DMP) demonstrate compliance with the environmental performance standard for the Underground HWDUs in accordance with §264.601(a)?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan
3	Permit Part 5, Section 5.2, 20.4.1.500 NMAC (incorporating 40 CFR §§264.98 and 264.601)	Do the Permittees conduct the DMP at the detection monitoring wells (DMW) specified in Table 5.3.1?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan
4	Permit Part 5, Section 5.3, 20.4.1.500 NMAC (incorporating 40 CFR §264 Subpart F)	Is there a program in place ensuring that the DMP is maintained in compliance with 40 CFR §264 Subpart F?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan
5	Permit Part 5, Section 5.3.1, 20.4.1.500 NMAC (incorporating 40 CFR §264.97(a) and §264.98(b))	Is there a program in place ensuring that the DMWs are maintained at the locations identified in Attachment L?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan
6	Permit Part 5, Section 5.3.2, 20.4.1.500 NMAC (incorporating 40 CFR §264.97(c) and §264.98(b))	Is there a program in place ensuring that the DMWs are maintained in accordance with Attachment L?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan
7	Permit Part 5, Section 5.4, 20.4.1.500 NMAC (incorporating 40 CFR §264.98(a))	Is there a program in place ensuring that the DMWs are sampled for the indicator parameters and hazardous constituents identified in Tables 5.4a & 5.4b?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan
8	Permit Part 5, Section 5.5.1 Sample Collection Procedures incorporating 20.4.1.500 NMAC (incorporating 40 CFR §§264.97(g)(2), 264.98(d), and 264.601(a))	Do the Permittees collect DMP samples and DMP sample duplicates as specified in Permit Attachment L. Section L-4c?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan
9	Permit Part 5, Section 5.5.2 - Sample Preservation and Shipment Procedures	Do the Permittees preserve and ship DMP samples as specified in Permit Attachment L. Section L-4c(2)(iv)?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan

	<b>Second Triennial Review Checklist</b>					
	<b>RCRA Permit Part 5 - Groundwater Detection Monitoring</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Part 5</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
10	Permit Part 5, Section 5.5.3 - analytical Procedures	Do the Permittees analyze DMP samples using the procedures specified in Permit Attachment L. Section L-4c(3)?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan
11	Permit Part 5, Section 5.5.4 - Chain of Custody Procedures	Do the Permittees track and control DMP samples using chain of custody procedures specified in Permit Attachment L. Section L-4c(2)(v)?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan
12	Permit Part 5, Section 5.6, 20.4.1.500 NMAC (incorporating 40 CFR §§264.97(g) and 264.98(d))	Is there a program/procedure documenting the background groundwater quality values listed in Table 5.6 of Permit Part 5 ?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan
13	Permit Part 5, Sections 5.7.1, 20.4.1.500 NMAC (incorporating 40 CFR §264.97(f))	Is there a program/procedure in place to ensure that the groundwater surface elevation is determined at each DMW each time groundwater is sampled ?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan
14	Permit Part 5, Sections 5.7.2, 20.4.1.500 NMAC (incorporating 40 CFR §264.97(f))	Is there a program/procedure in place to ensure that the groundwater surface elevation is determined at each well completed in the Culebra monthly?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan
15	Permit Part 5, Section 5.8, 20.4.1.500 NMAC (incorporating 40 CFR §264.98(e))	Is there a program/procedure in place to ensure that the groundwater flow rate and direction in the Culebra Member of the Rustler Formation is determined at least annually?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan
16	Permit Part 5, Section 5.9, 20.4.1.500 NMAC (incorporating 40 CFR §264.97(h)) & §264.97(i))	Is there a program/procedure in place to ensure that the statistical analysis methods identified in Permit Attachment L are used to evaluate DMP data for each hazardous constituent?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan

<b>Second Triennial Review Checklist</b>						
<b>RCRA Permit Part 5 - Groundwater Detection Monitoring</b>						
WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST						
REVIEW TOPIC			<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Part 5</b>			
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
17	Permit Part 5, Section 5.9.2, 20.4.1.500 NMAC (incorporating 40 CFR §264.90(c))	Is there a program/procedure in place to ensure that statistical tests are performed on DMW samples to determine whether there is statistically significant evidence of contamination for hazardous constituents listed in Permit Table 5.4.b?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan
18	Permit Part 5, Section 5.9.3, 20.4.1.500 NMAC (incorporating 40 CFR §264.98(f))	Is there a program/procedure in place documenting the methodology for determining whether statistically significant evidence exists (i.e., comparison of groundwater quality to background values)?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan
19	Permit Part 5, Section 5.9.4, 20.4.1.500 NMAC (incorporating 40 CFR §264.98(f)(2))	Is there a program/procedure in place ensuring that data evaluations are performed within 120 calendar days?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan
20	Permit Part 5, Section 5.10.1, 20.4.1.500 NMAC (incorporating 40 CFR §264.73(b)(6)) - Operating Record Requirements	Is there a program/procedure in place ensuring that DMP monitoring, testing and analytical data are posted in the Operating Record?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan
21	Permit Part 5, Section 5.10.2.1, 20.4.1.500 NMAC (incorporating 40 CFR §264.97(j)) - Data Evaluation Results	Is there a program/procedure in place ensuring that the Data Evaluation results are reported to NMED by November 30th each year?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan
22	Permit Part 5, Section 5.10.2.2 – Groundwater Surface Elevation Results	Is there a program/procedure in place ensuring that the Groundwater Surface Elevation results are reported to NMED semiannually by May 31st and November 30th?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan
23	Permit Part 5, Section 5.10.2.3 – Groundwater Flow Results	Is there a program/procedure in place ensuring that the Groundwater Flow results are reported to NMED by November 30th each year?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan

	<b>Second Triennial Review Checklist</b>					
	<b>RCRA Permit Part 5 - Groundwater Detection Monitoring</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Part 5</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
24	Permit Part 5, Section 5.10.3, 20.4.1.500 NMAC (incorporating 40 CFR §264.98(g))	Is there a program/procedure in place ensuring that if statistically significant evidence demonstrates there is contamination, the Permittees comply with all notification, sampling and reporting requirements in Permit Section 5.10.3?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan
25	Permit Part 5, Section 5.10.3.1, 20.4.1.500 NMAC (incorporating 40 CFR §264.98(g)(1)) - Notification	Is there a program/procedure in place ensuring that the NMED is notified if statistically significant evidence demonstrates there is contamination requirements in Permit Section 5.10.3?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan
26	Permit Part 5, Section 5.10.3.2, 20.4.1.500 NMAC (incorporating 40 CFR §264.98(g)(2)) - Appendix IX Sampling	Is there a program/procedure in place ensuring Appendix IX sampling for DMW for which there is evidence of contamination?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan
27	Permit Part 5, Section 5.10.3.3, 20.4.1.500 NMAC (incorporating 40 CFR §264.98(g)(3)) -Verification Sampling	Is there a program/procedure in place ensuring re-sampling for DMW for which there is evidence of contamination?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan
28	Permit Part 5, Section 5.10.4 – Demonstration of Outside Contamination	Is there a program/procedure in place ensuring that if statistically significant evidence demonstrates there is contamination from an off-site source, the Permittees comply with notification, sampling and reporting requirements in Permit Section 5.10.4?				Evaluated in conjunction with RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan

	<b>Second Triennial Review Checklist</b>					
	<b>RCRA Permit Part 6 through 8 - Closure, Post-Closure and Corrective Action</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Parts 6 through 8</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
1	Permit Part 6, Section 6.4 Notification of Closure (20.4.1.500 NMAC (incorporating 40 CFR § 264.112(d) and 40 CFR § 264.601))	Is there documentation of 60 calendar day written notification to the Secretary prior to the start of closure of each Underground HDWU, and are there links on the WIPP Home Page to those notices and documentation of notification of those on the e-mail notification list?				
2	Permit Part 6, Section 6.5.1 Partial Closure (20.4.1.500 NMAC (incorporating 40 CFR § 264.113))	Does documentation support closure of completed Underground HDWU's in accordance with the requirements of Permit Attachment G?				
3	Permit Part 6 Section 6.5.1 Partial Closure	Does documentation support completion of decontamination and decommissioning of surface equipment, structures, and soils in accordance with the requirements of Permit Attachment G?				
4	Permit Part 6 Section 6.6 DISPOSAL OR DECONTAMINATION OF EQUIPMENT, STRUCTURES, AND SOILS	As part of either partial closure or final facility closure, does documentation support completion of decontamination or disposal of contaminated equipment, structures, and soils, as specified in Permit Attachment G?				
5	Permit Part 6, Section 6.7 Certification of Closure (20.4.1.500 NMAC (incorporating 40 CFR § 264.111 and 40 CFR § 264.178))	Is there documentation of the 60 calendar day written notification to the Secretary of completion of closure of each Underground HDWU? (Or is there documentation that an extension of this time period has been granted by the NMED)				
6	Permit Part 6, Section 6.8 Survey Plat (20.4.1.500 NMAC (incorporating 40 CFR § 264.116))	Is there documentation that survey plats detailing the location and dimensions of each of the closed Underground HMWU's were submitted prior to the certification of those closures?				

	<b>Second Triennial Review Checklist</b>					
	<b>RCRA Permit Part 6 through 8 - Closure, Post-Closure and Corrective Action</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Parts 6 through 8</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
7	Permit Part 6, Section 6.10.1 Panel Closure	Is their documentation of written notification to the Secretary stating the final volume of TRU mixed waste emplaced in each Underground HDWU, and are their links on the WIPP Home Page to those notices and documentation of notification of those on the e-mail notification list?				
8	Permit Part 6, Section 6.10.1 Panel Closure	Is their documentation that the facility meets the closure standards in Table 6.10.1?				
9	Permit Part 6, Section 6.10.1 Panel Closure	Does documentation support closure of completed Underground HDWU's in accordance with requirements of Permit Attachment G and Permit Attachment G1 (Detailed Design Report )?				
10	Permit Part 7, Section 7.3.2.1 General Monitoring, Inspection, and Maintenance Requirements	Is there documentation that indicates the required inspection of accessible closure bulkheads is taking place as required by Permit Attachment E?	NA			No Post-Closure Care Plan is required
11	Permit Part 7, Section 7.3.2.2. Air Monitoring Requirements	Is there documentation that indicates the required post-closure air monitoring is taking place?	NA			No Post-Closure Care Plan is required
12	Permit Part 8, Section 8.4 Notification and Assessment for Newly Identified SWMUs and AOCs	Have there been any newly identified SWMUs or AOC's beyond those listed in Permit Attachment K? If so, is there documentation of written notification of the Secretary within 15 days of the discovery, and does that notification meet the notification requirements?	NA			There have been no newly identified SWMUs or AOCs



	<b>Second Triennial Review Checklist</b>					
	<b>RCRA Permit Part 6 through 8 - Closure, Post-Closure and Corrective Action</b>					
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	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Parts 6 through 8</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
13	Permit Part 8, Section 8.4 Notification and Assessment for Newly Identified SWMUs and AOCs	If written notifications to the Secretary have been made under Section 8.4, has the Secretary required the submittal of Release Assessment Report, and has that report been submitted meeting the requirements of Section 8.6.1?	NA			There have been no newly identified SWMUs or AOCs
14	Permit Part 8, Section 8.4 Notification and Assessment for Newly Identified SWMUs and AOCs	If written notifications to the Secretary have been made under Section 8.4, has the Secretary required the submittal of an Investigation Work Plan, and has that report been submitted meeting the requirements of Section 8.8.1?	NA			There have been no newly identified SWMUs or AOCs
15	Permit Part 8, Section 8.4 Notification and Assessment for Newly Identified SWMUs and AOCs (20.4.1.900 NMAC (incorporating 40 CFR § 270.42))	If an Investigation Work Plan has been requested, has the Permit been modified to add the identified SWMU or AOC to Permit Attachment K?	NA			There have been no newly identified SWMUs or AOCs
16	Permit Part 8, Section 8.6.1 Release Assessment Report (20.4.1.900 NMAC (incorporating 40 CFR § 270.14(b)(19)))	If a Release Assessment Report has been requested by the Secretary, was it prepared and submitted in accordance with Permit Part 8.6?	NA			There have been no newly identified SWMUs or AOCs
17	Permit Part 8, Section 8.7.1 Secretary-Initiated Interim Measures	Has written notification for the Secretary of a requirement for an Interim Measures (IM) Work Plan been received and, if so, has the IM Work Plan been submitted within 30 calendar days?	NA			There have been no newly identified SWMUs or AOCs
18	Permit Part 8, Section 8.7.2 Permittee-Initiated Interim Measures	Has Permittee-initiated Interim Measures been initiated and, if so, was 30 calendar days notice provided to the Secretary before initiating IM?	NA			There have been no newly identified SWMUs or AOCs
19	Permit Part 8, Section 8.7.3 Emergency Interim Measures	Has emergency Interim Measures been initiated and, if so, was one day notice provided to the Secretary before initiating IM?	NA			There have been no newly identified SWMUs or AOCs

	<b>Second Triennial Review Checklist</b>					
	<b>RCRA Permit Part 6 through 8 - Closure, Post-Closure and Corrective Action</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Parts 6 through 8</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
20	Permit Part 8, Section 8.7.5 Interim Measures Implementation	If Interim Measures were approved, was the work completed within 180 calendar days of the start of implementation, or was written approval received from the Secretary for an extension of that schedule?	NA			There have been no newly identified SWMUs or AOCs
21	Permit Part 8, Section 8.8.1 Investigation Work Plan Submittal	Have investigation work plans meeting the requirements of Permit Section 8.14.1 been submitted to the Secretary for all SWMUs and AOCs listed in Permit Attachment K, Table K-1?	NA			There have been no newly identified SWMUs or AOCs
22	Permit Part 8, Section 8.8.1.3 Investigation Work Plan Submittal Historical Documents	Have historical documents for the SWMUs and AOCs been submitted to the Secretary as required?	NA			There have been no newly identified SWMUs or AOCs

<b>Second Triennial Review Checklist</b>					
<b>RCRA Permit Attachment C - Waste Analysis Plan</b>					
WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
REVIEW TOPIC		<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment C</b>			
	Citation	Required Program			Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O
1	Permit Attachment C, Section C-5b –Phase II Waste Shipment Screening and Verification	Is there a program/procedure in place outlining the requirements of Phase II (e.g., confirm EPA numbers and check for irregularities) waste shipment screening and verification?			
2	Permit Attachment C, Section C-5b(2) –Examination of the Land Disposal Restriction (LDR) Notice	Is there a procedure in place outlining how the Permittees evaluate a generator site LDR Notice for accuracy and completeness?			
3	Permit Attachment C, Section C-5b(3) –Verification	How do the Permittees verify that the containers in a shipment are the containers for which accepted data already exists in the WWIS?			
4	Permit Attachment C, Section C-6 – Permittees' Waste Shipment Screening QA/QC	What administrative QA/QC processes control the waste shipment screening process? Where is it documented?			
5	Permit Attachment C, Section C-7 – Records Management & Reporting; C-7(a) - General Requirements, C-7(b) - Records Storage	Is there a procedure in place documenting how waste characterization records will be managed, stored and maintained?			
6	Permit Attachment C, Section C-8 – Reporting	Are the Permittees in compliance with the requirement to provide a biennial report to NMED that includes information on actual volume and waste descriptions received for disposal during the time period covered by the report?			

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment D - Contingency Plan</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment D</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
1	Permit Attachment D, Section D-1 - Scope and Applicability, 20.4.1.500 NMAC (incorporating 40 CFR §264.51(b)) & §262.34(a)(4)	Is there a program/procedure requiring a formal contingency plan that describes actions that facility personnel take in response to any fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment?				
2	Permit Attachment D, Section D-2a - Emergency Response Personnel, 20.4.1.500 NMAC (incorporating 40 CFR §264.52(d))	Is there a program/procedure requiring that a RCRA emergency coordinator be on site at WIPP full-time and be trained in accordance with the requirements in Attachment F-1 under Emergency Coordinator?				
3	Permit Attachment D, Section D-2a - Emergency Response Personnel	Is there a program/procedure outlining the responsibilities of the additional eight individuals, groups and organizations listed in Section D-2a?				
4	Permit Attachment D, Section D-2b – Emergency Response Training	Is there a program/procedure in place to ensure WIPP Fire Department personnel are trained in accordance with the <i>WIPP Fire Department Training Plan</i> as well as site-specific training as described in Permit Attachment F?				
5	Permit Attachment D, Section D-3 - Criteria for Implementation of the RCRA Contingency Plan, 20.4.1.500 2 NMAC (incorporating 40 CFR §264.51(b))	Is there a program/procedure in place ensuring that the RCRA Contingency Plan is implemented immediately in the case of a fire, explosion or a release of hazardous wastes or hazardous waste constituents that could threaten human health or the environment?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment D - Contingency Plan</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment D</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
6	Permit Attachment D, Section D-3 - Criteria for Implementation of the RCRA Contingency Plan, 20.4.1.500 NMAC (incorporating 40 CFR §264.56(i))	Is there a program/procedure in place ensuring that the Emergency Coordinator record the date, time and details of the incident that required implementation of the Contingency Plan?				
7	Permit Attachment D, Section D-3 - Criteria for Implementation of the RCRA Contingency Plan, 20.4.1.500 NMAC (incorporating 40 CFR §264.56(i)) & §264.56(a)	Is there a program/procedure in place ensuring that the Permittees immediately notify NMED of incidents requiring implementation of the Contingency Plan ?				
8	Permit Attachment D, Section D-3 - Criteria for Implementation of the RCRA Contingency Plan, 20.4.1.500 NMAC (incorporating 40 CFR §264.56(i))	Is there a program/procedure in place which describes the emergency situations (e.g., fire, explosions, unplanned sudden-non sudden releases, other occurrences) that require immediate implementation of the Contingency Plan?				
9	Permit Attachment D, Section D-3 - Criteria for Implementation of the RCRA Contingency Plan	Is there a program/procedure in place that requires the Emergency Coordinator to document when the RCRA Contingency Plan was not implemented?				Requirements under this criterion have been evaluated as a part of the RCRA Permit Attachment D - RCRA Contingency Plan
10	Permit Attachment D, Section D-4a(1) – Initial Emergency Response & Alerting the RCRA Emergency Coordinator, 20.4.1.500 NMAC (incorporating 40 CFR §264.56(a))	Is there a program/procedure in place which describes the notification processes required for facility personnel when a fire, explosion or release occurs at the facility?				
11	Permit Attachment D, Section D-4a(2) – Communication of Emergency Conditions to Facility Employees, 20.4.1.500 NMAC (incorporating 40 CFR §264.56(a))	Are there communications (i.e., fire alarms surface evacuation signal) in place to notify facility personnel immediately of emergency situations?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment D - Contingency Plan</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment D</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
12	Permit Attachment D, Section D-4b - Identification of Released Materials and Assessment of the Extent of the Emergency, 20.4.1.500 NMAC (incorporating 40 CFR §264.56(b))	Is there a program/procedure in place requiring that the Emergency Coordinator direct an investigation to determine pertinent information relevant to the actual or potential threat posed to human health or the environment?				
13	Permit Attachment D, Section D-4b - Identification of Released Materials and Assessment of the Extent of the Emergency, 20.4.1.500 NMAC (incorporating 40 CFR §264.52(a) and §264.171)	In the event of a spill or release of hazardous waste or hazardous waste constituents, is there a program/procedure in place requiring that the Emergency Coordinator take the actions (i.e., assemble equipment, transfer contents, determine extent) identified in Permit Attachment D-4b?				
14	Permit Attachment D, Section D-4c - Assessment of the Potential Hazards, 20.4.1.500 NMAC (incorporating 40 CFR §264.56(c))	Is there a program/procedure in place requiring that the Emergency Coordinator conduct a hazard assessment to identify potential hazards to human health and the environment from the fire, explosion or spill/release?				
15	Permit Attachment D, Section D-4d - Post-Assessment Notifications, 20.4.1.500 NMAC (incorporating 40 CFR §264.56(d)(1))	If it is determined that a spill or release of hazardous waste or hazardous waste constituents could threaten human health or the environment outside the facility boundary, is there a program/procedure in place requiring that the Emergency Coordinator notify the local (NM Homeland Security, Eddy Co., Lea Co.) agencies/organizations listed in Permit Attachment D, Section D-4d?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment D - Contingency Plan</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment D</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
16	Permit Attachment D, Section D-4d - Post-Assessment Notifications, 20.4.1.500 NMAC (incorporating 40 CFR §264.56(d)(2))	If it is determined that a spill or release of hazardous waste or hazardous waste constituents could threaten human health or the environment outside the facility boundary, is there a program/procedure in place requiring that the Emergency Coordinator notify the government (i.e., NMED and National Response Center) agencies/organizations listed in Permit Attachment D, Section D-4d?				
17	Permit Attachment D, Section D-4e - Control and Containment of the Emergency, 20.4.1.500 NMAC (incorporating 40 CFR §264.56 (e) and 31(f))	Is there a program/procedure in place requiring that the Emergency Coordinator ensure control of an emergency and minimize the potential for the occurrence, recurrence, or spread of releases due to the emergency situation?				
18	Permit Attachment D, Section D-4e - Control and Containment of the Emergency	Is there a program/procedure in place requiring that the Emergency Coordinator, in conjunction with the Incident Commander ensure control of an emergency via the measures (e.g., stopping processes & operations) listed in Permit Attachment D, Section D-4e?				
19	Permit Attachment D, Section D-4e - Control and Containment of the Emergency	Is there a procedure(s) in place documenting the appropriate actions for controlling releases (e.g., establishing drainage controls) in accordance with Permit Attachment D, Section D-4e?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment D - Contingency Plan</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment D</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
20	Permit Attachment D, Section D-4e - Control and Containment of the Emergency	If the facility stops operations in response to a fire, explosion or release, is there a procedure/program in place to ensure continued monitoring for leaks pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever appropriate in accordance with Permit Attachment D, Section D-4e?				
21	Permit Attachment D, Section D-4e - Control and Containment of the Emergency	Is there a procedure/program in place to ensure that natural and/or synthetic methods (e.g., absorption, neutralization) are utilized to limit release of hazardous waste or hazardous waste constituents in accordance with Permit Attachment D, Section D-4e?				
22	Permit Attachment D, Section D-4e - Control and Containment of the Emergency	Is there a procedure/program in place documenting the steps necessary to terminate the field emergency response activities in accordance with Permit Attachment D-4e?				
23	Permit Attachment D, Section D-4e(1) - Fires	In case of a fire that threatens TRU mixed waste or site-generated hazardous waste, is there a procedure/program in place documenting the emergency response actions that can be utilized in accordance with Permit Attachment D, Section D-4e(1)?				



	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment D - Contingency Plan</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment D</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
24	Permit Attachment D, Section D-4e(2) - Explosions	In case of an explosion that threatens TRU mixed waste or site-generated hazardous waste, is there a procedure/program in place documenting the emergency response actions that can be utilized in accordance with Permit Attachment D, Section D-4e(2)?				
25	Permit Attachment D, Section D-4e(3) – Unplanned Sudden/Non-Sudden Releases	In case of an unplanned sudden/non-sudden release that threatens TRU mixed waste or site-generated hazardous waste, is there a procedure/program in place documenting the emergency response actions that can be utilized in accordance with Permit Attachment D, Section D-4e(3)?				
26	Permit Attachment D, Section D-4e(4) – Other Occurrences	In case of a natural phenomenon (e.g., earthquake, tornado) that threatens TRU mixed waste or site-generated hazardous waste, is there a procedure/program in place documenting the emergency response actions that can be utilized in accordance with Permit Attachment D, Section D-4e(4)?				
27	Permit Attachment D, Section D-4e(4) – Other Occurrences	In case of an underground structural integrity emergency that threatens TRU mixed waste or site-generated hazardous waste, is there a procedure/program in place documenting the emergency response actions that can be utilized in accordance with Permit Attachment D, Section D-4e(4)?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment D - Contingency Plan</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment D</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
28	Permit Attachment D, Section D-4f - Post-Emergency Activates, 20.4.1.500 NMAC (incorporating 40 CFR §264.56(g))	Is there a procedure/program in place ensuring that upon initial release or spill control and containment have been completed, the RCRA Emergency Coordinator completes necessary decontamination and that recovered hazardous waste is properly managed, stored, and/or disposed?				
29	Permit Attachment D, Section D-4f - Post-Emergency activities, 20.4.1.500 NMAC (incorporating 40 CFR §264.56(h))	Is there a procedure/program in place ensuring that upon initial release or spill control and containment have been completed, the RCRA Emergency Coordinator will ensure that incompatibility of waste and restoration of emergency equipment are addressed?				
30	Permit Attachment D, Section D-4f(1) - Management and Disposition of Released Material, 20.4.1.200 NMAC (incorporating 40 CFR Part 261, Subparts C and D)	Is there a procedure/program in place ensuring that the Emergency Coordinator, upon completion of decontamination, nonradioactive hazardous waste resulting from the cleanup of a fire, an explosion, or a release involving a nonradioactive hazardous waste at the WIPP facility will be appropriately managed in accordance with Permit Attachment D, Section D-4f(1)?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment D - Contingency Plan</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment D</b>				
	Citation	Required Program				Notes/Comments
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31	Permit Attachment D, Section D-4f(2) - Incompatible Waste, 20.4.1.500 NMAC (incorporating 40 CFR §264.56(h)(1))	Is there a procedure/program in place ensuring that the Emergency Coordinator not treat, store or dispose of any waste that may be incompatible with the released material until cleanup of the released material has been completed?				
32	Permit Attachment D, Section D-4f(3) - Cleaning and Restoring Equipment, 20.4.1.500 NMAC (incorporating 40 CFR §264.56(h)(2))	Is there a procedure/program in place ensuring that the Emergency Coordinator take measures to ensure that in the affected area(s) of the facility, emergency equipment listed in the RCRA Contingency Plan, and used in the emergency response, is cleaned and fit for its intended use or replaced before operations are resumed?				
33	Permit Attachment D, Section D-5 - Required Reporting, 20.4.1.500 NMAC (incorporating 40 CFR §264.56(i))	Is there a procedure/program in place ensuring that the Permittees submit a report to NMED within 15 days after an incident that requires implementation of the Contingency Plan ?				
34	Permit Attachment D, Section D-6 - Emergency Equipment, 20.4.1.500 NMAC (incorporating 40 CFR §264.52(e))	Is there a procedure/program documenting the emergency equipment available at the WIPP facility, including its location and a brief description, in accordance with Permit Attachment D, Section D-6 and Table D-2?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment D - Contingency Plan</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment D</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
35	Permit Attachment D, Section D-7 - Agreements with Local Emergency Response Agencies, 20.4.1.500 NMAC (incorporating 40 CFR §264.37 and §264.52(c))	Is there a procedure/program for maintaining/updating the agreements with local emergency response agencies (e.g., BLM, Eddy Co.) identified in Permit Attachment D, Section D-7?				
36	Permit Attachment D, Section D-8 - Evacuation Plan, 20.4.1.500 NMAC (incorporating 40 CFR §264.52(f))	Is there a procedure/program for surface and underground evacuations as well as evacuation training drills?				
37	Permit Attachment D, Section D-8a – Surface Evacuation On-Site and Off-Site Staging Areas	Is there a procedure/program identifying the locations of surface evacuation on-site & off-site staging areas for WIPP facility personnel?				
38	Permit Attachment D, Section D-8b – Underground Assembly Areas and Egress Hoist Stations	Is there a procedure/program identifying the location of underground assembly areas and egress hoist stations for WIPP facility personnel?				
39	Permit Attachment D, Section D-8c –Plan for Surface Evacuation	Is there a procedure/program documenting the surface evacuation processes, including alarms, egress routes relevant incident information and specific instructions?				
40	Permit Attachment D, Section D-8d –Plan for Underground Evacuation	Is there a procedure/program documenting the underground evacuation processes, including alarms, egress routes relevant incident information and specific instructions for WIPP Fire Department and MRT members?				
41	Permit Attachment D, Section D-8e –Further Site Evacuation	Is there a procedure/program documenting the evacuation processes involving personnel transport and the evacuation routes from the WIPP facility ?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment D - Contingency Plan</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment D</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
42	Permit Attachment D, Section D-9 - Location o of the RCRA Contingency Plan and Plan Revisions, 20.4.1.500 NMAC (incorporating 40 CFR §264.53(a))	Is there a procedure/program in place which documents the locations where the RCRA Contingency Plan shall be maintained at the WIPP facility?				
43	Permit Attachment D, Section D-9 - Location of the RCRA Contingency Plan and Plan Revisions, 20.4.1.500 NMAC (incorporating 40 CFR §264.53(a))	Are copies of the RCRA Contingency Plan provided to the list of agencies/organizations in Permit Attachment D, Section D-2 and D, Section D-9?				
44	Permit Attachment D, Section D-9 - Location o of the RCRA Contingency Plan and Plan Revisions, 20.4.1.500 NMAC (incorporating 40 CFR §264.53(b))	Is there a procedure/program in place to ensure that the RCRA Contingency Plan is updated in accordance with the provisions in Permit Attachment D, Section D-9 (e.g., emergency coordinators change, the plan fails)?				
45	Permittees ensure that a copy of the Quick Reference Guide to the WIPP Facility RCRA Contingency Plan is maintained on file	Is a copy of the Quick reference Guide to the WIPP Facility RCRA Contingency Plan maintained on file and made available to emergency personnel?				
46	Whenever the RCRA Contingency Plan is revised, Permittees will update the Quick Reference Guide, if necessary, and redistribute in accordance with 20.4.1.300 NMAC (incorporating 40 CFR §262.262(c)).	When was the RCRA Contingency Plan last revised? At that time was the Quick Reference Guide updated and redistributed at that time?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment E - Inspection Schedule, Process and Forms</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment E</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
1	Permit Attachment E Section E-1 - Inspection Schedule (20.4.1.500 NMAC (incorporating 40 CFR § 264.15(a-d), 40 CFR § 264.174, and 40 CFR § 264.602))	Confirm that inspection and maintenance records are maintained as active for three years, and that records beyond three years are stored either onsite or are archived offsite at a facility that is temperature and humidity controlled.				
2	Permit Attachment E Section E-1 - Inspection Schedule (20.4.1.500 NMAC (incorporating 40 CFR § 264.15(a-d), 40 CFR § 264.174, and 40 CFR § 264.602))	Are operating personnel thoroughly familiar with the inspection and maintenance procedures including logging, limitations to authority, and return of equipment to service?				
3	Permit Attachment E Section E-1 - Inspection Schedule (20.4.1.500 NMAC (incorporating 40 CFR § 264.15(a-d), 40 CFR § 264.174, and 40 CFR § 264.602))	Are pre-operational inspections performed and logged using the approved procedure?				
4	Permit Attachment E Section E-1 - Inspection Schedule (20.4.1.500 NMAC (incorporating 40 CFR § 264.15(a-d), 40 CFR § 264.174, and 40 CFR § 264.602))	Is there evidence that increasing trends are logged and noted and communicated?				
5	Permit Attachment E Section E-1 - Inspection Schedule (20.4.1.500 NMAC (incorporating 40 CFR § 264.15(a-d), 40 CFR § 264.174, and 40 CFR § 264.602))	If a negative inspection cannot be corrected by the inspector or only requires monitoring, are appropriate actions taken?				
6	Permit Attachment E Section E-1 - Inspection Schedule (20.4.1.500 NMAC (incorporating 40 CFR § 264.15(c)))	Are post-repair inspections with approval to return equipment to service documented?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment E - Inspection Schedule, Process and Forms</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment E</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
7	Permit Attachment E Section E-1 - Inspection Schedule (20.4.1.500 NMAC (incorporating 40 CFR § 270.42))	Have non-administrative changes to equipment inspection forms been implemented and, if so, have these changes been submitted to NMED in accordance with the governing documents?				
8	Permit Attachment E Section E-1a - General Inspection Requirements (20.4.1.500 NMAC (incorporating 40 CFR § 264.15(b)(4)))	Are daily inspections of designated areas such as loading and unloading areas of the WHB unit documenting conditions of structures and equipment, as well as spills, completed and documented?				
9	Permit Attachment E Section E-1a - General Inspection Requirements (20.4.1.500 NMAC (incorporating 40 CFR § 264.33))	Are inspections, testing and maintenance of communication and alarm systems, fire-protection equipment, and spill and decontamination equipment performed as scheduled and appropriately documented?				
10	Permit Attachment E Section E-1b(1) Container Inspection (20.4.1.500 NMAC (incorporating 40 CFR § 264.15(b)(4)))	Do containers managed by the WIPP facility meet the descriptions found in this section?				
11	Permit Attachment E Section E-1b(1) Container Inspection (20.4.1.500 NMAC (incorporating 40 CFR § 264.15(b)(4)))	Is there evidence that inspections of containers that are required by procedure are being performed and documented?				
12	Permit Attachment E Section E-1b(2) - Miscellaneous Unit Inspection (20.4.1.500 NMAC (incorporating 40 CFR § 264.602))	Is there evidence that inspections of the miscellaneous unit including the geomechanical monitoring system are being conducted?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment E - Inspection Schedule, Process and Forms</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment E</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
13	General	Have the findings from the First Triennial Review been adequately addressed				
14	General	Have the observations from the First Triennial Review been adequately addressed				



	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment F - Facility Personnel Permit Training Program</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment F</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
1	Permit Attachment F - Personnel Training (20.4.1.500 NMAC (incorporating 40 CFR § 264.16 and 20.4.1.900 NMAC, incorporating 40 CFR § 270.14))	Perform overall review of the WIPP facility training program documentation and recordkeeping process.				
2	Permit Attachment F - Personnel Training (20.4.1.500 NMAC (incorporating 40 CFR § 264.16 and 20.4.1.900 NMAC, incorporating 40 CFR § 270.14))	Select specific personnel for a minimum of all six (6) job titles from Table F-1 for an in depth review of training records as compared to the respective Training (Type/Amount) requirements of the Permit Job Description for those positions as defined in Table F2.				Observation 3 - RCRA Permit Attachment F - GET training timeframe
3	Permit Attachment F Section F-1b - Personnel Training Job Title/Job Description (20.4.1.500 NMAC (incorporating 40 CFR § 264.16))	Is there an up-to-date list of personnel assigned to the job titles in Table F-1?				Observation 2 - Accuracy of RCRA employee lists
4	Permit Attachment F, Section F-1b(1) Training Content	Are employees not defined as TRU mixed waste workers trained to become knowledgeable in responding effectively to emergency situations as defined in the Permit?				Observation 1 - Scope of training of non-RCRA employees - Section F-1b(1)
5	Permit Attachment F, Section F-1b(2) - Training Frequency	Is there a process to assure new hires or transfers receive relevant training, excluding Emergency Response, within 6 months of assuming their new position?				
6	Permit Attachment F, Section F-1b(2) - Training Frequency	Is there a process or procedure for notifying managers when personnel are transferred into or out of a position associated with hazardous waste management?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment F - Facility Personnel Permit Training Program</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment F</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
7	Permit Attachment F, Section F-1b(3) - Training Techniques	Are training techniques stipulated for each course listed in the Permit and do they include the methods listed in the Permit?				
8	Permit Attachment F, Section F-1c - Training Manager	Has an individual been designated as the Technical Training Manager and does this person direct the RCRA Training Program?				
9	Permit Attachment F, Section F-1c - Training Manager	Is the Technical Training Manager trained in hazardous waste management and is he/she knowledgeable of the applicable regulations, orders, guidelines, and specific training processes employed at the WIPP facility?				
10	Permit Attachment F, Section F-2 - Implementation of Training Program	Are training records maintained at the facility for current employees and for three years after an employee leaves?				
11	General	Have the findings from the First Triennial Review been adequately addressed				
12	General	Have the observations from the First Triennial Review been adequately addressed				Observation 2 - Accuracy of RCRA employee lists

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment G - Closure Plan</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment G</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
1	Permit Attachment G Section G-1d(1) Schedule for Panel Closures	Have panel closures occurred within the start and end dates in Table G-1 of the Attachment? If not, have requests for Permit modification(s) been submitted? [Specifically address the finding from the last Triennial Review]				
2	Permit Attachment G Section G-1d(1) Schedule for Panel Closures	Has a Permit modification request been submitted for anticipated delays in start/end dates related to the remaining unclosed panels?				
3	Permit Attachment G Section G-1d(1) Schedule for Panel Closures	For panels that have undergone closure, is there documentation that supports adherence to the specific process for closure included in Attachment G?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment H - Post Closure Plan</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment H</b>				
	Citation	Required Program				
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
1	Permit Attachment H Section H-1 Post-Closure Plan	Do the Permittees have a process/procedure to routinely inspect openings in the vicinity of panel closures				
2	Permit Attachment H Section H-1 Post-Closure Plan	Do the Permittees have a process/procedure to sample ventilation air for harmful constituents?				
3	Permit Attachment H Section H-1 Post-Closure Plan	Do the Permittees have a VOCMP in place to monitor releases from closed panels?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment K - SWMU and AOC Tables</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment G</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? <small>NA=Not Applicable ND=Not Determined</small>	NA or ND	Y E S	N O	
1	Permit Attachment K Table K-4 Hazardous Waste Management Units	Have any new AOC's been identified? If so, has a Permit modification been submitted to add them to the permit?	NA			
2	Permit Attachment K Table K-4 Hazardous Waste Management Units	Has closure been completed on any of the listed panels?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment L</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
1	Permit Attachment L, Section L-2, 20.4.1.500 NMAC (incorporating 40 CFR §§264.600 through 264.603 & §§264.90 through 264.101)	Through what means do the Permittees flow down the groundwater monitoring requirements necessary to meet the requirements of §§264.90 through 264.101?				
2	Permit Attachment L, Section L-3a, 20.4.1.500 NMAC (incorporating 40 CFR § 264.97 and 264.98 (f))	Do the Permittees use Attachment L as the Groundwater Detection Monitoring Program and the Water Level Monitoring Program for the WIPP facility or are there separate procedures/programs that outlines these requirements?				
3	Permit Attachment L, Section L-4a – Monitoring Frequency	Do the Permittees monitor the groundwater surface elevations at the six DMWs on a monthly basis and prior to each annual sampling event?				
4	Permit Attachment L, Section L-4b – Analytical Parameters & Hazardous Constituents	Do the Permittees monitor for the parameters and hazardous constituents listed in Permit Part 5, Tables 5.4a and 5.4b?				
5	Permit Attachment L, Section L-4b – Analytical Parameters & Hazardous Constituents	When additional hazardous constituents are identified, how do the Permittees make changes to Tables 5.4.a and 5.4.b?				
6	Permit Attachment L, Section L-4c(1) – Groundwater Surface Elevation Monitoring Methodology	Do the Permittees measure the groundwater surface elevations in each DMW prior to groundwater sample collection and on a monthly basis?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment L</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
7	Permit Attachment L, Section L-4c(1) – Groundwater Surface Elevation Monitoring Methodology	Do the Permittees only collect serial samples until field indicator parameters stabilize or three well bore volumes are purged? What field indicator parameters are used?				
8	Permit Attachment L, Section L-4c(1), 20.4.1.900 NMAC (incorporating 40 CFR §270.41(a)(2))	Do the Permittees have a process established in the event a cumulative groundwater surface elevation change of more than 2 feet is detected in any DMP well over the course of one year which is not attributable to site tests or natural stabilization of the site hydrologic system?				
9	Permit Attachment L, Section L-4c(1) - Groundwater Surface Elevation Monitoring Methodology	Do the Permittees measure density in the DMWs annually?				
10	Permit Attachment L, Section L-4c(1)(i) – Field Methods & Data Collection Requirements	Do the Permittees use an SOP (s) when making the groundwater surface elevation measurements? Which SOP(s)?	NA			This only applies to DMWs
11	Permit Attachment L, Section 4c(1)(ii) – Groundwater Surface Elevation Records & Document Control	Do the Permittees use an SOP(s) when administering and managing the field data sheets? Which SOP(s)? Is the computerized work sheet under appropriate QA control?				
12	Permit Attachment L, Section 4c(2)(i) – Groundwater Pumping & Sampling Systems	Do the Permittees use a dedicated insulated sampling line, that has a flow-control valve, to collect water samples that will undergo analysis?				
13	Permit Attachment L, Section L-4c(2)(ii) – Serial Samples	Do the Permittees use an SOP(s) when collecting serial samples? Which SOP(s)?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment L</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
14	Permit Attachment L, Section L-4c(2)(iii) – Final Samples	Do the Permittees use an SOP(s) when collecting final samples? Which SOP(s)?				
15	Permit Attachment L, Section L-4c(2)(iii) – Final Samples	Do the Permittees collect and analyze a serial sample for each day of final sampling to ensure samples collected for laboratory analysis are representative of stable conditions?				
16	Permit Attachment L, Section L-4c(2)(iii) – Final Samples	Is sample integrity ensured in accordance with the Permit?				
17	Permit Attachment L, Section L-4c(2)(iv) – Sample Preservation, Tracking, Packaging & Transportation	Do the Permittees use an SOP(s) for sample preservation, tracking, packaging and transport? Which SOP(s)?				
18	Permit Attachment L, Section L-4c(2)(v) – Sample Documentation & Custody	Do the Permittees use an SOP(s) to document sample collection, handling and custody? Which SOP(s)?				
19	Permit Attachment L, Section L-4c(2)(v) – Sample Documentation & Custody	Does the following documentation exist for each sampling event reviewed? - Sample numbers and Labels - Custody Seals - Sample Identification and Tracking - Chain of Custody and Request for Analysis				
20	Permit Attachment L, Section L-4c(3) – Laboratory Analysis	Do the laboratory selection criteria specify that the laboratory follow the procedures specified in SW 846 and that the laboratory follow EPA protocols unless alternate methods or protocols are approved by the NMED?				



	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment L</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
21	Permit Attachment L, Section L-4d(1) – Sampling and Groundwater Elevation Monitoring Equipment Calibration & L-4d(2) - Groundwater Surface Elevation Monitoring Equipment Calibration Requirements	According to existing SOPs, how often must sampling and groundwater elevation monitoring equipment be calibrated?				
22	Permit Attachment L, Section L-4e(1) – Temporal & Spatial Analysis	Do the Permittees evaluate changes relative to baseline on an individual basis and report the concentrations of constituents as a time series, either in tabular form or in time plots?				
23	Permit Attachment L, Section L-4e(2) – Distribution & Descriptive Statistics	Do the Permittees use the 95th UTLV for those data sets where target analytes are measured at concentrations above method detection limits?				
24	Permit Attachment L, Section L-4e(3) – Action Levels	Is there a procedure for conducting an outlier test should the groundwater concentration of a constituent identified in Part 5, Table 5.6 is found to exceed an action level?				
25	Permit Attachment L, Section L-4e(4), 20.4.1.500 NMAC (incorporating 40 CFR §264.97(h)(4))	Do the Permittees compare the results from groundwater hazardous constituents of ongoing annual groundwater sample analysis to baseline values and report the results annually to NMED?				
26	Permit Attachment L, Section L-5a – Laboratory Data Reports	How do the Permittees ensure that analytical laboratories comply with the hard copy reporting requirements (e.g., summary, results of QC sample analyses) in section L-5a?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment L</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
27	Permit Attachment L, Section L-5c – Semi-Annual Groundwater Surface Elevation Report & Annual Culebra Groundwater Report	Does the Annual Culebra Groundwater Report submitted to NMED on an annual basis include the information listed (e.g., DMW & WLMP well configuration changes, pumping activities) in section L-5c?				
28	Permit Attachment L, Section L-5c – Semi-Annual Groundwater Surface Elevation Report & Annual Culebra Groundwater Report	Is the Annual Culebra Groundwater Report maintained as part of the WIPP facility Operating Record?				
29	Permit Attachment L, Section L-6 – Records Management	Do the Permittees maintain records generated during groundwater sampling and water level monitoring in project files or the Operating Record? Do they include the information (e.g., SAPs, SOPs) listed in section L-6?				
30	Permit Attachment L, Section L-7a(1) – L-7a(2)(vi) – Data Quality Objectives	How do the Permittees ensure that the DMP and the WLMP comply with the quality assurance requirements identified in section L-7?				
31	Permit Attachment L, Section L-7a(1) – L-7a(2)(vi) – Data Quality Objectives	How do the Permittees ensure that the DMP and the WLMP comply with the data quality objectives identified in section L-7a(1)?				
32	Permit Attachment L, Section L-7c – Instructions, Procedures and Drawings	Does WIPP facility document WP 13-1 outline the preparation and use of instructions and data quality procedures at the WIPP facility?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment L - WIPP Groundwater Detection Monitoring Program Plan</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment L</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
33	Permit Attachment L, Section L-7d – Document Control	How do the Permittees ensure that the latest approved versions of WIPP facility SOPs are used in performing groundwater monitoring functions and that obsolete materials are adequately identified or removed from work areas?				
34	Permit Attachment L, Section L-7e – Inspection and Surveillance	Do the Permittees conduct inspection and surveillance (related to groundwater monitoring) activities in accordance with WIPP document WP 13-1?				
35	Permit Attachment L, Section L-7f – Control of Monitoring & Data Collection Equipment	Do the Permittees control, calibrate and maintain monitoring and data collection equipment in accordance with document WP 13-1?				
36	Permit Attachment L, Section L-7g– Control of Nonconforming Conditions	Do the Permittees control and prevent the use of defective equipment in accordance with WP 13-1?				
37	Permit Attachment L, Section L-7h– Corrective Action	How do the Permittees document and report conditions adverse to acceptable quality in accordance with corrective action procedures and correct these conditions as soon as possible?				
38	Permit Attachment L, Section L-7i– Quality Assurance Records	Do the Permittees identify prepare, collect, store, maintain, dispose, and permanently store QA and RCRA records in accordance with WP 13-1?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment N - VOC Monitoring Plan</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment N</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
1	Permit Attachment N, Section N-1b – Objectives of the Volatile Organic Compound Monitoring Plan	Through what means do the Permittees flow down the VOC monitoring requirements necessary to meet the objectives of section N-1b?				
2	Permit Attachment N, Section N-2 (and Table N-1) – Target Volatile Organic Compounds	Do the Permittees monitor for the target VOCs for repository monitoring and disposal room monitoring listed in Table N-1?				
3	Permit Attachment N, Section N-3a(1) – Sampling Locations for Repository VOC Monitoring	Do the Permittees collect air samples at Station VOC-C (west of air intake at bldg 489) to quantify VOCs in ambient air?				
4	Permit Attachment N, Section N-3a(1) – Sampling Locations for Repository VOC Monitoring	Do the Permittees collect air samples at Station VOC-D (at groundwater pad WQSP-4) to quantify background VOCs?				
5	Permit Attachment N, Section N-3a(2) – Sampling Locations for Disposal Room VOC Monitoring	How do the Permittees flow down the requirements for VOC monitoring of airborne VOCs in underground disposal rooms in which waste has been emplaced listed in section N-3a(2)?				
6	Permit Attachment N, Section N-3a(3) – Ongoing Disposal Room VOC Monitoring in Panels 3 through 8	Are the Permittees conducting VOC monitoring in Room 1 of Panels 3, 4, and 6?				
7	Permit Attachment N, Section N-3b – Analytes to be Monitored	How are non-target VOCs, that meet the criteria in section N-3b, added to the analytical laboratory target analyte list for both repository and disposal room VOC monitoring programs?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment N - VOC Monitoring Plan</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment N</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
8	Permit Attachment N, Section N-3c – Sampling & Analysis Methods	Do the Permittees use section N-3c to establish the VOC sampling and analysis methods or is there a separate procedure/program that outlines these requirements?				
9	Permit Attachment N, Section N-3d(1) – Sampling Schedule for Repository VOC Monitoring	Do the Permittees collect a 24-hour time-integrated sample two times per week in accordance with section N-3d(1)?				
10	Permit Attachment N, Section N-3d(2) – Sampling Schedule for Disposal Room VOC Monitoring	Do the Permittees collect VOC samples in disposal rooms with open panels at least once every two weeks in accordance with section N-3d(2)?				
11	Permit Attachment N, Section N-3d(2) – Sampling Schedule for Disposal Room VOC Monitoring	Do the Permittees collect VOC samples in disposal rooms with filled panels 3, 4, and 6 (unless an explosion-isolation well is installed) at least once a month in accordance with section N-3d(2)?				
12	Permit Attachment N, Section N-3e(1) – Data Evaluation & Reporting for Repository VOC Monitoring	Do the Permittees evaluate air sampling data to determine whether VOC emissions from the Underground HWDUs exceed the action levels Permit Section 4.6.2.3?				
13	Permit Attachment N, Section N-3e(1) – Data Evaluation & Reporting for Repository VOC Monitoring	Do the Permittees calculate the carcinogenic risk for the non-waste surface worker for each target VOC using the equations in section N-3e(1)?				
14	Permit Attachment N, Section N-3e(1) – Data Evaluation & Reporting for Repository VOC Monitoring	Do the Permittees notify NMED in writing, within seven calendar days of obtaining validated analytical results, whenever the risk or HI exceeds the action levels?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment N - VOC Monitoring Plan</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment N</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
15	Permit Attachment N, Section N-3e(2) – Data Evaluation & Reporting for Disposal Room VOC Monitoring	Do the Permittees evaluate the validated data to determine whether the VOC concentrations in the air of any closed room, the active open room, or the immediately adjacent closed room exceeded the Action Levels for DRVMP?				
16	Permit Attachment N, Section N-3e(2) – Data Evaluation & Reporting for Disposal Room VOC Monitoring	Is there a procedure for notifying NMED in writing, within seven calendar days of obtaining validated analytical results, whenever the concentration of any VOC specified in Permit Part 4, 34 Table 4.4.1 exceeds the action levels specified in Permit Part 4, Table 4.6.3.2?				
17	Permit Attachment N, Section N-4a - N-4a(3) – Sampling Equipment	Does the SOP(s) for air sampling equipment provide detailed information about sample canisters, sample collection units and sample tubing as described in sections N-4a-N-4a(3)?				
18	Permit Attachment N, Section N-4b – Sample Collection	Does the SOP(s) for VOC sampling specify that Repository VOC samples will be 24 -hour time-integrated samples for each sampling event?				
19	Permit Attachment N, Section N-4b – Sample Collection	Does the SOP(s) for VOC sampling specify that field duplicate samples will be collected (two canisters filled simultaneously) for each VOC monitoring program at an overall frequency of at least 5 percent?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment N - VOC Monitoring Plan</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment N</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
20	Permit Attachment N, Section N-4b – Sample Collection	Does the SOP(s) for VOC sampling require that the sample lines be purged to ensure that the air collected is not air that has been stagnant in the tubing?				
21	Permit Attachment N, Section N-4c – Sample Management	Is there a procedure for how field sampling data sheets are to be completed to document the sampler conditions under which each VOC sample is collected?				
22	Permit Attachment N, Section N-4c – Sample Management	Is there a procedure for how VOC sample containers are to be labeled, maintained, tracked and shipped in accordance with section N-4c?				
23	Permit Attachment N, Section N-4d – Maintenance of Sample Collection Units	Is there a procedure for how periodic maintenance for sample collection units and associated equipment will be performed?				
24	Permit Attachment N, Section N-4e – Analytical Procedures	How do the Permittees ensure that analytical laboratories comply with the methods and reporting requirements in section N-4e?				
25	Permit Attachment N, Section N-4e – Analytical Procedures	Is there a procedure for how the Permittees will perform data validation for VOC laboratory analytical results ?				
26	Permit Attachment N, Section N-4e – Analytical Procedures	Do the Permittees provide SOP updates to the NED on an annual basis by January 31?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment N - VOC Monitoring Plan</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment N</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
27	Permit Attachment N, Section N-5 (and Table N-2)– Quality Assurance	Is there a procedure to ensure that QA activities for the VOC monitoring programs will be conducted in accordance with the documents: EPA Guidance for Quality Assurance Project Plans QA/G-5 (EPA, 2002) and the EPA Requirements for Preparing Quality Assurance Project Plans, QA/R-5 (EPA, 2001) and the QA criteria for VOC monitoring programs listed in Table N-2?				
28	Permit Attachment N, Section N-5 (and Table N-2)– Quality Assurance	Are the SOPs for QA in the facility Operating Record?				
29	Permit Attachment N, Section N-5a – Quality Assurance Objectives for the Measurement of Precision, Accuracy, Sensitivity & Completeness	Is there a procedure in place ensuring that the QA objectives for the measurement of data quality parameters (e.g., precision, accuracy, sensitivity, and completeness) detailed in section N-5a are achieved?				
30	Permit Attachment N, Section N-5a(1) – Evaluation of Laboratory Precision	Is there a procedure describing how laboratory sample duplicates and blank spike/blank spike duplicate will be used to evaluate laboratory precision in accordance with section N-5a(1)?				
31	Permit Attachment N, Section N-5a(2) – Evaluation of Field Precision	Is there a procedure describing how field duplicate samples will be collected at a frequency of at least 5 percent for the RVMP and at least 5 percent for the DRVMP in order to achieve the data quality objective for field precision of 35 percent for each set of field duplicate samples?				



	<b>Triennial Review Checklist</b>					
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	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
32	Permit Attachment N, Section N-5a(3) – Evaluation of Laboratory Accuracy	Is there a procedure describing how quantitative analytical accuracy will be evaluated through performance criteria on the basis of: (1) relative response factors generated during instrument calibration, (2) analysis of laboratory control samples (LCS), and (3) recovery of internal standard compounds?				
33	Permit Attachment N, Section N-5a(4) – Evaluation of Sensitivity	Is there a procedure describing how the sample inlet of the sample collection units will be protected sufficiently from the underground environment to minimize salt aerosol interference and that up to two filters, inert to VOCs, will be installed in the sample flow path to minimize particulate interference?				
34	Permit Attachment N, Section N-5a(5) – Completeness	Is there a procedure describing that the expected completeness for the program is greater than or equal to 95 percent and that data completeness will be tracked monthly?				
35	Permit Attachment N, Section N-5d – Data Reduction, Validation & Reporting	Is there a procedure in place ensuring that the data reduction, validation and reporting requirements of section N-5d are met?				
36	Permit Attachment N, Section N-5e – Performance & System Audits	Do the Permittees perform system audits to evaluate whether the monitoring systems and analytical methods are functioning properly in accordance with Permit Attachment N-5e?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment N - VOC Monitoring Plan</b>					
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	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment N</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
37	Permit Attachment N, Section N-5g – Corrective Actions	How do the Permittees identify, document and report corrective actions necessary to maintain 95% completeness of valid data and laboratory data quality?				
38	Permit Attachment N, Section N-5h – Records Management	Through what means do the Permittees maintain records control systems that provide adequate control and retention for program-related information in accordance with the requirements of section N-5h?				
39	Permit Attachment N, Section N-6 – Sampling & Analysis Procedures for Disposal Room VOC Monitoring in Filled Panels	Do the Permittees collect disposal room VOC samples using the subatmospheric pressure grab sampling technique described in section N-6?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment O - WIPP Mine Ventilation Rate Monitoring Plan</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment O</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
1	Permit Attachment O Section O-3a(1) Test and Balance Process	Is there documentation supporting that the testing and balancing of the mine ventilation system results meet the specific requirements of the section?				
2	Permit Attachment O Section O-3a(2) Test and Balance Schedule	Is there documentation supporting the testing and balancing of the mine ventilation system at intervals of less than eighteen months?				
3	Permit Attachment O Section O-3b(1) Ventilation of Active Room Minimum Air Flow	Is there a log which documents that minimum air flow of 35,000 scfm through active room(s) exists at the start of each shift, operational mode changes and configuration changes?				
4	Permit Attachment O Section O-3b(1) Ventilation of Active Room Minimum Air Flow	Is there a record of occurrences for times when the minimum flow rate cannot be achieved including reason and actions taken?				
5	Permit Attachment O Section O-5a Reporting	Has an annual report on Mine Ventilation Rate Monitoring Plan results been submitted to NMED annually, including Testing and Balancing results, when applicable?				
6	Permit Attachment O Section O-5a Reporting	Does the annual report on Mine Ventilation Rate Monitoring Plan results include reporting of failure to achieve the permitted flow rate when applicable?				
7	Permit Attachment O Section O-5a Reporting	Has placement of waste occurred when air flow rate was below 35,000 scfm and, if so, was NMED notified by e-mail within 15 calendar days for the start of placement?				

	<b>Triennial Review Checklist</b>					
	<b>RCRA Permit Attachment O - WIPP Mine Ventilation Rate Monitoring Plan</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Resource Conservation and Recovery Act and New Mexico Hazardous Waste Act - Attachment O</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
8	Permit Attachment O Section O-5b Recordkeeping	Does the Operating Record include the CRMO operating log that documents the ventilation system operating mode?				
9	Permit Attachment O Section O-5b Recordkeeping	Does the Operating Record include a log sheet documenting ventilation flow rate readings and applicable information listed in Section O-3c(2)?				
10	Permit Attachment O Section O-6 Quality Assurance	Are personnel conducting ventilation flow measurements clearly identified and have their qualifications been verified?				
11	Permit Attachment O Section O-6 Quality Assurance	Are instruments used in ventilation flow measurement calibrated as required, and is that information marked on the instruments?				
12	Permit Attachment O Section O-6 Quality Assurance	Is information on the calibration of instruments used in ventilation flow measurements documented as a part of the measurement process?				
13	Permit Attachment O Section O-6 Quality Assurance	How is ventilation simulation software used in ventilation flow management controlled?				

<b>Second Triennial Review Checklist</b>							
<b>Clean Water Act (CWA) &amp; NM Water Quality Act</b>							
WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST							
REVIEW TOPIC		<b>Clean Water Act and the New Mexico Water Quality Act</b>					
	Citation	Required Program	In Compliance?	NA	Y E S	N O	Notes/Comments
Number			NA=Not Applicable ND=Not Determined or ND				
1	NMAC 20.6.2.1201 (A) – Notice of Intent to Discharge	How do the Permittees ensure compliance with the requirement to file a notice with the groundwater quality bureau (GWQB) for discharges that may affect groundwater and/or the surface water quality bureau (SWQB) for discharges that may affect surface water?					
2	NMAC 20.6.2.1201 (C) – Notice of Intent to Discharge	Is there a process in place for ensuring that notices of intent (NOI) to discharge include all the required information outlined in 20.6.2.1201, subsection C?					
3	NMAC 20.6.2.1202 (A) – Filing of Plans and Specifications – Sewerage Systems	Have the Permittees had to file plans and specifications in accordance with 20.6.2.1202 , subsection A? If so, how do the Permittees ensure compliance with the requirement to file plans and specifications for modifying a sewerage system in a manner that will substantially change the quantity or quality of discharge to either groundwater or surface water?					
4	NMAC 20.6.2.1202 (C) – Filing of Plans and Specifications – Sewerage Systems	When applicable, how do the Permittees ensure compliance with the requirement to file plans and specifications for modifying a sewerage system prior to construction?					
5	NMAC 20.6.2.1203 (A) – Notification of Discharge-Removal	Should there be a discharge from the facility of oil or other water contaminant, is there a process in place to ensure compliance with the requirements of 20.6.2.1203, subsection A?					
6	NMAC 20.6.2.3103 (A-C) - Standards for Groundwater of 10,000 mg/l TDS concentration or less	How do the Permittees ensure that groundwater meets the human health standards, standards for domestic water supplies and standards for irrigation use outlined in 20.6.2.3103, subsections A-C NMAC?					
7	NMAC 20.6.2.3107 (A) – Monitoring, Reporting and Other Requirements	Does the Permittees' discharge plan meet the requirements of 20.6.2.3107, subsections A NMAC?					

	<b>Second Triennial Review Checklist</b>					
	<b>Clean Water Act (CWA) &amp; NM Water Quality Act</b>					
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	REVIEW TOPIC	<b>Clean Water Act and the New Mexico Water Quality Act</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
8	NMAC 20.6.2.3107 (B) – Monitoring, Reporting and Other Requirements	Do the Permittees' sampling and analytical techniques meet the requirements of 20.6.2.3107, subsections B NMAC?				
9	NMAC 20.6.2.3107 (C) – Monitoring, Reporting and Other Requirements	Is there a process in place ensuring that the Permittees notify NMED of any facility expansion, production increase or process modification that would result in any significant modification in the discharge of water contaminants?				
10	NMAC 20.6.2.3107 (D) – Monitoring, Reporting and Other Requirements	Is there a process in place ensuring that any authorized representative of NMED can conduct the activities (e.g., inspect relevant records) identified in 20.6.2.3107, subsection D?				
11	DP-831, Section A, condition 3 -	Is there a procedure/program in place ensuring that the Permittees maintain the impoundment liners in such a manner as to avoid conditions (e.g., erosion damage, animal burrows) which could affect the structural integrity of the impoundment(s) and/or impoundment liner(s)?				
12	DP-831, Operational Plan, Part A, condition 3	Is there a procedure/program in place ensuring that the Permittees routinely control vegetation by mechanical removal in a manner that is protective of the impoundment liner(s)?				
13	DP-831, Operational Plan, Part A, condition 4	How do the Permittees preserve a minimum of one foot of freeboard between the liquid level in all impoundments and the elevation of the top of the impoundment liners?				
14	DP-831, Operational Plan, Part B, condition 5	Do the Permittees maintain fences around the Facultative Lagoon System to control access by the general public and animals?				

<b>Second Triennial Review Checklist</b>					
<b>Clean Water Act (CWA) &amp; NM Water Quality Act</b>					
WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
REVIEW TOPIC		Clean Water Act and the New Mexico Water Quality Act			
	Citation	Required Program			Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O
15	DP-831, Operational Plan, Part B, condition 6	Do the Permittees maintain signs around the Facultative Lagoon System indicating that the wastewater at the facility is not potable?			
16	DP-831, Operational Plan, Part B, condition 7	Do the Permittees utilize certified operators to operate the wastewater collection, treatment and disposal systems?			
17	DP-831, Operational Plan, Part B, condition 8	Have the Permittees measured the thickness of the sludge blanket in each pond of the Facultative Lagoon System? If not, will it be completed before the end of 2021?			
18	DP-831, Operational Plan, Part B, condition 8	Is there a process/procedure in place describing how sludge will be removed from the pond in a manner protective of the liner?			
19	DP-831, Operational Plan, Part B, condition 8	Is there a procedure/process in place describing the requirements for containing, transporting, disposing and reporting/documenting of removed sludge solids?			
20	DP 831, Operational Plan, Part D, condition 9	Have the Permittees measured the thickness of the solids blanket in each of the storm water runoff impoundments? If not, will it be completed before the end of 2021?			
21	DP 831, Operational Plan, Part D, condition 9	Is there a procedure/process in place describing the requirements for containing, transporting, disposing and reporting/documenting of removed solids?			
22	DP 831, Operational Plan, Part D, condition 10	Do the Permittees inspect the leak detection systems for Salt Storage Ponds 2 & 3 on a monthly basis for the presence of liquid?			
23	DP 831, Operational Plan, Part D, condition 10	Do the Permittees keep an inspection log of findings and repairs made and include those logs in the semiannual report submitted to NMED?			

<b>Second Triennial Review Checklist</b>							
<b>Clean Water Act (CWA) &amp; NM Water Quality Act</b>							
WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST							
REVIEW TOPIC		<b>Clean Water Act and the New Mexico Water Quality Act</b>					
	Citation	Required Program	In Compliance?	NA	Y E S	N O	Notes/Comments
Number			NA=Not Applicable ND=Not Determined or ND				
24	DP 831, Operational Plan, Part D, condition 11	Do the Permittees conduct regular maintenance of the earthen cover on the Salt Cell 1 and the SPDV material pile?					
25	DP 831, Operational Plan, Part D, condition 11	Do the Permittees conduct inspections monthly and after storm events of 2 inches or greater in a 24-hour period to evaluate potential erosion and vegetation success of the cover at the Salt Cell 1 and the SPDV material pile?					
26	DP 831, Operational Plan, Part D, condition 11	In the event there is significant erosion or failure of vegetation success, is there a procedure/process for providing a plan and schedule for repair to NMED within 90 days of discovery and then reporting those cover repairs to NMED?					
27	DP 831, Monitoring & Reporting, Part A, condition 13	Do the Permittees have a process/procedure for sampling and analysis that incorporates the sampling methodology requirements of this permit part?					
28	DP 831, Monitoring & Reporting, Part A, condition 14	Do the Permittees conduct semiannual monitoring and submit a semiannual monitoring report to NMED in accordance with the timeframes and dates listed in this permit part?					
29	DP 831, Monitoring & Reporting, Part B, condition 15	Do the Permittees measure the domestic influent discharge to the Facultative Lagoon System on a monthly basis using a totalizing flow meter either on the influent line or one that measures the total domestic water usage?					Observation 5 - Permit condition 15 - influent discharge measurement and reporting
30	DP 831, Monitoring & Reporting, Part B, condition 15	Do the Permittees measure other authorized discharges to the Facultative Lagoon System by calculating the time/volume or volumetric measurement of the transport containers?					



	<b>Second Triennial Review Checklist</b>					
	<b>Clean Water Act (CWA) &amp; NM Water Quality Act</b>					
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	REVIEW TOPIC	<b>Clean Water Act and the New Mexico Water Quality Act</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
31	DP 831, Monitoring & Reporting, Part B, condition 15	Do the Permittees include monthly meter readings, the units of measurement, monthly discharge volumes and other volumetric calculations in the semiannual monitoring report submitted to NMED?				Observation 5 - Permit condition 15 - influent discharge measurement and reporting
32	DP 831, Monitoring & Reporting, Part B, condition 16	Do the Permittees collect a wastewater sample every 6 months from the influent to the Facultative Lagoon System and analyze the sample for TKN, No3-N, SO4, TDS and Cl?				
33	DP 831, Monitoring & Reporting, Part B, condition 16	Is there a procedure/process for preserving, transporting and analyzing the sample?				
34	DP 831, Monitoring & Reporting, Part C, condition 17	Do the Permittees measure the volume, using a time/volume method volumetric measurement of the transport container calculation, of all wastewater discharged to the Evaporation Pond H-19 that is derived from miscellaneous non-hazardous sources and reported to NMED?				
35	DP 831, Monitoring & Reporting, Part C, condition 18	Do the Permittees collect a sample semiannually from the Evaporation Pond H-19 and analyzed for SO4, TDS and Cl?				
36	DP 831, Monitoring & Reporting, Part C, condition 18	Is there a procedure/process for collecting samples annually after a significant storm event from Storm Water Ponds 1, 2 & 3 and analyzed for SO4, TDS and Cl?				
37	DP 831, Monitoring & Reporting, Part C, condition 18	Is there a procedure/process for preserving, transporting and analyzing the sample?				
38	DP 831, Monitoring & Reporting, Part C, condition 19	Do the Permittees measure the water depth, on a monthly basis, to the nearest tenth of a foot in Storm Water Ponds 1, 2 and 3 and report the approximate volume of storm water to NMED in the semiannual monitoring report?				

<b>Second Triennial Review Checklist</b>						
<b>Clean Water Act (CWA) &amp; NM Water Quality Act</b>						
WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST						
REVIEW TOPIC		<b>Clean Water Act and the New Mexico Water Quality Act</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
39	DP 831, Monitoring & Reporting, Part D, condition 20	Is there a procedure/process for collecting a sample annually after a significant storm event from Salt Storage Cells 1, 2, and 3 and analyzed for SO4, TDS and Cl?				
40	DP 831, Monitoring & Reporting, Part D, condition 20	Is there a procedure/process for preserving, transporting and analyzing the sample?				
41	DP 831, Monitoring & Reporting, Part D, condition 21	Do the Permittees measure the water depth, on a monthly basis, to the nearest tenth of a foot in Salt Storage Ponds 1, 2 and 3 and report the approximate volume of storm water to NMED in the semiannual monitoring report?				
42	DP 831, Groundwater Monitoring & Reports, condition 22	Do the Permittees measure the depth to the water table, on a quarterly basis, to the nearest hundredth of a foot in the piezometers/monitoring wells listed in this permit section?				
43	DP 831, Groundwater Monitoring & Reports, condition 23	Do the Permittees perform semiannual groundwater sampling at the piezometers/monitoring wells listed in this permit section and analyze those samples for temperature, pH, specific conductance, SO4, TDS and Cl?				
44	DP 831, Groundwater Monitoring & Reports, condition 23	Do the Permittees use this permit section as the procedure for collecting, preserving, transporting and analysis of groundwater samples or is there a separate procedure/process which documents this requirement?				
45	DP 831, Groundwater Monitoring & Reports, condition 23	Is there a procedure/process ensuring that the depth-to-most-shallow groundwater measurements, analytical results, including the laboratory QA/QC summary report, and a facility layout map showing the location and number of each well are reported to NMED in the semiannual monitoring reports?				

	<b>Second Triennial Review Checklist</b>						
	<b>Clean Water Act (CWA) &amp; NM Water Quality Act</b>						
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	REVIEW TOPIC	<b>Clean Water Act and the New Mexico Water Quality Act</b>					
	Citation	Required Program					Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O		
46	DP 831, Groundwater Monitoring & Reports, condition 24	Do the Permittees preform semiannual groundwater sampling at monitoring well WQSP-6A and analyze the samples for TKN and NO3?					
47	DP 831, Groundwater Monitoring & Reports, condition 24	Is there a procedure/process for preserving, transporting and analyzing the sample?					
48	DP 831, Groundwater Monitoring & Reports, conditions 25-28	Do the Permittees annually submit hydrographs, a potentiometric map, water level measurement table and groundwater data table in accordance with the requirements in conditions 25-28 of the permit?					
49	DP 831, Contingency Plan, condition 29	Is there a procedure/process that describes when the contingency plan should be enacted?					
50	DP 831, Contingency Plan, condition 29	Is there a procedure/process that outlines the requirements of a corrective action plan (once the contingency plan has been enacted)?					
51	DP 831, Contingency Plan, condition 30	In the event that an inspection reveals significant damage likely to affect the structural integrity of the lined impoundment(s) or its ability to contain contaminants, is there a procedure/process that outlines the requirements of submittal of a corrective action plan for repair or replacement?					
52	DP 831, Contingency Plan, condition 31	In the event that a minimum of one foot of freeboard cannot be preserved in the impoundment(s), is there a procedure/process that outlines how the Permittees will restore the required freeboard within 72 hours?					
53	DP 831, Contingency Plan, condition 31	In the event that freeboard cannot be restored within 72 hours in the impoundment(s), is there a procedure/process that outlines the requirements for submittal of short-term corrective action plan to restore the freeboard?					

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	<b>Clean Water Act (CWA) &amp; NM Water Quality Act</b>					
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	REVIEW TOPIC	Clean Water Act and the New Mexico Water Quality Act				
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Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
54	DP 831, Contingency Plan, condition 31	In the event that short-term corrective action plan cannot restore the freeboard in the impoundment(s), is there a procedure/process that outlines the requirements for submittal of long-term corrective action plan to restore the freeboard?				
55	DP 831, Contingency Plan, condition 32	In the event that a release occurs that is not authorized under the permit, is there a procedure/process that outlines the requirements to mitigate damage and initiate notifications (e.g., 24-hour verbal) and corrective actions (e.g., submittal of corrective action plan/report within 15-days) in accordance with this permit condition?				
56	DP 831, Contingency Plan, condition 34	In the event of a pipeline break, pump failure, pond overflow or other system failure, is there a procedure/process that outlines the requirements for containing discharged water and repairing replacing failed components within 72 hours?				Observation 5 - Condition 34 - Repair of system failures
57	DP 831, E - General Terms and Conditions, condition 41	Is there a procedure/process that outlines what records are required to be kept at the facility for at least five years?				

	<b>Second Triennial Review Checklist</b>					
	<b>Clean Air Act (CAA)</b>					
	<b>(including the National Emissions Standards for Hazardous Air pollutants (NESHAPS) and the New Mexico Air Quality Act)</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	Clean Air Act (CAA) (including the National Emissions Standards for Hazardous Air pollutants (NESHAPS) and the New Mexico Air Quality Act)				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
1	40 CFR, Part 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	Do the Permittees have an existing stationary compression ignition (CI) internal combustion engine (ICE) on site?				
2	40 CFR, Part 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	Is there a process for determining whether the stationary CI ICE is intended to be an emergency engine or a non-emergency engine?				
3	40 CFR, Part 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	How do you ensure compliance with 40 CFR, Part 60, Subpart IIII?				
4	40 CFR, Part 63 Subpart ZZZZ	Do the Permittees have an existing stationary reciprocating internal combustion engine (RICE) on site?				
5	40 CFR, Part 63 Subpart ZZZZ	How do you ensure compliance with 40 CFR, Part 63, Subpart ZZZZ?				
6	NMED Facility ID 318 – Air Quality Bureau, NMED	Based on NMED's documentation, the only air permit at the WIPP facility is a minor source, stationary CI ICE?				
7	NMED Facility ID 318 – Air Quality Bureau, NMED	Does the WIPP facility report on asbestos emissions?				
8	40 CFR §60.4204 – What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine (ICE)?	If applicable, is there a procedure/process for determining the applicable emission standards in accordance with §60.4204 (a-f) (i.e., pre-2007 model year, displacement of <30 liters per cylinder)?				

	<b>Second Triennial Review Checklist</b>					
	<b>Clean Air Act (CAA)</b>					
	<b>(including the National Emissions Standards for Hazardous Air pollutants (NESHAPS) and the New Mexico Air Quality Act)</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	Clean Air Act (CAA) (including the National Emissions Standards for Hazardous Air pollutants (NESHAPS) and the New Mexico Air Quality Act)				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
9	40 CFR §60.4205 – What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI ICE?	If applicable, is there a procedure/process for determining the applicable emission standards in accordance with §60.4205 (a-f) (i.e., pre-2007 model year, displacement of <30 liters per cylinder)?				
10	40 CFR §60.4206 – How long must I meet the emission standards if I am an owner or operator of a stationary CI ICE subject to this subpart?	Is there a process/procedure that flows down the requirement to comply with the applicable emissions standards for the entire life of the stationary IC ICE?	NA			Not a pre-2007 model year generator
11	40 CFR §60.4207 – What fuel requirements must I meet for emergency engines if I am an owner or operator of a stationary CI ICE?	How do the Permittees ensure they are complying with the fuel requirements outlined in §60.4207 (a-e) for stationary CI ICEs?				Observation 4 - There are no procedures related to CAA requirements
12	40 CFR §60.4208 – What is the deadline for importing or installing a stationary CI ICE produced in a previous model year?	How do the Permittees ensure they're complying with the import and/or installation of stationary CI ICEs produced in specific years (§60.4208(a-i)?				
13	40 CFR §60.4209 – What are the monitoring requirements if I'm the owner or operator of stationary CI ICE?	Is there a process/procedure/checklist that allows the Permittees to determine the applicable provisions of §60.4209(a&b)? For example, if the stationary CI ICE doesn't meet the standards for non-emergency engines, was a non-resettable hour meter installed?	NA			This information was listed in the air permit application and also required by the air permit. Additionally, these requirements/specifications are listed in contract documents with the manufacturer.
14	40 CFR §60.4211 – What are my compliance requirements if I'm the owner or operator of stationary CI ICE?	Is there a process/procedure that flows down the requirements of §60.4211(a-h)?				Observation 4 - There are no procedures related to CAA requirements
15	40 CFR §60.4211 – What are my compliance requirements if I'm the owner or operator of stationary CI ICE?	Are the Permittees in compliance with §60.4211(a-h)?				

	<b>Second Triennial Review Checklist</b>					
	<b>Clean Air Act (CAA)</b>					
	<b>(including the National Emissions Standards for Hazardous Air pollutants (NESHAPS) and the New Mexico Air Quality Act)</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	Clean Air Act (CAA) (including the National Emissions Standards for Hazardous Air pollutants (NESHAPS) and the New Mexico Air Quality Act)				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
16	40 CFR §60.4212 – What test methods or other procedures must I use if I’m the owner or operator of stationary CI ICE with a displacement of less than 30 liters per cylinder?	Is there a process/procedure that flows down the requirements of §60.4212(a-e)?				
17	40 CFR §60.4212 – What test methods or other procedures must I use if I’m the owner or operator of stationary CI ICE with a displacement of less than 30 liters per cylinder?	Are the Permittees in compliance with the test methods outlined in §60.4212(a-e)?				Observation 4 - There are no procedures related to CAA requirements
18	40 CFR §60.4213 – What test methods or other procedures must I use if I’m the owner or operator of stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder?	Is there a process/procedure that flows down the requirements of §60.4213(a-d)?				
19	40 CFR §60.4213 – What test methods or other procedures must I use if I’m the owner or operator of stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder?	Are the Permittees in compliance with the test methods outline in §60.4213(a-d)?				Observation 4 - There are no procedures related to CAA requirements
20	40 CFR §60.4214 – What are my notification, reporting and recordkeeping requirements if I’m the owner or operator of stationary CI ICE?	How do the Permittees determine the applicability of §60.4214 (a-e)? Is there a process/procedure/checklist for making this determination?				
21	40 CFR §60.4214 – What are my notification, reporting and recordkeeping requirements if I’m the owner or operator of stationary CI ICE?	Are the Permittees in compliance with notification, reporting and recordkeeping requirements in §60.4214(a-e)?				Observation 4 - There are no procedures related to CAA requirements
22	40 CFR §60.4218 – What parts of the General Provisions apply to me?	What are the applicable portions of the General Provisions (§§60.1-60.9)? How was that determined?				
23	40 CFR §60.4218 – What parts of the General Provisions apply to me?	Are the Permittees in compliance with the applicable General Provisions in §§60.1-60.9?				

	<b>Second Triennial Review Checklist</b>					
	<b>Clean Air Act (CAA)</b>					
	<b>(including the National Emissions Standards for Hazardous Air pollutants (NESHAPS) and the New Mexico Air Quality Act)</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	Clean Air Act (CAA) (including the National Emissions Standards for Hazardous Air pollutants (NESHAPS) and the New Mexico Air Quality Act)				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
24	40 CFR §63.6603– What emission limitations, operating limitations and other requirements must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?	If applicable, is there a process/procedure that flows down the emission limitations and operating limitations requirements of §63.6603(a-f)?				
25	40 CFR §63.6603– What emission limitations, operating limitations and other requirements must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?	Are the Permittees in compliance with the requirements in §63.6603(a-f)?	NA			The back-up generators are not located at an area source of HAP emissions.
26	40 CFR §63.6604– What fuel requirements must I meet if I own or operate a stationary CI RICE?	How do the Permittees ensure they are complying with the fuel requirements outlined in §63.6604 (a-d) for stationary CI RICES?	NA			The back-up generators are not located at an area source of HAP emissions.
27	40 CFR §63.6605– What are my general requirements for complying with this subpart?	What are the applicable portions of the general requirements (§63.6605(a&b)? How was that determined?				
28	40 CFR §63.6605– What are my general requirements for complying with this subpart?	Are the Permittees in compliance with the requirements in §63.6605(a&b)?				
29	40 CFR §63.6612– By what date must I conduct the initial performance tests or other initial compliance demonstration requirements if I own or operate an existing stationary RICE located at an area source of HAP emissions?	Is there a process/procedure for determining when an initial performance test/initial performance demonstration must be performed for a stationary RICE? If so, was the performance test/initial compliance demonstration performed in compliance with this section?				
30	40 CFR §63.6615– When must I conduct subsequent performance tests?	Is there a process/procedure for determining when subsequent performance tests must be performed for a stationary RICE?				
31	40 CFR §63.6620– What performance tests and other procedures must I use?	Is there a process/procedure outlining the performance test methods that must be used pursuant to §63.6620 (a-i)?				Observation 4 - There are no procedures related to CAA requirements



	<b>Second Triennial Review Checklist</b>					
	<b>Clean Air Act (CAA)</b>					
	<b>(including the National Emissions Standards for Hazardous Air pollutants (NESHAPS) and the New Mexico Air Quality Act)</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	Clean Air Act (CAA) (including the National Emissions Standards for Hazardous Air pollutants (NESHAPS) and the New Mexico Air Quality Act)				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
32	40 CFR §63.6620– What performance tests and other procedures must I use?	Are the Permittees test methods compliant with §63.6620(a-i)?				Observation 4 - There are no procedures related to CAA requirements
33	40 CFR §63.6625– What are my monitoring, installation, collection, operation and maintenance requirements?	How do the Permittees determine the applicability of §63.6625 (a-j)? Is there a process/procedure/checklist for making this determination?				
34	40 CFR §63.6625– What are my monitoring, installation, collection, operation and maintenance requirements?	Once applicability is established, is there a process/procedure that flows down the monitoring, installation, collection, operation and maintenance requirements of §63.6625(a-j)?				Observation 4 - There are no procedures related to CAA requirements
35	40 CFR §63.6625– What are my monitoring, installation, collection, operation and maintenance requirements?	Are the Permittees in compliance with monitoring, installation, collection, operation and maintenance requirements in §63.6625(a-j)?				
36	40 CFR §63.6630– How do I demonstrate initial compliance with the emission limitations, operating limitations, and other requirements?	Is there a process/procedure/checklist for demonstrating initial compliance with the emissions limitations, operating limitations and other requirements in §63.6630(a-e)?				
37	40 CFR §63.6635– How do I monitor and collect data to demonstrate continuous compliance?	Is there a process/procedure/checklist outlining the monitoring and data collection requirements in §63.6635(a-c)?	NA			Initial compliance was demonstrated many years ago, therefore this LOI isn't applicable.
38	40 CFR §63.6635– How do I monitor and collect data to demonstrate continuous compliance?	Are the Permittees in compliance with monitoring, and data collection requirements in §63.6635(a-c)?				

	<b>Second Triennial Review Checklist</b>					
	<b>Clean Air Act (CAA)</b>					
	<b>(including the National Emissions Standards for Hazardous Air pollutants (NESHAPS) and the New Mexico Air Quality Act)</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	Clean Air Act (CAA) (including the National Emissions Standards for Hazardous Air pollutants (NESHAPS) and the New Mexico Air Quality Act)				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
39	40 CFR §63.6640– How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?	Is there a process/procedure/checklist outlining how to demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements in §63.6640(a-f)?				
40	40 CFR §63.6640– How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?	Are the Permittees in compliance with the requirements for demonstrating continuous compliance in §63.6640(a-f)?				
41	40 CFR §63.6645 – What notifications must I submit and when?	Is there a process/procedure/checklist outlining the notification requirements in §63.6645(a-i)?				
42	40 CFR §63.6645 – What notifications must I submit and when?	Are the Permittees in compliance with the notification requirements?				Observation 4 - There are no procedures related to CAA requirements
43	40 CFR §63.6650 – What reports must I submit and when?	Is there a process/procedure/checklist outlining what reports must be submitted and by when?	NA			There are no reporting/notification requirements because the two back-up generators are used <500 hours/year.
44	40 CFR §63.6650 – What reports must I submit and when?	Are the Permittees in compliance with the reporting requirements in §63.6650(a-h)?				
45	40 CFR §63.6655 – What records must I keep?	Is there a process/procedure/checklist outlining what records must be maintained?				
46	40 CFR §63.6655 – What records must I keep?	Are the Permittees in compliance with the record-keeping requirements in §63.6655(a-f)?				
47	40 CFR §63.6660 – In what form and how long must I keep my records?	Is there a process/procedure/checklist outlining in what form and how long records must be maintained?				

	<b>Second Triennial Review Checklist</b>					
	<b>Clean Air Act (CAA)</b>					
	<b>(including the National Emissions Standards for Hazardous Air pollutants (NESHAPS) and the New Mexico Air Quality Act)</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	Clean Air Act (CAA) (including the National Emissions Standards for Hazardous Air pollutants (NESHAPS) and the New Mexico Air Quality Act)				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
48	40 CFR §63.6660 – In what form and how long must I keep my records?	Are the Permittees in compliance with the form and record retention requirements in §63.6660(a-c)?				Observation 4 - There are no procedures related to CAA requirements
49	40 CFR §63.6665 – What parts of the General Provisions apply to me?	What are the applicable portions of the General Provisions (§§63.1-63.15)? How was that determined?				
50	40 CFR §63.6665 – What parts of the General Provisions apply to me?	Are the Permittees in compliance with the applicable General Provisions in §§63.1-63.15?				

	<b>Second Triennial Review Checklist</b>					
	<b>Safe Drinking Water Act (and the New Mexico Drinking Water Regulations)</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Safe Drinking Water Act (and the New Mexico Drinking Water Regulations)</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
1	40 CFR, Part 141, Subpart B (§141.11-§141.13)– Maximum Contaminant Levels	Are nitrate levels sampled if required?	NA			Drinking water purchased and information from Site Environmental Compliance Manager
2	40 CFR, Part 141, Subpart C (§141.21-§141.29)– Monitoring and Analytical Requirements	Are the MCL requirements addressed by the Carlsbad Municipal Water System?				
3	40 CFR, Part 141, Subpart D (§141.31-§141.35) – Reporting and Recordkeeping	Are requirements for reporting and recording keeping being met?				
4	40 CFR, Part 141, Subpart E (§141.40-§141.43) – Special Regulations, Including Monitoring Regulations and Prohibitions on Lead Use	Are monitoring requirements met if required?				
5	40 CFR, Part 141, Subpart F (§141.50-§141.55) – Maximum Contaminant Level Goals and Maximum Residual Disinfectant Level Goals	Does the water system sample for residual chlorine if required and provide the results to the Department?				
6	40 CFR, Part 141, Subpart G (§141.60-§141.66) – National Primary Drinking Water Regulations: Maximum Contaminant Levels and Maximum Residual Disinfectant Levels	Are appropriate MCLs met if required?				
7	40 CFR, Part 141, Subpart Q (§141.201-§141.211) – Public Notification of Drinking Water Violations	Are public notifications made if required?				

	<b>Second Triennial Review Checklist</b>					
	<b>Safe Drinking Water Act (and the New Mexico Drinking Water Regulations)</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Safe Drinking Water Act (and the New Mexico Drinking Water Regulations)</b>				
	Citation	Required Program	In Compliance?	NA	Y E S	N O
Number			NA=Not Applicable ND=Not Determined or ND			
8	40 CFR, Part 141, Subpart L ( 141.130-141.135) - Disinfection Residuals, Disinfection Byproducts, and Disinfection Byproduct Precursors	Does the water system add chemical disinfectant?				
9	40 CFR, Part 141, Subpart V ( 141.620 - 141.629 ) - Stage 2 Disinfection Byproducts Requirements	Is a system sampling plan in place to meet applicable requirements?				Observation 6 - Procedure development and revision
10	40 CFR, Part 141, Subpart Y ( 141.851 - 141.861 ) - Revised Total Coliform Rule	Is a system sampling plan in place to meet applicable requirements?				Observation 6 - Procedure development and revision
11	NMAC 20.7.10.8- Submittals to the Department	Are all required submittals sent to the Drinking Water Bureau within the New Mexico Environmental Department ?				
12	NMAC 20.7.10.9-Documentation Required for Population Determination	Is the determination of the population served documented and available to the Department ?				
13	NMAC 20.7.10.200-Public Water System Projects	Have there been any water system projects that are required to submit an application or obtain Department approval ?				
14	NMAC 20.7.10.500- Monitoring Requirements	Does the water system have a Drinking Water Distribution System Sampling Plan that meets the requirements of the Departments instructions and plan template ?				Observation 6 - Procedure development and revision
15	40 CFR §141.11 – Maximum contaminant levels for inorganic chemicals	If required to be sampled, are nitrate levels below the MCL?	NA			Drinking water purchased and information from Site Environmental Compliance Manager
16	40 CFR §141.22 – Turbidity Sampling & Analytical Requirements	If required, are turbidity sampling and analytical requirements met?	NA			Drinking water purchased and information from Site Environmental Compliance Manager

	<b>Second Triennial Review Checklist</b>					
	<b>Safe Drinking Water Act (and the New Mexico Drinking Water Regulations)</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Safe Drinking Water Act (and the New Mexico Drinking Water Regulations)</b>				
	Citation	Required Program	In Compliance?	NA	Y E S	N O
Number			NA=Not Applicable ND=Not Determined or ND			
17	40 CFR §141.23 – Inorganic Sampling & Analytical Requirements	If required, are inorganic sampling and analytical requirements met?	NA			Drinking water purchased and information from Site Environmental Compliance Manager
18	40 CFR §141.24 – Organic Sampling & Analytical Requirements	If required, are organic sampling and analytical requirements met?	NA			Drinking water purchased and information from Site Environmental Compliance Manager
19	40 CFR §141.25 –Analytical methods for radioactivity	If required, are compliant analytical methods used for radioactivity?	NA			Drinking water purchased and information from Site Environmental Compliance Manager
20	40 CFR §141.27 –Alternate analytical techniques	If used, are any alternate analytical techniques approved by the State with EPA concurrence?	NA			Drinking water purchased and information from Site Environmental Compliance Manager
21	40 CFR §141.28 –Certified Laboratories	Are all samples analyzed by a laboratory certified by the Department Drinking Water Laboratory Certification Program?				
22	40 CFR §141.31 –Reporting Requirements	Are all applicable required test measurements or analysis reported to the State?				
23	40 CFR §141.33 –Record Maintenance	Are all required records retained on the premises or at a convenient location?				
24	40 CFR §141.35 –Reporting for unregulated contaminant monitoring results	Has the non-transient non-community water system been notified by the State or EPA that it is a part of the State Monitoring Plan for <b>Assessment</b> Monitoring?	NA			Drinking water purchased and information from Site Environmental Compliance Manager
25	40 CFR §141.40 –Monitoring requirements for unregulated contaminants	Is the water system required to sample for lead and copper?				
26	40 CFR §141.41 –Special Monitoring for sodium	If required, is monitoring performed for sodium?	NA			Drinking water purchased and information from Site Environmental Compliance Manager
27	40 CFR §141.42 –Special monitoring for corrosivity characteristics	If required, is monitoring performed for corrosivity characteristics?	NA			Drinking water purchased and information from Site Environmental Compliance Manager
28	40 CFR §141.43 –Prohibition on use of lead pipes, solder and flux	Are procedures in place to prevent the use of lead pipe, solder, and flux for installation and repair?				

	<b>Second Triennial Review Checklist</b>					
	<b>Safe Drinking Water Act (and the New Mexico Drinking Water Regulations)</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Safe Drinking Water Act (and the New Mexico Drinking Water Regulations)</b>				
	Citation	Required Program	In Compliance?	NA	Y E S	N O
Number			NA=Not Applicable ND=Not Determined or ND			
29	40 CFR §141.50 –Maximum contaminant level goals for organic contaminants	If required, are the MCL goals for organic contaminates being met?	NA			Drinking water purchased and information from Site Environmental Compliance Manager
30	40 CFR §141.51 –Maximum contaminant level goals for inorganic contaminants	If required, are the MCL goals for inorganic contaminants being met?				
31	40 CFR §141.52 –Maximum contaminant level goals for microbiological contaminants	If required, are the MCL goals for microbiological contaminants being met?	NA			Drinking water purchased and information from Site Environmental Compliance Manager
32	40 CFR §141.53 –Maximum contaminant level goals for disinfection byproducts	If required, are the MCL goals for disinfection byproducts being met?				
33	40 CFR §141.54 –Maximum residual disinfectant level goals for disinfectants	If required, are the maximum residual level goal for disinfectants met?				
34	40 CFR §141.55 –Maximum contaminant level goals for radionuclides	If required, are the MCL goals for radionuclides met?	NA			Drinking water purchased and information from Site Environmental Compliance Manager
35	40 CFR §141.61 –Maximum contaminant levels for organic contaminants	If required, are the MCLs for organic contaminants being met?	NA			Drinking water purchased and information from Site Environmental Compliance Manager
36	40 CFR §141.62 –Maximum contaminant levels for inorganic contaminants	If required, are the MCLs for inorganic contaminants being met?	NA			Drinking water purchased and information from Site Environmental Compliance Manager
37	40 CFR §141.63 –Maximum contaminant levels for microbiological contaminants	If required, are the MCLs for microbiological contaminates being met?	NA			Drinking water purchased and information from Site Environmental Compliance Manager

	<b>Second Triennial Review Checklist</b>					
	<b>Safe Drinking Water Act (and the New Mexico Drinking Water Regulations)</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Safe Drinking Water Act (and the New Mexico Drinking Water Regulations)</b>				
	Citation	Required Program	In Compliance?	NA	Y E S	N O
Number			NA=Not Applicable ND=Not Determined or ND			
38	40 CFR §141.64 –Maximum contaminant levels for disinfection byproducts	If required, are the MCLs for disinfection byproducts being met?				
39	40 CFR §141.65 –Maximum contaminant levels for radionuclides	If required, are the MCLs for radionuclides being met?	NA			Drinking water purchased and information from Site Environmental Compliance Manager
40	40 CFR §141.201 –General public notification requirements	Is the water system prepared to provide public notice of any applicable violation?				
41	40 CFR §141.202 –Tier 1 Public Notice – Form, manner, and frequency of notice	Is the water system prepared to provide a Tier 1 Public Notice?				
42	40 CFR §141.203 –Tier 2 Public Notice – Form, manner, and frequency of notice	Is the water system prepared to provide a Tier 2 Public Notice?				
43	40 CFR §141.204 –Tier 3 Public Notice – Form, manner, and frequency of notice	Is the water system prepared to provide a Tier 3 Public Notice?				
44	40 CFR §141.205 –Content of the Public Notice	Have the Public Notice content requirements been reviewed?				
45	40 CFR §141.207 –Special notice to the availability of unregulated contaminant monitoring results	If monitoring for unregulated contaminants, is notice provided as required?	NA			Drinking water purchased and information from Site Environmental Compliance Manager
46	40 CFR §141.209 –Special notice for nitrate exceedance above MCL by non-community water systems	If special permission was given under 141.11(d), has required notice been given?	NA			Drinking water purchased and information from Site Environmental Compliance Manager
47	40 CFR 141.621 Routine Monitoring	Is monitoring performed on the required frequency and at the required number of locations?				



	<b>Second Triennial Review Checklist</b>						
	<b>Safe Drinking Water Act (and the New Mexico Drinking Water Regulations)</b>						
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST						
	REVIEW TOPIC	<b>Safe Drinking Water Act (and the New Mexico Drinking Water Regulations)</b>					
	Citation	Required Program	In Compliance?	NA	Y E S	N O	Notes/Comments
Number			NA=Not Applicable ND=Not Determined or ND				
48	40 CFR 141.852 Analytical methods and laboratory certification	Are correct analytical methods used and are they performed by a certified laboratory?					
49	40 CFR 141.853 General monitoring requirements for all public water systems	Does the Drinking Water Distribution System Sampling Plan identify sampling sites and a sample collection schedule that is representative of water throughout the distribution system?					
50	NMAC 20.7.4 Wastewater and Water Supply Facilities Utility Operator Certification	If required, are all applicable operator levels of certification requirements being met ?					

Second Triennial Review Checklist							
New Mexico Solid Waste Act							
WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST							
REVIEW TOPIC		New Mexico Solid Waste Act					
	Citation		Required Program				Notes/Comments
Number			In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
1	NMAC 20.9.2.8 (A)	General Requirements	How do the Permittees ensure proper transportation of solid waste or recyclable materials to a permitted or registered facility?				
2	NMAC 20.9.2.8 (B)	General Requirements	What measures do the Permittees have to ensure the integrity for both their indoor and outdoor solid waste storage containers (except for construction and demolition debris, yard refuse, or white goods) when they are sedentary and when they are handled?				
3	NMAC 20.9.2.8 (C)	General Requirements	What measures do the Permittees have to store their solid waste, recyclable materials, yard refuse or white goods that prevents blowing litter, insect and rodent harborage, and does not create a public nuisance or public health hazard?				
4	NMAC 20.9.2.8 (D)	General Requirements	How do the Permittees ensure that their solid waste storage does not create a public nuisance?				
5	NMAC 20.9.2.8 (E)	General Requirements	Is there a process in place for directing notifications to the bureau chief of the solid waste bureau?				
6	NMAC 20.9.2.8 (F)	General Requirements	Is there a check in place to ensure the Permittees ; soil, water, and special waste testing methods used to demonstrate compliance with the Solid Waste Act or 20.9.2 - 20.9.10 NMAC are in conformance with permit requirements or are otherwise specifically approved by the department prior to use?				
7	NMAC 20.9.2.8 (G)	General Requirements	Is there a procedure in place to notify the department within 48 hours of an excavation of a closed cell or solid waste disposal area?				

<b>Second Triennial Review Checklist</b>							
<b>New Mexico Solid Waste Act</b>							
WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST							
REVIEW TOPIC		<b>New Mexico Solid Waste Act</b>					
	Citation		Required Program				Notes/Comments
Number			In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
8	NMAC 20.9.2.8 (H)	General Requirements	Is there a process for when the Permittee accepts, stockpiles, or uses clean fill material to comply with the requirements in NMAC 20.9.2.8 subsection H?				
9	NMAC 20.9.2.10 (A)	Prohibited Acts	Is there a procedure in place to ensure the Permittees do not commit any of the nineteen prohibited acts listed in 20.9.2.10 subsection A?				
10	NMAC 20.9.2.10 (B)	Prohibited Acts	What measures are taken to determine the characteristics of the waste being handled?				
11	NMAC 20.9.2.10 (C)	Prohibited Acts	If WIPP is a Subtitle C facility authorized to accept special waste, is there a check in place to ensure that solid waste is allowed under its permit?	NA			WIPP is not a Subtitle C landfill.
12	NMAC 20.9.8.10 (A)	General Requirements for Special Waste	Is there a process/procedure is in place to ensure that the special waste is stored at designated special waste storage areas meeting the requirements of 20.9.8 NMAC?				
13	NMAC 20.9.8.10 (B)	General Requirements for Special Waste	Is there a process/procedure is in place to ensure that the waste is placed in storage awaiting transportation, processing, or final disposal for no longer than 90 days?				
14	NMAC 20.9.8.10 (C)	General Requirements for Special Waste	Is there a process/procedure is in place to ensure that all containers of special waste when deemed full and placed in storage are clearly labeled or marked by their generators, indicating the name and address of the generator, contents, date placed in storage and potential health, safety, and environmental hazards associated with the waste?				Observation 7 - Adequacy of employee training related to container labeling

<b>Second Triennial Review Checklist</b>							
<b>New Mexico Solid Waste Act</b>							
WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST							
REVIEW TOPIC		<b>New Mexico Solid Waste Act</b>					
	Citation		Required Program	In Compliance?	NA	Y E S	N O
Number				NA=Not Applicable ND=Not Determined or ND			Notes/Comments
15	NMAC 20.9.8.10 (D)	General Requirements for Special Waste	Is there a process/procedure is in place to ensure that all containers of special waste that are prepared for transportation are clearly labeled or marked by their generators, indicating the name and address of the generator, contents, and potential health, safety, and environmental hazards associated with the waste?				
16	NMAC 20.9.8.10 (E)	General Requirements for Special Waste	Is there a process/procedure is in place for haulers to ensure that all containers of special waste are clearly labeled or marked prior to transportation, indicating the name and address of the generator, contents, date transported, and potential health, safety, and environmental hazards associated with the waste?				
17	NMAC 20.9.8.10 (F)	General Requirements for Special Waste	Is there a process/procedures in place for haulers or generators to ensure that a manifest in accordance with 20.9.8.19 NMAC accompanies each load of special waste originating in or being disposed in New Mexico?				
18	NMAC 20.9.8.10 (G)	General Requirements for Special Waste	Is there a practice in place to ensure that a hauler of special waste carries an appropriate clean-up kit in each vehicle used for hauling?				
19	NMAC 20.9.8.11 (A)	Required Analysis	Is there a process/procedure in place to ensure that the physical and chemical characteristics of all special wastes for storage, transportation or disposal is properly documented by the means listed in 20.9.8.11 subpart A?				

<b>Second Triennial Review Checklist</b>							
<b>New Mexico Solid Waste Act</b>							
WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST							
REVIEW TOPIC		<b>New Mexico Solid Waste Act</b>					
	Citation		Required Program	In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O
Number							Notes/Comments
20	NMAC 20.9.8.11 (B)	Required Analysis	How do the Permittees ensure that the laboratory performing an analysis follows U.S. EPA quality assurance and quality control procedures in accordance with U.S. EPA approved analytical methods or such other methods acceptable to the department?				
21	NMAC 20.9.8.11 (C)	Required Analysis	Is there a process/procedure in place to ensure that representative samples are analyzed in conformance with the parameters found in 20.9.8.11 subpart C?				
22	NMAC 20.9.8.12 (A)	Asbestos Waste	Is there a process/procedure in place to ensure that generators of asbestos waste prevent public access to asbestos wastes at the point of generation, and that haulers of asbestos waste prevent public access to asbestos waste during transportation?				
23	NMAC 20.9.8.12 (B)	Asbestos Waste	Is there a process/procedure in place for asbestos waste generators to determine whether the asbestos waste is regulated asbestos waste?				
24	NMAC 20.9.8.12 (B)	Asbestos Waste	If it is not regulated asbestos waste, is there a process/procedure in place for the generator to assure that the asbestos waste is handled in a manner to prevent the asbestos waste from becoming regulated asbestos waste?				
25	NMAC 20.9.8.12 (B)	Asbestos Waste	Is there a process/procedure in place to ensure compliance with the category I and category II non-friable asbestos waste handling requirements written in 20.9.8.12 subsection B?				

<b>Second Triennial Review Checklist</b>							
<b>New Mexico Solid Waste Act</b>							
WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST							
REVIEW TOPIC		<b>New Mexico Solid Waste Act</b>					
	Citation		Required Program	In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O
Number							Notes/Comments
26	NMAC 20.9.8.12 (B)	Asbestos Waste	If it is regulated asbestos waste, is there a process/procedure in place to ensure that the asbestos waste is disposed at a landfill permitted to accept regulated asbestos waste and handled accordingly?				
27	NMAC 20.9.8.12 (C)	Asbestos Waste	If non-regulated asbestos waste is to be disposed as non-regulated asbestos waste, is there a practice in place to ensure that the hauler handles the waste in a manner to prevent the asbestos waste from becoming regulated asbestos waste?				
28	NMAC 20.9.8.12 (C)	Asbestos Waste	Is there a process/procedure in place to ensure compliance with the category I and category II non-friable asbestos waste hauling requirements written in 20.9.8.12 subsection C?				
29	NMAC 20.9.8.12 (C)	Asbestos Waste	How do the Permittees ensure that the hauler properly notifies the landfill operator that the load contains non-regulated asbestos waste and must be disposed of properly?				
30	NMAC 20.9.8.12 (E)	Asbestos Waste	Is there a process/procedure in place to ensure that the				
31	NMAC 20.9.8.12 (E)	Asbestos Waste	Is there a process/procedure in place to ensure that the generator of regulated asbestos waste properly wets and containerizes the waste and complies with the containerizing requirements listed in 20.9.8.12 subpart E?				
32	NMAC 20.9.8.12 (E)	Asbestos Waste	Is there a process/procedure in place to ensure that haulers do not accept or transport regulated asbestos waste unless the waste has been properly wetted and containerized?				

<b>Second Triennial Review Checklist</b>							
<b>New Mexico Solid Waste Act</b>							
WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST							
REVIEW TOPIC		<b>New Mexico Solid Waste Act</b>					
	Citation		Required Program				Notes/Comments
Number			In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
33	NMAC 20.9.8.12 (E)	Asbestos Waste	Is there a process/procedure in place to ensure that haulers comply with the regulated asbestos waste hauling requirements listed in 20.9.8.12 subpart E?				
34	NMAC 20.9.8.12 (F)	Asbestos Waste	Is there a process/procedure in place to ensure that all regulated asbestos containers, to include individually wrapped facility components or pipes, have a warning label specified by the U.S. EPA or the occupational safety and health administration (OSHA) and are printed in both English and Spanish?				
35	NMAC 20.9.8.15 (A)	Petroleum Contaminated Soils	Is there a process/procedure in place for generators of petroleum contaminated soil to assure that all petroleum contaminated soils to be disposed, processed, composted, or transformed at a solid waste facility are tested under the requirements of 20.9.8.11 NMAC?				
36	NMAC 20.9.8.15 (B)	Petroleum Contaminated Soils	Is there a process/procedure in place to ensure that petroleum contaminated soils containing free liquid are not accepted at a solid waste facility?				
37	NMAC 20.9.8.15 (B)	Petroleum Contaminated Soils	Is there a process/procedure to ensure the test results of soils that can pass the paint filter test are placed in the daily operating record and made available to the secretary upon request?				
38	NMAC 20.9.8.15 (C)	Petroleum Contaminated Soils	Are the methods of storage, remediation, and testing of petroleum contaminated soil described in the disposal management plan?				
39	NMAC 20.9.8.15 (C)	Petroleum Contaminated Soils	What checks are in place to ensure that the conditions of a soil sample listed in 20.9.8.15 subpart C are met in order to complete remediation of petroleum contaminated soil?				

<b>Second Triennial Review Checklist</b>							
<b>New Mexico Solid Waste Act</b>							
WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST							
REVIEW TOPIC		<b>New Mexico Solid Waste Act</b>					
	Citation		Required Program	In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O
Number							Notes/Comments
40	NMAC 20.9.8.15 (D)	Petroleum Contaminated Soils	Is there a landfill identified to dispose of the Permittees' petroleum contaminated soils?				
41	NMAC 20.9.8.15 (E)	Petroleum Contaminated Soils	Is there a process/procedure in place to ensure that uncontaminated or remediated soils are not mixed with contaminated soils?				
42	NMAC 20.9.8.15 (F)	Petroleum Contaminated Soils	Is there a practice in place that ensures the owner or operators provides a written report to the department documenting remediation?				
43	NMAC 20.9.8.19 (A)	Manifest Requirements	Is there a process/procedure in place to ensure that each generator or authorized agent prepares a manifest following the requirements listed in 20.9.8.19 subpart A that accompanies each load of waste?				
44	NMAC 20.9.8.19 (B)	Manifest Requirements	Is there a process/procedure in place to ensure that a generator or authorized agent signs the manifest, obtains the signature of the initial transporter and date of acceptance of the manifest, and retains a copy of the manifest?				
45	NMAC 20.9.8.19 (B)	Manifest Requirements	Is there a process/procedure in place to ensure that a hauler obtains the signature of the individual who accepts the special waste for storage, further transportation or disposal, retains a copy of the manifest, and provides the original manifest to the next hauler or solid waste facility operator who receives the special waste?				
46	NMAC 20.9.8.19 (C)	Manifest Requirements	Is there a procedure in place to ensure the manifest accurately reflects the required information?				



<b>Second Triennial Review Checklist</b>							
<b>New Mexico Solid Waste Act</b>							
WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST							
REVIEW TOPIC		<b>New Mexico Solid Waste Act</b>					
	Citation		Required Program	In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O
Number							Notes/Comments
47	NMAC 20.9.8.19 (C)	Manifest Requirements	Is there a procedure in place to ensure is signed and dated by the generator and each hauler of the special waste, and by the solid waste facility owner or operator, acknowledging delivery, weight or volume, and receipt of the special waste?				
48	NMAC 20.9.8.19 (C)	Manifest Requirements	Is there a check in place to ensure that all signatories are duly authorized agents of their organizations?				
49	NMAC 20.9.8.19 (C)	Manifest Requirements	Is there a procedure in place to ensure that the generator keeps a copy of the originating manifest for three years?				
50	NMAC 20.9.8.19 (D)	Manifest Requirements	Upon discovery of any significant discrepancy including, but not limited to, factual misrepresentation on the manifest, irregularities in transportation, discharges, or any unauthorized action in regard to the shipment, delivery, or disposal of the solid waste, is there a process in place for the person discovering the discrepancy to notify the department, generator, hauler, and solid waste facility operator in writing within 24 hours?				
51	NMAC 20.9.8.19 (E)	Manifest Requirements	When a special waste shipment is received at the solid waste facility, is there a procedure in place to ensure that the owner or operator of the solid waste facility sends the original signed copy of the manifest to the generator, acknowledging receipt of the shipment within 30 days?				
52	NMAC 20.9.8.19 (E)	Manifest Requirements	Is there a check in place to ensure the solid waste facility owner or operator lists any discrepancies on the manifest?				

	<b>Second Triennial Review Checklist</b>						
	<b>New Mexico Solid Waste Act</b>						
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST						
	REVIEW TOPIC	<b>New Mexico Solid Waste Act</b>					
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53	NMAC 20.9.8.19 (F)	Manifest Requirements	Is there a process in place to ensure that a copy of the manifest is retained by each hauler, and solid waste facility operator for their operating records?				
54	NMAC 20.9.8.19 (F)	Manifest Requirements	Is there a process in place to ensure that the generator retains for a period of three years both the originating copy and the returned original manifest signed by the solid waste facility owner or operator and all haulers transporting the waste?				
55	NMAC 20.9.8.19 (F)	Manifest Requirements	Is there a process in place to ensure that haulers retain a copy of the manifest for a period of three years?				
56	NMAC 20.9.8.19 (G)	Manifest Requirements	Is there a procedure in place to ensure that copies of the manifest are retained by the facility owner or operator throughout any post-closure period?				

	<b>Second Triennial Review Checklist</b>					
	<b>Emergency Planning and Community Right to Know Act (EPCRA)</b>					
	<b>(and the New Mexico Hazardous Chemicals Information Act)</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Emergency Planning and Community Right to Know Act (EPCRA) (and the New Mexico Hazardous Chemicals Information Act)</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
1	40 CFR Part 355-Emergency Planning and Notification	Is the DOE required to comply with EPCRA and the NMHCIA? How does the DOE ensure compliance with EPCRA and the NMHCIA?				
2	40 CFR, Subpart B, §355.10 – Must my facility comply with the emergency planning requirements of this subpart?	Is there a process/procedure that helps determine whether the WIPP facility is subject to the emergency planning requirements of 40 CFR §355.10?				
3	40 CFR, Subpart B, §355.11 – To what substances do the emergency planning requirements of this subpart apply?	Do the DOE have any of the extremely hazardous substances (EHSs) listed in Appendices A and B of §355.11. If so, how are they tracked/managed?				
4	40 CFR, Subpart B, §355.12 – What quantities of extremely hazardous substances trigger emergency planning requirements?	If the DOE has any EHSs, in what quantities? Do the quantities trigger the emergency planning requirements of 40 CFR Part 355?				
5	40 CFR, Subpart B, §355.13 – How do I calculate the quantity of an extremely hazardous substance present in mixtures?	If the DOE has EHSs on site, is there a process/procedure for calculating the quantity of the EHS in a mixture?				
6	40 CFR, Subpart B, §355.13 – How do I calculate the quantity of an extremely hazardous substance present in mixtures?	If applicable, is DOE performing the calculation in accordance with §355.13?				
7	40 CFR, Subpart B, §355.14 – Do I have to aggregate extremely hazardous substance to determine the total quantity present?	If applicable, is DOE aggregating the EHS to determine the total quantity present? Is there a process/procedure for performing this activity?				
8	40 CFR, Subpart B, §355.15 – Which threshold planning quantity do I use for an extremely hazardous substance present at my facility in solid form?	Is there a process/procedure that details which threshold planning quantity DOE must use for EHSs in solid form at the WIPP facility?				

	<b>Second Triennial Review Checklist</b>					
	<b>Emergency Planning and Community Right to Know Act (EPCRA)</b>					
	<b>(and the New Mexico Hazardous Chemicals Information Act)</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	Emergency Planning and Community Right to Know Act (EPCRA) (and the New Mexico Hazardous Chemicals Information Act)				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
9	40 CFR, Subpart B, §355.16 – How do I determine the quantity of extremely hazardous substances present for certain forms of solids?	Is there a process/procedure that details how to determine the quantity of EHSs present for certain forms of solids?				
10	40 CFR, Subpart B, §355.20 – If this subpart applies at my facility, what information must I provide, who must I submit it to, and when is it due?	If applicable, is there a process/procedure to ensure the required information is provided to the appropriate organization on the required frequency?	ND			Observation 8 – process/procedure
11	40 CFR, Subpart B, §355.20 – If this subpart applies at my facility, what information must I provide, who must I submit it to, and when is it due?	If DOE has provided such information, was it in compliance with the table in §355.20?	ND			Observation 8 – information provided, but unclear if it meets requirement
12	40 CFR, Subpart B, §355.21 – In what format should the information be submitted?	If applicable, is there a process/procedure to ensure the required information is provided in the format required in §355.21?				
13	40 CFR, Subpart B, §355.21 – In what format should the information be submitted?	If DOE has provided this information, did the format comply with the requirements in §355.21?				
14	40 CFR, Subpart C, §355.30 – What facilities must comply with the emergency release notification requirements of this subpart?	Is DOE required to comply with the emergency release notification requirements? How was this determined?				
15	40 CFR, Subpart C, §355.31 – What types of releases are exempt from the emergency release notification requirements of this subpart?	Is there a process/procedure for determining what types of releases are exempt from the emergency release notification requirements in §355.31(a-g)? Have DOE identified any exempt releases?				
16	40 CFR, Subpart C, §355.32 – Which emergency release notification requirements apply to continuous releases?	Does the DOE have any "continuous releases" as defined in §355.32(a-d)?				

	<b>Second Triennial Review Checklist</b>					
	<b>Emergency Planning and Community Right to Know Act (EPCRA)</b>					
	<b>(and the New Mexico Hazardous Chemicals Information Act)</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Emergency Planning and Community Right to Know Act (EPCRA) (and the New Mexico Hazardous Chemicals Information Act)</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
17	40 CFR, Subpart C, §355.32 – Which emergency release notification requirements apply to continuous releases?	If so, is there a process/procedure for executing the emergency release notification requirements for continuous releases ?				
18	40 CFR, Subpart C, §355.33 – What release quantities of EHSs and CERCLA hazardous substances trigger the emergency release notification requirements of this subpart?	Is there a process/procedure that details the EHS and/or CERCLA hazardous substances reportable quantities (RQ) in Appendices A and B of 40 CFR Part 355? If so, does the process/procedure also detail the notification requirements if a RQ of a EHS or CERCLA hazardous substance is released within 24 hours?				
19	40 CFR, Subpart C, §355.40 – What information must I provide?	Is there a process /procedure detailing the information required for immediate notifications and written follow-up emergency notifications per §355.40(a-c)?				
20	40 CFR, Subpart C, §355.40 – What information must I provide?	Has the DOE had to make this type of notification?				
21	40 CFR, Subpart C, §355.41 – In what format should the information be submitted?	Is there a process /procedure detailing the format required for immediate notifications (oral) and written follow-up emergency notifications per §355.41?				
22	40 CFR, Subpart C, §355.42 – To whom must I submit the information?	Is there a process /procedure detailing who the immediate notifications (oral) and written follow-up emergency notifications must be sent per §355.42(a&b)?				

	<b>Second Triennial Review Checklist</b>					
	<b>Emergency Planning and Community Right to Know Act (EPCRA)</b>					
	<b>(and the New Mexico Hazardous Chemicals Information Act)</b>					
	WASTE ISOLATION PILOT PLANT 2021 TRIENNIAL REVIEW CHECK LIST					
	REVIEW TOPIC	<b>Emergency Planning and Community Right to Know Act (EPCRA) (and the New Mexico Hazardous Chemicals Information Act)</b>				
	Citation	Required Program				Notes/Comments
Number		In Compliance? NA=Not Applicable ND=Not Determined	NA or ND	Y E S	N O	
23	40 CFR, Subpart C, §355.43 – When must I submit the information?	Is there a process /procedure detailing when the immediate notification (oral) and written follow- up emergency notifications must be submitted per §355.43(a&b)?				

**ATTACHMENT D**

**REVIEW TEAM QUALIFICATIONS**

## EXPERIENCE SUMMARY

Ms. Echols has over 30 years' experience in radiological protection and radioactive waste management. She has detailed knowledge and understanding of nuclear waste management programs and regulatory requirements having served as a regulator, technical manager, sales manager, and now leads a woman owned small business; therefore, she possesses a depth of knowledge in a range of nuclear disciplines.

Ms. Echols specializes in problematic waste disposition and has worked both domestically and internationally with radioactive waste generators and regulatory agencies to solve some of the most complex waste treatment and disposition challenges. Ms. Echols experience includes treatment and disposition of a variety of low-level, mixed low-level, and transuranic waste streams.

In her role as President of Firewater, Ms. Echols is directing growth and expansion of Firewater's business with government and commercial clients by offering solution-based consulting services to nuclear waste generators.

## SECURITY CLEARANCE

Department of Energy Q Clearance

## EDUCATION

**Mississippi State University**, Starkville, Mississippi


Bachelor of Science, Animal Sciences, May 1982 with Master of Science Work in Ruminant Nutrition in 1983.

## PROFESSIONAL EXPERIENCE

**President, Firewater Associates, LLC**  
**Maryville, TN**

**February 2017 to Present**

Firewater is a woman owned small business established in 2009 to provide technical consulting and staffing services to government and commercial clients. The company has been recognized for its attention to providing outstanding service by receiving awards such as the URS|CH2M Oak Ridge (UCOR) Woman Owned Small Business of the Year in 2016. The company specializes in radioactive waste management and transportation.

 **DOE Assistant Secretary for Environmental Management (EM-1) Technical Advisor on Mercury Strategy.** Ms. Echols began this work under EM-1 Anne White who established this role to support end state cleanup at Oak Ridge. Mercury is the number one environmental liability on the Oak Ridge Reservation and a concern to DOE for its cleanup in a safe and protective manner. In June 2019, EM leadership changed with the departure of Ms. White, however DOE EM's Manager of Oak Ridge Operations Jay Mullis requested EM Headquarters continue



Ms. Echols' Technical Advisor role, which resulted in a contract extension under the new Headquarters leadership. In her Technical Advisory role, Ms. Echols is developing strategies and identifying innovative technologies/solutions for future cleanup of the Mercury Use buildings at the Y-12 Security Complex. Ms. Echols serves on a newly established Mercury Test Bed Team that will identify and test technologies to address the major gap areas for cleanup of the Mercury Buildings – characterization, source removal, and contamination control.

**Hanford Test Bed Initiative (TBI)**, Ms. Echols, serves as the Radioactive Waste Manager for a commercial team contracted by DOE EM to perform the Hanford TBI. Ms. Echols was one of the originators of this concept for developing alternative commercial disposition strategies for a portion of the 56 million gallons of High-Level tank wastes stored at Hanford. These wastes represent DOE EM's number one financial liability and environmental risk, and although 90% or more of the wastes exhibit the characteristics of low-level (mixed low-level) wastes they must be treated in accordance with the Hanford Federal Facility Agreement and Consent Order, between DOE, EPA, the State of Washington and other stakeholders. The TBI is an alternative to the current strategy of vitrification for the low-level waste portion of the tank waste. Using commercial treatment and offsite disposal strategies versus construction and operation of DOE onsite facilities is expected to save hundreds of millions of dollars or more. In addition, the TBI can lead to freeing Double Shell Tank (DST) space, promote tank retrievals, and avoid cost for constructing new tanks at Hanford.

**First Triennial Review Project**, Ms. Echols and her Firewater team led a year-long regulatory compliance review in support of Nuclear Waste Partnership (NWP) at the Waste Isolation Pilot Plant Project (WIPP). This project was required as a result of a Settlement Agreement between the New Mexico Environment Department (NMED), the DOE Carlsbad Field Office (CBFO) and NWP to resolve alleged violations of the facility's permits from the receipt, disposal, and uncontrolled reaction/fire of a non-compliant waste stream (nitrate salts from Los Alamos). The fire damaged and contaminated a portion of the underground disposal facility and resulted in WIPP's closure for approximately three years. The review identified non-compliance or potential non-compliance in the areas of radioactive waste management (including transuranic wastes); hazardous waste management (EPA Resource Conservation and Recovery Act [RCRA] and Toxic Substances Control Act [TSCA] regulations); transportation; nuclear facility operations; treatment and disposal facility acceptance; forensic analysis of nuclear processes; and, preparation of National Environmental Policy Act (NEPA) documentation including supplemental analyses. The Review Team evaluated over 500 individual criteria across six different regulatory areas. The Firewater team issued a final report with recommendations that identified areas of compliance concern. The project was completed ahead of schedule and under budget and resulted in DOE meeting the requirements of the consent decree.

**Professional Services Support**, Ms. Echols and her Firewater team provide waste management technical support personnel to UCOR, EM's prime contractor for cleanup on the Oak Ridge Reservation (ORR). Firewater personnel perform waste engineering, waste certification and transportation management services for UCOR at all 3 ORR sites. Firewater personnel perform oversight of waste packaging and transportation to ensure

compliance with DOE orders, applicable state and federal environmental regulations, and disposal site waste acceptance criteria (e.g., onsite facilities such as the Environmental Waste Management and Disposal Facility, non-radioactive landfills and offsite facilities such as the Nevada Nuclear Security Site). Additional duties include developing characterization and disposal plans for hazardous and mixed low-level wastes that are generated during D&D operations (e.g., mercury, beryllium, etc.).

- DOE NNSA, Mr. Echols is supporting NNSA headquarters on waste management related initiatives relating to the weapons modernization program and the generation of Transuranic wastes.

***Senior Vice President, Sales, Business Development & Marketing,  
Perma-Fix Environmental Services, Inc. December 2000 to September 2016  
Knoxville, TN***

Ms. Echols was responsible for all aspects of the corporation's business development, sales, proposal and marketing activities. Ms. Echols utilized her understanding of waste management requirements for commercial and government nuclear clients to develop sales approaches for business acquisition. She was also responsible for creating and branding Perma-Fix into a company that is recognized as a leader in the field of problematic waste treatment.

Ms. Echols identified and helped establish waste treatment and disposal pathways for large volumes of DOE legacy wastes that contained challenging radioactive (e.g. special nuclear material, high concentrations of tritium and technetium-99) and hazardous constituents. Working with DOE's former Orphan Waste Teams, Ms. Echols worked to establish new processes capable of the safe disposition of wastes contaminated with a variety of hazardous constituents such as mercury (including elemental), polychlorinated biphenyls, reactive metals (e.g., sodium and depleted uranium), organic wastes (e.g., solvents and degreasers). Prior to Perma-Fix's entry into the marketplace, these processes were not available to DOE and thus created large stockpiles of wastes that were classified as orphans (also referred to as "no path to disposal" wastes). In addition, Ms. Echols led the company's effort to become a Nevada Nuclear Security Site approved generator (the first commercial treatment processor to do so).

***Vice President, Sales & Marketing  
Waste Control Specialists, LLC September 1999 to October 2000  
Oak Ridge, TN***

Ms. Echols was responsible for sales and marketing activities for a licensed nuclear waste treatment and disposal company based in Dallas, Texas. Her responsibilities included business development and marketing the capabilities of the Andrews Texas disposal facility; revenue growth; and, managing sales personnel for nuclear, hazardous, and mixed waste sales activities both in the U.S. and Mexico.

***General Manager/Sales Manager  
Allied Technology Group, Inc. September 1997 to September 1999***

***Oak Ridge, TN***

Ms. Echols was responsible for operations and management of a Decontamination and Decommissioning (D&D) project office. She was responsible for growth of revenue in commercial and government nuclear waste D&D projects and radioactive waste treatment. She also worked on the acquisition team for Molten Metal, Inc. and incorporated personnel and treatment capabilities into ATG capabilities. Her additional responsibilities included management of sales personnel, business development, proposals, and contract management.

***Manager of Customer Service/Government Sales Representative***  
***Duratek, Inc./Scientific Ecology Group***      ***February 1993 to August 1997***  
***Oak Ridge, TN***

Ms. Echols assisted the company's expansion into the DOE radioactive waste treatment service sector. She performed direct sales and customer account management for all DOE customers including negotiating and acquiring the first DOE site contract with Lockheed Martin Energy Systems in Oak Ridge. She was later promoted to Manager of Customer Service responsible for oversight and management of all commercial and government customer accounts and customer service personnel. She managed customer service responsibilities and participated on the transition team through the acquisition from Westinghouse to Duratek.

## **PROFESSIONAL MEMBERSHIPS AND AFFILIATIONS**

- Chair of the Energy Facility Contractors Organization Group (EFCOG) Waste Management Working Group.
- Member of the East Tennessee Economic Counsel.
- Member of Energy Technology Environmental Business Association (ETEBA).

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## SUMMARY

- Over 40 years' experience in management, operations, and oversight of nuclear and chemical facility operations. This experience includes operations at DOE Category 2 nuclear facilities.
- In depth knowledge of U.S. Environmental Protection Agency "Resource Conservation and Recovery Act (RCRA)" and "Toxic Substance Control Act (TSCA)" regulations.
- Managed transition of waste treatment and disposal operations at the DOE Hanford Site to ensure continuity of service for onsite waste generators upon award of the Plateau cleanup contract to CHPRC.
- Developed multiple treatment strategies for orphan mixed radioactive waste streams facilitating disposition of waste streams from DOE sites around the complex.
- Experience with radioactive, mixed, and transuranic operations, packaging, transportation, and regulatory compliance evaluations to identify compliance and improvement for commercial nuclear treatment companies.
- Subject Matter Expert testimony for environmental remediation of radioactive, mixed, and transuranic wastes.
- Design, installation of soil and groundwater remediation programs at a variety of hazardous and radioactively contaminated sites utilizing a wide variety of technologies tailored to specific site conditions.

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## SECURITY CLEARANCE

Uncleared

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## EDUCATION

***Bachelor of Science, Chemical Engineering***  
Stevens Institute of Technology, New Jersey

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## PROFESSIONAL EXPERIENCE

### **Independent Consultant, Knoxville TN**

Management consulting for organizational structure, acquisition evaluation, efficiency/cost improvement, systems development, contract dispute resolution and management. Proposal support including technical approach, cost estimating, schedule development and Technical and Cost Volume for waste management and nuclear facility operations. Current projects include consultation to Oak Ridge National Laboratory on development of waste



management strategy for high activity transuranic waste and subject matter expert supporting design of Category II hot cell facilities.

**Vice President, Manager of Projects, Nuclear Services**  
**Perma-Fix Environmental Services, Knoxville, TN**

Responsible for all aspects of the operation of the Nuclear Services Division, including proposal development, estimating, pricing, procedure and program development, project execution, personnel management and financial performance. Responsible for providing project controls, estimating and scheduling support for Nuclear Services and Waste Services projects.

Led company transition as part of the CH2M Plateau Remediation Company (CHPRC) cleanup team at the Hanford Site. Perma-Fix scope included operation of onsite waste treatment and disposal operations including managing TRU operations at T Plant (Cat 2 nuclear facility), and the Low-Level (LLW) and Mixed Low-Level (MLLW) burial grounds. Led the effort to develop a new strategy for offsite treatment of large CH-TRU containers at the Perma-Fix commercial nuclear facility. This strategy saved DOE over \$350Million by avoiding the cost of building new onsite treatment capabilities for CH TRU wastes.

Developed, engineered, and deployed technical solutions for complex mixed wastes generated during cleanup at government, commercial and international facilities. Examples included developing a system used at the Portsmouth Gaseous Diffusion Plant for down-blending highly enriched Uranium; Mercury (Hg) amalgamation mobile system for treatment of United Kingdom Elemental Hg wastes; and, a system to identify and remove Plutonium contaminated soils on a commercial industrial site.

Responsible for regulatory interfaces, plan development through regulatory approval for remediation of soil and groundwater at Perma-Fix owned sites, as well as Perma-Fix work at customer sites, including both hazardous and radioactive constituents of concern. Managed associated regulatory relationships through acceptance of final closure.

**Senior Vice President**  
**ATG Corporation, Oak Ridge TN and Richland WA**

Responsible for marketing, sales, strategic planning and material stewardship. Responsible for the full-service radioactive, wet waste processing, equipment and remediation facilities in Tennessee. Responsible for field service operations in the commercial nuclear power and decommissioning arenas. Overall management of the Richland, WA facility, including all aspects of the Low Level and Mixed Radioactive Waste processing facilities, including physical completion and startup of Non-Thermal and Thermal Mixed Waste operations.

**Chief Operating Officer****Med Images, Inc., Knoxville, TN**

Managed all operations for this image-based, integrated medical documentation and information management startup. Developed software to prolong the life of installed technology.

**Chief Operating Officer****Quadrex Corporation, Oak Ridge, TN**

Responsible for all operating divisions of this Corporation, including environmental, nuclear waste processing and nuclear engineering divisions. Responsible for over 500 engineering, technical, health and safety, quality assurance, regulatory compliance, operations, maintenance and accounting personnel. Responsible for turnaround and ultimate success of Quadrex's full-service nuclear decontamination facility in Oak Ridge, TN. The facility operations, governed by radioactive materials licenses in highly regulated and audited industries, served the nuclear power, DOE, and commercial nuclear waste industries.

**Plant Manger****FMC Corporation – Chemicals Group**

Managed multiple U.S. and international chemical plants.

**CERTIFICATIONS, AWARDS, AND TRAINING**

- Patent – US9,381,552B1 Method and Apparatus for Recovery of Subsurface Free Mercury and Decontaminating a Substrate
- Radworker II

## **ASHLEY MEYER**

### **EXPERIENCE SUMMARY**

Ms Meyer has nearly 2 years' experience with Longenecker and Associates working at Los Alamos National Laboratory (LANL) supporting both the Management and Operations contract (TRIAD) and the legacy cleanup contract (N3B). Her current position is as an Engineering Apprentice. Her recent work includes support to a project assessing the waste characterization practices of LANL, coordinating and assisting in the logistics for starting various new projects/tasks, and supporting both program Managers in their day-to-day activities ensuring that the programs are running to schedule and budget.

Prior to joining L&A, Ms Meyer spent four years conducting research and completing internships on nuclear materials science at North Carolina State University. One of her internships was at WIPP in the radiological controls and emergency management departments, where her research into the viability of the Canberra iSolo alpha/beta detector led to its use in radionuclide determination from the air filters of incoming TRUPACT containers. She also helped plan, write, and organize the Master Scenario Events List for the annual WIPP Drill and Exercise.

### **DETAILED EXPERIENCE**

- **Engineering Apprentice – Longenecker and Associates – Los Alamos National Laboratory  
Los Alamos, NM**

2019-PRESENT

Ms Meyer's current position is to support the L&A Program Managers of the LANL M&O work (TRIAD) and legacy cleanup work (N3B). L&A's role is to support their mission goals by providing expert services through collaboration of work scope, developing strategies, and coordinating across offices for product delivery. Ms Meyer's specific activities include: developing proposals, recruiting SMEs, coordinating on-boarding locally (Los Alamos), and helping to ensure product delivery is timely and of high quality.

Ms Meyer has also been a member of a technical team conducting an assessment of TRIAD's waste characterization practices at LANL, where she was the coordinator between the team members and the end-customer and was responsible for arranging every meeting, documenting the outcomes of the meetings and managing the project expectations. She also actively participated in interviews with the positions involved with waste management, and in the document reviews and deep-dives.

- **Radiological Controls/Emergency Mgmt Intern – Nuclear Waste Partnership LLC (NWP) – Waste Isolation Pilot Plant (WIPP)**  
**Carlsbad, NM** SUMMER 2018
  - Performed literature review and research into the optimization of the Canberra iSolo detector to determine that it is suitable and reliable to use in the analysis of radionuclides in TRUPACT RAF filters
  - Researched for salt buildup on continuous air monitors in mine
  - Shadowed various radiological activities at site and in mine
  - Assisted in development of and performed in the site-wide DOE drill and exercise
  
- **Nuclear Materials Undergraduate Researcher – North Carolina State University**  
**Raleigh, NC** 2015-2019
  - Cut and polished numerous metallographic samples for microscopic analysis
  - Performed creep experiments on Zircalloy-4 and SS 709, plotted and analyzed trends versus temperature and stress, and analyzed the microstructures within the samples
  
- **Computational Materials Science Intern – North Carolina State University**  
**Raleigh, NC** 2017-2018
  - Created various AlN slab reconstructions and analyze the surface energies

## PROJECTS COMPLETED

- **Design of a Criticality Experiment for Molten Sodium Coolant – North Carolina State University**  
(Sponsored by Los Alamos National Lab) 2018-2019

Use of MCNP to model both a TWR reactor based on Terrapower's sodium-cooled TP-1 design and LANL's Comet criticality machine to research molten sodium cross-sections for use in sodium-cooled fast reactors.

## EDUCATION

- North Carolina State University, Bachelor of Science in Nuclear Engineering, 2019

## PROFESSIONAL MEMBERSHIPS

- Member: American Nuclear Society, Women in Nuclear

## AWARDS

- Best in Category: Reactor Physics, ANS Student Conference, 2019
- Undergraduate Roy G. Post Foundation Scholarship, WM Symposia, 2019
- Progress Energy Nuclear Engineering Scholarship, 2016



## **KATHRYN ROBERTS**

### **EXPERIENCE SUMMARY**

Ms. Roberts is a recognized regulatory and public outreach expert with more than 19 years of environmental leadership, innovative management, compliance and technical expertise related to regulatory matters (e.g., RCRA, CERCLA, NEPA) as well as management and regulation of contaminated soil, surface/groundwater and facilities. In addition to serving as a cabinet-appointed regulatory division director managing an approximately 200 employee organization, her experience includes 17 years managing, coordinating and communicating between State and Federal agencies (e.g., EPA, DOE), Congressional delegation, State legislators, Indian Pueblos, local municipal governments and a wide range of other stakeholders, including activist groups and non-profit organizations. She possesses broad experience and knowledge of the regulatory structure and strategy for characterization, treatment, shipment and disposal of transuranic waste. In addition to being the primary regulator of the Waste Isolation Pilot Plant (WIPP), she led the negotiation of the Settlement Agreement and Consent Order following WIPP's radiological events and was regulatory lead for the restart of WIPP operations. She has deep understanding of transuranic waste certification and acceptance requirements and the innovative strategies necessary to safely and efficiently disposition transuranic waste from across the DOE generator site complex.

Her regulatory responsibilities have included oversight of complex DOE sites and facilities, including contaminated facility decommissioning and demolition, remediation of diverse contaminated media and resultant hazardous and radioactive wastes streams, as well as radioactive disposal facilities, including WIPP. She is unique in that she has been involved with RCRA regulated facilities and contamination both as a regulator (with State of New Mexico) and as a manager of the regulated facilities and sites (while with LANL and N3B).

Most notably, she was the lead negotiator and author for the New Mexico Environment Department (NMED) on the 2016 Consent Order for Los Alamos National Laboratory (LANL). This document was revolutionary for legacy cleanup at LANL because, unlike its predecessor, it established an effective structure for accomplishing work on a risk-informed, priority basis through the "Campaign Approach", which allows for the addition and/or adjustment of campaigns and milestones via the "annual planning process" and facilitates cooperation and exchange of information between the regulator and the site. This benchmark agreement implements proven best practices from successful DOE site closures (e.g. Rocky Flats) and defines shared responsibilities between signatories to identify strategies and resolve technical issues to achieve cleanup progress.

### **DETAILED EXPERIENCE**

#### **Director, Regulatory Assurance – Longenecker & Associates**

January 2020 – Present

Ms. Roberts led the establishment and implementation of L&A's Regulatory Assurance business line to deliver best in class regulatory strategy and subject matter experts to DOE and NNSA projects and sites to enable mission goals. She currently performs and manages other experts in delivery of high impact environmental regulatory strategy and support tasks at Los Alamos Legacy Cleanup Contract (LLCC), Los

Alamos M&O, Savannah River Site, Oak Ridge, Nevada M&O and DOE-EM Headquarters. This work includes interactions with senior officials and decision makers in cognizant state agencies, EPA regions, DOE site leadership and DOE Headquarters to deliver effective regulatory approaches to support EM mission success. She and her team proactively identify issues and assist sites in resolving disagreements where they already exist and assists DOE in establishing new and innovative ways to collaborate with its regulators and other stakeholders. As Director of Regulatory Assurance, Ms. Roberts oversees L&A's work scope for all current contracts in the area of environmental regulatory compliance and support. She is responsible for business development, interacting with clients, and general oversight of L&A staff and subcontractors performing regulatory assurance work scope.

### **Senior Associate– Longenecker & Associates**

January 2017 – January 2020

As a senior associate based in NM, Ms. Roberts was, and continues to be, responsible for maintaining communications and outreach efforts with local, state and federal agencies, NM State Legislators, NM Congressional delegation and community and regional development organizations. She provided expert technical, regulatory (primarily RCRA and Clean Water Act (CWA)) and stakeholder support and advice to L&A projects throughout the complex, but primarily at Los Alamos, WIPP and Sandia. She was a Lead Reviewer for L&A on the inaugural Waste Isolation Pilot Plant (WIPP) Triennial Review. The Triennial Review is a Supplemental Environmental Project required by the Settlement Agreement between the New Mexico Environment Department and the DOE resulting from violations of their RCRA permits. The Triennial Review evaluated WIPP's environmental compliance across several areas, including hazardous waste management and groundwater protection.

### **Recent Projects**

Los Alamos Legacy Cleanup Contract (LLCC) - She served as the Deputy Project Manager for L&A's work on the Los Alamos Legacy Cleanup Contract (LLCC). As Deputy PM, she was responsible for contract administration, interacting with the client, (Newport News Nuclear N3B-Los Alamos, LLC (N3B)) and DOE Site Office (EM-LA)) and general oversight of all L&A staff performing work under the LLCC. She is also a performer under the LLCC. She provides full-time support to N3B's Contact-Handled – Transuranic Waste program (CH-TRU) in the area of regulatory compliance and strategy. She is tasked with developing RCRA-permitting strategies that will allow the waste processing lines to compliantly treat multiple waste streams ultimately bound for WIPP. She also serves as a liaison between the CH-TRU program and the Regulatory Compliance group to help facilitate discussions on daily environmental compliance issues (e.g., RCRA, NPDES, Air, etc.) as well as regulatory coordination strategy development.

Transitions for LLCC and LANL M&O - Ms. Roberts supported the transition teams for both Los Alamos prime contracts. She played a key role on the transition team for the LLCC from January 2018 – April 2018. She supported N3B in the planning and implementation of the transition including working closely with all parties to identify and address hundreds of interface questions regarding employees and functions split between the LLCC and the M&O contract. Additionally, she was asked to fill in as the acting Regulatory Compliance Director for N3B until a permanent replacement was hired (July of 2018). In this role, she was responsible for environmental compliance for N3B's two core mission programs – Environmental Remediation (ER) and CH-TRU. On the transition team for the Los Alamos M&O contract (Triad), she was responsible for ensuring all permits (i.e., RCRA, NPDES, Air, Groundwater Discharge, etc.) and other

regulatory requirements were successfully transferred from the previous M&O contractor to Triad. All requirements were transferred on time or ahead of schedule.

Deep Borehole Project- Alamogordo, NM Site- From January 2017 through June 2017, Ms. Roberts served as the Public Outreach Liaison for one of the four Deep Borehole Field Test (DBFT) sites awarded by DOE. The DBFT site was near Alamogordo, NM. The DBFT project was designed to study the feasibility of engineering deep boreholes for final disposal of radioactive waste. One of the field test's main purposes was to collect data on the type of rocks, the chemistry of the water, the depths to these rocks and water, the temperature of the rocks and other geologic data to see if nuclear waste disposal would be feasible in this kind of geology. Ms. Roberts was responsible for planning and managing the public outreach activities for the project. She was responsible for responding to stakeholder inquiries via email and those received through the project website; developing presentations and facilitating public meetings and coordinating with NM State legislators and the New Mexico Congressional delegation (i.e., Senator Udall, Senator Heinrich, Rep. Lujan-Grisham, Rep. Ben Ray Lujan and Rep. Steve Pearce), to obtain their support for the project and/or respond to their concerns. Her role was also heavily focused on interfacing with local municipal leaders (e.g., City of Alamogordo, Otero County Commission) and business owners (e.g., local Rotary Clubs) to explain the project and, per request from DOE, obtain support for the project from the local community. In this role she consistently responded to media inquiries from local newspapers and tv stations and coordinated interviews between media outlets and project personnel.

**Director, Resource Protection Division – New Mexico Environment Department (NMED)  
Santa Fe, NM**

January 2015-January 2017

Appointed by the Governor, Ms. Roberts served as the Resource Protection Division (RPD) Director for the New Mexico Environment Department (NMED). She managed four Bureaus (Hazardous Waste; Solid Waste, Petroleum Storage Tanks; DOE-Oversight) and approximately 200 employees. She oversaw regulatory compliance activities and rendered regulatory decisions for three complex federal facilities -- Los Alamos National Laboratory (LANL), Sandia National Laboratory- New Mexico (SNL) and WIPP -- as well as numerous generators and owners/operators of all RCRA treatment storage and disposal facilities (TSDF), all owners/operators of solid waste facilities, including private and municipal landfills and transfer stations, all owners/operators of underground and aboveground petroleum storage tanks (e.g., commercial gas stations, private owners), and independent air, water and soil sampling. She was also the New Mexico representative on the Rocky Mountain Low Level Radioactive Waste Board, which included representation from Colorado, New Mexico and Nevada. She represented NMED in the DOE-EPA-State dialogue conversations, which were undertaken to improve working relationships and identify and resolve common issues across the DOE complex. There, she was able to establish enduring relationships with her counterparts in neighboring States with DOE facilities, such as Nevada and Idaho.

During her tenure as RPD Director, she served as the primary liaison for NMED with local stakeholders, community groups, regulated entities, State legislators and New Mexico's Congressional delegation on a wide range of environmental compliance issues associated with hazardous waste management and TSDFs. She served as the primary point of contact between NMED and all three federal facilities in the State. Interactions occurred on a daily basis. Ms. Roberts frequently presented at State Legislative Committees, community meetings and to the public to address hazardous waste management, waste storage and related implementing laws and regulations. She was also integral in final remediation decisions for major

RCRA closure sites, such as the Mixed Waste Landfill at Sandia. Following review of all data and public comments, she authored the order outlining the final decision for the NMED Secretary's signature. Ultimately, the final remedy for the Mixed Waste Landfill included a four-layer evapotranspiration cover, extensive soil, groundwater and soil vapor monitoring and a requirement that Sandia evaluate the effectiveness of the final remedy every five years.

Based on her extensive field experience, the NMED Cabinet Secretary asked her to lead the inspection team that performed the final inspection of WIPP (prior to reopening) following the February 2014 breached drum event. Following a week-long series of visual inspections of the facilities and performing document reviews, Ms. Roberts approved for the site to resume operations.

Ms. Roberts had several highly recognized accomplishments during her tenure as RPD Director. She successfully negotiated/authored the following agreements and/or regulatory documents:

- 2016 Compliance Order on Consent (Consent Order) for LANL legacy cleanup activities. This is the regulatory document which drives the scope of the LANL legacy cleanup program. This document was an innovative approach to cleanup because it provided a framework for organizing work ("Campaign Approach"), facilitated cooperation between LANL and NMED, and promotes focused attention on cleanup activities and attainable results.
- Settlement agreements between the State of New Mexico and the DOE for both LANL and WIPP for violations of RCRA (due to the WIPP event).
- Oversaw development of the Work Plans and Scope and Guidelines documents for the Supplemental Environmental Projects and Triennial Reviews at WIPP and LANL.
- First ever Cooperative Agreement and Memorandum of Agreement with the United States Air Force for \$750K in supplemental fees to fund NMED staff.
- Settlement of legal mediation with Western Refining, Inc. for violations of RCRA.

**Group Leader – Los Alamos National Laboratory (LANL)-Environmental Programs  
Los Alamos, NM**

September 2010-December 2014

Served as Group Leader for the Regulatory Support and Performance group within the Associate Directorate for Environmental Programs (ADEP) at LANL. Responsible for interpretation, development and implementation of laboratory wide regulatory programs under RCRA and the Clean Water Act (CWA), including strategic direction and implementation. Her management of regulatory matters for the ~\$3B/yr LANL missions were diverse and vital to success of both environmental and national security missions of the laboratory. Managed performance evaluations and work assignments for 20 people. Managed regulatory support and deliverable compliance for legacy cleanup work conducted under the Consent Order, CWA and the processing and shipping of hazardous waste associated with those projects. Projects where Ms. Roberts' group was responsible for regulatory compliance and strategy ranged from the decontamination and decommissioning work at TA-21, to implementing the presumptive remedy at Material Disposal Area (MDA) B, to both major groundwater cleanup projects (i.e., chromium and RDX). Acted as primary liaison between LANL, state agencies and stakeholders including elected officials, community groups, and Native American Pueblos bordering LANL on a wide range of environmental compliance issues. Negotiated with state and federal agencies (e.g., NMED, DOE, and EPA) on technical and regulatory issues related to environmental cleanup. Provided regulatory support and expertise for

remediation projects across LANL. Managed the Quality Assurance (QA) and Contractor Assurance programs and staff for ADEP. Managed budget, schedule, cost commitments and resource planning.

**Supervisor – New Mexico Environment Department (NMED)-Hazardous Waste Bureau  
Santa Fe, NM**

May 2004-September 2010

Supervised four project leaders on corrective action under the Consent Order and permitting activities for LANL and White Sands Missile Range under the RCRA. Reviewed all assigned permit applications, permit modification requests, corrective action work plans, corrective action reports, and other documents submitted by LANL for evaluation of technical adequacy. Drafted correspondence such as, Notices of Deficiency, letters of approval and disapproval regarding technical and regulatory adequacy issues, Notices of Violation, and other compliance and enforcement documents. Inspected, toured, and consulted with LANL regarding various corrective action sites. Frequent interactions and meetings between DOE (and its contractor).

**Environmental Compliance Analyst – Hawk Engineering, P.C.  
Binghamton, NY**

June 2001-November 2003

Completed Environmental Assessment Forms, Draft Environmental Impact Statements (DEIS) and Phase 1 Environmental Site Assessments; performed annual inspections for landfills involved in post-closure care activities and supervised drilling operations, evaluated soil samples and supervised installation of groundwater monitoring wells.

**EDUCATION**

Master of Science, Environmental Management, 2011, Duke University

- Masters' Thesis – *"Public Participation in the Environmental Permitting Process: Development of a Public Involvement Plan (PIP) for Stakeholders in Northern New Mexico"*

Bachelor of Arts, Environmental Geography, 2001, Colgate University

**SPECIAL TRAINING**

- OSHA-40 Hour Hazwoper
- RCRA Hazardous Waste Regulations
- Former Q Clearance

**BOARDS/MEMBERSHIPS/AWARDS**

- Secretary, Regional Institute of Health and Environmental Leadership (RIHEL), 12/2017 – present
- Alumni Council, Chair – District Clubs Committee, Colgate University, 2010-2014
- Panelist – Colgate SophoMORE Connections program. Program provides second-year students an opportunity to explore their academic and career interests through conversations with alumni, faculty, staff, and upperclassmen. 2005 - present
- Maroon Citation – 2016. Awarded in recognition of significant and invaluable personal (i.e., record of service) contributions to Colgate University.

- President, Colgate Alumni Admission Program (AAP) of New Mexico. AAP members volunteer as representatives at college fairs, by conducting informational interviews, and by helping with area receptions for prospective and accepted students. Members of the AAP serve as primary resources for prospective students.
- President, Colgate Alumni Club of New Mexico

**DAVID E. WILSON, JR., P.E.**

**EXECUTIVE EXPERIENCE HIGHLIGHTS**

David has more than 30 years of executive leadership experience, including leading significant political and regulatory matters related to radioactive waste management and environmental cleanup. He is a nationally recognized subject matter expert and proven problem solver. He has successfully led large, diverse organizations, and spearheaded numerous task forces and special teams to address emergent priorities.

- Led negotiation of the initial Savannah River Site (SRS) Federal Facility Agreement for the South Carolina Department of Health and Environmental Control and many subsequent agreements.
- Conceived of regulatory strategy to manage SRS Liquid Waste Tanks under a wastewater permit, allowing for flexibility in hazardous waste requirements.
- Directed staff in implementation of the partnering process between Department of Defense facilities, the Department of Energy, the Environmental Protection Agency and the state.
- Served as the Governor's policy representative to the National Governors Association Department of Energy Federal Facility Task Force from 2000 through 2018.
- Worked with Senator Graham's office in passage of Section 3116 of the 2005 National Defense Authorization Act addressing Liquid Waste residuals.
- Negotiated common goals and values and treatment strategy for Liquid Waste with SRS, the Governor's Nuclear Advisory Council, and the Defense Nuclear Facility Safety Board in 2005.
- Commended by Assistant Secretary for Environmental Management (I. Triay) in 2010 letter to Governor-Elect Haley for collaboration in SRS Liquid Waste treatment and tank closure strategy.
- Directed an agency of over 3,200 employees operating at 99 locations with a budget of over \$620 million. Managed agency responsibilities touching on more than 360 state and federal statutes, regulations, and state provisos.
- Managed the implementation of Agency emergency Incident Command System (ICS) Organizational Structure and served as Agency Incident Commander for response to hurricanes Irma and Florence, including coordination with the State Emergency Management Division and implementing needed medical evacuations.

**DETAILED EXPERIENCE**

**Senior Strategist, Longenecker & Associates, Inc.**

**AUG 2020-PRESENT**

Leads and supports L&A projects and activities to develop technical and strategic plans to meet mission goals. Identifies alternatives to optimize environmental cleanup plans to reduce technical, worker and regulatory risk, while reducing lifecycle cost and schedule. Conduct organizational and programmatic assessments to identify improvements and sustain performance despite foreseeable challenges, including providing advice on financial/budgetary planning, emergency preparedness, legal and regulatory strategies.

**Senior Legislative/Policy Specialist/National Affairs Coordinator  
South Carolina Farm Bureau Federation (SCFB)**

**JAN 2019-JULY 2020**



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- Discuss issues of concern for the agricultural industry in South Carolina with the State congressional delegation and staff.
  - Coordinate activities of the SCFB National Legislative Committee.
  - Represent the SCFB at various State and national meetings and events.
  - Provide input on policy direction.

#### **Various Positions, South Carolina Department of Health and Environmental Control (DHEC)**

##### **Acting Director**

**AUG 2018-DEC 2019**

- Established and maintained relationships with the Governor and with lawmakers across South Carolina and provided data needed to support effective policy development.
- Represented DHEC before the legislature, providing needed data and an understanding of health and environmental issues affecting the state, allowing for informed decision making and policy development impacting South Carolinians.
- Represented DHEC during budget hearings; advocated for DHEC resource needs and the value of services provided by DHEC.
- Evaluated organizational capacity needs and provided direction to address needs related to budget, staffing levels, professional development, succession planning, and organizational efficiency.
- Maintained DHEC's fiscal integrity by realigning budgets, ensuring effective use of taxpayer, grant, and foundation funding, and operating DHEC within the approved budget.

##### **Senior Director - Legislative Affairs**

**JAN 2016-AUG 2018**

- Evaluated proposed legislation for potential impact on the agency mission and programs.
- Informed Director, Board, and staff of legislation.
- Tracked legislation that affects the Agency.
- Testified and provided information to legislators and legislative committees to help ensure progress of proposed legislation and regulations.
- Tracked annual proposed budget with the Governor's Office and Legislature.
- Addressed constituent concerns for Legislature regarding agency issues.
- Resolved Agency-wide program and administrative problems.

##### **Chief - Bureau of Water**

**2006-JAN 2016**

- Planned, managed, and directed the overall functions of the Bureau, including programmatic and administrative activities.
- Established program goals, priorities, and resource needs to carry out the mission of the Bureau.
- Identified the need for and developed policies and procedures; ensured coordination with other Bureaus to promote multi-media interaction.
- Served as primary Bureau contact for the Environmental Protection Agency, legislators, Congress, Commissioner, Deputy Commissioner, and the Board.
- Testified before the Legislature and made presentations to the Board.
- Served on national, regional, and local committees and workgroups.
- Oversaw the Savannah River Site Liquid Waste Tank Industrial Wastewater Permit and tank closure plans.



**Assistant Chief - Bureau of Land and Waste Management**

**1993-2006**

- Managed the hazardous waste, infectious waste, solid waste, radioactive waste and mining programs, including permitting, compliance and enforcement activities.
- Supervised the daily activities of Division Directors and other staff.
- Oversaw the administrative functions of the Bureau.
- Ensured that policies and procedures were in compliance with State, Federal and agency requirements.
- Ensured timely cleanup of federal facilities through partnering, including Savannah River Site liquid waste and soil and groundwater cleanup.

**Director - Division of Waste Management**

**1991-1993**

- Ensured all hazardous waste permits were issued consistent with State and Federal laws and regulations.
- Ensured the infectious waste program was developed and implemented in accordance with applicable law and regulation.
- Managed development of the Federal Facility Agreement with the Savannah River Site and oversight of SRS cleanup and waste management.
- Coordinated revisions of the Hazardous Waste Management Regulations and applications for hazardous waste program authorization from the Environmental Protection Agency.
- Guided management, technical staff, and legal office in complicated legal proceedings involving the hazardous waste program.

**Manager - Hazardous Waste Permitting Section**

**1987-1991**

- Ensured consistency with activities of engineering staff in permitting treatment, storage, and disposal facilities.
- Conducted technical reviews of permit applications for complex hazardous waste management facilities.
- Coordinated the functions of the South Carolina Hazardous Waste Task Force.
- Represented the S.C. Department of Health and Environmental Control in hazardous waste issues addressed by the State Legislature and the court system.

**Engineer Associate/Engineer**

**1982-1987**

- Performed technical review of facility wastewater management plans.
- Reviewed hazardous waste permit applications.
- Provided technical assistance to public officials, engineers, and others as requested.

**EDUCATION**

University of South Carolina, Master of Science, Civil Engineering, 1982

University of South Carolina, Bachelor of Science, Civil Engineering, 1981

**LICENSE**

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Licensed South Carolina Professional Engineer