



Department of Energy
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APR 27 2016

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

Subject: Class 1 Permit Modification Notifications to the Waste Isolation Pilot Plant Hazardous Waste Facility Permit Number: NM4890139088-TSDF

Dear Mr. Kieling:

Enclosed is a Notification of Class 1 Permit Modifications for the following items:

- Revise Recordkeeping Requirements for Training;
- Add Option for VOC Contract Laboratory Proficiency Testing; and
- Add Live Fire Extinguisher Training.

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

If you have any questions, please contact Mr. George T. Basabilvazo at (575) 234-7488.

Sincerely,

Original Signatures on File

Todd Shrader, Manager
Carlsbad Field Office

Philip J. Breidenbach, Project Manager
Nuclear Waste Partnership LLC

Enclosure

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CBFO M&RC
*ED denotes electronic distribution

Class 1 Permit Modification Notification

Revise Recordkeeping Requirements for Training

Add Option for VOC Contract Laboratory Proficiency Testing

Add Live Fire Extinguisher Training

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

WIPP Permit Number - NM4890139088-TSDF

April 2016

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Overview of the Permit Modification Notifications

This document contains three (3) Class 1 Permit Modification Notifications (**PMNs**) for the Waste Isolation Pilot Plant (**WIPP**) Hazardous Waste Facility Permit (**Permit**) Number NM4890139088-TSDF.

These PMNs are being submitted by the U.S. Department of Energy and Nuclear Waste Partnership LLC, collectively referred to as the Permittees, in accordance with Permit Part 1, Section 1.3.1 (20.4.1.900 New Mexico Administrative Code (**NMAC**) incorporating Title 40 of the Code of Federal Regulations (**CFR**) §270.42(a)(2)). The PMNs in this document are necessary to notify the New Mexico Environment Department (**NMED**) of changes which impact the Permit. These changes do not reduce the ability of the Permittees to provide continued protection to human health and the environment.

The requested modifications to the Permit and any related supporting documents are provided in this PMN. The proposed modifications to the text of the Permit have been identified using red text and double underline and a ~~strikeout~~ font for deleted information. All direct quotations are indicated by italicized text.

Attachment A
Description of the Class 1 Permit Modification Notifications

Table 1. Class 1 Hazardous Waste Facility Permit Modification Notifications

Item No.	Affected Permit Section	Change Description	Category
1.	Permit Part 2, Section 2.8.3.	This modification revises Permit Part 2, Section 2.8.3., <i>Personnel Training Records</i> to allow the Permit specified records to be maintained in an unalterable, electronic format, unless specifically prohibited by the Permit.	B.5.b
2.	Permit Part 4, Section 4.6.2.1. Attachment N, Section N-5e	This modification revises Permit Part 4, Section 4.6.2.1., <i>Implementation of Repository VOC Monitoring</i> , and Attachment N, Section N-5e <i>Performance and System Audits</i> to add proficiency testing as an alternative to the Permit-required Laboratory Performance Evaluation Plan.	B.2.a
3.	Part 2, Section 2.10.6. Attachment F2	<p>This modification to Permit Part 2, Section 2.10, <i>Preparedness and Prevention</i> adds a live fire extinguisher training class. New Permit Section 2.10.6., <i>Live Fire Extinguisher Training</i> specifies that the Permittees will develop and make available a live fire extinguisher training class as a preparedness and prevention measure, but it is not a mandatory training class for the general employee.</p> <p>This modification updates Attachment F2, <i>Training Course and Qualification Card Outlines</i> Table of Contents to include the new course SAF-502F, <i>Live Fire Extinguisher Training</i>.</p> <p>This modification to Attachment F2, <i>Training Course and Qualification Card Outlines</i> updates the existing training course outline for SAF-501, <i>Inexperienced Miner Training</i> to include live fire extinguisher training. This modification makes live fire extinguisher training mandatory for unescorted access in the underground by adding it to SAF-501, <i>Inexperienced Miner Training</i>. The training course outline includes classroom instruction, live fire practical participation, and a written examination. The training is anticipated to be approximately four hours in length.</p> <p>This modification to Attachment F2, <i>Training Course and Qualification Card Outlines</i> adds the new training course outline SAF-502F, <i>Live Fire Extinguisher Training</i> to Attachment F2, <i>Training Course and Qualification Card Outlines</i>.</p>	B.5.b

Item 1

Description

This modification revises Permit Part 2, Section 2.8.3., *Personnel Training Records* to allow the Permit specified records to be maintained in an unalterable, electronic format, unless specifically prohibited by the Permit.

Basis

The change is classified as "*Changes in training plan: Other changes*" and is, therefore, a Class 1 modification pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, B.5.b). A Permit modification was approved by NMED on March 28, 2008; the Permit was modified to allow the WIPP Operating Record to be maintained in an unalterable, electronic format. The language being added is similar to the language added to the Permit in 2008. Pursuant to Permit Part 2, Section 2.8.1. the training program requirements in 40 CFR §264.16 are included in Permit Attachment F and Permit Attachment F2. Permit Attachment F, Section F-2 includes the recordkeeping requirements. Therefore, this is a Class 1 Permit Notification.

Discussion

This change is needed to allow the Permittees to maintain training records electronically. The records will be available for inspection and review by the NMED. Paper copies of any electronic file will be made available to the NMED upon request.

This change enables the Permittees to more efficiently manage the volume of paper records that must be stored at the WIPP facility.

Proposed Revised Permit Text:

2.8.3 Personnel Training Records

The Permittees shall maintain training documents and records, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.16(d) and (e)). The Permittees may maintain training records required by the terms of this Permit electronically. Unless specifically prohibited by this Permit, an electronic record that cannot be altered by the user and capable of producing a paper copy shall be deemed to be a written record.

Item 2

Description

This modification revises Permit Part 4, Section 4.6.2.1., *Implementation of Repository VOC Monitoring*, and Attachment N, Section N-5e *Performance and System Audits* to add proficiency testing as an alternative to the Permit-required Laboratory Performance Evaluation Plan.

Basis

The change is classified as "Changes to analytical quality assurance/control plan: To conform with agency guidance or regulations" and is, therefore, a Class 1 modification pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, B.2.a).

Discussion

This change is needed to add an option for proficiency testing to Permit Part 4, Section 4.6.2.1. and Attachment N, Section N-5e. Proficiency testing may be used as an alternative to the Laboratory Performance Evaluation Plan. The Permittees have determined that this is a viable option to demonstrate the capability of the analytical laboratory by using a third party evaluation and is a more efficient option than developing a Laboratory Performance Evaluation Plan specific to the WIPP facility. Proficiency testing is a standard laboratory practice. The following language has been added to the Permit to assure both options remain available to the Permittees: *If the Permittees are unable to develop a proficiency testing plan that is acceptable to the NMED, then the Permittees will prepare and submit the LPEP.* This provision is needed in the event that one of these options cannot be accomplished in a timely manner.

Proposed Revised Permit Text:

4.6.2.1 Implementation of Repository VOC Monitoring

The Permittees shall implement repository VOC monitoring and the Laboratory Performance Evaluation Plan (**LPEP**) or proficiency testing as specified in Permit Attachment N (Volatile Organic Compound Monitoring Plan) and as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.602 and §264.601(c)). The Permittees shall implement repository VOC monitoring until the certified closure of all Underground HWDUs.

N-5e Performance and System Audits

The Permittees will evaluate whether the monitoring systems and analytical methods are functioning properly through performance and system audits. The assessment period will be determined by the Permittees. System audits will initially address start-up functions for each phase of the project. These audits will consist of on-site evaluation of materials and equipment, review of certifications for canisters and measurement and test equipment, review of laboratory qualification and operation and, at the request of the QA officer, an on-site audit of the laboratory facilities. The function of the system audit is to verify that the requirements in this plan have been met prior to initiating the program. System audits will be performed at or shortly after the initiation of the VOC monitoring programs and on an annual basis thereafter.

Performance audits will be accomplished as necessary through the evaluation of analytical QC data by performing periodic site audits throughout the duration of the project, and through the introduction of third-party audit cylinders (laboratory blinds) into the analytical sampling stream. Performance audits will also include a surveillance/review of data associated with canister certifications and measurement and test equipment, a project-specific technical audit of field operations, and a laboratory performance audit. Field logs, logbooks, and data sheets, as applicable will be reviewed during data validation. Blind-audit canisters will be introduced once during the sampling period. Details concerning scheduling, personnel, and data quality evaluation are addressed in the QAPjP.

By May 1, 2016 the Permittees shall develop and implement a RVMP Laboratory Performance Evaluation Plan (LPEP) that has been reviewed and approved by the Secretary prior to use, for Repository VOC ambient monitoring. In addition to the timely submittal of validated data packages under this LPEP to the Secretary, the results shall also be reported annually in the October Semi- Annual VOC Monitoring Report. The second contract laboratory performing the performance evaluation to be used for comparison to the primary contract laboratory shall use the required MRLs as required in Table N-2, which are defined to be equivalent to the CRQLs. Any contract laboratory involved in this program shall have a site specific quality assurance project plan and an associated QA/QC program that are acceptable and aligned with EPA guidance. The LPEP shall, at a minimum, include the following sections:

1. Table of Contents
2. Introduction
3. Background
4. Scope/Objectives: this section shall include comparative testing of subatmospheric sampling containers, the field background canisters, and a test of the cleanliness of the canister less than the SIM mode MRL in Table N-2.
5. Laboratory Specific SOPs
6. Sampling Methodologies
7. Analytical Methodologies
8. Quality Assurance Requirements
9. Schedules
10. Reporting: data packages shall contain all applicable sections found in the document "*Statement-of-Work for the Analysis of Air Toxics from Superfund Sites*" (EPA 1990), Exhibit B, Section 2, "*Reporting Requirements and Order of Data Deliverables*" and as approved by the Secretary.

As an alternative to the LPEP, the Permittees will notify the Secretary of their intention to require the contract laboratory to participate in proficiency testing. The Permittees will then, within 90 days, submit to the NMED for approval, a proposal for proficiency testing. If the Permittees are unable to develop a proficiency testing plan that is acceptable to the NMED, then the Permittees will prepare and submit the LPEP. The proposal for proficiency testing will include the following, as applicable:

- Specific analytical method(s)
- Schedule for proficiency testing implementation
- Provision for the periodic reporting of proficiency testing results and corrective actions, if any

Results of proficiency testing will be reported in the Semi-Annual VOC Monitoring Report as specified in Permit Part 4, Section 4.6.2.2.

Item 3

Description

This modification to Permit Part 2, Section 2.10, *Preparedness and Prevention* adds a live fire extinguisher training class. New Permit Section 2.10.6., *Live Fire Extinguisher Training* specifies that the Permittees will develop and make available a live fire extinguisher training class as a preparedness and prevention measure, but it is not a mandatory training class for the general employee.

This modification updates Attachment F2, *Training Course and Qualification Card Outlines* Table of Contents to include the new course SAF-502F, *Live Fire Extinguisher Training*.

This modification to Attachment F2, *Training Course and Qualification Card Outlines* updates the existing training course outline for SAF-501, *Inexperienced Miner Training* to include live fire extinguisher training. This modification makes live fire extinguisher training mandatory for unescorted access in the underground by adding it to SAF-501, *Inexperienced Miner Training*. The training course outline includes classroom instruction, live fire practical participation, and a written examination. The training is anticipated to be approximately four hours in length.

This modification to Attachment F2, *Training Course and Qualification Card Outlines* adds the new training course outline SAF-502F, *Live Fire Extinguisher Training* to Attachment F2, *Training Course and Qualification Card Outlines*.

Basis

The change is classified as "Changes in the training plan: other changes" and is, therefore, a Class 1 modification pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, (B.5.b). This modification does not affect the type nor does it decrease the amount of training personnel receive at the WIPP facility. The type of training is for preparedness and prevention and is simply an increase in the amount and detail provided for such training.

Discussion

The Settlement Agreement and Stipulated Final Order, HWB-14-21 (CO) (Order), dated January 22, 2016, requires the Permittees to prepare and implement live fire training. The Order requires the Permittees to submit a work plan describing the contents of a Class 1 Permit Modification Notification for updating the WIPP Hazardous Waste Facility Permit by adding live fire extinguisher training to the *Inexperienced Miner Training* (SAF-501) and adding a new course outline *Live Fire Extinguisher Training* (SAF-502F). Pursuant to the work plan the Permittees anticipated submitting the Permit Modification Notification for live fire extinguisher training on or before May 6, 2016.

This change is needed to satisfy the commitments in the work plans submitted to NMED in accordance with the Order.

Proposed Revised Permit Text:

2.10.6. Live Fire Extinguisher Training

The Permittees shall develop and implement a Live Fire Extinguisher Training class as identified in Permit Attachment F2. The Live Fire Extinguisher Training class will be made available to employees as a preparedness and prevention measure, but it is not a mandatory training class for the general employee. It is mandatory for unescorted access in the underground and is part of SAF-501.

ATTACHMENT F2

TRAINING COURSE AND QUALIFICATION CARD OUTLINES

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Attachment F2, Training Course and Qualification Card Outlines

COURSE:	SAF-501 - Inexperienced Miner Training
DURATION:	40 Hours
PREREQUISITES:	None (Steel-toe shoes/boots required for underground tour)
SCOPE:	The instructor will present the required information to allow unescorted underground access
OBJECTIVES:	<p>Fulfill all requirements of 30 CFR part 48 for underground access.</p> <p>Mastery of the terminal objective will be demonstrated by satisfactory performance on all practical sessions and by scoring 80 percent or higher on the daily exams with no score less than 70 percent with post course examination.</p>
REFRESHER:	SAF-502 Annually

COURSE DESCRIPTION (by lesson)

1. Introduction
 ≈.5 hour
 - a. Paperwork
 - b. Course attendance
 1. Required attendance
 2. Special instructions
 - c. Overview of the WIPP Underground Operations
 1. Similarity to other mining operations
 - a. Potash mining
 2. Differences to other mining operations
 - a. Potash mining
 - b. Coal mining
 - d. Summary

- 2. Act of 1977
≈1 hour
 - a. Creation of the Federal Mine Safety and Health Act of 1977
 - 1. Congressional Act
 - b. Purpose
 - c. Coverage under the Act of 1977
 - 1. Mandatory safety and health standards
 - 2. Inspection rights
 - 3. Accident investigations
 - 4. Record keeping
 - 5. Guidelines for correcting dangerous conditions
 - 6. Mandatory posing of violations and warnings
 - 7. Required training
 - d. Summary
- 3. Miner's Representative
≈1 hour
 - a. Definition
 - b. The miner's representative under the Act of 1977
 - c. The miner's representative system at WIPP
 - d. Protection of the employee
 - e. Need for employee participation in the inspection of the site
 - f. Summary
- 4. Reporting of Hazards/Lines of Authority
≈1 hour
 - a. Hazards
 - b. Reporting of hazards
 - 1. Responsibilities
 - a. Miner operator
 - b. Supervisor
 - c. Employee
 - c. Method of reporting
 - 1. Potential minor hazard
 - 2. Hazards involving possible imminent dangers
 - d. Disciplinary actions and the employee
 - e. Need for employee involvement
 - f. Summary

- 5. Self-Rescuer/Respiratory Devices
≈1.5 hour
 - a. Purpose
 - b. Service life
 - c. Inspection/Color code
 - d. Mine operator quarterly inspection
 - e. The self-rescuer
 - 1. Features
 - 2. The assembly
 - f. Operation
 - g. Demonstration
 - h. Practical application
 - i. Respiratory protection
 - 1. The WIPP program
 - 2. Requirements
 - j. Summary
- 6. Entering and Leaving the Mine
≈1 hour
 - a. Access requirements
 - 1. Miner training
 - b. Qualification period
 - c. Lamproom location
 - 1. Proper safety equipment
 - 2. Sign-in procedure
 - 3. Brass tag
 - d. Summary
- 7. Transportation
≈1 hour
 - a. General
 - 1. Surface
 - 2. Underground
 - b. Hazards
 - c. Hazard preventive equipment
 - 1. Lighting
 - 2. Alarms
 - d. Personnel warning systems
 - e. Interaction with pedestrians
 - 1. Normal travel patterns
 - 2. Variations
 - f. Samples of hazards
 - 1. Conveyance
 - 2. Electric carts
 - 3. Haulage trucks
 - 4. Fork lift trucks
 - g. Summary

8. Communications
≈1.5 hours

- a. WIPP communications systems overview
 - 1. Personnel
 - 2. Artificial
- b. System breakdown
 - 1. Personnel communication
 - a. Lamp signals
 - b. Hand signals
 - c. Appropriate uses
 - 2. Artificial communications
 - a. Commercial telephone
 - b. Mine phone
 - c. Gia-tronics
 - d. Alarms systems
 - e. Alarm warning lights
- c. Summary

9. Mine Map
≈1 hour

- a. Definitions
- b. Map legends
- c. Directions and locations
 - 1. Underground reference point
 - 2. Boundary limits
- d. Primary drifts
 - 1. North/South
 - 2. East/West
- e. Drifts by area name
 - 1. North
 - a. East/West
 - b. North/South
 - 2. Other North area drifts
 - 3. South construction area
 - 4. South disposal area
- f. Assembly areas
- g. Summary

10. Ventilation
≈1.5 hours

- a. Ventilation
 - 1. General requirements
- b. Intake volume
- c. Intake points
 - 1. Air Intake Shaft
 - 2. Salt Handling Shaft
 - 3. Waste Shaft
- d. Exhaust volume
- e. Primary air-flow routes
 - 1. North mine area air flow (intake)
 - 2. North mine area air flow (exhaust)
 - 3. South mine area air flow (intake)
 - 4. South mine area air flow (exhaust)
- f. Air quality
- g. Air flow balancing
 - 1. The plan
 - 2. Adjustments
 - 3. Unapproved adjustments
- h. Escapeways
- i. Summary

11. Evacuation and Escape Routes
≈2 hours

- a. WIPP underground evacuation procedures
 - 1. Authorization for evacuation
 - 2. Notifications
 - 3. Initial actions
- b. Escapes
 - 1. Purpose
 - 2. Primary
 - 3. Secondary
- c. Non-routine egress
 - 1. Combination usage
 - 2. Blocked access
- d. Define a barricade
- e. Function of barricades
- f. Permanent barricades
- g. Temporary barricades
- h. Methods of erecting a temporary barricade
- i. Barricades in relationship with WIPP design
- j. Summary

12. Ground Control
≈2.5 hours

- a. Evaluation of ground control
- b. Federal regulations
- c. State mining regulations
- d. WIPP procedures
- e. Introduction to ground control and ventilation
- f. Introduction to barring down and scaling
- g. Demonstration of bar down and scaling techniques
- h. Geological formation at WIPP
- i. Review of class room instruction
- j. Field activities
 - 1. Identification of bad back or rib
 - 2. Bar down operations
 - 3. Scaling down operations
 - 4. Safety issues
- k. Summary/exam

13. Hazard Recognition
≈6 hour

- a. General hazard recognition
 - 1. Mining as a whole
 - 2. Comparing WIPP with general mining industry
- b. Mobile equipment
 - 1. Size
 - 2. Construction
 - 3. Other hazards
- c. Ground control
 - 1. Over confidence in work place
 - 2. Barriers
 - 3. Improper installation of control devices
- d. Electrical hazards
 - 1. Cables
 - 2. Substations and switch racks
 - 3. Unauthorized personal equipment
- e. Loss of ventilation
 - 1. Air quality
 - 2. Radiation
- f. Housekeeping
 - 1. General
 - 2. Risk to personnel
- g. Laser operations
- h. Seismic activity
- i. Summary

14. Health
≈1 hour

- a. Air quality
 - 1. Dust
 - 2. Other vapors
 - 3. Personal protective equipment
- b. Noise
 - 1. Acceptable working levels
 - a. 8 hour shift
 - b. Short term
 - 2. Protection against damage
 - a. In-ear protection
 - b. Over-the-ear protection
- c. Chemicals
 - 1. Use
 - 2. Personal protective equipment
 - 3. Training
 - 4. Health effects
 - 5. Pre-event planning
- d. Potable water
- e. Toilet facilities
 - 1. Chemical toilets
- f. Waste receptacles
 - 1. General
- g. Food consumption
 - 1. Restriction
- h. Radiation exposure
 - 1. ALARA
 - 2. External
 - 3. Internal
 - 4. Through wounds
- i. Summary

15. Live Fire Extinguisher Training
≈4 hours

- a. Classroom instruction
- b. Written examination
- c. Live fire practical participation
- d. Participate in performance critique of other class member as they extinguish a fire.

All times are approximate and do not reflect additional time spent on topics that arise from class participation, student breaks, class size, and/or practical exercises. (i.e., Job Performance Measures)

COURSE: SAF-502F Live Fire Extinguisher Training

DURATION: 4 Hours

PREREQUISITES: None

SCOPE: This course is designed to instruct the trainee in the basic concepts of fire classifications and characteristics, the different types of fire extinguishers, how to properly operate a portable hand-held fire extinguisher, the hazards associated with an incipient stage fire, and when not to fight a fire.

OBJECTIVES: Upon completion of this course, the trainee will have the necessary knowledge and skills to use a portable hand-held fire extinguisher.

Mastery of the terminal objective will be demonstrated by scoring 80% or higher on the written exam, and performing satisfactorily on the Job Performance Measure.

REFRESHER: Biennially

COURSE DESCRIPTION:

1. Classroom Instruction
≈1.5 hours
 - a. Regulations and WIPP procedures
 - b. Define purpose of a fire extinguisher
 - c. Identify different fire classifications and types
 - d. Identify different types of fire extinguishers
 - e. Identify the hazards associated with an incipient fire
 - f. Identify when not to fight a fire
2. Live Fire Practical Participation with Fire Extinguisher
≈1.5 hours
 - a. Demonstrate the operation of a fire extinguisher
 1. Check pressure gauge
 2. Use PASS system
3. Conclusion with Written Examination
≈1 hour

All times are approximate and do not reflect additional time spent on topics that arise from class participation, student breaks, class size and/or practical exercises.