

Underground Compliance Plan

Prepared in Response to New Mexico Environment Department
Administrative Order Issued May 12, 2014

1.0 INTRODUCTION

The purpose of this document is to provide the plan required by the New Mexico Environment Department (NMED) Administrative Order (Order) issued on May 12, 2014, to the U.S. Department of Energy (DOE) and Nuclear Waste Partnership LLC (NWP), collectively referred to as the Permittees. The Order, at paragraph 17(a), requires the Permittees to submit an *Underground Compliance Plan* (UCP) for review and comment for the Waste Isolation Pilot Plant (WIPP) underground disposal facility. The Order requires that the UCP include “a detailed compliance schedule for those requirements described in Paragraph 13 of the Order, including identification of all underground Permit requirements; a description of the current compliance status of each underground Hazardous Waste Facility Permit (Permit) requirement; a proposed timeline, including dates, for compliance and achieving underground recovery; any plans related to attaining compliance with the Permit; the reason(s) for any Permit non-compliance; and, any other pertinent information. This shall include a spreadsheet summary with each category listed above as a column or row.”

2.0 BACKGROUND

At 11:14 P.M. on February 14, 2014, a Continuous Air Monitor (CAM) detected airborne radiation in the WIPP underground facility. When the CAM alarmed, underground ventilation exhaust air automatically shifted to flow through high efficiency particulate air (HEPA) filters to remove radioactive particulates. Since that time underground exhaust air has continued to be routed through HEPA filtration.

The radiological release contaminated portions of the underground facility. In addition, the assessment of the impacts of the salt haulage truck fire on February 4, 2014 needs to be completed (e.g., the extent of impact such as soot buildup). The Permittees are currently in the process of determining the extent of such contamination. Because of the contamination, some Permit required activities cannot be performed due to inaccessibility of the underground. The inability to perform these activities does not pose a threat to human health or the environment because of the restrictions placed on entry to the underground and because emissions from the underground are continuously filtered. Activities in the underground must be carefully planned and performed to assure workers are not exposed to harmful doses of radioactivity. Throughout this UCP there are references to numerous documentation steps associated with this planning such as preparing work packages, classifying radiation areas, and preparing and approving safety basis documents. These steps are not specifically described in the Permit; however, they are important steps in assuring the Permit-required activities occur within the boundaries of radiologically safe operations.

3.0 INFORMATION REQUIRED BY THE ORDER

The following sections describe the UCP required under the Order. In formulating the schedule portion of the UCP, some of activities may be done concurrently. The relationship between these activities will become more obvious once prerequisite activities are completed and the schedule evolves.

3.1 Prerequisite Activities

The Order covers underground Permit-required activities (e.g., inspections, monitoring). General access to the underground for these activities is not allowed at this time pending the completion of certain prerequisite activities that will establish the safety and habitability of the work areas. The underground has been divided into specific areas (zones) for systematically accomplishing recovery. In each of the zones, there is a sequence of activities that must occur in order to resume normal or limited activities in the areas. The designation of the zones and the timing of activities are based, to an extent, on the amount of contamination anticipated or actually found in these areas.

The Permittees' priorities place safety, health, and environmental protection ahead of mission resumption. These priorities are listed below.

- Mine stability (e.g., ground control, bolting), which includes taking the actions necessary to ensure that the underground is safe for personnel.
- Ventilation, which includes providing adequate airflow for workers to conduct activities.
- Underground habitability, which includes radiological characterization, posting of radiological zones, re-establishing habitability (e.g., toilets, cleaning, trash removal), and the safe restart of the electrical system.
- Underground maintenance and bringing the underground equipment, including fire protection systems, into working order with preventative maintenance and open corrective actions complete or compensatory measures in place.
- Decontamination of portions of the mine to allow for operations.

There are numerous important enabling activities to support the accomplishment of these top priorities, including Evaluation of the Safety of the Situation revisions, Documented Safety Analysis revisions, corrective action completion, safety management system enhancements, and aboveground support activities. As zones are released in the underground, some Permit-related activities such as underground inspections and monitoring may resume. Updates on these activities will be included in the bi-weekly report, as required by Paragraph 18(c) of the Order. It is anticipated that the release of these zones for Permit-related activities will be completed by January 2016.

Some of the enabling activities are delineated below. Activities that are underway are shown in italics:

- *Evaluation of the cause of the release, which has currently been narrowed down to a single container in Panel 7, Room 7.*

- *Release of the underground by the DOE Accident Investigation Board. This will be conducted in phases, with the release of all but Panel 7, Room 7 expected by June 20, 2014.*
- *Work packages, procedures, and health and safety plans that require updating to address work in minimally ventilated areas and in potentially contaminated areas. Personnel training to these documents and activities will be required*
- *Performance of underground radiation surveys to determine the extent of contamination. The surveys performed to date have been focused on re-entry needs for the purposes of investigations. This must be expanded to cover areas where personnel will be working and to gain access to the required equipment.*
- Evaluation of the ground conditions in and around the Hazardous Waste Disposal Units (HWDUs).
- *Filter replacement. Replacement of some or all of the filters in the HEPA filtration system is expected to occur during the duration of the activities under this Order. This activity is required to ensure the filtration system operates at optimal efficiency.*
- Evaluation of the extent of radiological contamination on equipment needed to maintain the mine entries for the HWDUs.
- Evaluation of the extent of soot on electrical equipment needed to perform work in the underground.
- *Finalization and implementation of the WIPP Recovery Plan and associated schedule.*
- *Completion of corrective actions and/or implement compensatory measures for inadequacies noted for fire protection and emergency management.*
- Establishment of underground habitability. Activities required for personnel hygiene and safety (e.g., portable toilets, eyewash stations inspections, fire suppression equipment inspections) must be re-established for personnel habitability.
- Establishment of required ventilation. Minimum ventilation must be established pursuant Mine, Safety, and Health Administration (MSHA) requirements in order operate the salt haulage vehicles and other necessary diesel equipment.
- *Preparation and approval of safety basis documentation.*
- Preventative maintenance (PM) on the salt haulage vehicles and scissor lifts to ensure safe operability.
- *Activation of the Waste Hoist.*
- Completion of Panel 6 initial closure activities
- Completion of Panel 7, Room 7 closure activities
- Establishment of supplemental HEPA filtration
- Preparation of balance of Panel 7 for restart
- Establishment of supplemental construction ventilation
- Re-establishment of mining for Panel 6 final closure
- Installation of permanent closure in Panel 6
- NMED inspection of the underground prior to restart

3.2 Paragraph 17, Section (a) i

The Order requires the Permittees to provide a detailed compliance schedule for those requirements described in Paragraph 13 of the Order. The attached spreadsheet addresses the underground activities required by the Permit. Activities cannot be started until the appropriate prerequisites activities have been completed. Dates are subject to change as field conditions change over time. Once the Recovery Plan is finalized more definitive dates will be available and an update to this Plan will be submitted to the NMED. With regard to the inspection dates in the status portion in the attached spreadsheet, the date provided reflects the most recent inspection at the time this Plan was prepared. The bi-weekly report required by Paragraph 18 of the Order contains updated information.

3.3 Paragraph 26

The Order requires the Permittees to post the final report and submissions to NMED related to the Order in the Information Repository within five (5) working days of submission to NMED. The Permittees will create a folder in the Information Repository specifically for these submissions.