



# WIPP Integrated Recovery Plan

March 2014

Draft 3



The US Department of Energy's (DOE) Waste Isolation Pilot Plant (WIPP) is designed to safely isolate defense-related transuranic (TRU) waste from people and the environment.

Waste temporarily stored at sites around the country is shipped to WIPP and permanently disposed in rooms mined out of an ancient salt formation 2,150 feet below the surface. WIPP, which began operating in 1999, is located 26 miles outside of Carlsbad, New Mexico. WIPP is operated for the DOE by the Nuclear Waste Partnership, LLC (NWP).

## Recent Events

Feb. 5, 2014

### Vehicle Fire in the WIPP Underground



- The diesel engine on an underground truck used to transport mined salt caught on fire
- All underground personnel were evacuated to the surface
- Ventilation to the underground was sent through filtered exhaust and all waste-handling operations were stopped
- DOE deployed an Accident Investigation Board (AIB) to determine the causes of the event and analyse the management and safety programs and procedures at both the federal and contractor levels.

Feb. 14, 2014

### Radiological Release



- Continuous air monitor (CAM) detected airborne radioactive contamination in the WIPP underground
- No employees were working underground at the time
- Onsite and offsite air sampling and monitoring were initiated to characterize the release
- Site access was limited to essential personnel
- Source of the airborne radioactive contamination is under investigation

## Key Immediate Actions

### Vehicle Fire in the WIPP Underground

- Evacuated personnel
- Treated 17 employees for smoke inhalation
- Activated emergency and information centers
- Established event command and control center
- Developed recovery plans for surface and underground
- Executed two entries with mine rescue personnel to ensure fire was extinguished
- Deployed DOE /contractor corporate resources
- Established normal ventilation and continuous air monitors (CAMs) for habitability requirements
- AIB members made several entries into the mine

### Radiological Release

- No employee underground. Sheltered above-ground employees in place
- Performed initial onsite and offsite radiological monitoring
- Activated emergency and information centers
- Evacuated non-essential personnel and limited site access to essential personnel
- Established ongoing daily sampling and air monitoring
- Established whole-body count for all site personnel and visitors exiting the WIPP site
- Implemented employee bioassay testing
- Deployed DOE /contractor corporate resources

## Integrated Recovery Plan



- Issued on Feb. 26, 2014
- Describes the actions that the DOE Carlsbad Field Office (CBFO) and its contractor, NWP, have taken and will take at WIPP to integrate recovery efforts from the fire and radiological release events and restore WIPP back to TRU waste disposal operations

## Recovery Plan Key Objectives

- Protect workers, public health, and the environment at all times
- Identify and mitigate the hazards, including mine and radiological safety
- Terminate the low-level release of radioactive material
- Identify the source of the radiological event and isolate and mitigate the release
- Replace contaminated filters in the ventilation exhaust system and remediate any contamination in the underground
- Identify the root cause of the two events and perform actions to prevent recurrence
- Utilize WIPP's highly skilled and knowledgeable workforce to the maximum extent practical, recognizing that retaining their unique skills and knowledge are critical for recovery and resumption of waste-disposal operations
- Organize and fully utilize the expertise and resources available from the DOE, the NWP parent companies, national laboratories, and others to ensure a safe and timely recovery
- Throughout the recovery, ensure effective and transparent communication, involvement, and collaboration with stakeholders, municipalities, and regulators
- Resume waste-disposal operations in a safe, systematic manner following completion of corrective actions

## Recovery Plan Key Strategies

### Re-entry

- Use Salt Hoist for re-entry with the Air Intake Hoist as the secondary means of egress
- Unmanned instrumented entry to establish safe habitability before manned entry
- Manned entry to characterize mine stability, attempt to identify the cause of the release, and collect information to prepare the recovery plan

### Recovery

- Terminate the low-level release of radioactive material from the underground exhaust
- Isolate and mitigate the activity source in the underground
- Replace exhaust filter bank elements as necessary to support restored operations

### Workforce protection and usage

- Temporarily assigning some personnel to other key activities and to offsite locations
- Limiting site access to essential personnel during re-entry and mitigation activities

### Expertise/resource usage

- Deploy best-in-class resources from both federal and contractor sectors to support recovery efforts

### Communication

- Be proactive and timely in communication to stakeholders and regulators

### Resumption of operations

- Complete all pre-start corrective actions

## Schedule

- Preliminary schedules to execute the Integrated Recovery Plan were issued on Feb. 26, 2014
- These plans will be updated / refined as new information is received
- The completion dates for re-entry, recovery, and resumption of waste operations will be determined as key information becomes known, such as the cause of the release, the extent of radioactivity in the underground, etc.