



U.S. DEPARTMENT OF  
**ENERGY**

OFFICE OF  
**ENVIRONMENTAL  
MANAGEMENT**

# **WIPP Status Update**

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for

***National Cleanup Workshop***

**September 15, 2016**

# WIPP Progress

## Path to Resumption of Waste Emplacement

- ✓ Documented Safety Analysis - **completed**
- ✓ Cold Operations - **completed**
- ✓ Management Self Assessment - **completed**
- Operational Readiness Reviews

## Schedule Challenges

- Ground Control
- Waste Handling in a Contaminated Environment

## Changes to the National TRU Program

- New WIPP Waste Acceptance Criteria (WAC)
- Enhanced National TRU Program Requirements

## Shipping Schedules and Near Term Limitations

- Resumption of Waste Emplacement
- Projected Shipment Numbers

## Future projects for return to normal operations

- Interim Ventilation System
- Additional Surface Storage at WIPP
- Permanent Ventilation System Status

# Documented Safety Analysis (DSA)

## Approved April 29, 2016

- Developed under new DOE Standard 3009-2014
- Approximately 120 Safety Management Program procedures created or revised
- Implementation declared complete on May 29



## Cold Operations – completed August 24 -

- WIPP crews processed and downloading empty waste containers using new DSA Rev. 5 controls
- Originally scheduled for 8 weeks, expanded to 12 weeks to complete necessary work evolutions and allow more time for crews to practice
- Included regular drills conducted to test safety management procedures





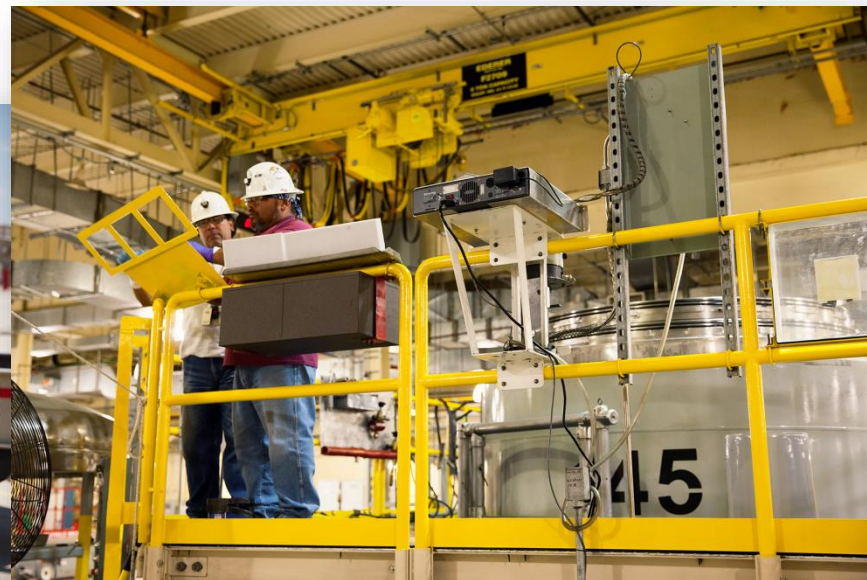
## Management Self Assessment (MSA)

- Internal review conducted by the M&O Nuclear Waste Partnership (NWP) to confirm operational readiness
- Two weeks of field work - concluded August 26
  - ✓ Reviewed over 950 documents
  - ✓ Conducted 200 interviews
  - ✓ Conducted over 120 performance based field observations
- Identified 5 adverse findings in the areas of configuration management, fire protection, operations and management readiness
- Corrective actions responding to pre-start findings, post-start findings and deficient conditions are in progress

# Operational Readiness Reviews

## Contractor and DOE Operational Readiness Reviews (ORR)

- Performance-based examination of facilities, equipment, personnel and procedures
- Will ensure WIPP will be operated safely – within approved safety envelope





# Return to Waste Emplacement Operations





**CBFO and NWP are working hard to resume waste emplacement operations -**

- Safety issues take precedent
- Ground control remains a priority

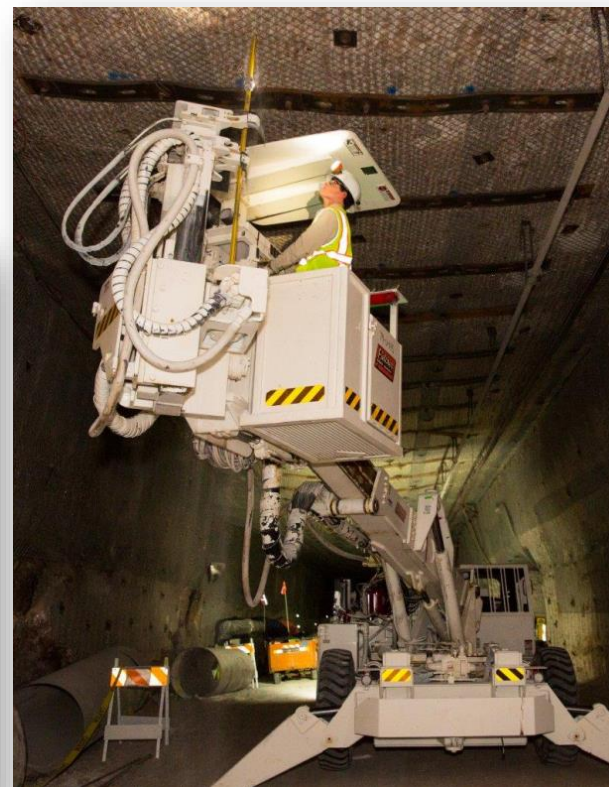
Roof bolt plate



Broken roof bolts



Floor heave

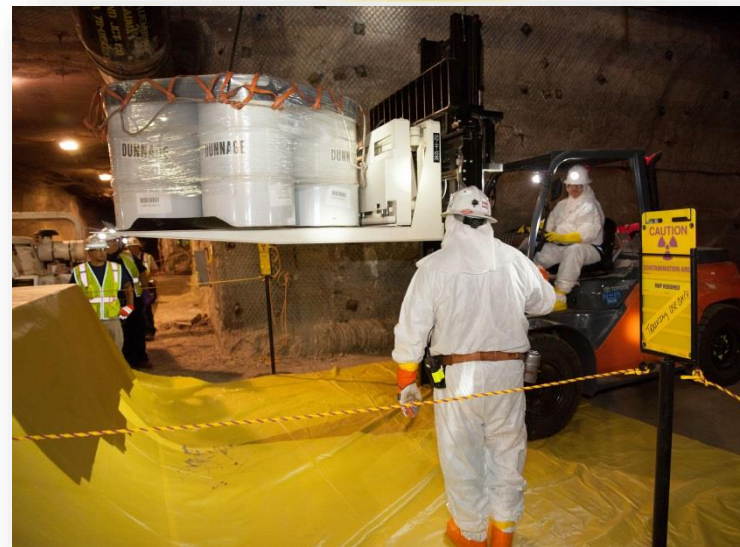


Hybrid bolter

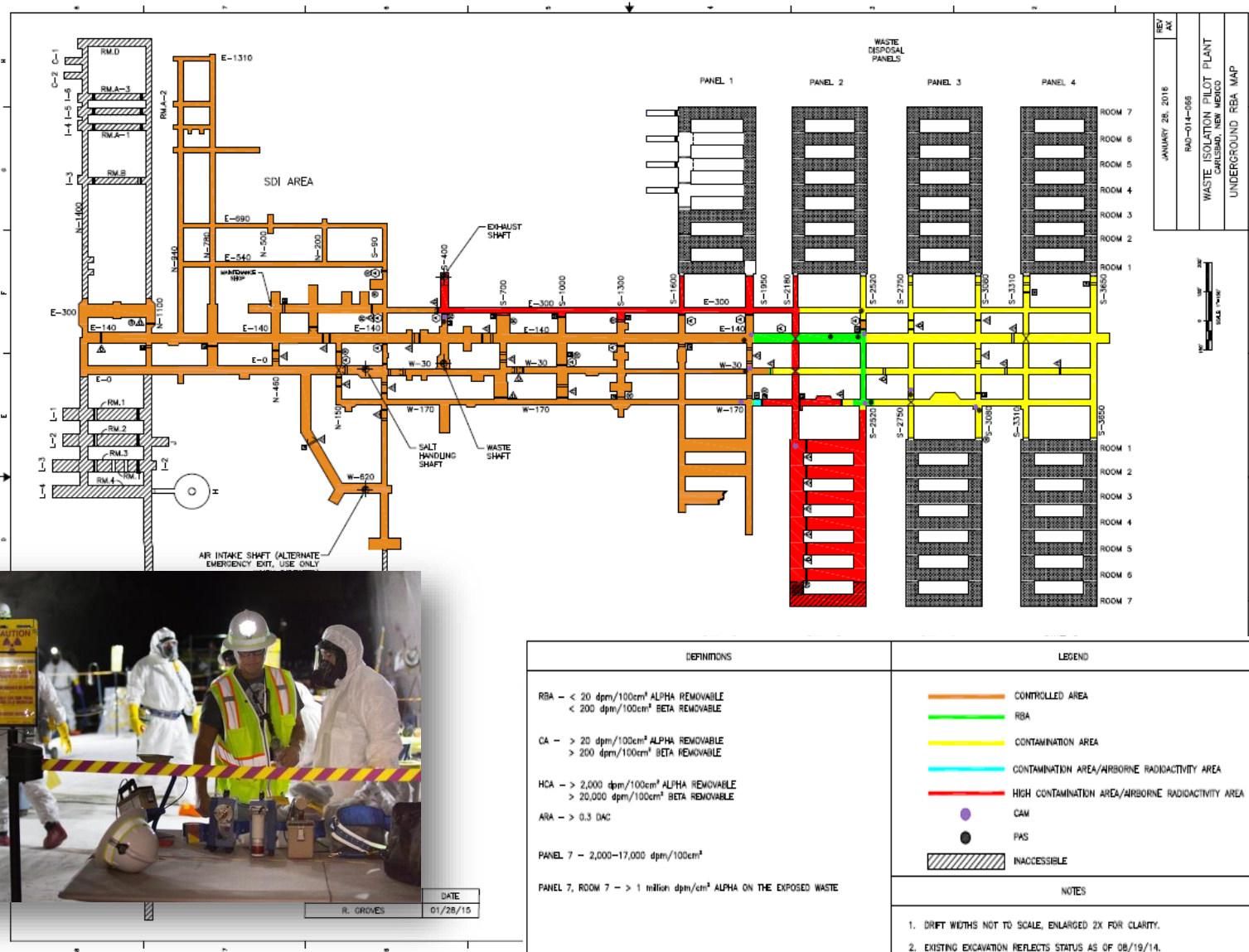


## Waste emplacement in contaminated environment—

- Will take place in Panel 7 rooms 1-5
- Will require a transition from clean to contaminated zones near the opening of Panel 7
- Waste handling operators working in the contaminated zone will be in personal protective clothing and powered air purifying respirators



# Radiological Control Areas





# National TRU Program Changes

## New and Enhanced Federal Oversight of Contractor Activities

- Increased oversight by Carlsbad Field Office and EM/HQ
- Clearer roles and responsibilities





## New Waste Acceptance Criteria (WAC)

- WAC Revision 8 issued June 27, 2016 – Effective July 5, 2016
- Includes changes resulting from findings from the Accident Investigation Board
- Incorporates requirements from the recently approved DSA and chemical compatibility studies
- Temporary suspension of waste certification at generator sites



## New Requirements

- Enhanced Acceptable Knowledge - detailed verification of source documentation for potentially incompatible materials and to ensure the adequate information basis
- Chemical Compatibility Evaluations – identifying the range of possible chemical combinations that could occur in each waste stream using EPA approved methodology



## New Requirements

- Basis of Knowledge for Oxidizing Chemicals – waste certification programs to identify and potentially treat waste to avoid effects from oxidizing chemicals
- Generator Site Technical Reviews (GSTR) - performed by CBFO and NWP to ensure waste packaging and treatment activities meet new enhanced WIPP WAC requirements
- Re-certification Audits – required before shipping waste certified under new WAC revision 8



# Resumption of Waste Emplacement

## When Waste Emplacement Resumes –

- Waste in Waste Handling Building (WHB) at WIPP will be emplaced first – Expected to take 90 days
- Emplacement rate at startup will be the limiting factor – current planning based on *emplace rate of up to five shipments a week*



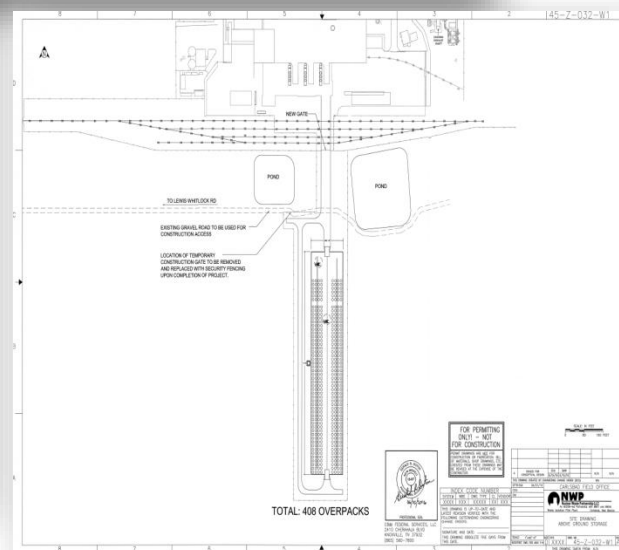
# Above Ground Storage Project

## **Engineered Concrete Overpacks – design used at SRS –**

- Surface storage capacity for CH waste – 408 containers/136 shipments/8 weeks of capacity @ 17/week
- Storage of any single container not to exceed 1 year
- Increases the available weeks for TRU waste shipments
  - Receipt of shipments can continue during mining operations when waste emplacement operations are put on hold
- Continue CH TRU waste receipt during normal operational fluctuations and maintenance outages
- Class 3 Permit modification request (PMR) expected to be submitted to NMED in late September or early October



# Above Ground Storage Project





# Interim Ventilation Project

## Interim Ventilation System:

- The flange separating IVS from UVS removed August 26 and hot testing began on August 29; operational in September
- Provide an additional 54,000 cubic feet per minute of filtered airflow – doubling existing airflow in the underground
- Supports waste emplacement and allows additional equipment to operate simultaneously in the underground



# Permanent Ventilation System

- New shaft and 55,000 sq. ft. ventilation building located east of the existing exhaust shaft
- Geotechnical Analysis is underway
- Data will be used to determine bearing capacity, seismic design parameters and building foundation design
- Will provide enough airflow underground for mining and waste emplacement activities to occur concurrently





# Questions

