U.S. DEPARTMENT OF ENERGY | OFFICE OF ENVIRONMENTAL MANAGEMENT

WIPP Status Update

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for

Northern New Mexico Citizen's Advisory Board

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WIPP Progress

Path to Resumption of Waste Emplacement

- ✓ Documented Safety Analysis - completed
- ✓ Cold Operations - completed
- ✓ Management Self Assessment – completed
- ✓ Interim Ventilation System - 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

- 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

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

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

Interim Ventilation Project

Interim Ventilation System

- The interim ventilation system (IVS) became operational September 9 – air balancing to maximize airflow completed on September 14
- IVS provides 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

Operational Readiness Reviews

Contractor and DOE Operational Readiness Reviews (ORR)

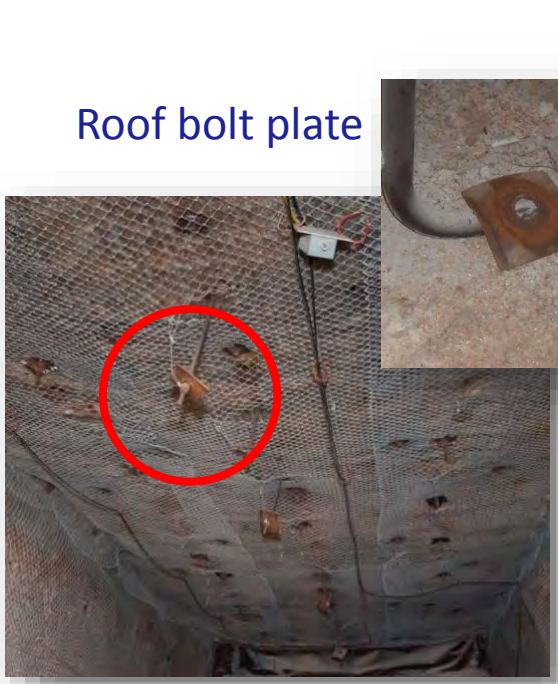
- Performance-based examination of facilities, equipment, personnel and procedures
- Will ensure WIPP will be operated safely – within approved safety envelope

Return to Waste Emplacement Operations

Schedule Challenges

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

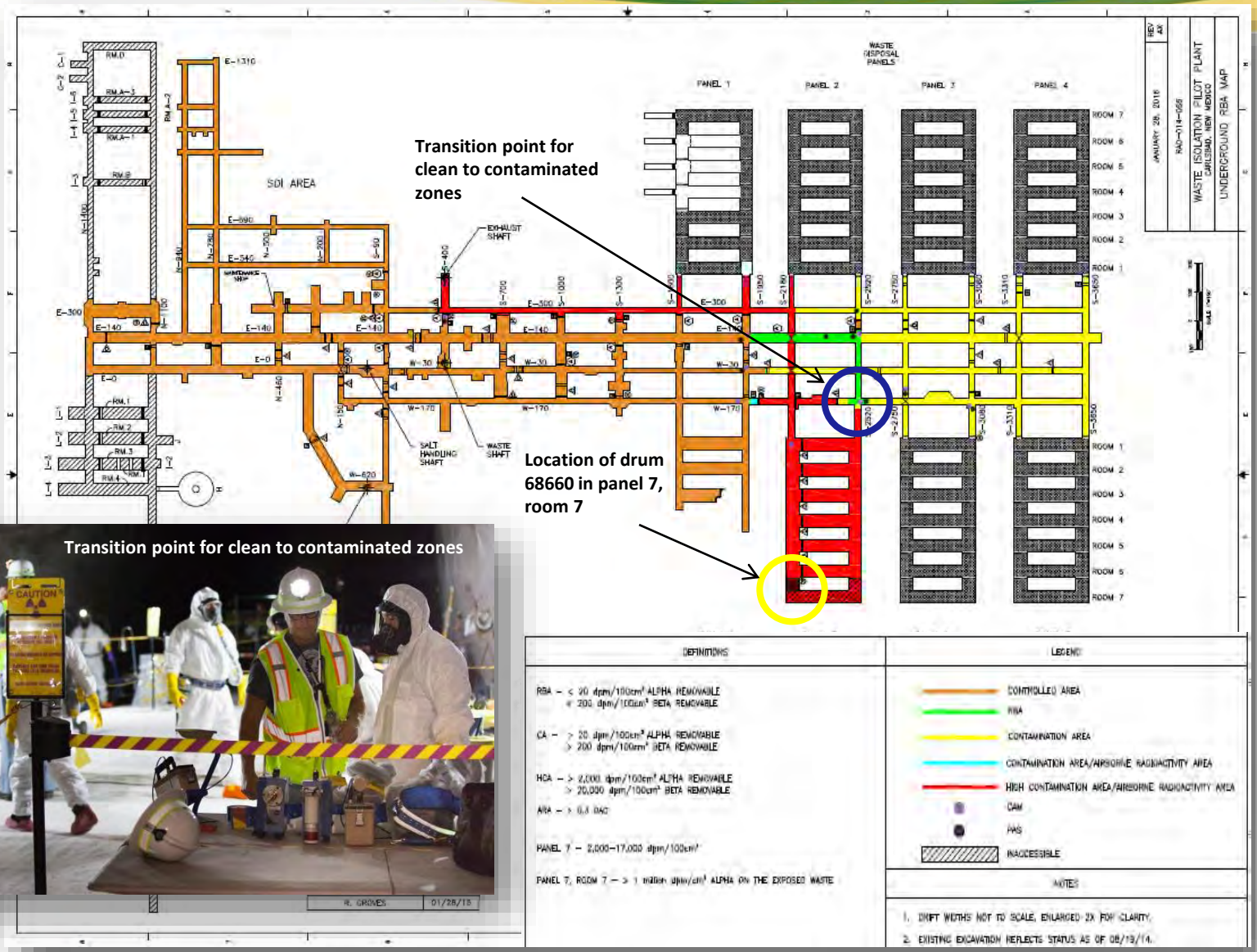
Hybrid bolter

Waste Handling Challenges

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 (PAPR)

Radiological Control Areas



National TRU Program Changes

New and Enhanced Federal Oversight

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

Enhancements to National TRU Program

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

Enhancements to National TRU Program

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

Enhanced National TRU Program

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 –

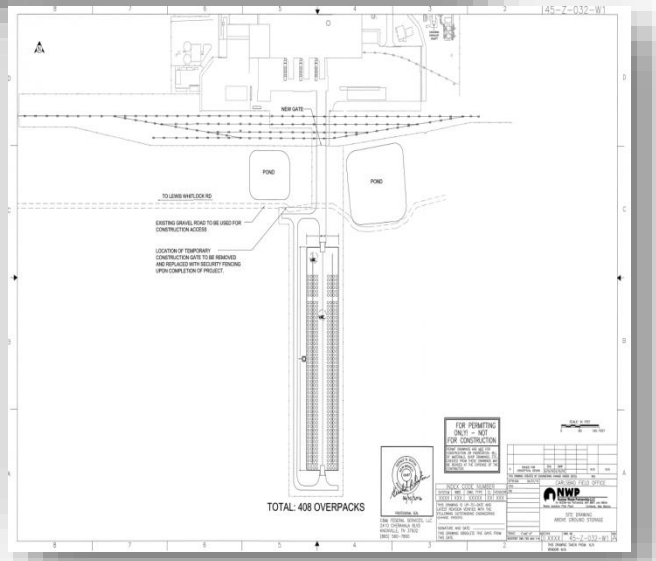
- Waste in Waste Handling Building (WHB) at WIPP will be emplaced first – Expected to take 90 days
- Emplacement rate at startup will be the limiting factor – current planning based on *emplace rate of up to five shipments a week*

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 later this year

Above Ground Storage Project



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