WIPP Town Hall Meeting

Sponsored by the U.S. Department of Energy and the City of Carlsbad, NM

August 4, 2016
• Welcome and Introductions— Mayor Dale Janway
• Opening Comments— John Heaton (Moderator)
• Update on WIPP Progress – Todd Shrader, CBFO
• Update on Restart Activities – Jim Blankenhorn, NWP
• Changes to the National TRU Program
  – Casey Gadbury, CBFO/OPM
• Questions and Answers – John Heaton
  • In house
  • Internet
Update on WIPP Progress
Todd Shrader, CBFO Manager
WIPP Progress

• Progress Toward Resumption of Operations

• Schedule Challenges
  • Ground Control
  • Interim Ventilation System
  • Operational Readiness Reviews and corrective actions

• Changes to the National TRU Program
  • New waste acceptance criteria effective July 5, 2016
  • Temporary suspension of waste certification activities at generator sites pending demonstration of compliance
WIPP Progress

• **Progress on Supplemental Environmental Projects**
  - WIPP north access road – phase 1 completed
  - Regional mine rescue teams - additional training and equipment

• **WIPP Management and Operations Contract Status**
  - Agreed upon Modification splits 5 year option period into smaller option periods, a one year option followed by a 4 year option.
  - The original 5 year contract ends in September of 2017
  - The one year option has not been exercised at this time
Update on Restart Activities
Jim Blankenhorn, NWP Recovery Manager

An AECOM-led partnership with BWXT and AREVA
Cold Operations

- Successfully demonstrated surface waste handling
- Currently focusing on downloading operations
- Transitioning simulated waste containers from the clean side to contaminated side for emplacement
• **Management Self Assessment**
  - Scheduled to take place August 15-25, 2016
  - Performance based examinations of
    - Facilities
    - Equipment
    - Procedures
    - Personnel

• **Assessment of WIPP waste emplacement operations**
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
Ground Control Strategy

• Ground control priorities set monthly using information gathered from several sources. Sources include:
  – Collection and analysis of geotechnical instrumentation data
  – Evaluation of the performance of installed ground support systems
  – Evaluation of physical observations
  – WIPP-specific experience
• We focus recovery efforts on areas that we occupy most frequently
• Access is controlled to areas where ground control margin of safety is reduced (prohibited or restricted)
• Ground control includes
  - Disposition/Removal of broken/Loose bolts
  - Bolting operations
  - Scaling operations
  - Ground heave mitigation
Bolt Installation Indicators

• Goal 110 bolts installed per week (approx. 3 times weekly failure rate)
• Improvements
  − Reduce bolter maintenance down time
  − Dedicated radiological control support
  − Improved bolter fueling process
  − Management focus on process and efficiency

Great Trend

Note: Chart does not include mechanical bolt installation or driven bolt/bolts removed data.
Chart includes non-accessible days (e.g., holidays, filter changes).
Ground Control Conclusion

- We are committed to safe operations at WIPP
  - Radiological conditions resulting from the 2014 event have made ground control much more difficult
- Our highest priority is improving ground control conditions and we have a comprehensive program to evaluate, assess, track, trend and improve
- We have a robust ground control monitoring program and process in place to protect workers
- We will continue to work with MSHA to further improve safety
Schedule Challenges

Interim Ventilation System:

- Contractor Readiness Review completed
- An External Management Self-Assessment completed
- A CBFO Line Management Assessment completed
- Pre-start items being completed and validated
- DOE Readiness Assessment scheduled next week
- Correct Pre-Start items
- CBFO approval to commence Hot Testing/operations
Permanent Ventilation System

- New shaft and 55,000 sq. ft. ventilation building located east of the existing exhaust shaft
- Geotechnical Analysis is underway and consists of drilling multiple bore holes to various depths
- 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
• Both Blue and Red teams competed at the National Mine Rescue Contest in Reno, NV
  ➢ Competed against 36 teams from 18 states
  ➢ Blue Team won national championship in field competition
Blue Wins National Championship
Changes to the National TRU Program
Casey Gadbury, CBFO Assistant Manager
Office of Program Management – National TRU Program
This presentation focuses on enhancements to this area.
National TRU Program

WIPP Certified Programs
- CCP is subset of WIPP M&O (NWP)
- Certified by CBFO
- Ensures Sites have properly prepared the waste for shipment to WIPP
  - Acceptable Documentation (AK)
  - Non destructive examination
  - Radiological characterization
  - Flammable Gas analysis
- Data tracked in Waste Data System

Manages NTP
- Scope includes
  - TRU waste inventory
  - Packaging
  - Characterization
  - Certification
  - Transportation
  - Technical support
  - Regulatory interface
- Integrates all regulatory requirements (e.g., NMED, EPA, etc.)

Prepares Waste
- Must follow WAC
  - All limits and requirements listed
- Must follow transportation requirements
- Waste is verified by CCP/AMWTP
Characterization Processes to Certify Waste

CBFO- (WIPP-) Certified Program

Acceptable Knowledge (AK) Documentation, including chemical compatibility evaluations

Visual confirmation of each waste container compared to AK using Real-Time Radiography or Visual Examination Methods

Radiological Characterization using Non-Destructive Assay or Dose-to-Curie Methods

Flammable Gas Analysis to meet transportation requirements

Container certification in the WIPP Waste Data System (WDS)
National TRU Program

CBFO

NTP

SITE

CCP

AMWTP

CBFO QA
What went wrong?

**Implementation Failure**: Failure to follow requirements
- Specified in processes/procedures
  - Mixed incompatible chemicals
- Implementation Corrective actions are the **quickest** method to address the failures

**Management Failure**: Failure of management/supervision
- Support and guide employees
  - Poor Safety Culture at site
- Management Corrective actions provide a **long-term** system/culture change

**Oversight Failure**: Failure of adequate monitoring and feedback
- Ensures safe and compliant performance
  - Lack of constant assessments to ensure the process was being correctly followed
- Oversight Corrective actions provide **continuous** monitoring and feedback
Improved Implementation

• Acceptable Knowledge (AK) Documentation
  • Improved Chemical Compatibility Evaluations
    • Adds specific EPA Method
    • Compares all chemicals and materials in waste
    • Better identifies incompatibilities
  • New Basis of Knowledge of Oxidizing Chemicals
    • Based on actual testing
    • Specific tests conducted to better understand reactions
    • Provides recipe for resolution
## Chemical Compatibility Evaluations

<table>
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<tr>
<th>Group No.</th>
<th>Reactivity Group Name</th>
<th>Symbols</th>
<th>Notes</th>
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<td>Alcohols and Glycols</td>
<td>H, GT, GF</td>
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<td>7</td>
<td>Amines, Aliphatic and Aromatic</td>
<td>H, F</td>
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<td>Caustics</td>
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<td>Ethers</td>
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<td>Ketones</td>
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<td>Metals, Other Elemental and Alloys as Sheets, Rods, Drops,</td>
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<td>Moldings, etc.</td>
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<td>Hydrocarbons, Aliphatic, Saturated</td>
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<td>Phenols and Creosols</td>
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<td>Organophosphates, Phosphothiocites, Phosphodithioates</td>
<td>H, E</td>
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<td>Combustible and Flammable Materials, Miscellaneous</td>
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<td>106</td>
<td>Water and Mixtures Containing Water</td>
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**Symbols:**
- H = Heat Generation
- F = Fire
- G = Innocuous and Non-Flammable Gas Generation
- GF = Flammable Gas Generation
- GT = Toxic Gas Generation
- E = Explosion
- V = Violent Polymerization
- S = Solubilization of Toxic Substances

Improved Implementation

- New Process for Procedures at generator sites
  - All critical Waste Packaging and Treatment Documents
  - Prevents uncontrolled changes to procedures
    - Interface Waste Management Document List
  - NTP must approve future changes
- Re-verify previously certified waste
  - One-time assessment
  - Does additional check on all waste characterized/certified before new Waste Acceptance Criteria requirements were issued
Improved Oversight

- New Headquarters Oversight Programs
- CBFO Restructured
  - Clarify and Focus Roles and Responsibilities
- New CBFO Qualification Program
- Increased CBFO Oversight at TRU Waste Sites
- Generator sites must be Recertified
- New Generator Site Technical Reviews
  - Independent reviews of Site Programs and interface with Certified Program
New Waste Acceptance Criteria

- WIPP WAC Revision 8.0 issued June 27, 2016
  - Effective July 5, 2016
  - Incorporates requirements from new Documented Safety Analysis
- Validate compliance with revised WAC
  - Generator sites temporarily suspended certification of TRU waste
  - Must complete CBFO Recertification Audit prior to certifying new waste
  - Must complete a GSTR in order to ship
Bottom Line

- **Improvements** in the National TRU Program (NTP)
  - Resolved causes identified in the Accident Investigation Reports
- **New/Additional Oversight**
  - GSTR
- **New WAC**
- **New Basis of Knowledge** for Oxidizing Chemicals
- **New process**
  - Certifying waste
  - Approving Waste Certification Programs
- **Recertification of each SITE**
Questions & Answers