



U.S. DEPARTMENT OF
ENERGY

OFFICE OF
ENVIRONMENTAL
MANAGEMENT

WIPP Town Hall Meeting

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

August 4, 2016

Agenda

- 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



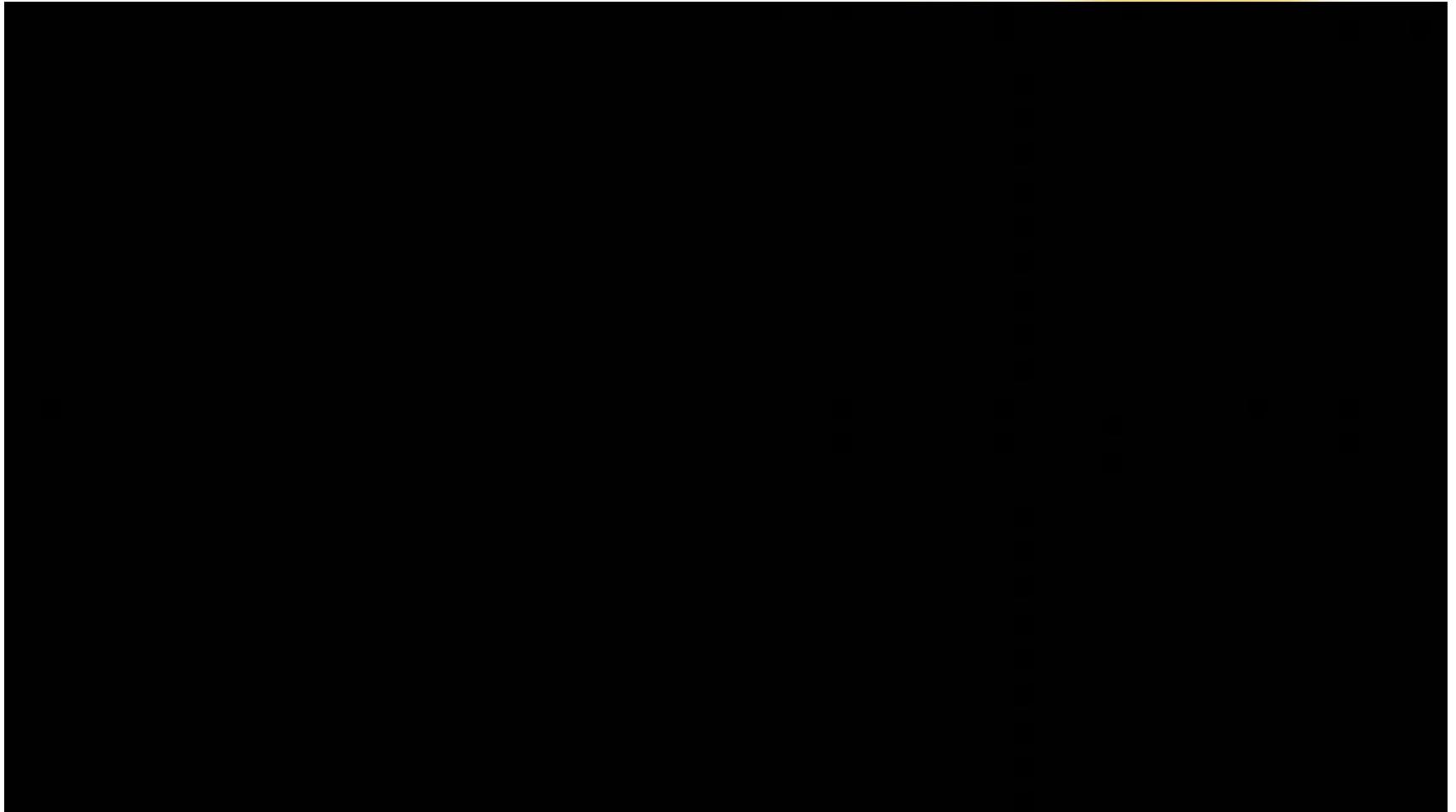
An AECOM-led partnership with BWXT and AREVA

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



Cold Operations



Readiness Reviews

- 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

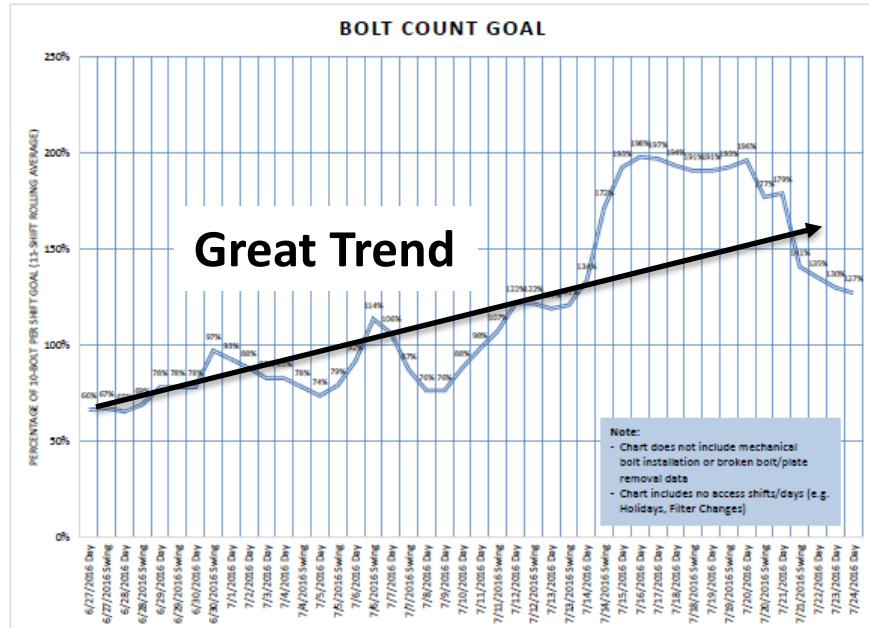


Ground Control Strategy

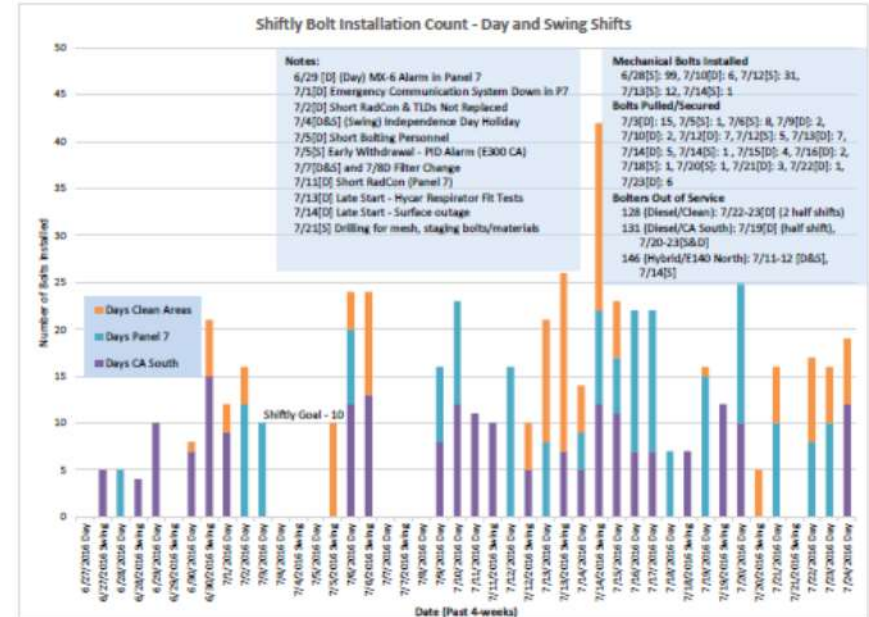
- Ground control priorities set monthly using information gathered from several sources. Sources include:
 - Collection and analysis of geotechnical instrumentation data
 - Evaluation of the performance of installed ground support systems
 - Evaluation of physical observations
 - WIPP-specific experience
- 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



Daily Bolting Accounting 60725/Bolt Count Goal Chart, 7/25/16



Daily Bolting Accounting 60725/Bolting Bolt Count Chart 7/25/16

- 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

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



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

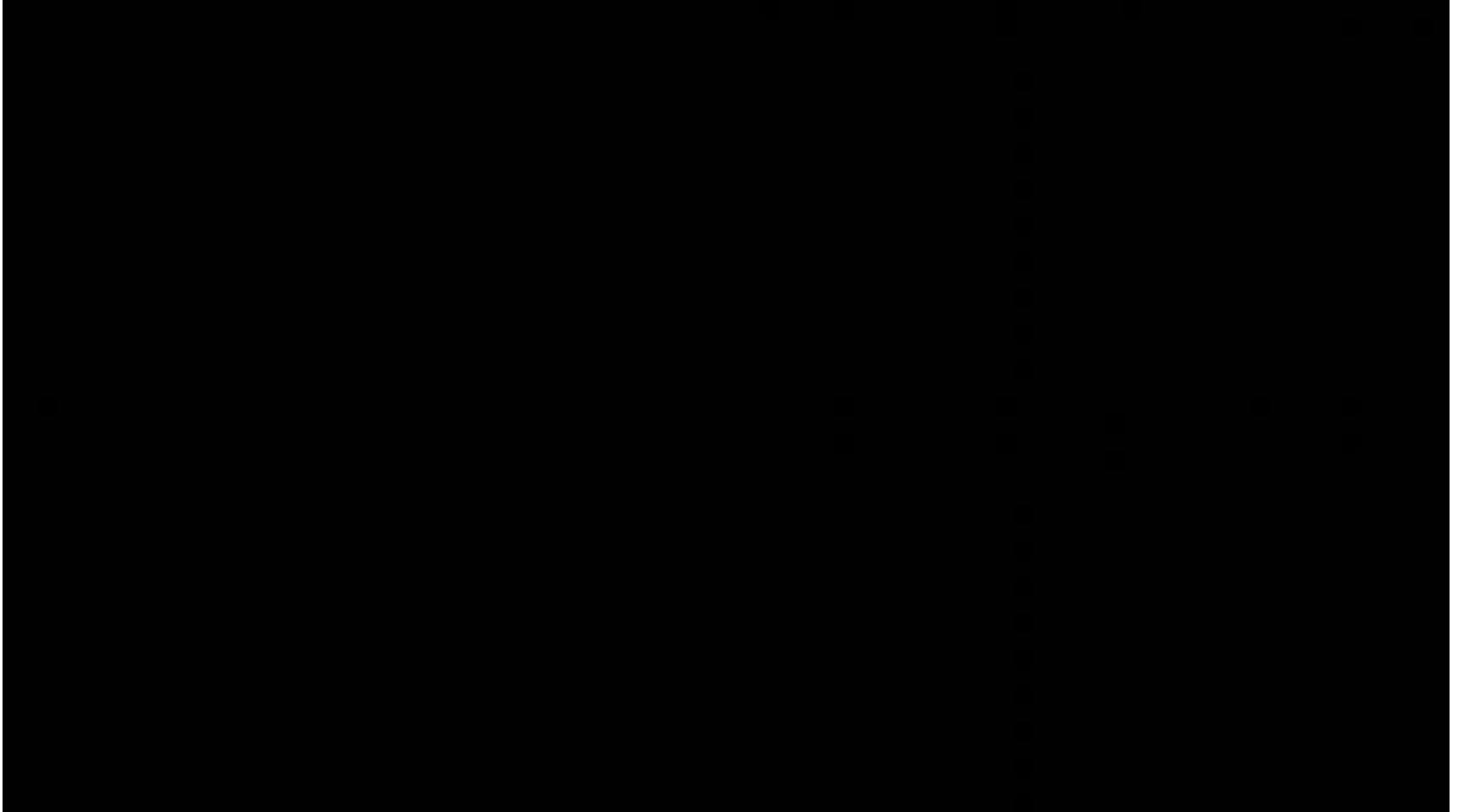


Blue Mine Rescue Team Wins at Nationals!

- 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



CBFO Mission

National TRU Program

Characterization & Certification



Transportation



Disposal at WIPP



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

CBFO

NTP

CCP
AMWTP

SITE

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

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

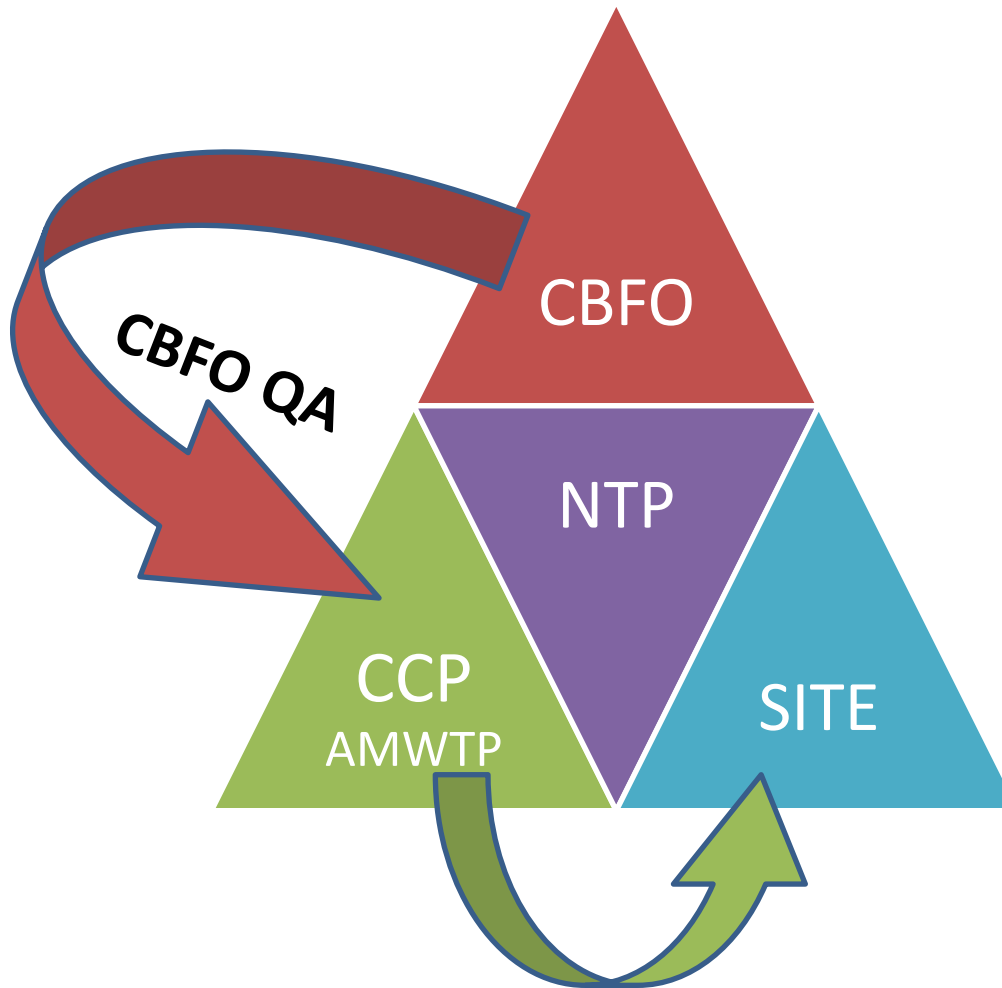


Flammable Gas Analysis to meet transportation requirements



Container certification in the WIPP Waste Data System (WDS)

National TRU Program



What went wrong?

Implementation Failure: Failure to follow requirements

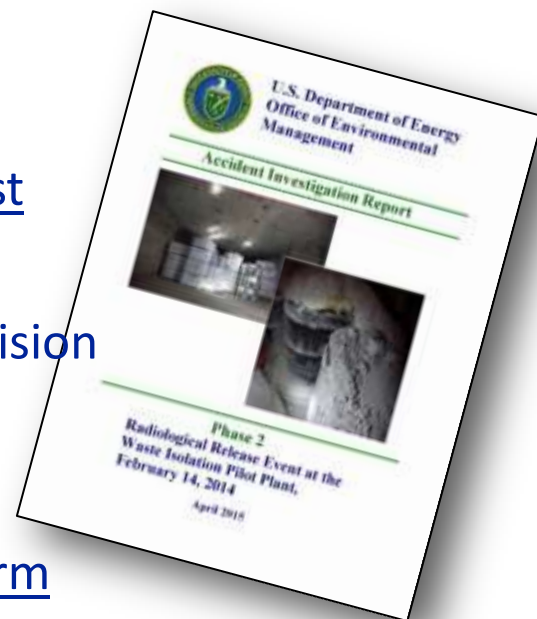
- Specified in processes/procedures
 - Mixed incompatible chemicals
- Implementation Corrective actions are the quickest method to address the failures

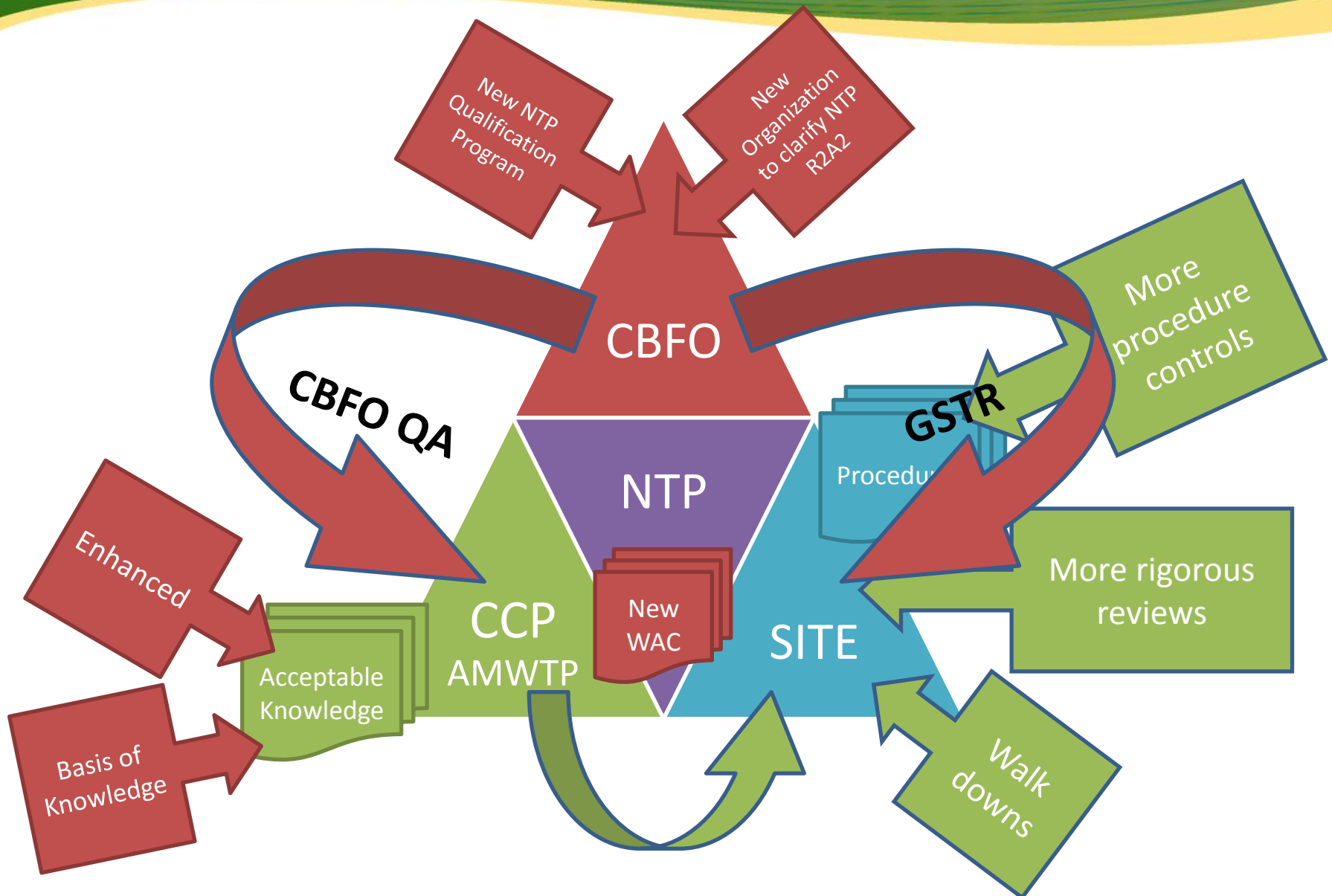
Management Failure: Failure of management/supervision

- 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

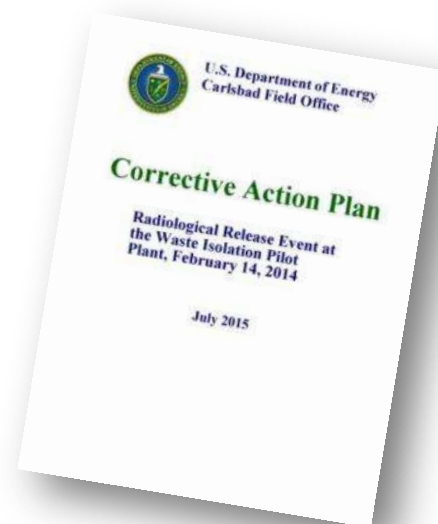
- Ensures safe and compliant performance
 - Lack of constant assessments to ensure the process was being correctly followed
- Oversight Corrective actions provide continuous monitoring and feedback





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

Group No.	Reactivity Group Name														
4	Alcohols and Glycols	4													
7	Amines, Aliphatic and Aromatic		7												
10	Caustics			10											
14	Ethers				14										
16	Hydrocarbons, Aromatic					16									
17	Halogenated Organics		H, GT	H, GF			17								
19	Ketones			H				19							
23	Metals, Other Elemental and Alloys as Sheets, Rods, Drops, Moldings, etc.						H, F		23						
24	Metals and Metal Compounds, Toxic		S	S						24					
29	Hydrocarbons, Aliphatic, Saturated										29				
31	Phenols and Creosols											31			
32	Organophosphates, Phosphothioates, Phosphodithioates			H, E									32		
101	Combustible and Flammable Materials, Miscellaneous													101	
106	Water and Mixtures Containing Water									S					106
		4	7	10	14	16	17	19	23	24	29	31	32	101	106

H = Heat Generation

F = Fire

G = Innocuous and Non-Flammable Gas Generation

GF = Flammable Gas Generation

GT = Toxic Gas Generation

E = Explosion

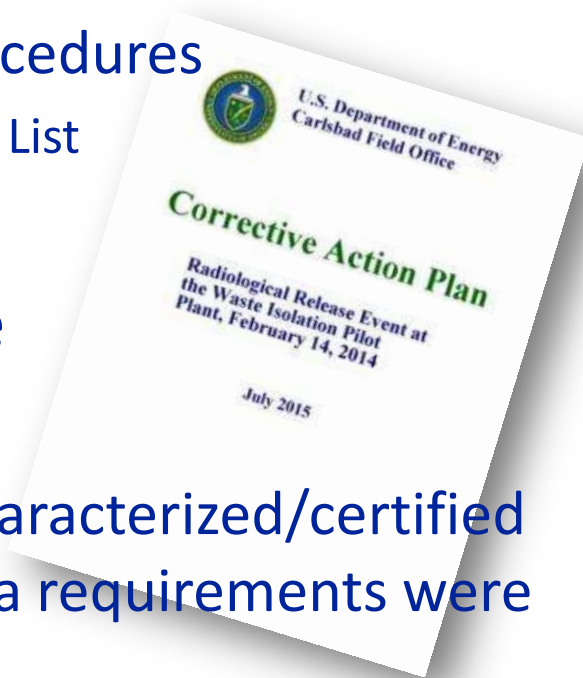
V = Violent Polymerization

S = Solubilization of Toxic Substances

Source: Hatayama, H.K., J.J. Chen, E.R. deVera, R.D. Stephens, and D.L. Storm, 1980, "A Method for Determining the Compatibility of Hazardous Wastes," EPA-600/2-80-076, U.S. Environmental Protection Agency, Cincinnati, Ohio.

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



- **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

