

WIPP Update

Idaho National Laboratory Site Environmental Management Citizens Advisory Board

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Carlsbad Field Office – WIPP Team



U.S. Department of Energy
Carlsbad Field Office

- Leads the Transuranic Waste Program
- Science Program



Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

Nuclear Waste Partnership LLC

- Manages and operates the WIPP facility
- Manages transportation logistics and packages
- Manages waste retrieval, characterization and certification



Sandia National Laboratories

- Scientific advisor for repository recertification



Los Alamos National Laboratory

- Scientific advisor for waste characterization
- Mobile loading – Celeritex LLC



CBFO Technical Assistance Contractor

- Technical and Quality Assurance support for the Carlsbad Field Office



Ma-Chis Lower Creek Indian Tribe Enterprises, Inc. – TRANSKOM

- Satellite Tracking



Visionary Solutions

- Transportation carrier



Specialty Transportation, Inc.

CAST Specialty Transportation

- Transportation carrier

A National Project

An aerial photograph of the Waste Isolation Pilot Plant (WIPP) facility. The facility is situated in a vast, arid desert landscape with sparse green and brown vegetation. The central part of the image shows a complex of industrial buildings, parking lots, and infrastructure. To the left, there are several large, rectangular concrete structures, likely part of the waste disposal process. A prominent feature is a large, rectangular, dark-colored pool or reservoir in the foreground. The overall scene is a mix of natural desert terrain and man-made industrial structures.

WIPP is America's only deep geologic repository for the permanent disposal of defense-generated transuranic (TRU) radioactive waste left from research and production of nuclear weapons.

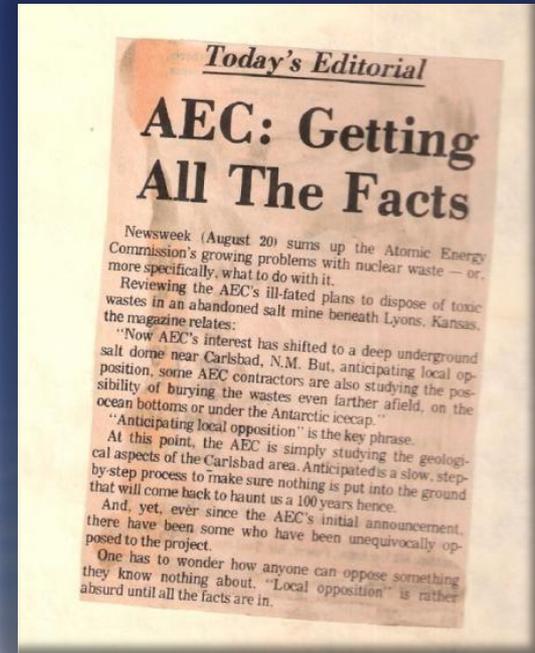
Cold War Legacy

- WIPP provides a crucial answer to the question of how to deal with the Cold War legacy of nuclear waste left in temporary storage at more than 20 nuclear weapons research and production sites across the country.
- WIPP is the best solution for the TRU waste from those locations.



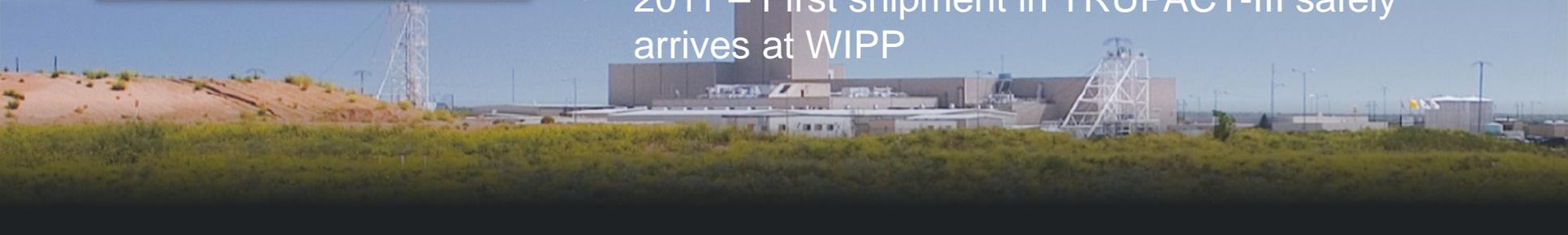
History

- 1957–The National Academy of Sciences recommends deep geologic disposal for radioactive waste
- 1968 – A demonstration, “Project Salt Vault,” is tested at a mine near Lyons, Kansas
- 1971 – State Senator Joe Gant Jr. contacts U.S. Congressman Harold Runnels and suggests that the Atomic Energy Commission take a look at Carlsbad’s salt beds
- 1979 – Congress authorizes WIPP as a research and development facility
- 1981 – The Department of Energy proceeds with construction of WIPP
- 1989 – The DOE completes repository construction



History

- 1992 – President Bush signs the WIPP Land Withdrawal Act. The act is amended in 1996.
- 1998 – The EPA certifies that WIPP meets all applicable regulations
- 1999 – The first shipment of TRU waste arrives at WIPP on March 26. The New Mexico Environment Department issues a hazardous waste facility permit in October
- 2005 – The final TRU waste shipment from Rocky Flats is received at WIPP
- 2007 – The first shipment of RH-TRU waste arrives at WIPP on January 23
- 2011 – First shipment in TRUPACT-III safely arrives at WIPP



TRU Waste

- Clothing, tools, rags, debris, residues and other items contaminated with man-made radioactive elements that are heavier than uranium



Contact-Handled (CH)

- Primarily emits alpha radiation (less penetrating) and can be handled under controlled conditions without any shielding beyond the container itself
- About 96 percent of waste to be disposed at WIPP



Remote-Handled (RH)

- Emits more penetrating radiation than CH-TRU
- Transported and handled in certified casks that provide additional shielding
 - Shielded Containers
- About four percent of waste to be disposed at WIPP

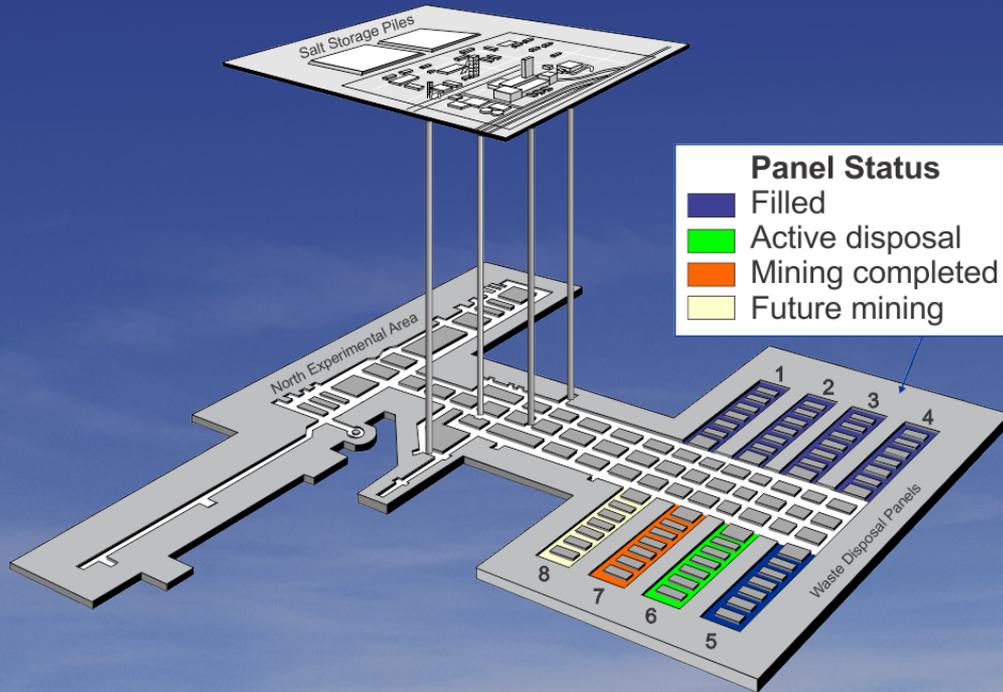


Characterization Resources

- CBFO coordinates all TRU program resources
- CBFO characterizes
 - All remote-handled waste
 - Most contact-handled waste
- Advanced Mixed Waste Treatment Project characterizes TRU waste and is supplemented by CBFO



Facility Status



- **Underground excavation began 30 years ago (1982)**
- **Safe operations began 14 years ago (1999)**
 - More than 167,000 waste containers underground



Total Shipments (as of June 2, 2013)

Contact Handled 10,662

Remote Handled 665

Total 11,327



Safest Shipping Containers on the Road

- Nuclear Regulatory Commission certified Type B Shipping Containers
 - TRUPACT-II
 - HalfPACT
 - RH-72B
 - TRUPACT-III
- Proven leak tight after rigorous testing
 - **30-foot drop**
 - **Puncture bar test**
 - **TRUPACT-II tested for 30 minutes in 1,475-degree jet fuel fire**



Shipments Tracked by Satellite

- Fully automated nationwide tracking to within 500 feet
- Five-minute updates
- States and tribes have access to password-protected Web site
- Drivers in constant communication with WIPP's Central Monitoring Room



Emergency Responders Trained Along Pre-approved Routes

- Since 1988, more than 32,000 first responders have been trained
 - Exercises
 - State, tribe and hospital personnel training
 - Outreach



Transportation Requirements

- Driver Requirements
- Bad Weather Protocols
- Safe Parking Protocols
- Training and Exercises
- Public Information
- Highway Routing



National Cleanup Status



Total number
TRU waste sites
cleaned up to
date:

22

Questions?

