



U.S. DEPARTMENT OF  
**ENERGY**

OFFICE OF  
ENVIRONMENTAL  
MANAGEMENT

# WASTE ISOLATION PILOT PLANT

September 26, 2024

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**Justin Marble**

DOE EM HQ NTP Office

Director

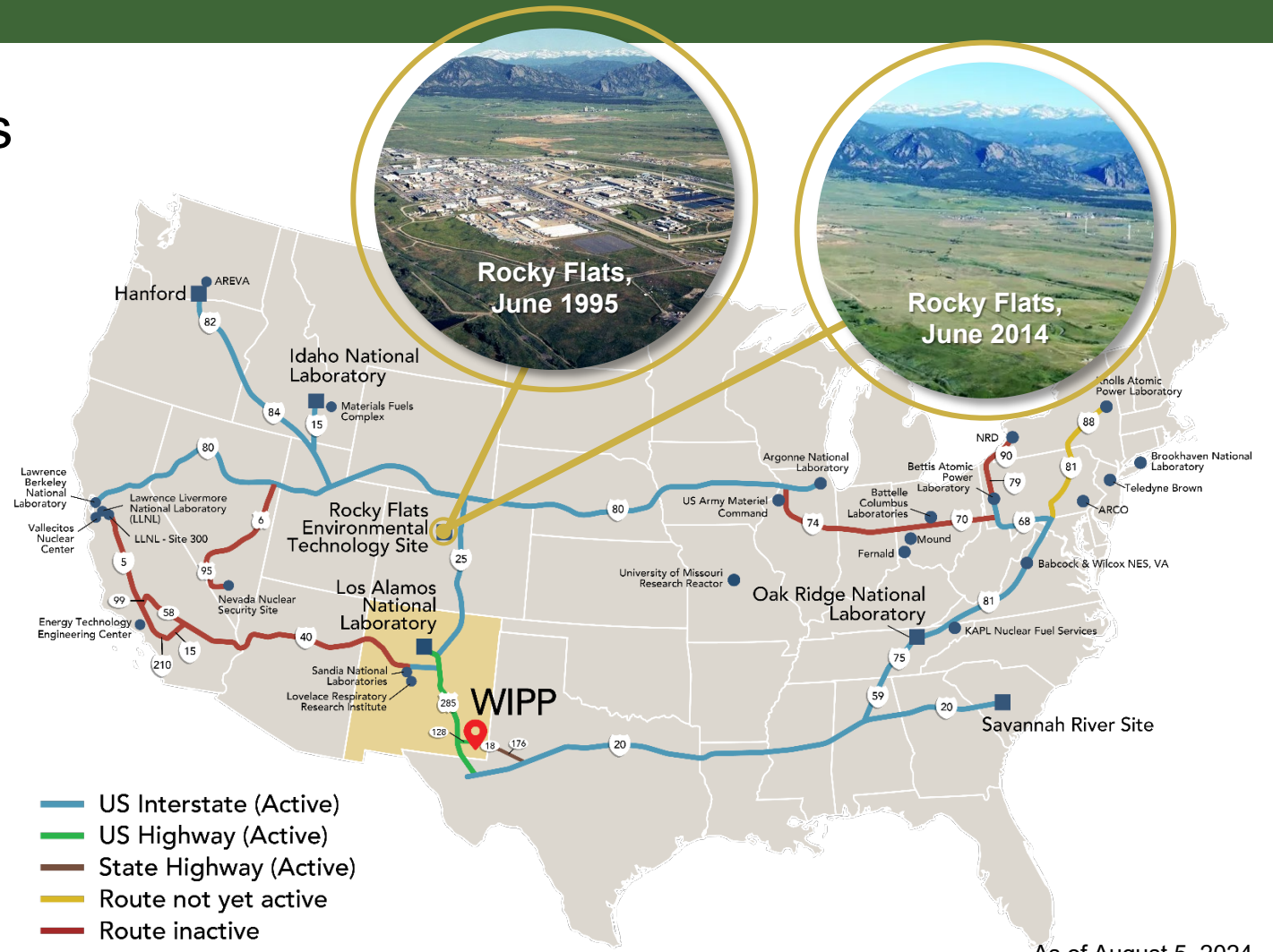
# Waste Isolation Pilot Plant

**Our mission is to provide safe and compliant characterization, transportation, and disposal of the United States' defense transuranic (TRU) waste while protecting workers, the public and the environment.**



# Mission Accomplishments

- **25** years since start of operations
- **22** sites completed TRU waste cleanup
- **14,089** total shipments received
- **16.8 million** loaded miles safely traveled



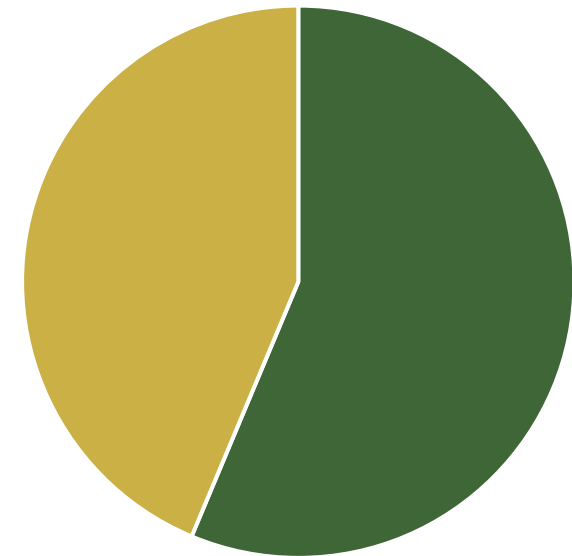
As of August 5, 2024

# WIPP TRU Waste Disposal

- WIPP Land Withdrawal Act (LWA)
- Defense generated transuranic
- Must meet WIPP Waste Acceptance Criteria
- WIPP transuranic waste capacity 6.2M ft<sup>3</sup>
  - Current volume capacity filled = 2.7M ft<sup>3</sup> (~44%)



WIPP transuranic waste capacity  
(cubic feet)



■ LWA remaining capacity

# One Team – Focused on Safety and Quality



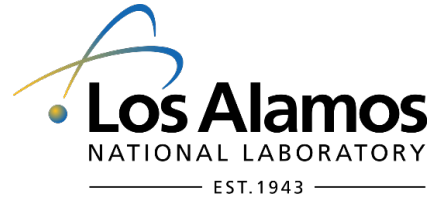
**U.S. Department of Energy  
Carlsbad Field Office**

- Leads the Transuranic Waste Program
- Science Program



**Salado Isolation Mining  
Contractors LLC**

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



**Los Alamos  
National Laboratory**

- Scientific advisor for waste characterization



**CCS-IC JV, LLC**

- TRANSCOM**
- Satellite Tracking



**Sandia National  
Laboratories**

- Scientific advisor for repository recertification



**CBFO Technical  
Assistance Contractor**

- Technical and Quality Assurance support for the Carlsbad Field Office



Specialty Transportation, Inc.

**CAST Specialty  
Transportation**

- Transportation carrier

# Update: Legacy TRU Waste Disposal Plan

- New Mexico Environment Department (NMED) issued the final Hazardous Waste Facility Permit effective on November 3, 2023.
- The following Permit condition was added:

## 4.2.1.5 Legacy TRU Waste Disposal Plan

The Permittees shall define legacy TRU and TRU mixed waste and develop the Legacy TRU Waste Disposal Plan (Plan). The Plan will be developed in consultation with the generator/storage sites and stakeholders. Consultation with stakeholders shall begin within 90 days of the effective date of this Permit. The Plan shall be submitted to the Secretary within one year of the effective date of this Permit. The Permittees shall seek public input for 60 days following the submittal of the Plan and submit received comments to the Secretary. To the extent practicable as articulated in the final Plan, Panel 12 will be reserved for the disposal of legacy TRU mixed waste.



# Consultations

## Stakeholder Consultations

November 15, 2023  
Stakeholder Consultation,  
in Santa Fe

December 13, 2023  
Stakeholder Consultation hybrid meeting,  
in Carlsbad, NM

March 2024  
Waste Management Symposium,  
in Phoenix, AZ

June 6, 2024  
National Transportation Stakeholder Forum,  
in Denver, CO.

July 17, 2024  
Energy Communities Alliance,  
in Washington D.C.

## Tribal Consultations

May 8, 2024  
State & Tribal Government Working Group  
meeting, in Santa Fe, NM.

Generator/Storage Site	Definition*/Date
Argonne National Laboratory	Not defined/present.
Hanford Site	All waste (retrieved, buried and/or generated) prior to June 2000 is legacy waste.
Lawrence Livermore National Laboratory	Not defined/present.
Oak Ridge National Laboratory	Waste generated prior to EM transition is referred to as “legacy” waste.
Savannah River Site National Laboratory	Waste characterized by the Central Characterization Program (CCP) prior to the 2014 WIPP event.
Los Alamos National Laboratory	Waste generated prior to October 1, 1999.
Idaho National Laboratory	Stored waste generated on/prior to October 1995.
National TRU Program User Group meeting in Albuquerque, NM	

*\* As defined by the generator sites this may or may not include future decommissioning and decontamination waste streams.*

# 2024 Waste Emplacement Goals

- Receive and emplace 450 waste shipments
- Minimum of 40 Los Alamos TRU shipments
- Carrier services increased to support up to 17 shipments per week



# 14,000 SHIPMENTS

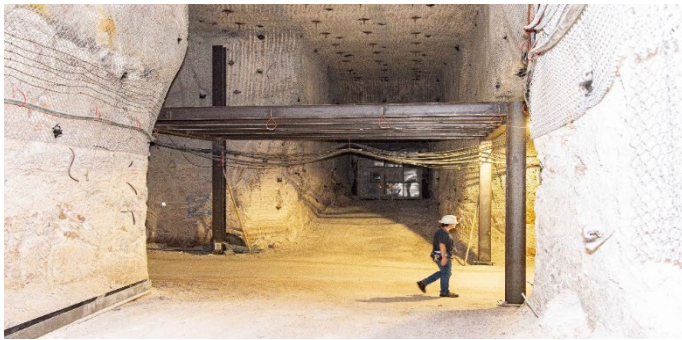
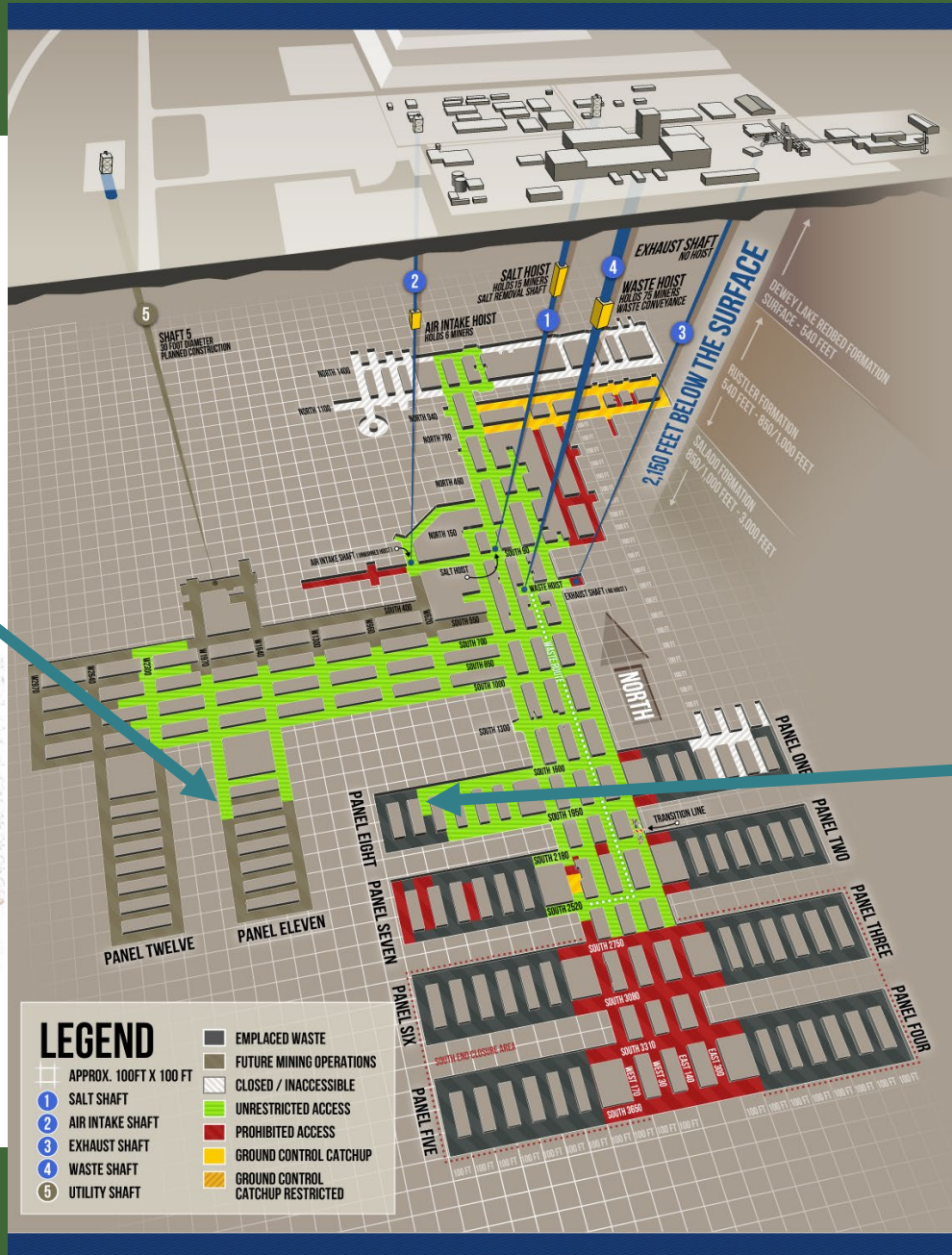
Since WIPP's opening. Achieved on June 14, 2024

Congratulations to our workforce for making New Mexico and America cleaner and safer.



# Operations

- Panel 11 mining began December 2023
- Reached Room 1 in April 2024
- Mining activities continue



Installation of new infrastructure for future Panel 11 emplacement



- Panel 8, Room 6 filled in April 2024
- Began Room 5 emplacement

# Infrastructure Investments

- Projects will:
  - Reduce maintenance down time
  - Improve operational efficiencies
  - Enhance worker safety
- Safety Significant Confinement Ventilation System (SSCVS)
  - New filter building
  - Salt reduction building
- New Utility Shaft
- Minor construction projects



# New Ventilation System

## SSCVS

Increasing airflow to the underground to **540,000 cubic feet per minute**.

## Progress

- Construction completed in late May
- Rigorous systems testing underway
- Finish commissioning and start the readiness review process by September 2024
- Overall commissioning is on pace for SSCVS to be operational in 2026



SSCVS final large ductwork installation

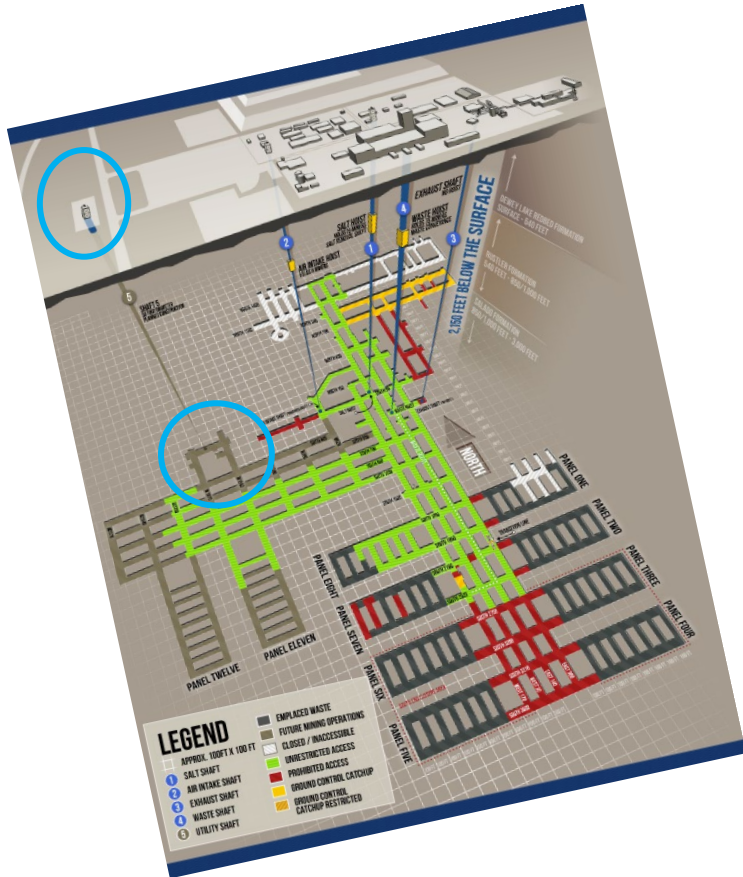
# New Utility Shaft and Plant Upgrade Projects

## New Utility Shaft Project

- Providing higher-capacity air intake for the underground in conjunction with new ventilation system
- Shaft sinking complete, linkage to existing mine system underway

## Other Plant Projects

- Salt pocket refurbishment project
- Hoisting maintenance and upgrades

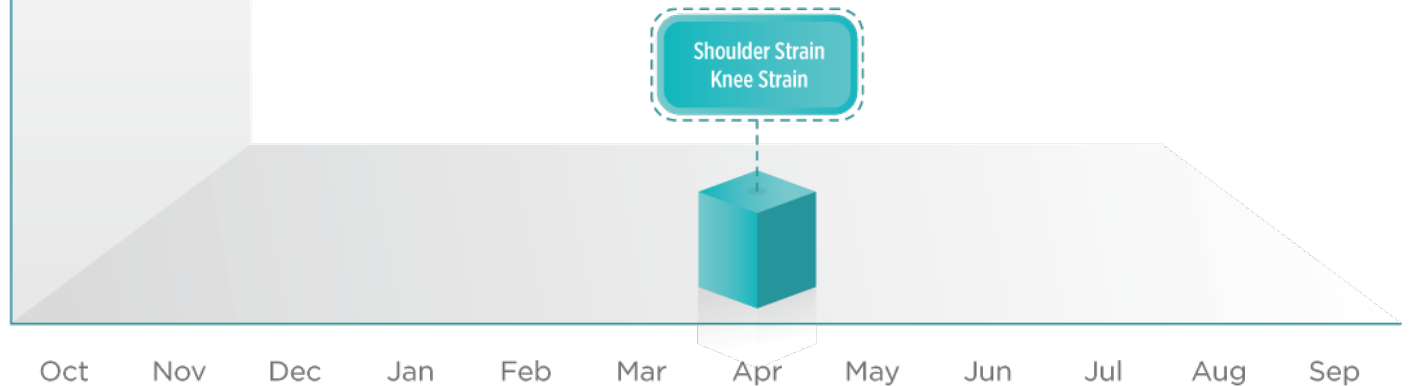


# Continued Focus on Worker Safety

- Our goal is to achieve and sustain zero accident and injuries
- Increased focus on preventing hand and slip/fall injuries
- Workshops providing workers' ownership in safety program
- Raising 'Conduct of Operations' awareness to ensure proper planning and communication for all work

## Fiscal Year 2024 **Safety Performance**

### **JOURNEY TO ZERO INJURIES**



# Regulatory Status

## NMED Successes

- **WIPP Permit Renewal in 2024**
  - 10-year renewal, approval of Panels 11 and 12
  - Prioritization of NM waste, transparency on the WIPP "big picture," enhanced notification and public engagement
- **Class 2 Permit Modification Request** for shielded containers and risk-based certification audits was approved by NMED on June 25.
- Unannounced WIPP site inspection in April found a single minor violation, earned praise for strong improvements in safety and housekeeping.

## Ongoing Actions for Panels 11 and Beyond

- Replacement Panels: Planned change request submitted to EPA in March for replacement Panels 11 and 12: responding to initial requests for additional information.
- Additional Panels: SA for Panels 13+ preliminary draft in internal review. Currently working on response to be shared with HQ.

# Union Labor Status

## United Steel Workers

~350 Employees

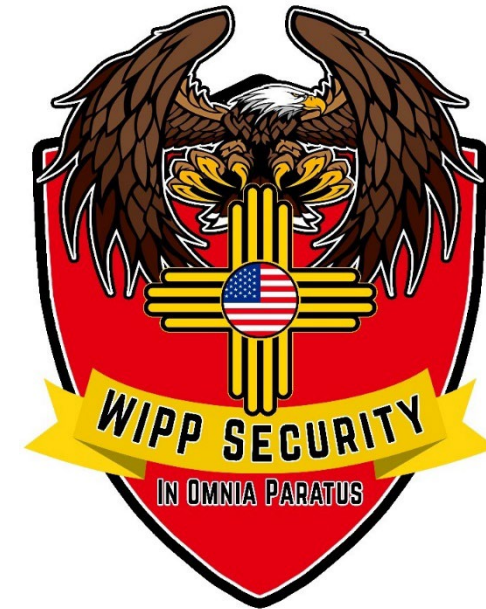
- Contract renewed in November 2023
- 4-year labor agreement
- Recent safety culture joint assessment with International Office and DOE-HQ
- Plans to support additional training by International Office through SENMC



## Guard Union of America

~20 Employees

- Contract renewed in December 2023
- 3-year contract



# Economic Impact on New Mexico

- **\$77 million** spent in subcontracts and procurements in 2023
- **\$6.3 billion** in project investment since WIPP began
- **1,700 jobs** in New Mexico





# Stakeholder Outreach

*We build trusted relationships through honest and transparent communication and active engagement with local communities.*



## 2024 progress

- Hosted first-ever DOE Regional Science Bowl
- WIPP 25<sup>th</sup> Anniversary
- Active in Carlsbad, Hobbs, Albuquerque chambers of commerce
- Continue to volunteer for United Way giving, and K-12 STEM events
- Received an award from Department of Development for 25 years of business
- Maintains stakeholder tour program



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# QUESTIONS?

