

# WIPP Strategic Plan Meeting

August 26 & 28, 2019

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

# Agenda

- Welcome - NWP President and Project Manager  
Bruce Covert
- Current WIPP Status -  
Bruce Covert
- Future WIPP Update -  
Acting CBFO Manager  
Kirk Lachman



# Current WIPP Status

## NWP President and Project Manager Bruce Covert



# Safety

- 1.3 million safe hours worked since last lost time injury
- Increased focus on heat stress & construction safety.
- Continue on the journey to excellence in safety via our Zone Safety Committees and Voluntary Protection Program STAR focus.
- Preparing for our annual exercise scheduled for September 11, 2019.
- Kicked off a Mine Safety Advisory Team with academia and mine Subject Matter Experts (SME)



# Recent Accomplishments

- Averaging 8 - 10 shipments/week
  - Total Shipments 12,555
  - FY19 – 278 shipments
  - Since restart – 661 shipments
- 406 Columns of waste emplaced – Target 515
- Awarded Utility Shaft contract
- Received Earned Value Management System certification
- Received our first battery/electric vehicle

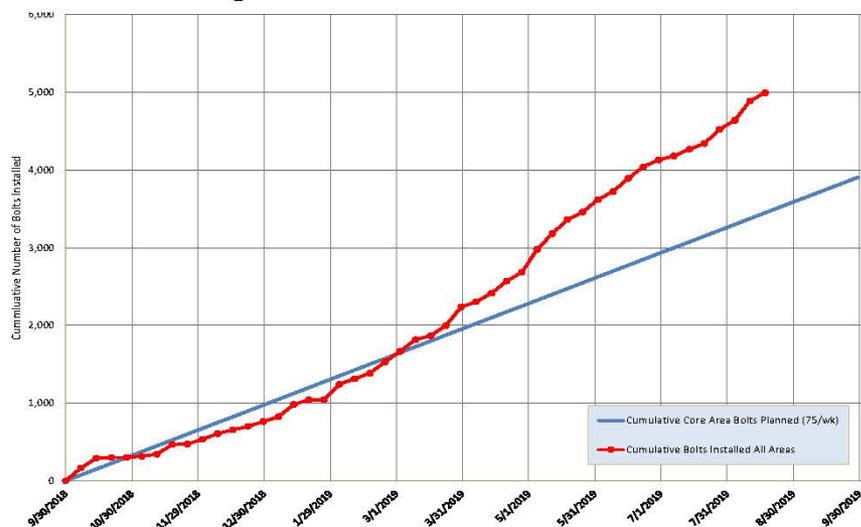


# Recent Accomplishments

- Mined over 58,000 tons of salt from Panel 8
- +5,000 bolts installed in FY19
- Received and assembling new continuous miner
- TRUPACT-III readiness progressing well
- Construction of south end closures complete



**Bolting Production Metric**



# Panel Closures

- Closures installed in main north-south drifts between S-2520 and S-2750 drifts
- Closes Panels 3, 4, 5 and 6
- Closures meet NMED and EPA requirements

Waste Isolation Pilot Plant  
Hazardous Waste Permit  
December 2018

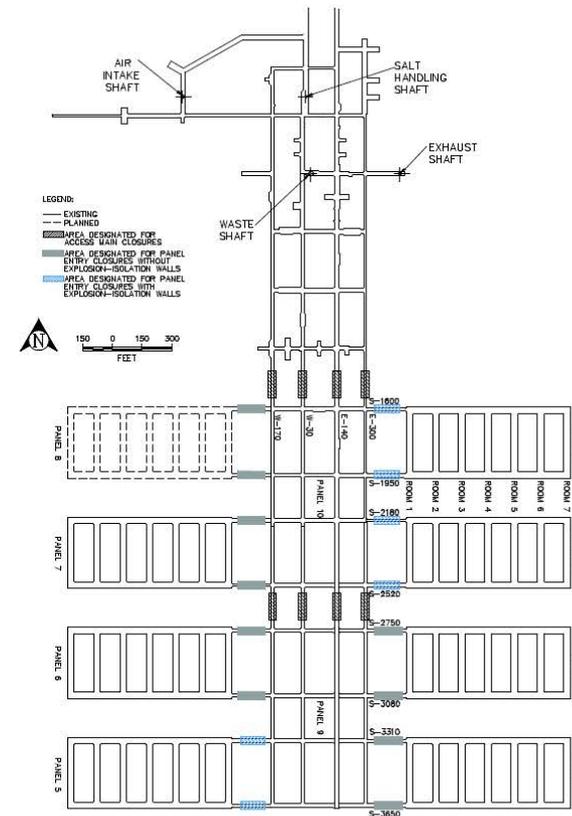
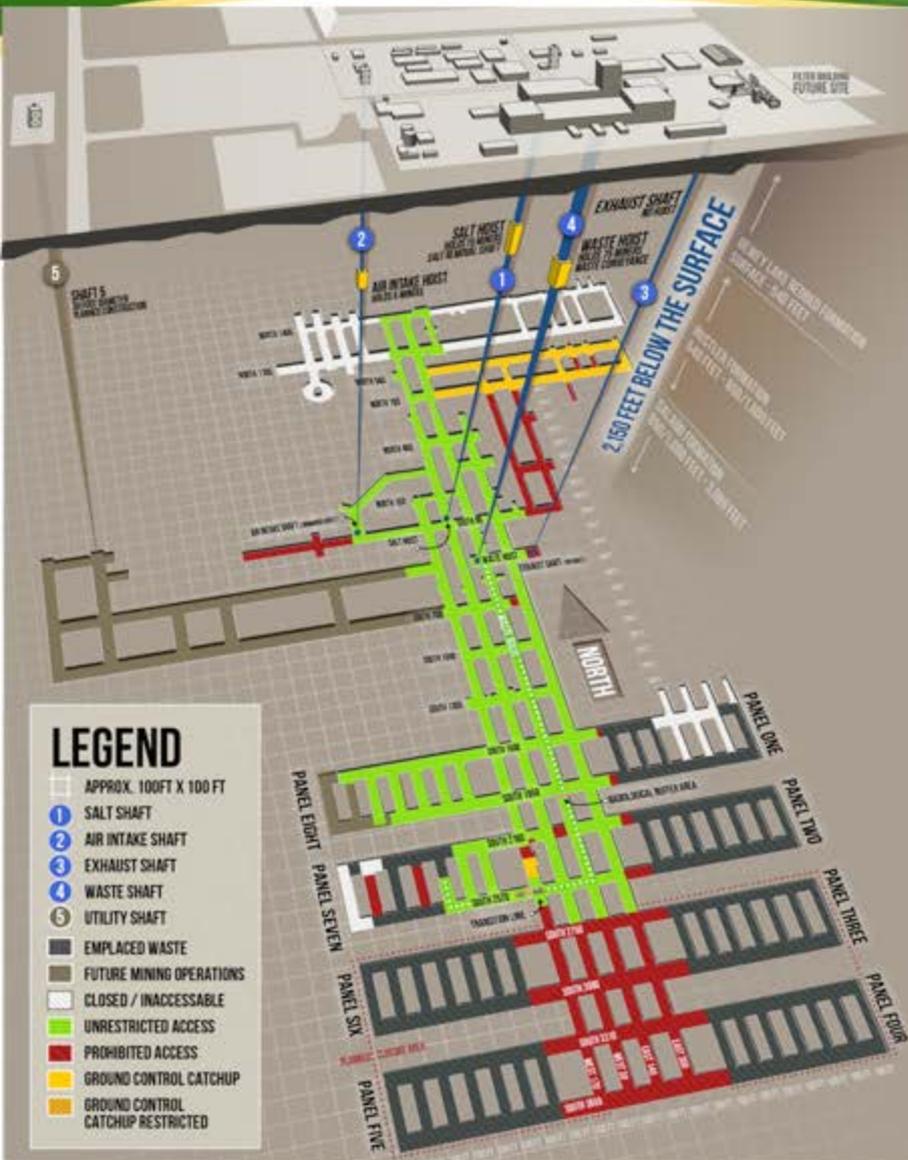


Figure G-1  
Location of Underground HWDUs and Anticipated WPC Locations

# Site Overview

## WASTE ISOLATION PILOT PLANT

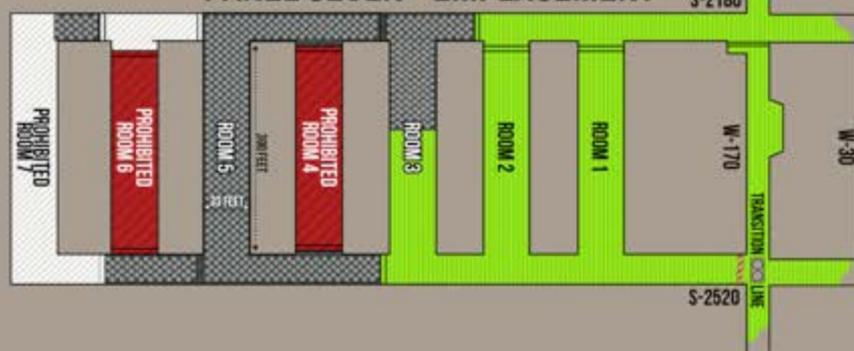
SERVING OUR NATION FOR FUTURE GENERATIONS. SAFELY DISPOSING THE NATION'S TRANSURANIC WASTE



### ENLARGEMENT OF PANEL EIGHT - MINING

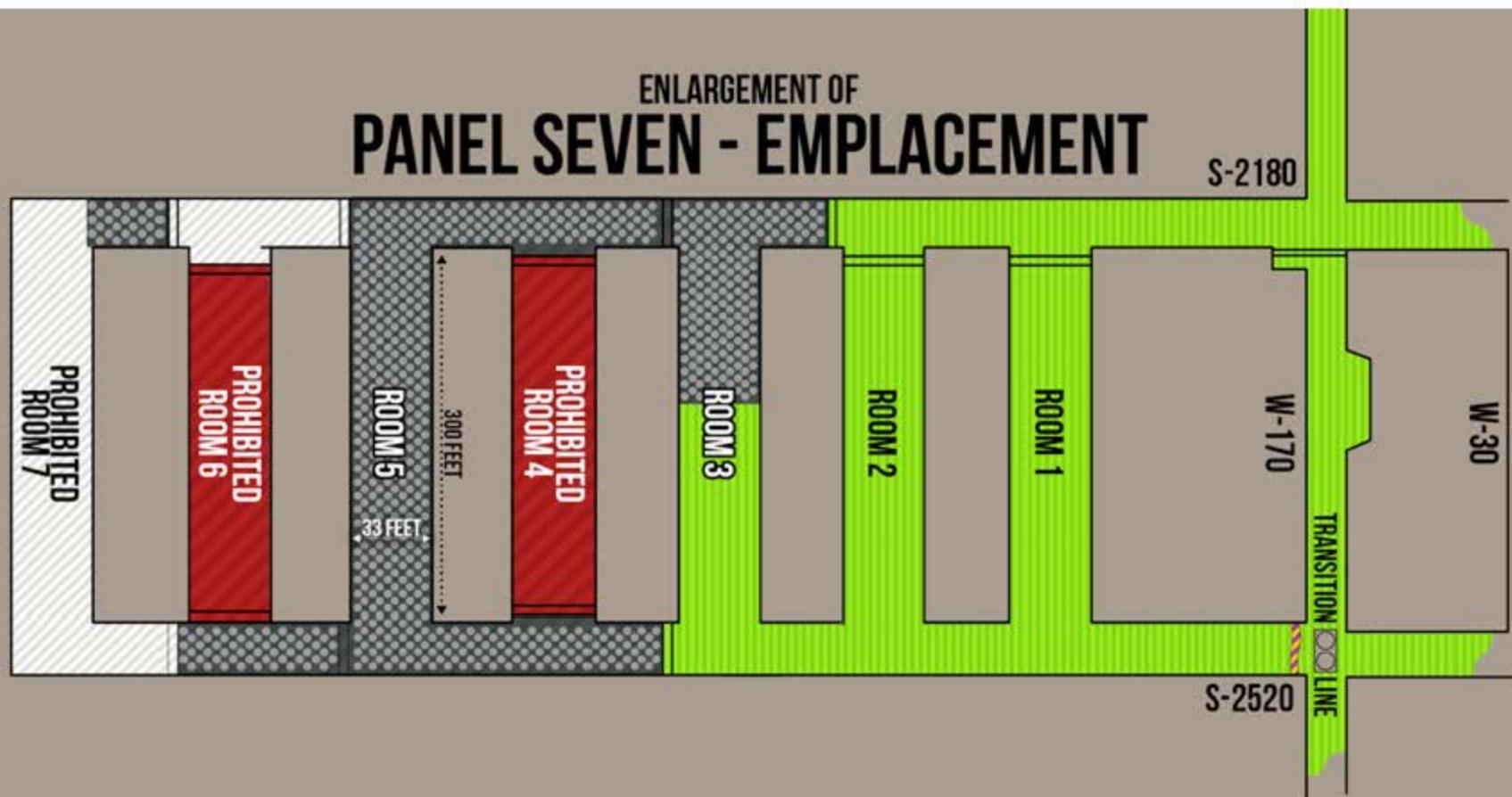


### ENLARGEMENT OF PANEL SEVEN - EMPLACEMENT



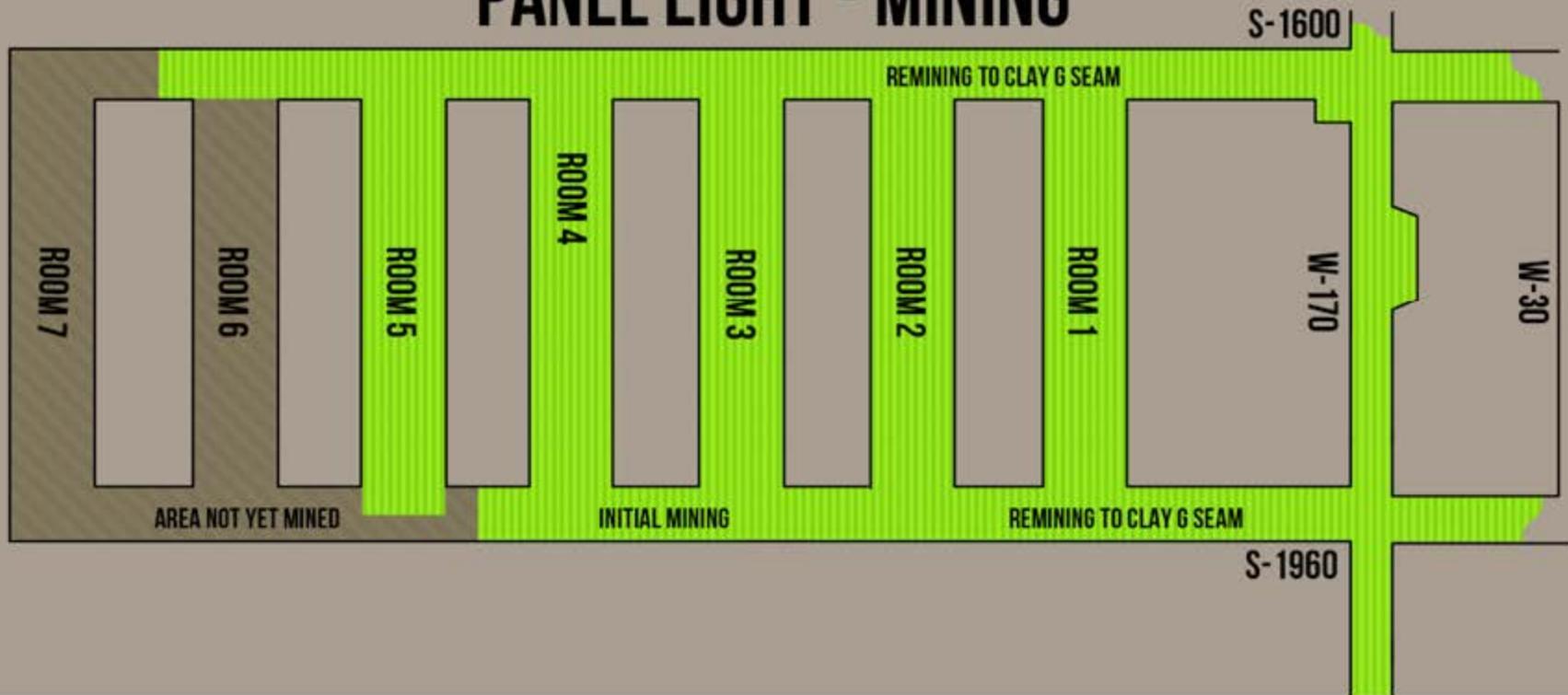
UPDATED: AUGUST 12, 2019

# Panel 7 Status



# Panel 8 Status

## ENLARGEMENT OF PANEL EIGHT - MINING





# Safety Significant Confinement Ventilation System North Access Road Bypass

Video

# Capital Projects Status

## • Safety Significant Confinement Ventilation System (SSCVS)

- The SSCVS Fabrication Assembly Building foundation slab has been poured.
- The subcontractor is making preparations for steel erection.
- The first filter housing has successfully passed formal housing and filter banks testing.
- Two diesel generators manufactured and delivered to New Mexico.
- The first De-duster components fabricated in Germany have been tested in Germany, and then sent to Grand Junction CO. The full scale testing is currently scheduled for September 17 in Grand Junction, CO.
- The Exhaust Fans are being fabricated in Pulaski Tennessee



# Capital Projects Status



# Capital Projects Status

## • Utility Shaft

- Installing utility duct bank from the site to the general shaft area.
- Final grading of the 22 acre section required for the Shaft and Drifts contractor has commenced and will be completed in August

## • North Access Road Bypass

- The cut and fill has been completed with about 80% of the road now covered in the geotextile material and the first course of stone.
- All the cattle crossings have been installed and the wing walls and concrete access and egress slabs are being formed.
- The City of Carlsbad has installed the water line valves and thrust blocks, which ensure the integrity of the City's water line and their agreement with DOE for providing an uninterrupted water supply.



# General Plant Projects

- Replacement air compressors
- Salt hoist repair
- Underground substation replacement
- Substations 1 & 3 Replacement
- Above Ground Airline Replacement
- WIPP Site Fire Loops Phases 1-4
- Central Monitoring Room Upgrades



# General Plant Projects

- Site Infrastructure Backbone Upgrade
- Lightning Array Upgrade
- Building 411/412 Safety Significant Fire Suppression Design
- Public Address System Upgrade Design
- Hybrid Bolter Purchase



# University Partnerships

## WIPP ON CAMPUS

- BROWN BAG SEMINARS
- CLASSROOM SESSIONS



## WORKFORCE DEVELOPMENT

- SAFETY CLASSES FOR NWP AND INDUSTRY (SAFETYFEST)
- SKILLS DEVELOPMENT



## STRATEGIC UNIVERSITY PARTNERSHIPS

## EXPERTS PANEL

- PERIODIC REVIEWS
- RECOMMENDATIONS REGARDING: GROUND CONTROL & MINE DESIGN



## LEADERSHIP DEVELOPMENT

- EXECUTIVE FORUMS
- FRONTLINE MANAGER TRAINING
- 19 CADRES OF THE LEADERSHIP ACADEMY



## INTERNSHIPS

• 15-20 INTERNS EACH SUMMER



# Community Commitment Plan

- Several Projects with the City of Carlsbad
  - New pavilion at the beach
  - 5<sup>th</sup> Street Park rehabilitation
  - Working on shade covers for various parks
  - Planning for a first responder thank you event in the Fall
- \$200,000 in Economic Development Funding
- \$20,000 in Local Scholarships
- \$19,500 in Teacher Mini Grants
- More than \$75,000 in Community Grants
- 18,400 pounds of Food Bank Donations
- 6000 Volunteer Hours



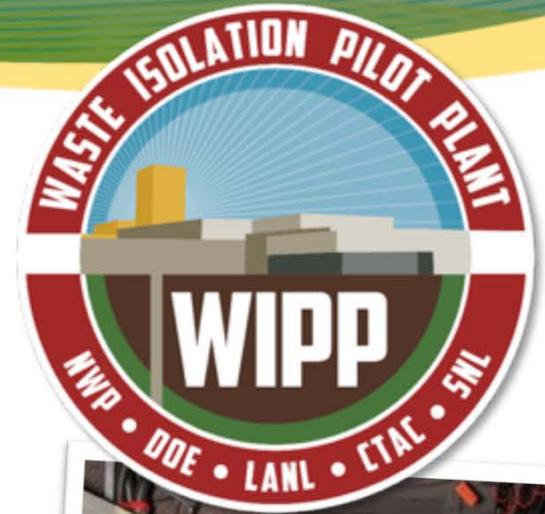
# CBFO Future Update

## Acting Manager Kirk Lachman



U.S. DEPARTMENT OF  
**ENERGY**

- **CBFO Changes**
  - Todd Shrader now Principal Deputy Assistant Secretary for Environmental Management (EM-2)
  - Kirk Lachman named Acting Manager of CBFO
- **2020 President's budget**
  - \$398 million request shows continued strong support for WIPP
  - Congressional committees/delegation provide strong support for WIPP as well as local officials and state delegation
- **Working with our Regulators and Engaging our Stakeholders**
  - Continuing to build on our good working relationship with the New Mexico Department of the Environment, the US Environmental Protection Agency, and Nuclear Regulatory Commission
    - Regularly meet with the Mine Safety and Health Administration as well
  - Increasing stakeholder engagement by holding public meetings
    - Meetings announcements in English and Spanish
    - Translator on hand at Permit meetings
    - Additional meetings – more than regulatory requirements



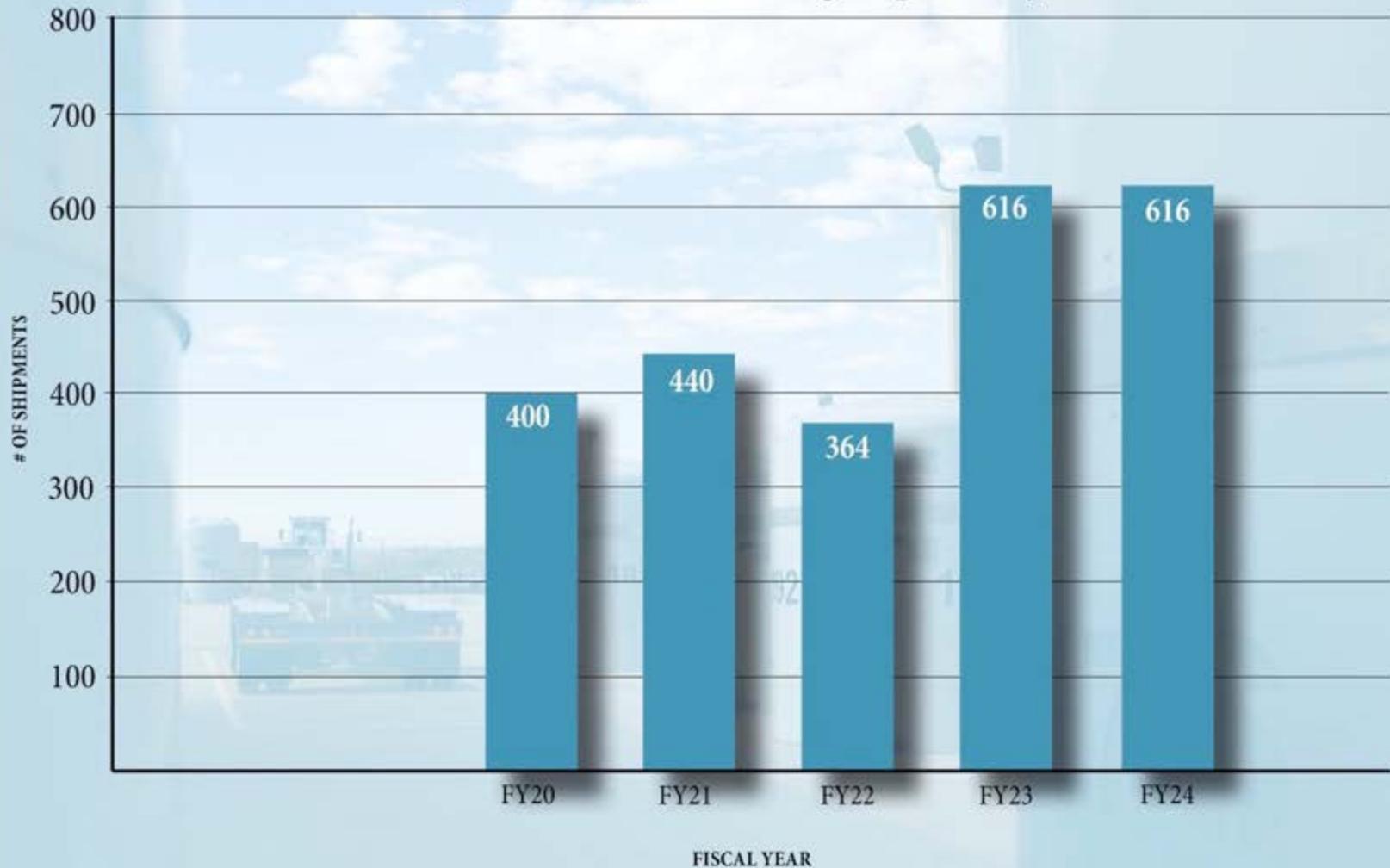
# Modernization

- WIPP must implement modern technologies to improve performance
- There are opportunities for modernization at WIPP in both the underground and the surface facilities
  - Challenged NWP to create a modernization plan to implement new technologies at WIPP
    - Semi-autonomous vehicles/autonomous vehicles with sensor suites for monitoring ground control performance, air quality, etc.
      - Potential for machine learning on rockbolt status was demonstrated by Sandia National Laboratories earlier this year
    - Virtual Reality of the Underground and Surface facilities for stakeholder engagement as well as training opportunities
    - Opportunities for automation of repetitive tasks
- Mine Safety Advisory Team
  - NWP has moved forward and engaged a team of world-class experts from academia and industry to provide valuable insight and advice
    - Modern mining practices
    - Technical advice



# Potential Shipments by Fiscal Year

**SHIPMENT PLANNING ASSUMPTION**  
(FY19 - FY24, For Planning Purposes only)



# Upcoming Permit Modification Requests

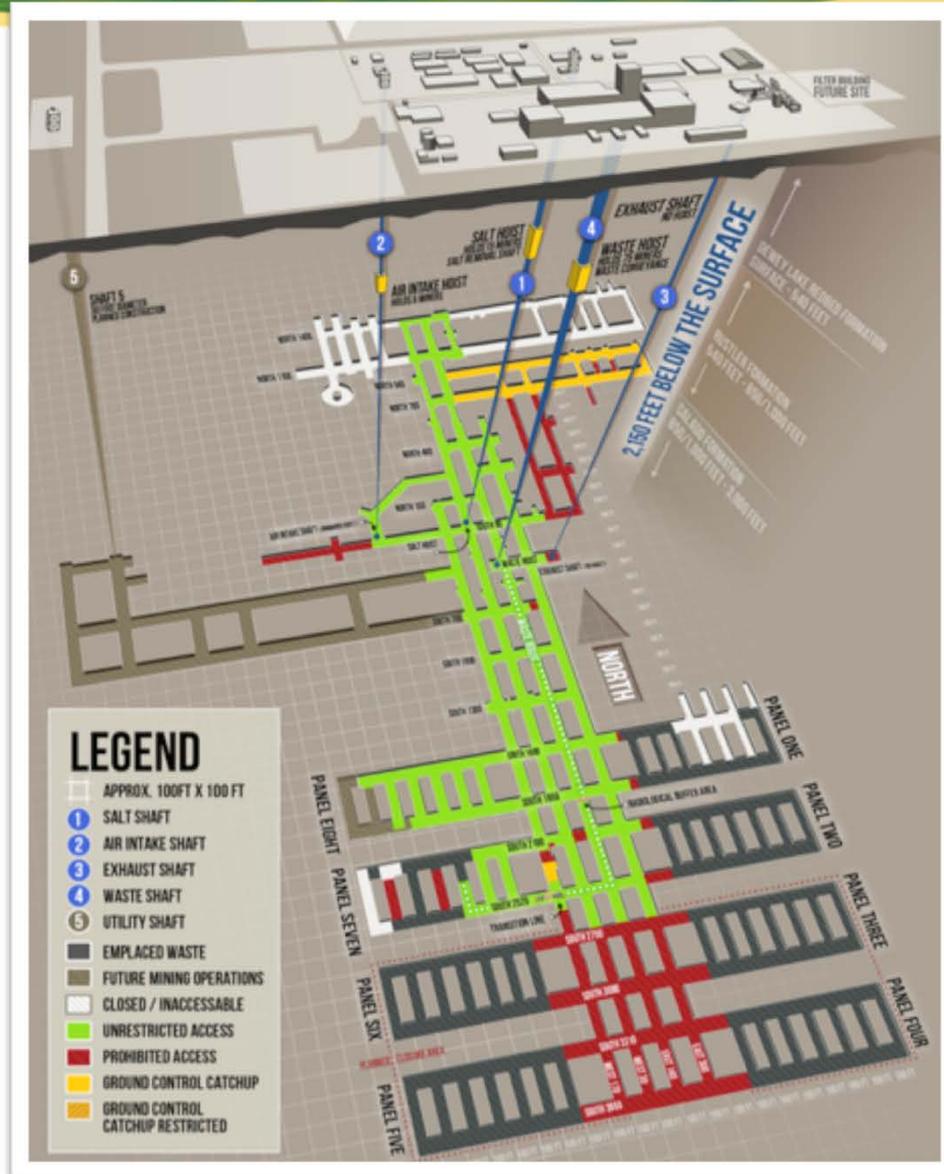
- Planning to submit the following Permit Modification Requests and 10 year Permit Renewal Application over the next few years
  - Excavation of New Shaft and Associated Connecting Drifts – Submitted August 2019
  - Removal of Deteriorating/Non-Essential Water Level Monitoring Program Wells
  - Ten Year Permit Renewal Application
  - Additional Panels
  - New Shielded Containers



Salt dust fills the air during roof bolting in the WIPP underground

# Repository Plans

- Additional panels are needed to complete the cleanup mission and support the national security mission.
- Panel Status
  - Panel 7 will be filled by mid to late 2021
  - Panel 8 coming on line in mid to late 2021
  - What happened to panels 9 & 10?
  - Panel 11 and beyond



# Underground Safety

- CBFO and NWP are focused on implementing measures to improving air quality for the underground workers during this time when the underground ventilation flow rate is limited
  - Continuing to research use of battery-electric vehicles and moving to Tier IV final (low-emissions) diesel powered equipment in the underground
  - Deploying multiple workplace enhancements to help with air quality
  - Fleet size of battery-electric and low emissions diesel-operated equipment will be increased to improve air quality and modernize mining and ground control capability over time.

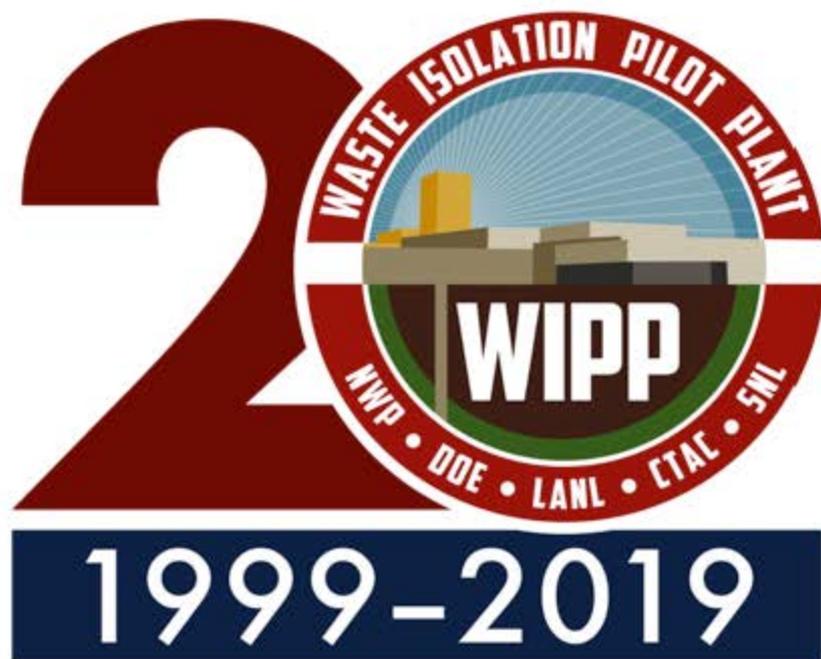


# Stakeholder Engagement

- The missions of the WIPP and the NTP remain vital to the Nation and to the overall success of the DOE-EM's cleanup effort. Public understanding of the missions of the WIPP and the NTP is a critical element to both continued operations and public awareness.
- As WIPP explores lifecycle planning to 2050 and the continued acceptance of TRU waste, appropriate public involvement and stakeholder outreach practices must continue throughout the 5-year strategic planning cycle and beyond.



- WIPP has made significant progress recently thanks to our workforce and strong financial support
- We are continuing to move forward in order to complete our important mission
- We are improving our outreach and stakeholder interactions
- We are looking for ways to modernize WIPP



Comments regarding this draft may be directed to

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Comments must be received by September 30, 2019

# Questions?