



U.S. DEPARTMENT OF
ENERGY

OFFICE OF
**ENVIRONMENTAL
MANAGEMENT**

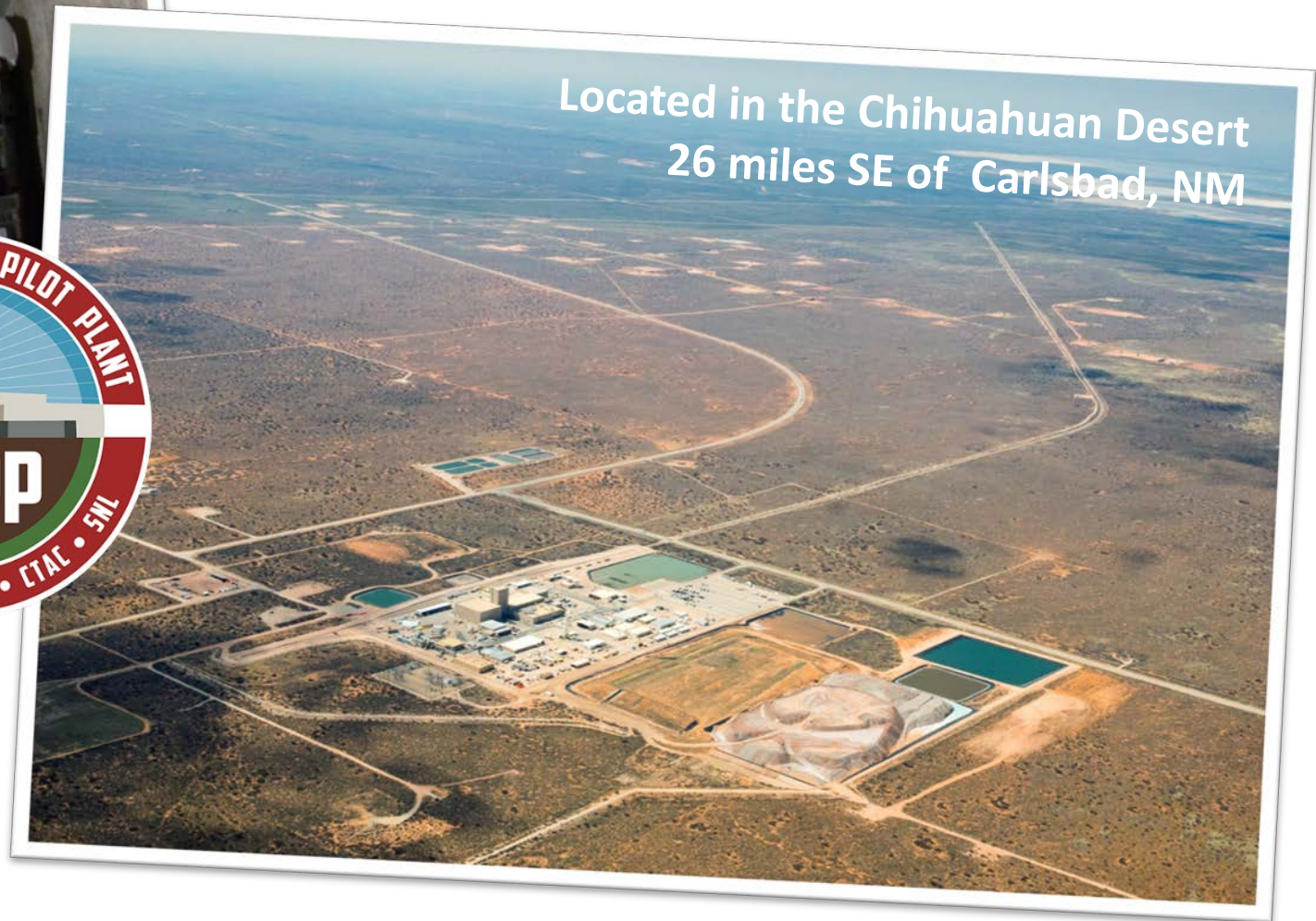
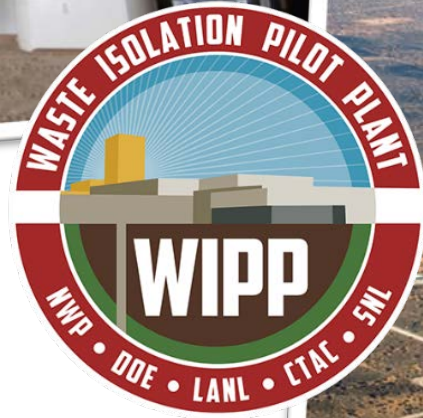
National Governors Association Federal Facilities Task Force

Waste Isolation Pilot Plant

January 2021

Reinhard Knerr
Manager, DOE Carlsbad Field Office

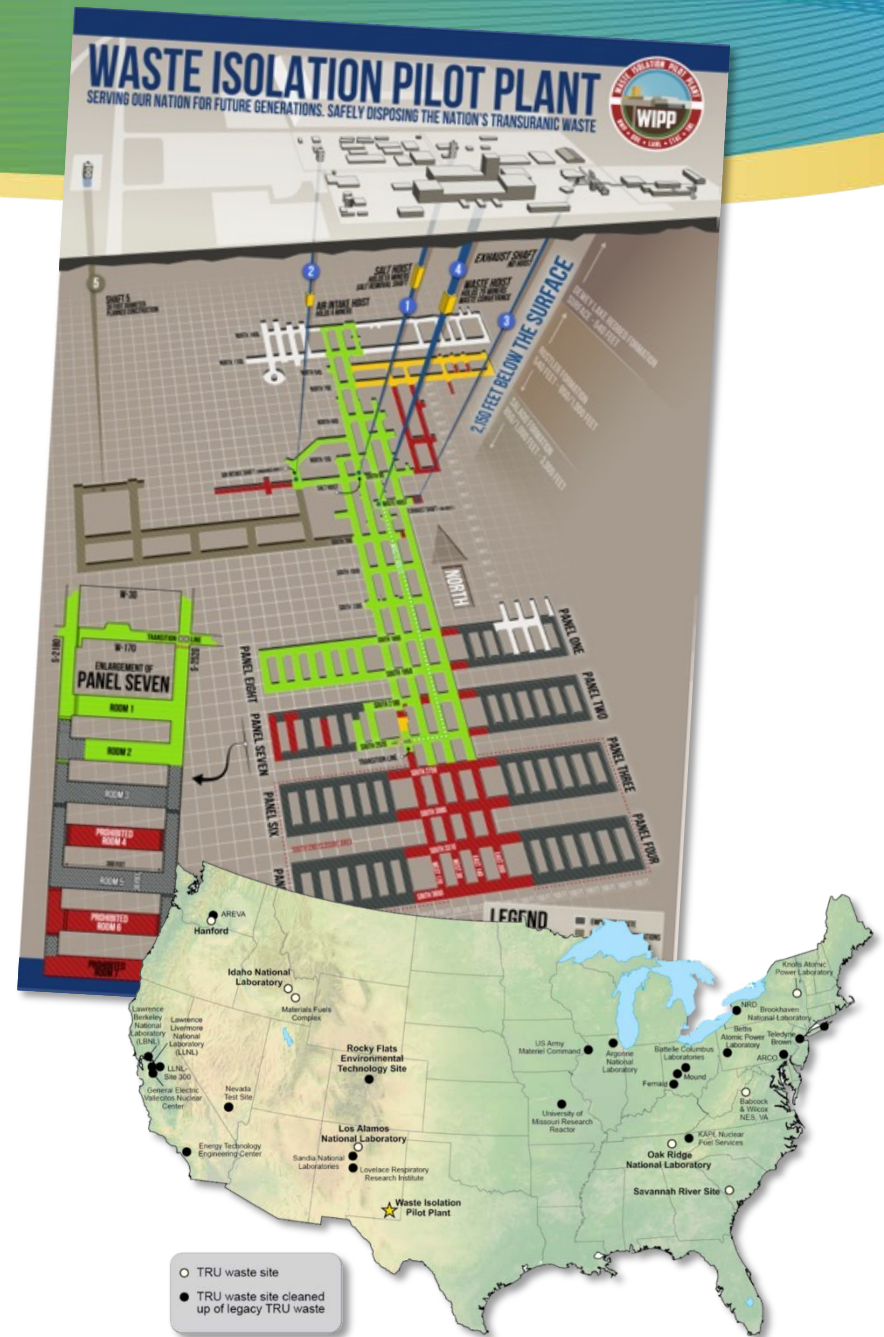
WIPP is a National Solution



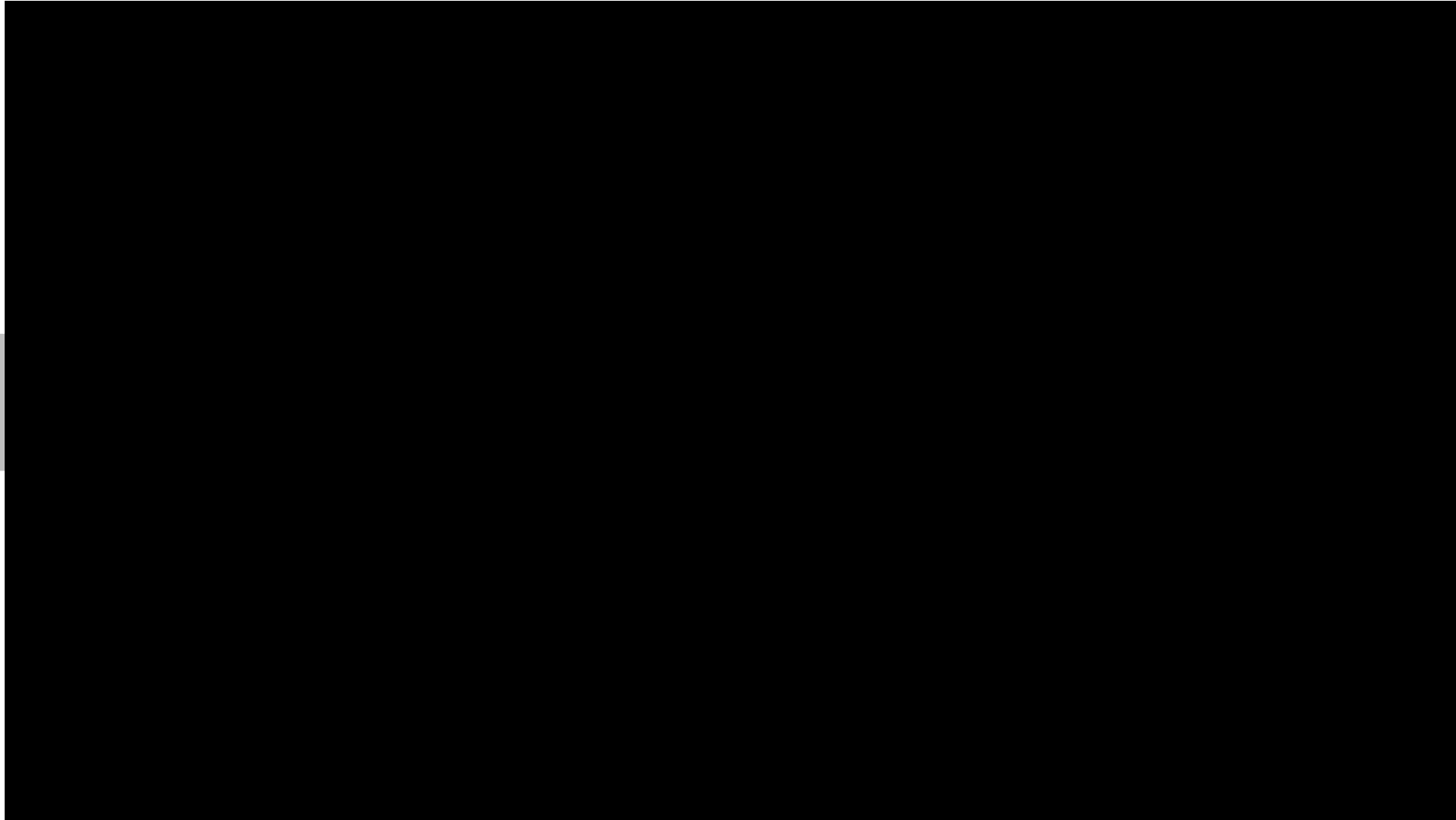
WIPP is America's only deep geologic repository for the permanent disposal of defense-generated transuranic (TRU) radioactive waste left from research and production of nuclear weapons.

WIPP's Critical Mission

- WIPP opened in 1999 and has now operated for more than 20 years
- Enabled clean up of 22 legacy TRU waste sites throughout the U.S.
- Remains a cornerstone of DOE's ongoing cleanup efforts
- Is planned to operate for at least 30 more years
- recapitalization and critical infrastructure upgrades are underway



2020 Accomplishments Video



Click the mouse
to play the video

- Covid Protective Measures
- 700-C fan restart
- Complete Panel 8 mining
- Continue progress toward filling Panel 7
- Increase waste shipments
- Continuation of SSCVS construction
- Resume work on Utility Shaft
- Continue infrastructure upgrades



Utility shaft headframe and Galloway work platform.

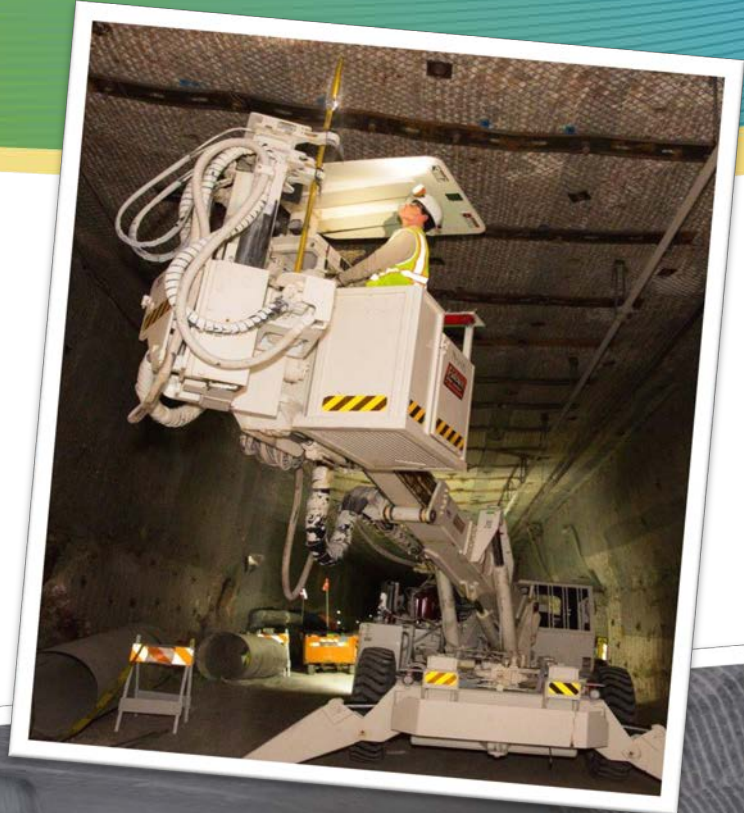
700-C Ventilation Fan Start Up



- To provide much needed increased airflow to the WIPP underground, WIPP plans to restart one of its legacy exhaust fans, the 700-C fan (pictured)
- The fan will exhaust unfiltered air from the WIPP underground.
- Portions of the underground which have very low levels of contamination will be ventilated by the fan directly to atmosphere.
- WIPP has conducted thorough investigations to ensure any radiological release caused by operating the fan will be well below regulatory guidelines and poses no threat to the workforce, the public or the environment.
- Initial testing of the fan is expected to be conducted in the later part of this year.

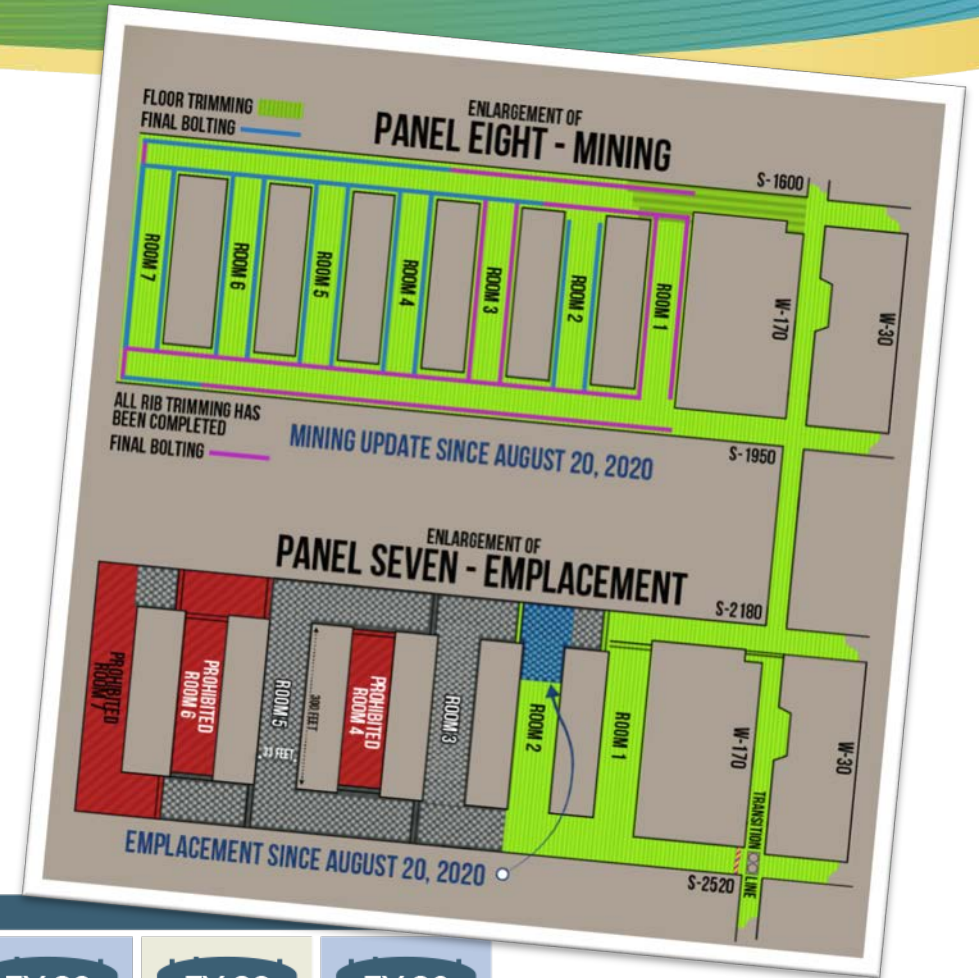
Benefits of Restarting 700-C

- Increases airflow for mining & ground control activities, and improves overall operational efficiencies.
- Improves worker health and safety.
 - Improves overall air quality by exhausting diesel emissions more efficiently
 - Allows WIPP to meet compliance with the new more restrictive air quality standards
 - Reduces potential for heat stress by more effectively removing heat produced by the operating equipment in the underground



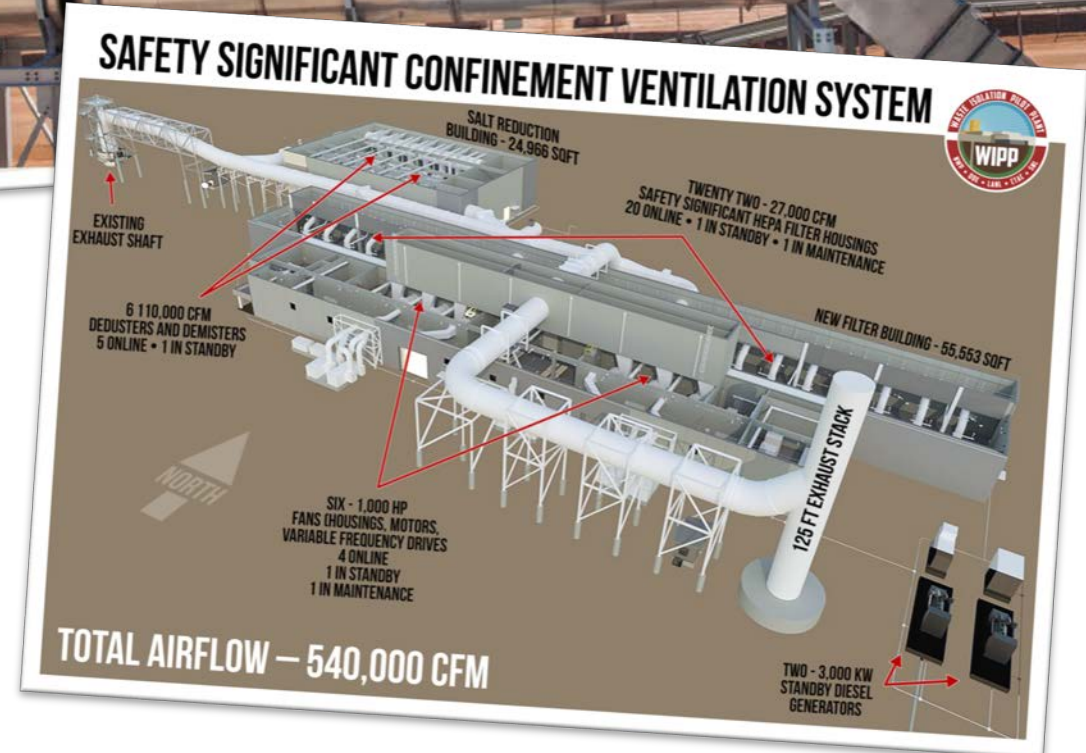
Mining & Waste Emplacement

- Rough Cut and Final Rib Mining in Panel 8 is Complete
- Floor Trimming is scheduled to be complete in May 2021
- Outfitting and Certification of Panel 8 is scheduled to be completed by January 2022
- Emplacement in Panel 7 projected to be complete by April 2022



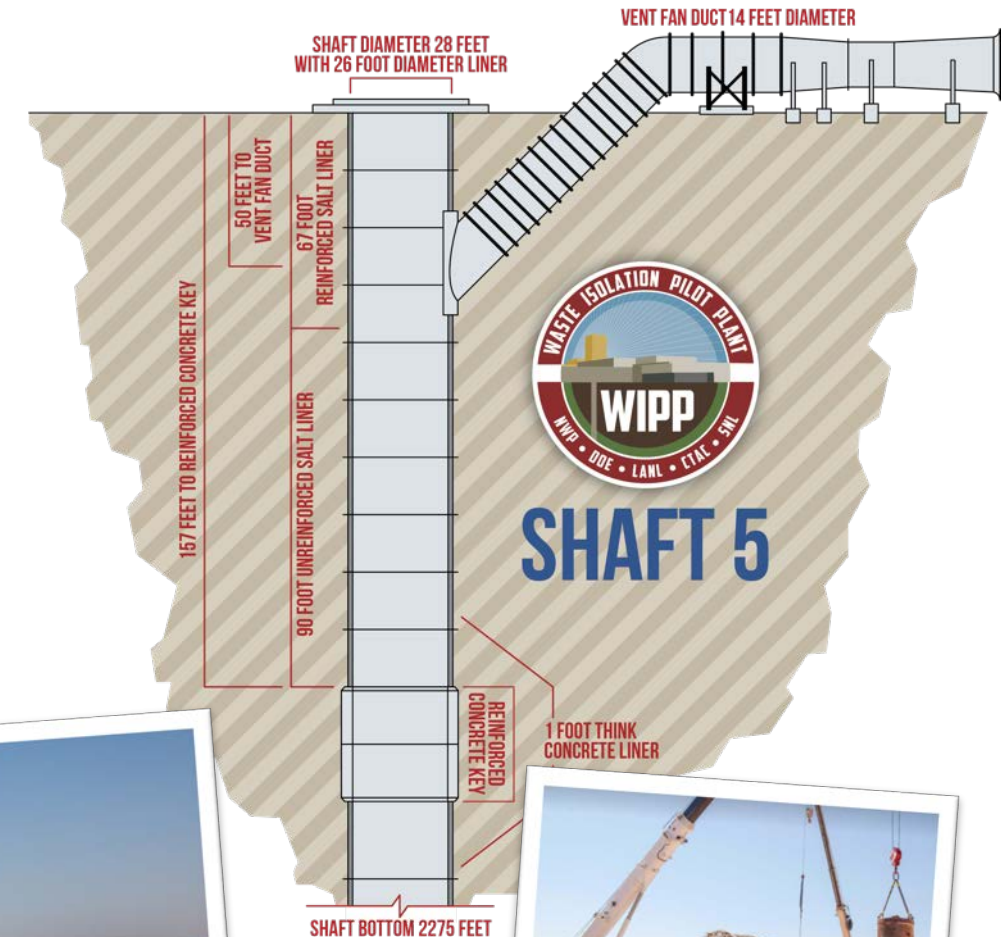
Safety Significant Confinement Ventilation System (SSCVS)

- Underground utilities installed
- Fabrication building completed
- Support trailer complex completed
- We are currently starting to receive long lead items
- Resuming pouring of slab walls



Utility Shaft Project

- Temporary Authorization issued by NMED, allowing work to begin in April 2020
- Excavation to 116 feet, awaiting construction of headframe and completion of Galloway multi-level work platform
 - Project currently in a holding pattern pending regulatory approval.
- \$197M of scope (includes adjoining drifts)
- Joint venture (Harrison Western-Shaft Sinkers)
- 2,275 feet deep
- 30-foot diameter shaft (26-foot diameter after liner)
- Construction underway





Numerous General Plant Projects (GPP) are underway to upgrade WIPP infrastructure and plant systems

- Original design – plant expected to operate for 30 - 35 years beginning in late 1980's so many systems are near end of planned service life
- WIPP needs to remain open longer to accommodate current mission; modernization is needed

Completed in FY20

- Plant Air Systems
- Lightning Array System Upgrade



Completed in FY21

- Central Monitoring Room Improvements

Targeted Completion in FY21

- Fire Water Loop Recapitalization
- Safety Significant Fire Suppression System Construction (Waste Handling building 411 Fire System)
- Design and Fabricate Surface Electrical Substation Replacements (1&3)
- Underground Substation & Transformer Replacements
- Design Authority Waste/Salt Hoist Controllers Upgrade



Construction of the new Fire Water Tanks for the Fire Water Loop System

Targeted Near Term Completions

- Design and Fabricate Electrical Substations 2, 4 & 6
- Public Address System Recapitalization
- Design and Construct New Changeroom Facility

Longer Term Initiatives FY22 and beyond*

- Install Surface Electrical Substations
- Waste/Salt Hoist Controllers Upgrade
- Site Network Infrastructure Upgrade / I.T. Strategic Plan
- Repurpose SSCVS Fabrication Building to Environmentally controlled warehouse
- New Site Office Building
- TRU waste handling Pull Through Facility

* Targeted for acceleration due to SSCVS delay





Questions?