

WASTE ISOLATION PILOT PLANT (WIPP)

“WIPP continues to make history every day that we are in operation, supporting our nation’s critical defense mission by permanently disposing of defense transuranic waste. We continued to improve WIPP’s infrastructure in 2022, ensuring that we can safely continue our mission for decades to come. WIPP employees are among the best of the best, and I’m proud to lead this team.”

– Reinhard Knerr, Manager, Carlsbad Field Office

HIGHLIGHTS

- Received 235 transuranic waste shipments from five generator sites.
- **Completed 50 percent of the West Access Drift mining—an EM 2022 priority.**
- Reached a depth of more than 700 feet for the new Utility Shaft towards the targeted depth of 2,275 feet.
- Completed more than 60 percent of the new permanent ventilation system project.
- Received Nuclear Regulatory Commission approval for shielded container designs.
- Increased stakeholder engagement activities in northern New Mexico.

PROGRESS ON MULTIPLE FRONTS

Workers at WIPP continued making progress on a number of projects in 2022, led by the Safety Significant Confinement Ventilation System (SSCVS).



A worker inside the 14-foot ductwork of the SSCVS Project's Salt Reduction Building.



The shadows of construction employees are visible as they look down the new Utility Shaft, which will be the largest diameter shaft at WIPP when completed.

The SSCVS will be the largest containment fan system in the DOE complex and will significantly increase airflow underground, enabling increased waste emplacement and facility mining operations.

The skyline for the SSCVS Project's New Filter Building, where 1,000-horsepower fans will pull air through HEPA filtration, changed dramatically in 2022 with the construction of the building's walls.

Changes to the interior of the SSCVS Project's Salt Reduction Building could also be seen as the structure was outfitted with electrical, fire protection and utility systems. Construction crews also initiated the installation of several major systems, including salt reduction units, de-misters, de-dusters, and booster fans.

Progress also continued on another key project, the new Utility Shaft, which will serve as the massive air intake for the new ventilation system. Excavation of the shaft has now surpassed 700 feet of its projected 2,275-foot depth. It will be WIPP's largest shaft at 26 feet in finished diameter.

PREPARING FOR FUTURE WASTE EMPLACEMENT

As Panel 7 neared capacity, crews outfitted Panel 8 with power, communications, and air monitors. Panel 7 was officially filled in October. Now that Panel 7 has been sealed, waste emplacement has begun in Panel 8 and can move at a faster pace since workers are no longer required to wear respirators and protective clothing due to contamination issues. Mining at WIPP is timed so that a disposal panel is only ready when it is needed. This is because the natural movement of salt causes mined openings to close at a rate of two to four inches yearly. This closure is attributed to salt rock movement, which eventually permanently encapsulates the waste.



Waste handlers in WIPP's Panel 7 use a push-pull device on a forklift to lift and slide a container into place.



Mining activities continue in the WIPP underground as new pathways are mined toward the west.

MINING TO THE WEST

After completing mining activities in Panel 8, workers turned west to begin cutting access drifts (called the West Mains) for the new Utility Shaft and possible future waste disposal panels. WIPP mining crews were running at a rapid pace, grinding out a record 4,823 tons of salt in a single week in the West Mains area. Since work began on the West Mains project, crews have mined more than 79,000 tons of salt.

UPGRADING AGING INFRASTRUCTURE

WIPP's aging infrastructure continues to receive a massive upgrade, ensuring the facility can continue to operate safely and compliantly over the next several decades. The Central Monitoring Room, which is the brain for all WIPP operational systems, received a major upgrade. Phases 1 and 2 of the fire loop system were completed and tied into the new Utility Shaft. Once completed, the system will provide another reliable water supply that will ensure the safety of the workforce should a fire break out. Additionally, the replacement of a critical underground electrical substation provides much needed electricity to power underground mining machines, fabrication workshops, and numerous booster fans.