Waste Isolation Pilot Plant Restart of 700-C Fan

April 15, 2021

700-C Ventilation Fan 4-hour Test Results

- On January 31, 2021, WIPP ran the 700-C legacy ventilation fan for an initial 4-hour test.
- The test included a comprehensive sampling strategy to detect and measure any radiological emissions.
- Emissions were well below all DOE and EPA regulatory limits, as predicted:
- Four-hour test data indicates that routine operation of the 700-C fan would result in annual exposures **5,000 times less than the EPA limit of 10 millirem.**

Why Restart the 700-C Ventilation Fan?

- To provide increased airflow to the WIPP underground, WIPP plans to restart one of its legacy unfiltered exhaust fans, the 700-C fan (pictured).
- WIPP conducted thorough investigations prior to initial testing of the fan to ensure any radiological emissions caused by operating the fan would be well below regulatory guidelines.
- Sampling data collected during testing was analyzed to confirm that routine operations of the fan will not result in any adverse risk to the workforce, the public or the environment.

Benefits of Restarting 700-C

- Supports worker health and safety.
  - Improves overall air quality by exhausting diesel emissions more efficiently.
  - Interim measures will help WIPP to more easily meet new air quality standards.
  - Reduces potential for heat stress by more effectively removing heat produced by the operating equipment in the underground.
- Increases airflow for mining & ground control activities and improves overall operational efficiency.

700-C Fan Project

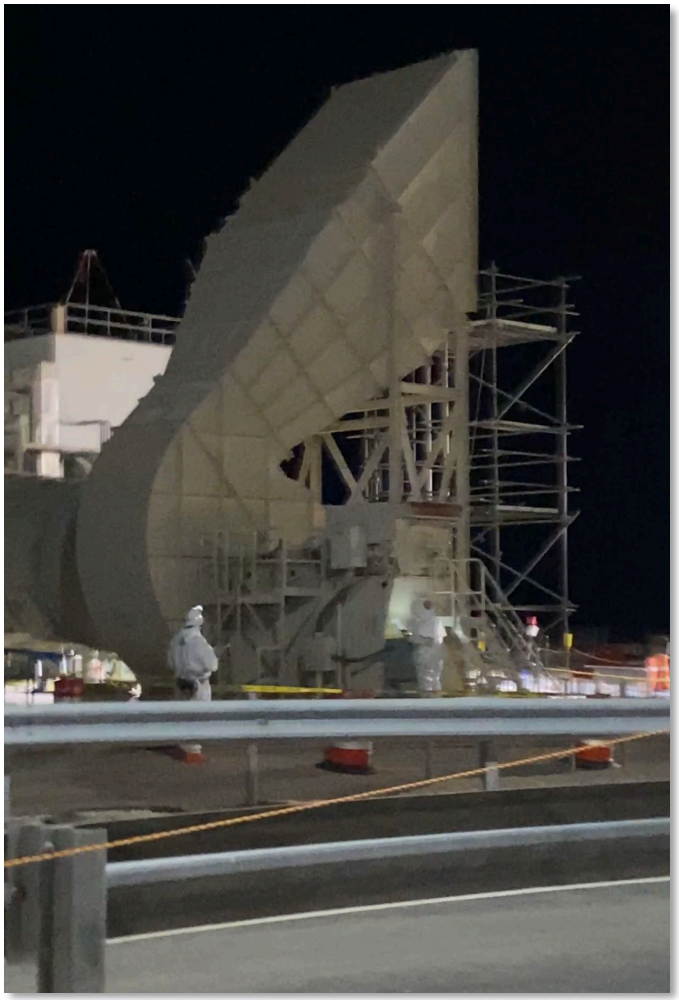
- The 700-C fan has a capacity of up to 240,000 cfm to the underground.
- This is an increase of 94,000 cfm over the existing ventilation systems.
- Because the 700-C will exhaust directly to the environment, no waste emplacement will occur while the fan is in operation.
- In the event that an increase in underground radiation levels are detected in the exhaust air, unfiltered ventilation will be immediately stopped.

700-C Fan Restart Status

Steps	Status
1. Analyze potential for radiological emissions from the 700-C fan.	Complete
2. Run a 4-hour test to collect data.	Complete
3. Evaluate the new emissions data from the 4-hour test and verify acceptability to operate the fan.	Complete
4. Balance airflows in the mine with the 700-C fan.	Scheduled to occur following a Readiness Assessment to verify readiness for normal 700-C fan operations
5. Initiate startup of the 700-C fan for routine operations during non-waste handling activities.	Immediately following completion of the test and balance

4-Hour Test Sampling and Monitoring

- On January 31st, 2021, WIPP successfully completed the 4-hour test of the 700-C fan.
- Initial radiological field surveys did not detect any immediate elevation of contamination (there were 114 samples taken and analyzed).
- The samples were collected and sent to the WIPP labs for isotopic analysis (an additional 255 samples were taken and analyzed).
- The Carlsbad Environmental Monitoring and Research Center (CEMRC) collected independent air samples.
- **CEMRC results are consistent with those of the WIPP laboratories.**



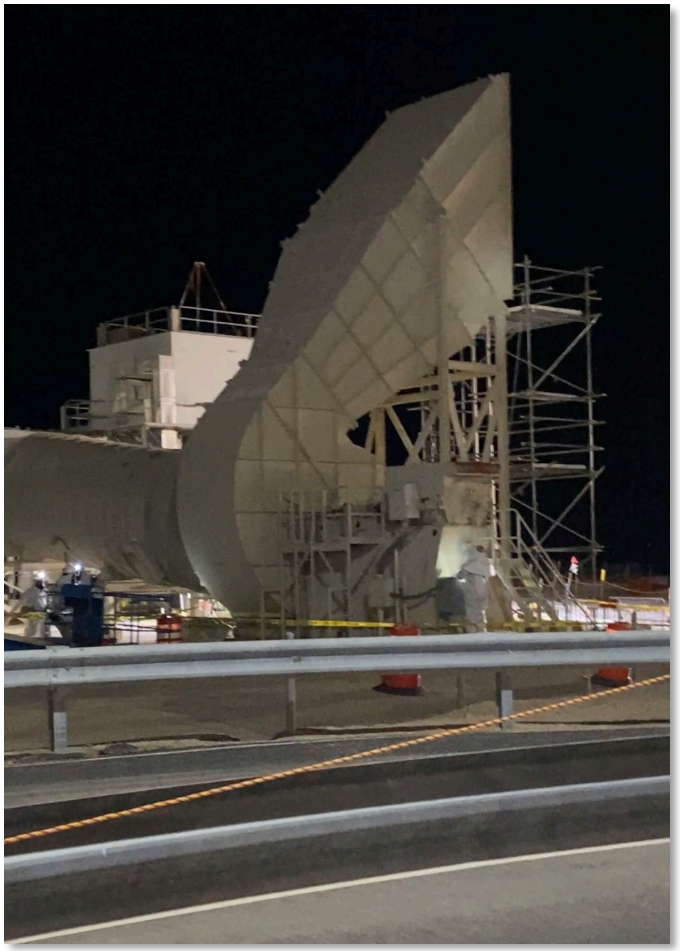
Picture taken during the 4-hour test

700-C Fan 4-Hour Test Results

The 4-hour test confirmed that:

- Standard WIPP radiological protection measures currently performed on a daily basis are more than adequate for operation of the 700-C fan.

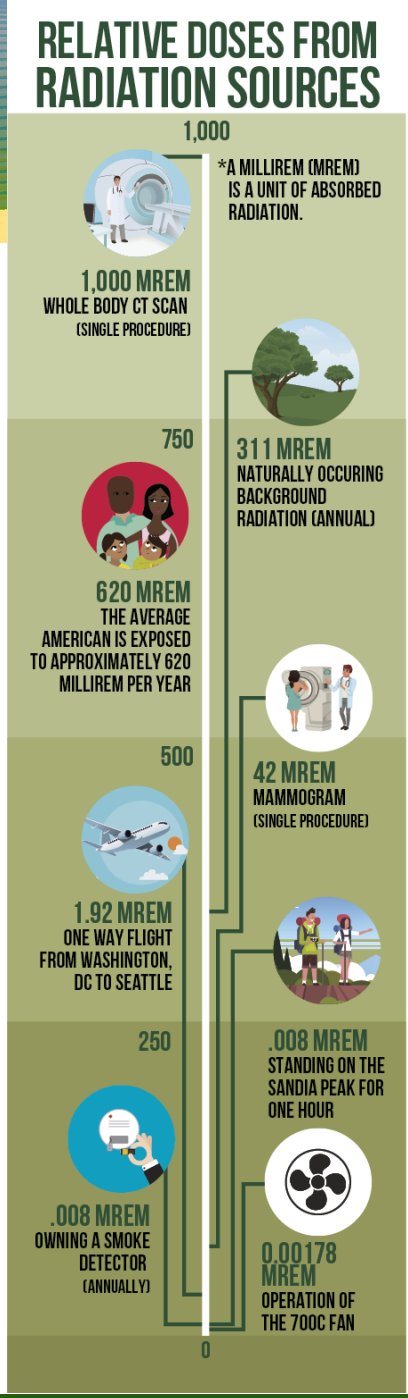
- Exposure to the public is far below allowable limits. Based on the data from the 4-hour test, operating the fan for a full year results in radiation exposures **5,000 times less than the EPA threshold of 10 millirem.**



Picture taken during the 4-hour test

Radiation Exposure Risk

- The average American receives approximately 620 millirem per year from natural and man-made sources.
- All members of the public are subjected to some radiation exposure from a variety of sources.
- Based on the results from the 4-hour test, routine operation of the 700-C fan results in an annual dose to a member of the public that is less than the exposure to a smoke detector in a year.



Moving Forward

- Over the next few months, WIPP will begin preparing to balance the airflows in the underground and then transition to routine operation of the 700-C fan.
- Additional sampling and monitoring will be performed during the airflow balancing of the 700-C fan.
- The additional airflow created by the 700-C fan will further improve the air quality in the WIPP underground, supporting WIPP critical mission.

Questions?