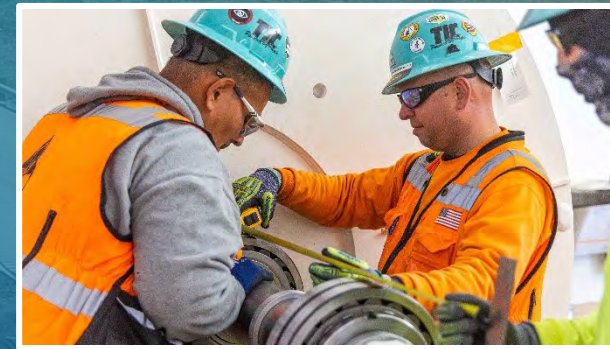


Briefing on SSCVS CAM in response to DNFSB letter of May 15, 2024



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Agenda



Installation of the ductwork bridge that will connect the existing underground ventilation system to the SSCVS when it comes online.

- Safety Significant Confinement Ventilation System (SSCVS) startup Phases
- Response to CAM environmental qualification
- Response to Waste Shaft Station control selection
- Safety Basis changes and path for subsequent phases of SSCVS operation



Bringing Online the SSCVS fans and HEPA filters Phase 1



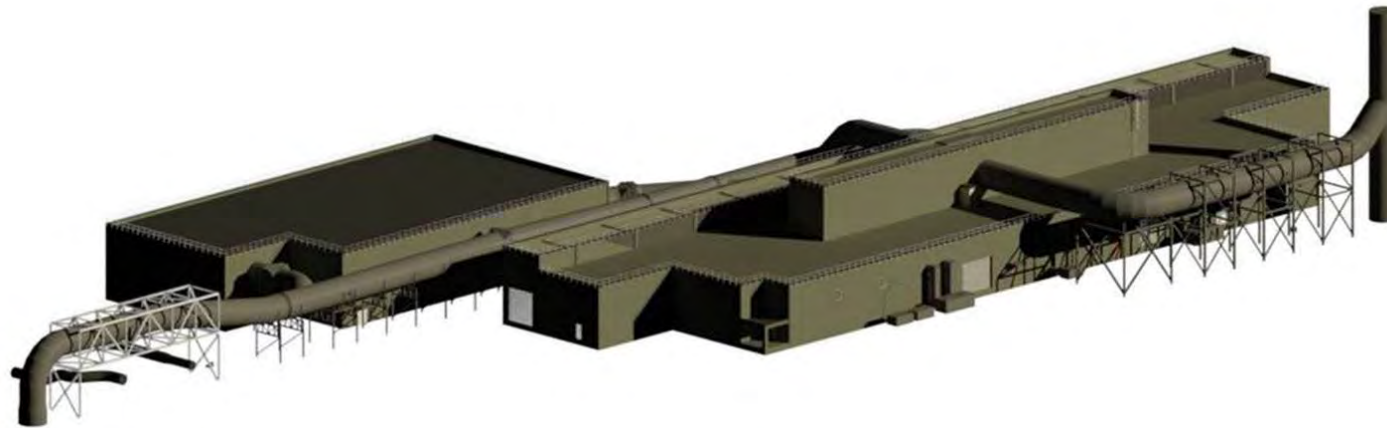
- Connect SSCVS to the mine in direct filtration mode for the test period. Phase 1 allows operations to complete mine ventilation balancing, any outstanding testing needed from commissioning, and completion of final procedure validation needed with systems connected.
- Allows for continuation of receipt of shipments while under a safe graded project approach.
- Phase 1 equipment status: The Salt Reduction System (SRS) will be in bypass. Double isolation dampers to the SRB are closed. There are other systems in the Salt Reduction Building (SRB) that will be operational but are not part of the ventilation system. The new Continuous Air Monitors (CAMS) will be online as part of the Radiological Controls Safety Management Program.
- Phase 1-Data collected for understanding environmental impacts on new CAM operations and to determine the needed frequency of surveillances for operability when SRB is brought online.



Bringing Online the SSCVS Phase 2 and Phase 3



- Phase 2 of the Startup Plan will be to bring the construction ventilation flow path and Shaft 5 on-line
- Phase 3 will bring Salt Reduction Building (SRB) on-line which require CAMs to perform the safety function of detection and signaling dampers to close to the SRB.
- Phase 2 and 3 will require a change to the DSA which will detail any needed controls for Shaft 5 and the construction ventilation path and detail the TSR requirements for the CAMs.





Board concern #1: CAM environmental qualification



Soot loading on the CAMs due to a fire, is an off-normal condition.

- CAMs will signal isolation of the SRB on either detection of radiological release, a fault due to excessive soot particulate loading, or a loss of detectable background radiation.
- The fault detection is a fail-safe feature designed into the CAM system. This fail-safe feature meets DOE Order 420.1C Change 3, *Facility Safety*, Attachment 3 requirements

Salt loading on CAMs due to mining activities is an expected condition.

- Phase 1 test data will inform the placement and frequency of surveillance of the CAMs to ensure operability under normal conditions.
- Amount of salt dust passing by CAMs will be reduced due to planned change in ventilation path.



Board concern #2: Waste Shaft Station control selection



Accident scenarios causing release of material in the waste shaft station are large pool fires that credit engineered preventive controls, such as the safety-significant vehicle fire suppression systems.

- This follows the hierarchy of controls of passive over mitigate active engineered control.

During review of the SSCVS PDSA Hazards Analysis, it was identified that deflagration events in the waste shaft station and transport path need further analysis and explanation of their controls.

- WIPP will continue to analyze all possible accident scenarios and will make appropriate changes to the safety basis documentation. The analysis and change to the safety basis is not required for Phase 1 and will be completed prior to exiting direct filtration.



Safety Basis Path for Subsequent SSCVS operations



DSA/TSR Rev 9 – current Safety Basis

DSA/TSR Rev 9

Page Change 01 – Supports tie-in activities for SSCVS to include installation of exhaust duct elbow.

DSA/TSR Rev 10 – Supports Phase 1 operations with Salt Reduction Building isolated, CAMs not required to perform a safety function as all underground exhaust is filtered.

DSA/TSR Rev 10

Page Change 01 – Any updates from SSCVS commissioning testing results.

-----SSCVS Contractor MSA followed by DOE Readiness Assessment-----

Subsequent DSA/TSR Revision – Phase 2: Shaft 5 underground drifts tie-in

Subsequent DSA/TSR Revision – Phase 3: Salt Reduction Building and CAM operations to support automatic isolation of the Salt Reduction Building upon detection of a release in the underground.



Conclusions



- SSCVS CAMs will be tested in their operational environment during Phase 1 operations of the SSCVS. The testing will provide technical basis for placement and surveillance frequency to ensure operability of the system in the salt environment.
- Hierarchy of controls will be followed for all scenarios in the waste shaft station and additional explanation of controls for the missing deflagration event will be added to the safety basis documentation prior to exiting direct filtration.



Questions



Questions ?