

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 6, 2020

TO: Christopher J. Roscetti, Technical Director
FROM: Alexander Velazquez-Lozada, Cognizant Engineer
SUBJECT: Waste Isolation Pilot Plant (WIPP) Report for February 2020

DNFSB Staff Activity: R. Quirk provided routine onsite oversight.

WIPP Outage. WIPP started a month long maintenance outage in mid-February. The outage includes activities in the underground and the Waste Handling Building, as well as maintenance of the waste and salt hoists, and preparations to perform a dry-test of the 700C fan control power.

Waste Handling Building Ventilation System. On January 5, 2020, operators in the Central Monitoring Room received alarms from the Central Monitoring System (CMS). The alarms indicated a loss of differential pressure as measured between the Contact Handled (CH) Bay and outside of the Waste Handling Building. The CMS indicated that the exhaust fan was still running. The Facility Shift Manager (FSM) directed operators to enter the appropriate Limiting Condition for Operation. In performing the required actions, operators determined that the safety-significant exhaust fan wasn't running. Further investigation indicated that the adjustable speed drive for the fan motor tripped offline due to an overcurrent situation. The power disturbance was not detected by the plant metering system because it was out of service. The FSM contacted the utility provider and learned that no abnormal conditions had occurred in the off-site distribution systems. No radiological releases occurred. Since then, NWP has continued to evaluate the ventilation system in the CH Bay and no further issues have occurred.

Exhaust Shaft Inspections. WIPP is required to conduct quarterly inspections of the Exhaust Shaft per the Hazardous Waste Facility Permit. Throughout calendar 2019, a number of inspections were not performed or completed in a timely manner. As of this report, WIPP had not completed the required 4th quarter inspection. NWP plans to perform a causal analysis and develop a corrective action plan. A failure or obstruction of the shaft has the potential to restrict the air flow of the underground ventilation system and prevent it from performing its safety function. The exhaust shaft is currently operational.

Underground Vehicle Maintenance. On February 3, 2020, CBFO identified maintenance issues associated with several vehicles with safety-significant automatic fire suppression systems (AFSS). At least six maintenance actions that could challenge the operability of the AFSS are still pending. Some of the maintenance actions are related to leakage or accumulations of fuel residue, excessive salt, hydraulic fluid, and grease. Further investigation identified that two particular maintenance procedures were drafted in 2019 but had not yet been implemented. As part of the corrective actions, NWP plans to review and implement these two maintenance procedures and develop a routine maintenance schedule for all liquid fueled vehicle.

Safety Significant Confinement Ventilation System (SSCVS). In response to the Board letter of August 27, 2019, DOE briefed the Board on February 14, 2020. DOE indicated that they are planning to conduct an underground air flow analysis to assess the locations of continuous air monitors required to ensure adequate performance of the radiological release detection system.