

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 3, 2020

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

DNFSB Staff Activity: A. Velazquez-Lozada provided routine onsite oversight.

WIPP Outage. Nuclear Waste Partnership, Inc. (NWP), completed the WIPP maintenance outage and then restarted receiving waste shipments. NWP also returned to service one of the safety-significant 860 fans that is part of the underground ventilation filtration system.

COVID-19 Response. As a response to the COVID-19 pandemic, WIPP started reducing operations to ensure continuity of its essential mission, and will receive limited shipments from waste generator sites. In addition, WIPP plans to retain the existing workforce to ensure an orderly return to full operation by the end of this limited operation period.

Waste Handling Building Ventilation System. Unexpected high levels of volatile organic compounds (VOC) were identified in the waste hoist control room early this month. NWP determined this was a Potentially Inadequacy in the Safety Analysis (PISA). The VOCs had migrated into the waste hoist control room from the Contacted Handled (CH) Bay area, where workers were applying sealant to the floor, through an unsealed electrical conduit. This implies that existing controls to protect the facility worker located in the waste hoist control room may not be adequate if a radiological release occurred in the CH Bay. In addition to the new leak path through the unsealed electrical conduit, the NWP evaluation identified a hazardous condition not previously considered in the safety analysis, and that current preventive and mitigative controls do not protect the facility worker located in the waste hoist control room. As part of the corrective actions arising from this PISA, NWP has included as affected areas the Waste Hoist Tower and Waste Shaft in the event WIPP enters a limiting condition of operation due to a potentially non-compliant waste container.

Internal fans for the adjustable speed drive (ADJ) of a safety significant Waste Handling Confinement Ventilation System (WHCVS) fan stopped operating. An external fan was placed for use as a short term solution until new internal fans are installed. The ADJ allows the WHCVS fan to maintain the required vacuum pressure in portions of the Waste Handle Building and avoid a release to the environment in the event of a radiological release inside the building.

Underground Ventilation System. NWP continues to prepare for the 700 series C (700C) fan test and initial start-up ([see November 2019 monthly report](#)). WIPP is awaiting an independent assessment to determine the need to apply a fixative to the radiological contamination found in the ductwork associated with 700C fan, prior to conducting the restart test.

Seismic Activity. On March 26, 2020, a magnitude 5.0 earthquake struck West Texas. The WIPP site is located about 48 miles north of the epicenter. Seismic sensors did not trigger the alarm at the WIPP site. WIPP did not report any damages in the underground or at the surface.