

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 8, 2022

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** Alexander Velazquez-Lozada, Cognizant Engineer  
**SUBJECT:** Waste Isolation Pilot Plant (WIPP) Report for June 2022

**DNFSB Staff Activity.** The Board's staff participated in regular conference calls to maintain cognizance of site activities.

**Waste Handling Activities.** In this reporting period, Nuclear Waste Partnership, LLC (NWP), declared a potential inadequacy of the safety analysis (PISA) related to material at risk (MAR) in the Contact Handled (CH-) Bay of the Waste Handling Building. The PISA identified potential inconsistencies between the MAR used in the accident analysis and the MAR allowed in the CH-Bay, per current procedures. For example, one of the assumptions for a postulated accident scenario includes a maximum of eight loaded facility pallets. Meanwhile, WIPP personnel have reported observing up to 13 loaded facility pallets staged together in the CH-Bay. Thus, the observed MAR allowed in the CH-Bay may not be bounded by the MAR value used in the accident analysis. As a result, the calculated dose consequences of certain postulated accidents in the accident analysis might not be conservative. NWP determined that this was a PISA and an unreviewed safety question (USQ). NWP put in a place a Timely Order that limited the number of loaded facility pallets in the CH-Bay. NWP is currently further evaluating the PISA and completing an evaluation of the safety of the situation.

**Underground Air-Flow.** While performing an underground air-flow analysis for future air-flow configurations in which bulkhead 707 is removed and Panel 8 becomes operational, NWP identified a PISA for a potential air-flow reversal in Panel 7 Room 1 when in unfiltered ventilation mode (i.e., when the 700C fan is running). This reverse air-flow would inhibit the ability of the continuous air monitors to detect a potential radiological release in Panel 7. NWP performed an additional analysis and showed that this initial concern does not create a reverse air flow. However, the analysis did identify another potential bulkhead configuration that could create a reverse air-flow. The configuration that created this potential reverse air-flow was shown through the analysis to be a specific combination of bulkhead 707 being removed, the regulators and doors in Panel 8 being open, and the man-door in Bulkhead 203 being left (propped) open. As a result of the analysis, NWP implemented a Timely Order temporarily prohibiting running of the 700C fan but lifted it after concluding that the bulkhead configurations of potential concern would not be employed since they are not in accordance with the approved WIPP Mine Ventilation Plan. The Board's staff is evaluating NWP's conclusion.

**Air Intake Shaft (AIS) Hoist.** During this reporting period, the AIS hoist remained out of service due to a malfunction of a card in the controller that manages the hoist. NWP is procuring the required replacement. NWP estimates it will be at least 4 to 8 weeks before it will receive the new card and put the hoist back in service. For safety reasons, WIPP requires two serviceable hoists when accessing and performing activities in the underground. With the AIS hoist out of service, if either the Waste Hoist or the Salt Hoist are not operational, WIPP personnel are prohibited from accessing the underground. This precludes underground operations during scheduled or other maintenance activities on either the Waste or Salt Hoists.