

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 6, 2019

TO: Christopher J. Roscetti, Technical Director
FROM: Alexander Velazquez-Lozada, Cognizant Engineer
SUBJECT: Waste Isolation Pilot Plant (WIPP) Report for August 2019

DNFSB Staff Activity: A. Velazquez-Lozada provided onsite oversight during the week of August 19th.

Waste Handling: Nuclear Waste Partnership (NWP) entered a Limiting Condition of Operation (LCO) upon noticing an upward deflection of the top and outward deflection of the side of a standard waste box (SWB). The deflections were conservatively treated as indications of a potential SWB over-pressurization, but workers did not detect the release of any radioactive material. The SWB was sent from the Savannah River Site (SRS). Per the LCO action statements, NWP suspended waste handling activities and restricted access to the potentially affected areas. Later in the week, workers put the SWB into a shielded storage area, which allowed the resumption of waste handling activities. NWP is developing a plan for the final disposition of the SWB. The restrictions on waste handling activities caused WIPP to violate a Nuclear Regulatory Commission (NRC) requirement to vent two shipping packages within the required 10-day timeframe. NWP plans to submit a deviation report to NRC documenting the failure to meet the required vent time.

Conduct of Operations: NWP conducted readiness assessment activities related to the receiving and handling of TRUPACT-III (TP-III) shipping packages. The assessment activities were limited to surface operations as NWP reported that download and emplacement of Standard Large Box 2 (SLB2) containers from TP-III shipping packages had been performed safely since the restart of contact-handled (CH) waste activities. Assessment activities included interviews of NWP staff and observations of receiving and surface handling of a TP-III shipping package. The receiving and surface handling demonstrations were interrupted when access to the CH Bay was restricted due to the potential SWB over-pressurization (see the paragraph above). After access to the CH Bay was restored, the CRA team continued with CRA activities. WIPP personnel were knowledgeable of the process to receive and handle TP-III shipping packages. The CRA team identified opportunities to improve the written procedures in the areas of radiological controls, personal protective equipment, and training. The unplanned interruption of the demonstrations provided the CRA team with an opportunity to identify processes that must be performed in series and processes that could be performed in parallel. This should reduce the impact of potential future unplanned interruptions when receiving and handling TRUPACT-III shipping packages.

Safety Significant Confinement Ventilation System (SSCVS): On August 27, 2019, the Board sent a letter to the Department of Energy (DOE) stating that the final SSCVS design does not adequately consider design requirements for the underground continuous air monitoring (CAM) system. The CAMs will be used to detect an underground radiological release and then direct the realignment of ventilation system dampers into a safe configuration. The letter also identifies the lack of integration between the SSCVS exhaust fans and the supply fans that will be installed by the Utility Shaft Project.