

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 7, 2018

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** Alexander Velazquez-Lozada, Cognizant Engineer  
**SUBJECT:** Waste Isolation Pilot Plant (WIPP) Report for August 2018

**DNFSB Staff Activity:** A Velazquez-Lozada visited the site to complete the Inexperienced Miner Training and observe the annual emergency exercise. R. Quirk, Z. Beauvais and L. Schleicher visited the site to observe the annual emergency exercise. Staff oversight during FY-2018 has averaged to 2.3 person-weeks/month.

**Annual Emergency Exercise.** WIPP completed the 2018 annual full-scale exercise. The simulated scenario involved a breached drum in panel 7 and three injuries, including a victim at the accident scene. The scenario was significantly simplified compared to past full-scale annual emergency exercises at WIPP. Nuclear Waste Partnership, LLC (NWP), emergency management personnel acknowledged that the exercise scenario was simplified in an attempt to allow responders to better demonstrate their proficiency. During the simulated exercise, there were problems associated with successfully accounting for all personnel evacuating the underground in less than 1 hour as required by the Mine Safety and Health Administration (MSHA). This delay could be concerning since in the case of an emergency involving a fire, evacuation would likely take even more time. From a radiological accident perspective, delayed evacuation of the underground could expose workers to radiation and contaminants expelled by a breached drum for longer than necessary.

**Waste Management.** Due to recent concerns related to high levels of volatile organic compounds (VOC) issuing from INL containers, NWP is evaluating the implementation of more controls to ensure workers are protected from VOC when processing transuranic (TRU) shipping containers. Some of the steps to remove the payload may be causing resuspension of heavier VOC material. NWP is assessing these steps and a potential path forward to ensure a safe breathing zone for the workers in the Contact Handled Bay of the Waste Handling Building.

**Safety Significant Confinement Ventilation System (SSCVS).** In a letter dated April 26, 2018, Carlsbad Field Office (CBFO) approved the Preliminary Documented Safety Analysis (PDSA) associated with the SSCVS Project subject to the incorporation of directed page changes. These directed page changes included a condition of approval requiring the underground radiological detection instrumentation (e.g., continuous air monitor) to meet Safety Integrity Level (SIL) 2 performance in accordance with DOE-STD-1195-2011, *Design of Safety Significant Safety Instrumented Systems Used at DOE Nonreactor Nuclear Facilities*. The Board's staff submitted an agenda to DOE to discuss the implementation of DOE-STD-1195-2011 and the interlocks between the SSCVS and systems in a separate recently approved project named the Utility Shaft.