

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 7, 2019

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

DNFSB Staff Activity: R.G. Quirk and D.J. Grover provided onsite oversight during the weeks of April 29th and May 13th, respectively. Staff oversight during fiscal year 2019 has averaged 1.28 person-weeks/month.

Underground Ventilation System (UVS). On May 2, 2019, the Carlsbad Field Office (CBFO) sent a letter of direction to Nuclear Waste Partnership, LLC (NWP), “to perform all work necessary to prepare the 700 series underground ventilation fans for start-up. The scope of work shall include all repairs and regulatory and nuclear safety related changes and approvals necessary to start the fan. NWP shall commence with the activities identified in its material condition assessment for the 700 C fan and complete the work by October 31, 2019.” CBFO also directed NWP to complete a material condition assessment by July 31, 2019, for the potential restart of the 700 B fan. On May 14, 2019, NWP conducted a workshop to evaluate the safety basis strategy. CBFO has not made a final decision to restart the 700 series fans.

Transuranic (TRU) Waste. As reported in April 2019, Los Alamos National Laboratory-Carlsbad Operations evaluated the hazards of cellulose-based materials exposed to nitric acid and metal nitrate salts in transuranic (TRU) waste. After a peer-review, CBFO concluded that this waste will not undergo autocatalytic runaway reactions after aging beyond the latency periods of 200 days or 730 days, respectively, at average daily temperatures of 50 °F or higher.

Waste Handling Building (WHB). NWP identified a potential inadequacy in the safety analysis related to the control and movement of a loaded 300 gallon fuel tank in the WHB and underground without being specifically controlled by the Technical Safety Requirements. NWP concluded that this represents an Unreviewed Safety Question and required development of a safety analysis change.

WHB Confinement Ventilation System (CVS). The WIPP Facility Shift Manager (FSM) entered Limiting Condition for Operation (LCO) 3.2.5 due to an out-of-tolerance reading on the transmitter loop for a CVS High Efficiency Particulate Air (HEPA) filter. The FSM declared the Central Monitoring System (CMS) alarm indication for this HEPA filter to be inoperable and started monitoring the performance of the HEPA filter at the local pressure gage every 12 hours.

Conduct of Operations. Based on three underground incidents, WIPP paused movement of all mobile equipment to reinforce management expectations, provide guidance to employees that work near or operate mobile equipment, and develop corrective actions.

Maintenance. A rope without proper maintenance was inadvertently snagged by an operator of a salt haul vehicle causing an airlock door to close while the vehicle was passing. The vehicle was put in safe configuration and CBFO confirmed that the required direction of the underground air flow was not impacted by this incident.