

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 6, 2019

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

DNFSB Staff Activity: T. Davis, R. Oberreuter, L. Schleicher, and R. Quirk provided routine onsite oversight.

Waste Management: On November 2, 2019, WIPP received a 55-gallon drum of organic sludge from Idaho National Laboratory (INL) with an irregularly-shaped through-hole in a corroded area on the bottom third of the drum exterior. Subsequent radiological surveys did not detect any contamination on the drum or in the surrounding area. Nuclear Waste Partnership, LLC (NWP), personnel entered the appropriate limiting condition for operation (LCO) and placed the entire 14-drum payload assembly in which the drum had been delivered back inside the TRUPACT-II container until a recovery plan could be developed by NWP and approved by Carlsbad Field Office (CBFO). On November 8, 2019, CBFO approved the NWP plan to address and disposition the damaged 55-gallon drum, and restore compliance with Technical Safety Requirements (TSR) applicable to the process area. The NWP plan included over-packing the damaged drum. However, the handling procedures for over-packing could not be used until NWP completed additional revisions and separate approvals.

Conduct of Operations. On November 9, 2019, NWP personnel identified an underground compressor emitting excessive soot; elevated carbon monoxide levels were detected in the underground. The compressor had an Out of Service (OOS) tag, dated February 7, 2019. However, the compressor was used to support probe hole drilling in the underground facility. NWP also identified that preventive maintenance for the compressor has not been performed for almost 4 years. NWP placed the compressor OOS. Further, NWP plans to evaluate preventive maintenance processes for equipment that goes from storage emission testing to regular use, evaluate the extent of condition of preventive maintenance on other equipment, and evaluate whether they should reconstitute the continuous mine gas monitoring program that was recommended following the events of February 2014. Of note, on September 24, 2018, the Board sent DOE a letter with an enclosure documenting concerns with the preventive maintenance program and weaknesses that should be addressed to reduce the likelihood of another fire event in the underground. The Board's letter highlighted deficiencies (e.g., excessive maintenance intervals for infrequently used equipment) relevant to this event.

Underground Ventilation. On May 2, 2019, CBFO directed NWP to perform all work necessary to prepare the 700C fan for restart by October 31, 2019. This schedule has not been met and testing of the 700C fan is still pending. DOE continues discussions with NWP related to the proposed changes to the DSA to support operation of the 700C fan; implementation of Specific Administrative Control (SAC); and adequacy of limiting condition of operations (LCO) for the continuous air monitors (CAMS).