

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 5, 2024

TO: Katherine R. Herrera, Acting Technical Director
FROM: Erin A. McCullough, Cognizant Engineer
SUBJECT: Waste Isolation Pilot Plant (WIPP) Report for December 2023

DNFSB Staff Activity. The Board's WIPP cognizant engineer held weekly meetings to maintain awareness of mining and waste handling activities. During the week of December 11, 2023, a Board's staff team visited WIPP to observe waste handling, transportation, and emplacement activities.

Safety Risks Associated with Salt Handling Shaft Structural Condition. The Salt Handling Shaft continues to be the subject of ongoing federal and contractor evaluations regarding its structural condition and efforts required to maintain safety and operational capabilities (see November 2023 report). The Board's staff recently received a design engineering report from 2017 that highlights the long-standing nature of the structural deficiencies in the Salt Handling shaft. While temporary structural repairs addressed the urgent concerns regarding potential structural member failure, the permanent resolution has been unfunded. Alternatives for transporting salt to the surface are under consideration pending funding available in fiscal year 2025. The Board's staff members met with site personnel responsible for preparing the alternatives analysis. Salado Isolation Mining Contractors, LLC (SIMCO) is prioritizing an alternative that would maintain salt transportation capabilities with a conveyor and apron feeder to top-load the salt skip while bypassing the need to use the salt loading pocket at the bottom of the shaft. The other alternative would include purchasing the Utility Shaft and associated equipment from Harrison Western Shaft Sinkers JV, LLC (HWSS), which has contractual and schedule limitations. Although site personnel acknowledged schedule risks for the two options under consideration, they were not yet prepared to address occupational or nuclear facility safety risks associated with each option. The cognizant engineer will continue to follow this issue.

Annual Full-Scale Emergency Exercise After Action Report. In October 2023, a Board's staff team visited WIPP to observe the annual full-scale emergency exercise (see October 2023 report). The SIMCO Emergency Management Section after action report explained that the evaluation team graded the exercise as "Overall Successful" with 49 of 57 exercise objectives met. Areas for improvement over previous years included planning, coordination, control, and exercise management. After observing the evaluation team meeting in October and reviewing the report, the Board's staff team broadly agreed with the areas for improvement.

Utility Shaft Construction Project Stop Work Order. The Stop Work Order for the Utility Shaft Construction Project remained in effect for the first half of the month. On December 15, 2023, HWSS submitted a Shaft Recovery Plan to SIMCO detailing specific actions necessary to re-start construction, including inspecting the shaft and associated components, repairing all identified damage, and removing water in the sump. SIMCO subsequently transmitted a partial release to work letter on December 16, 2023, authorizing HWSS to begin recovering the shaft and prepare for resuming construction. To assist with the recovery and corrective action processes, HWSS retained a safety culture expert to advise improvements to current work procedures and practices.