

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 3, 2022

TO: Christopher J. Roscetti, Technical Director
FROM: Austin R. Powers, Cognizant Engineer
SUBJECT: Nevada National Security Site (NNSS) Report for May 2022

DNFSB Staff Activity: The staff conducted no onsite activities at NNSS during May.

Indeterminate Items in Waste Container: At the Radioactive Waste Management Complex (RWMC), Mission Support and Test Services, LLC (MSTS), personnel will perform real-time radiography operations on select waste containers that are received from off-site generators. MSTS performs these operations prior to disposition to verify and confirm that the generators are adhering to the NNSS waste acceptance criteria and the waste submitted aligns to the specific requirements of the approved profiles. In April, the RWMC received two containers from an Oak Ridge National Laboratory (ORNL) waste profile. MSTS personnel performed radiography operations on these containers and identified indeterminate items in one of them. As a conservative measure, MSTS staged the two containers in an area separate from the RWMC disposal cells. The waste generator was not able to provide additional information to identify the indeterminate items. Therefore, MSTS rejected the shipments and had them returned to the waste generator's facility.

After returning the waste to ORNL, United Cleanup Oak Ridge (UCOR) personnel (contractor responsible for the cleanup of the Oak Ridge Reservation in Tennessee) opened the containers. UCOR personnel identified two lithium-ion batteries and one handheld borescope within the container. These items were equipment that was meant to be reused and not disposed as waste. UCOR personnel voluntarily suspended this particular waste profile and plan to perform a causal analysis as a result of this event. UCOR personnel will not lift the suspension until a corrective plan has been developed and the plan is reviewed and accepted by NNSS personnel. The identified corrective actions must also be completed.

U1a Complex Air Compressors: The U1a Complex has multiple air compressors (both electrical and diesel powered) installed above ground and outside. While the air compressors are not credited to perform a nuclear safety function, MSTS relies on them to supply uncontaminated and breathable air to each underground refuge station during an emergency event. In May, MSTS personnel replaced two of the electrical air compressors. The previous air compressors were rated for indoor use, but they were installed outside. As a result, the air compressors had issues operating in more extreme temperatures (i.e., hot temperatures in the summer and cold temperatures in the winter). In previous instances in which an electrical air compressor was inoperable, MSTS would rely on the diesel air compressors to sufficiently provide air to the refuge stations. The diesel air compressors were not replaced and are still available.

Joint Actinide Shock Physics Experimental Research (JASPER) Experiment: In May, Lawrence Livermore National Laboratory (LLNL) personnel successfully conducted an experiment using special nuclear material at the JASPER Facility. LLNL personnel executed the experiment in a safe manner with no safety issues to report.