

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 6, 2024

**TO:** Timothy J. Dwyer, Technical Director  
**FROM:** Sonia G. Thangavelu, Ph.D., Cognizant Engineer  
**SUBJECT:** Nevada National Security Site (NNSS) Report for August 2024

**DNFSB Staff Activity:** On August 13, 2024, the Board issued a letter to the Secretary of Energy highlighting safety concerns with the lithium-ion battery uninterrupted power supply (UPS) at the Device Assembly Facility (DAF). The Board's letter requested a briefing and written report on actions the Department of Energy (DOE) has taken or plans to take to address hazards and the safety control strategy for lithium-ion battery energy storage systems at defense nuclear facilities and the DAF UPS. During the week of August 25, 2024, the Board's cognizant engineer for NNSS observed the contractor readiness assessment for radioactive material handling, assembly, and packaging operations in multiple DAF buildings, including use of the transportation simulation device.

**Fourth Quarter Start Up Notification Report (SNR).** On July 2, 2024, Misson Support and Test Services, LLC (MSTS) submitted the fourth quarter SNR as required by DOE Order 425.1D, *Verification of Readiness to Start Up or Restart Facilities*, to Nevada Field Office (NFO) for approval. The SNR provides revised start up readiness activities, plan of action submittal dates, and schedules for several new operations at NNSS facilities, including the Enhanced Staging Project (ESP) and Z-Pinch Experimental Underground System (ZEUS). The ESP schedule delays reflect costs incurred to construct and procure drum handling equipment; the ZEUS schedule delays support construction of new drifts at the Principal Underground Laboratory for Subcritical Experimentation (PULSE) facility to house project-related equipment. On August 7, 2024, NFO approved the SNR and requested MSTS remove the small-scale dynamic vessel experiment readiness activities for the next quarter SNR submittal.

**Termination of Justification of Continued Operations (JCO) for DAF Firewater Tank.** As mentioned in the NNSS monthly report for November 2023, MSTS implemented a JCO to rely on two general service tanks to supply water to the DAF fire suppression system (FSS) until the credited firewater tank is repaired. This summer, MSTS's subcontractor applied epoxy to coat the tank interior walls and modified the tank bottom with a welded skirt design to cover areas with significant corrosion. On August 16, 2024, MSTS declared the repaired firewater tank operable after completing the changeover from the general service tanks to the repaired tank to supply water to the FSS in accordance with the DAF safety basis requirements. MSTS terminated the JCO.

**Prohibited Items Identified in NNSS Waste Shipment.** On June 25, 2024, the NNSS Radioactive Waste Acceptance Program (RWAP) notified a United Cleanup Oak Ridge (UCOR) Waste Certification official that a waste container received from the Oak Ridge National Laboratory contained suspect prohibited items. The RWAP identified light bulbs, aerosol cans, batteries, and a small pouch with liquid as the anomalies in the waste stream via real-time radiography but could not positively identify if the items comply with the NNSS waste acceptance criteria. On July 15, 2024, UCOR received the waste container shipped from NNSS to further investigate the waste drum contents.