

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 2, 2022

TO: Christopher J. Roscetti, Technical Director
FROM: Sonia G. Thangavelu, Cognizant Engineer
SUBJECT: Nevada National Security Site (NNSS) Report for August 2022

DNFSB Staff Activity: The staff conducted no onsite activities at NNSS during August. S. Thangavelu completed transition activities with A. Powers and is currently serving as the NNSS acting cognizant engineer effective August 1, 2022.

Criticality Safety Infraction at Device Assembly Facility (DAF) Update: As discussed in the NNSS Monthly Report for July 2022, Mission Support and Test Services, LLC (MSTS), and Lawrence Livermore National Laboratory (LLNL) identified from inventory logs that the total containers with criticality safety index (CSI) values exceeded the limit for a DAF staging building. In August, LLNL issued the final criticality safety infraction report in accordance with requirements and compliance to the LLNL Nuclear Criticality Safety Division (NCS) procedures. The report provides a description of the criticality infraction event and timeline, identification of contributing factors, and recommendations to reduce the likelihood of similar infractions in the future. The report identified eight contributing factors to the infraction. One of the contributing factors identified was that fissile material handlers were not updating the LLNL or MSTS manager inventory logs to track materials added or removed within the DAF staging area during material movements. Another contributing factor was a lack of understanding that all containers staged at the DAF staging building regardless of material form and type needed to have an assigned CSI value in order to satisfy LLNL criticality safety control requirements. The report also identified seven recommendations to prevent future infractions at DAF. Two of the recommendations are for LLNL to perform a full inventory check of its inventory logs quarterly and retain it as a record and to update the standard operating procedure for internal material movements at DAF. Another recommendation is to use only one CSI inventory log to stage CSI labeled containers at DAF instead of two, and for LLNL to manage this log. The LLNL NCS provided the report to LLNL program management and DAF facility management for further consideration to inform them of the contributing factors and recommendations.

NNSS Start-up Notification Report: In July, the Nevada Field Office (NFO) approved the 4th quarter fiscal year 2022 start-up notification report. In the report, MSTS changed the schedule for readiness activities associated with the Small-Scale Dynamic Vessel Experiments (SSDVE) project and Oxide Handling operations at DAF. The changes were made to align with programmatic needs and deconflict competing resources. The contractor readiness assessments for both activities are projected to occur in the 2nd quarter of fiscal year 2023, whereas the operational readiness review for the SSDVE is projected to start in March 2023. The start dates for the Enhanced Staging Project have changed to calendar year 2023 due to delayed inputs to the DAF safety basis development schedule. The plan of action for the readiness activities associated with the Enhanced Staging Project is expected to be available in September 2022.