

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 2, 2020

TO: Christopher J. Roscetti, Technical Director
FROM: Austin R. Powers, Cognizant Engineer
SUBJECT: Nevada National Security Site (NNSS) Report for September 2020

DNFSB Staff Activity: During September, A. Powers, P. Migliorini, D. Minnema, and J. Plaupe conducted a teleconference review on criticality safety at the National Criticality Experiments Research Center (NCERC) with Los Alamos National Laboratory (LANL), Mission Support and Test Services, LLC (MSTS), and Nevada Field Office (NFO) personnel. The Board's staff conducted no onsite activities during September.

COVID-19 Impact: During September, NNSS remained in Phase 2 of its return to work plan. In this phase, NNSS continued to be in the "Normal Operation with Maximum Telework" work status. The increase in confirmed COVID-19 cases in Nevada has not impacted the ability of MSTS to maintain required staffing at the NNSS defense nuclear facilities.

Device Assembly Facility (DAF) Uninterruptible Power Supply (UPS) System Project: MSTS has been executing plans to replace the three obsolete UPS systems within DAF, one of which is credited and connected to the credited emergency lighting (provides illumination so that high explosives can be placed in a safe and stable state in a power loss event). As part of the replacement project, MSTS developed a change notice to the DAF safety basis to support a new configuration that relies on battery operated emergency lighting while the credited UPS is being replaced. In the change notice, MSTS revised two hazard scenarios and added two more. MSTS determined a moderate mitigated risk to the worker for these four scenarios, which requires justification as to why the risk cannot be further reduced to low or negligible. The change notice states that there are no viable controls available to further mitigate the risk to the worker. In September, NFO approved the change notice (with no conditions of approval) and the control strategy. NFO noted in its approval that all high explosives operations at DAF will be performed in full compliance with DOE Standard 1212-2019, *Explosives Safety*, which includes a set of administrative controls that ensures high explosives operations are performed safely. The change notice also addressed the positive unreviewed safety question determination regarding the emergency lighting being credited for hazard scenarios that do not involve high explosives (see NNSS Monthly Report for June 2020). In the change notice, MSTS no longer credits the emergency lighting for these scenarios and found the risk to still be sufficiently low for the workers, so additional controls did not need to be considered.

NCERC Incident Update: As discussed in the NNSS Monthly Report for July 2020, LANL identified material that did not have an assigned criticality safety index (CSI) value prior to starting an activity. When received a month prior, LANL did not initially assign a CSI value because they believed that these items were source materials (i.e., less than 1 gram of fissionable material) exempt from criticality safety controls. However, LANL found that some of the items exceeded the 1 gram threshold. LANL has since assigned a CSI value to those items. LANL has identified additional corrective actions, such as training on the requirements for small quantities of fissionable material, creating an in-hand use procedure for moving material stored under CSI controls, and creating a checklist for receiving material at DAF.