

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

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TO: Christopher J. Roscetti, Technical Director
FROM: Austin R. Powers, Cognizant Engineer
SUBJECT: Nevada National Security Site (NNSS) Report for September 2019

Device Assembly Facility (DAF) Conduct of Operations and Work Planning: Over the summer, several incidents have occurred at DAF. These incidents include a vehicle driving over an electrical fiber re-enforced box, a circuit breaker tripped due to electrical work being performed outside the work package and without proper lock out/tag out, an excavator's counter weight hit a fuel vehicle, and incorrect installation of the temporary uninterruptible power supply system. Both the Nevada Field Office (NFO) and Mission Support and Test Services, LLC (MSTS), acknowledged the increase in incidents and have taken action.

In addition to performing a fact finding or causal analysis for each incident, MSTS also issued a timely order that formally identifies a work release process that applies to all NNSS facilities. This new process evaluates work readiness for a specific activity, just prior to executing the work, by conducting a review that ensures the following: the work activity is authorized; the work activity is compatible with current conditions at the facility; the work activity is compatible with other ongoing work activities in the facility; the work group understands the associated hazards and controls; the work group understands and can articulate the critical non-recoverable steps and what to do if there is scope creep, unexpected results are noted, or other issue is identified; and the work group is familiar with the job site. The Nuclear Operations Manager or Facility Manager designee is responsible for ensuring that the process is performed. MSTS is revising the Plan of the Day procedure to include the work release definition and process. Since implementing the work release process, Facility Managers have identified issues and were able to have these corrected before actual work execution. While initial feedback has been positive, MSTS plans to continue to optimize the process for effectiveness.

NFO has engaged MSTS regarding the increase in incidents during bi-weekly meetings, where they discuss operations, issues, and corrective actions. NFO also has increased its oversight in multiple functional areas (electrical safety, criticality safety, electrical systems, work planning and conduct of operations). Lastly, NFO management has directed all of the safety and operations staff to conduct assessments of work planning in their respective functional areas including execution of work packages.

Joint Actinide Shock Physics Experiment Research (JASPER) Experiments: During September, Lawrence Livermore National Laboratory (LLNL) personnel conducted two surrogate shots successfully at JASPER. The experiments were executed in a safe manner with no safety issues to report. LLNL personnel plan to conduct surrogate experiments using a 40 mm launch tube (see NNSS Monthly Report for May 2018). LLNL personnel will use these surrogate experiments to better understand the characteristics of the 40 mm launch tube (e.g., the projectile speeds that can be achieved using this tube and appropriate propellant mixture).