

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 17, 2016

TO: Steven Stokes, Technical Director
FROM: Jennifer Meszaros and Rory Rauch, Site Representatives
SUBJECT: Oak Ridge Activity Report for Week Ending October 14, 2016

Building 9212: CNS management held a critique this week to discuss a spill of approximately 200 gallons of nitric acid in the Building 9212 decontamination area. Leading up to the event, workers drained a nitric acid line in preparation for maintenance work on the decontamination hood. Maintenance personnel used a lockout/tagout (LO/TO) permit to isolate the line during the work; however, the permit was not explicit regarding the position of the drain valve. Following the maintenance activity, operations personnel performed a partial system alignment to verify the position of a subset of valves identified as impacted by the maintenance work. The drain valve was not included in the scope of the partial system alignment checklist. Approximately an hour after the system was returned to service, an operator noticed a leak coming out of the decontamination room. Operations personnel identified the source of the leak as the nitric acid drain valve located in the decontamination hood. They immediately closed the valve and notified an area supervisor in accordance with the facility spill response procedure. Workers cleaned up the spill over the course of several days per shift manager direction.

During the critique, CNS management identified a corrective action to review LO/TO and system alignment control procedures to identify and address any weaknesses in the interface between these processes. Additionally, Building 9212 management committed to performing a full system alignment to ensure proper valve positioning on the affected system. Prior to the critique, an NPO facility representative (FR) noted that workers cleaning up the spill were not wearing personal protective equipment that protected them against inhalation of nitric acid vapors. The NPO FR questioned whether the appropriate subject matter experts (e.g., industrial hygiene) were consulted during cleanup work planning. The site reps and the NPO FR are reviewing the spill response actions further.

Aging Infrastructure: CNS recently issued a revision to the Y-12 Aging Asset Management Program (AAMP). In April 2016, NPO issued a letter that directed CNS to update its aging management plan so that it is consistent with the Extended Life Program (ELP) recommendations (See 4/22/16 report). The AAMP provides a framework for integrating asset health and risk management information with available funding in order to ensure that CNS is able to safely and reliably sustain mission work using aged systems, structures, and components. It identifies tools that are vital to the aging management strategy (e.g., system health reports) and highlights key organizations, programs, and committees that help ensure successful implementation of program elements. The AAMP also identifies a new coordinated outage process that will be piloted using facilities identified as part of the ELP. CNS is currently projected to issue the ELP implementation plan (also identified in the April 2016 NPO letter) by the end of the month.

Highly Enriched Uranium Materials Facility (HEUMF): Last week, NPO issued a safety evaluation report (SER) approving the annual update to the HEUMF documented safety analysis. The SER contains a request for CNS to re-evaluate the hazard control classification of the safety-significant secondary confinement and power distribution systems because the estimated consequences of the design basis fire event are well below DOE thresholds requiring safety-significant control designation. The SER states that the re-evaluation should be included as part of the resolution of NPO's concerns with the testing of credited HEUMF smoke detectors (see 2/12/16 report). This was an open item from previous SERs (see 11/5/10 report).