

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 20, 2017

TO: Steven Stokes, Technical Director  
FROM: Jennifer Meszaros and Rory Rauch, Resident Inspectors  
SUBJECT: Oak Ridge Activity Report for Week Ending November 17, 2017

K. Amundson and A. Miller were at Y-12 to observe fissile material operations. R. Oberreuter was at Y-12 to augment resident inspector activities.

**Building 9204-2:** This week, the Building 9204-2 operations manager declared a technical safety requirements (TSR) violation after a chemical operator failed to patrol all affected areas of an inoperable fire suppression system. Facility personnel had previously isolated wet pipe system 5 (WPS-5) to accommodate planned maintenance activities on the system. The shift manager entered the appropriate TSR limiting condition for operation (LCO), which included an action to perform fire patrols in the affected sprinkler coverage area. Although the shift manager briefed a chemical operator on the fire patrol coverage area utilizing a map, she later determined that the operator had not included two locked rooms within the coverage area of WPS-5. Upon notification of the omission, the operations manager declared the TSR violation. During a subsequent fact finding meeting, Building 9204-2 management identified a corrective action to increase the expected rigor of initial briefings provided to personnel conducting fire patrols. Management also committed to evaluate the existing methodology used by shift managers during facility fire patrol briefs. Shift managers currently utilize a map of the affected area during these briefs but may benefit from the development of a more specific route checklist.

**Uranium Processing Facility:** Last week, NPO issued a Safety Evaluation Report (SER) documenting their review of the Uranium Processing Facility (UPF) Preliminary Documented Safety Analysis (PDSA). The SER summarizes radiological accident consequences to public receptors that fall below thresholds described in DOE-STD-1189-2008, *Integration of Safety into the Design Process*; as such, the PDSA does not identify any safety class controls. The SER does summarize various safety-significant controls, including the facility Criticality Accident Alarm System (CAAS) and the Safety Detection and Response System (SDRS). The SDRS is credited in the PDSA to detect seismic activity and initiate required safety response actions (e.g., valve isolation and process equipment shutdown). The NPO safety basis approval authority approved the PDSA with no conditions of approval (COA). Additionally, the SER closes three COA from previous design activities.

**Building 9212:** CNS concluded work under the Metal Production Improvement Plan (MPIP) at the end of fiscal year 2017. CNS established the MPIP in 2015 to improve Building 9212 chemical recovery equipment reliability and thus facilitate increased purified metal production (see 10/16/15 report). The MPIP project team planned and executed a series of rolling system outages in order to address a backlog of approximately 200 maintenance work orders. They completed the majority these work orders during the rolling outages, and facility personnel will complete the balance of the work orders in the coming weeks as part of general facility maintenance. Additionally, the MPIP project team evaluated facility critical spare inventory. As a result of this evaluation, they increased significantly the number of available critical spares so that facility personnel can expeditiously address future maintenance issues.

**CAAS:** CNS has nearly completed the CAAS LCO improvement initiative (see 3/17/17 report). In October, CNS implemented most of the legacy facility TSR revisions that streamline CAAS system operability definitions and document technical bases for surveillance frequencies and action completion times. CNS has yet to implement the Building 9720-5 TSR revision that is part of this initiative, but will do so after unrelated CAAS hardware modifications are complete.