

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 6, 2016

TO: Steven Stokes, Technical Director
FROM: William Linzau and Rory Rauch, Site Representatives
SUBJECT: Oak Ridge Activity Report for Week Ending June 3, 2016

Buildings 9204-2 and 9204-2E: The Building 9204-2E Operations Manager declared a potential inadequacy in the safety analysis (PISA) due to questions on the Criticality Accident Alarm System (CAAS) coverage associated with Buildings 9204-2 and 9204-2E. Building 9204-2 has two CAAS detector stations located in separate parts of the facility that provide overlapping coverage of specific areas. Both detectors had a surveillance requirement to verify operability daily, but in 2012, the surveillance requirement for one of the detector stations was changed to only require a daily check upon entry into the secure room in which the station is located. This change may have resulted in reduced assurance of dual CAAS detection coverage in areas with on-going fissile operations. As an initial compensatory action, the Operations Manager has issued a standing order that directs the required surveillance to be performed prior to fissile material handling activities in the areas in question or have personnel carry a portable radiation detection instrument when conducting these activities.

Building 9204-2/Aging Infrastructure: CNS Construction personnel completed the installation of a structural steel frame designed to shore a cracked concrete beam discovered last July (see 7/10/15 report). The site reps accompanied the Operations Manager for Special Materials Operations on a walkdown of the area in which the frame was installed. The area was clean and the frame had no obvious construction quality defects. In addition to walking down the new frame, the site reps walked to the floor above to read postings that implement a new control on area live loads. The new control addresses a concern from NPO's recently hired structural engineer (see 11/20/15 report) by prohibiting the simultaneous use of forklifts on the floors above and below the cracked beam. To implement this restriction, the building's Shift Manager has posted signs restricting forklift transit on the floor above the cracked beam. CNS Construction personnel began construction in early February completed the work last month.

Building 9212: CNS held a fact-finding meeting last week to evaluate how several containers of fissile material destined for offsite shipment were packaged incorrectly. The fissile material was loaded in cans that were placed inside larger shipping containers along with empty cans that provided spacing. These spacing cans had wire handles sheathed with a plastic coating that did not comply with the packing instruction, which restricted specific hydrogenous materials in the shipping containers. Workers questioned the wire coating on the handles after they had completed loading several containers but before any of the containers had been shipped off site. Corrective actions from the fact-finding meeting included a management review of applicable work instructions to ensure enough detail is provided to workers to prevent such errors. CNS has since repacked the discrepant containers and completed the rest of the activity.

On a separate topic, the Metal Production Improvement Project (MPIP) team continues to progress in its efforts to eliminate the maintenance backlog for Building 9212 purified metal production equipment (see 5/9/16 and 10/16/15 reports). The goal of this effort is to re-baseline the equipment to an improved level of reliability and increase purified metal production rates moving forward. To date, the project team has completed outages that eliminated the maintenance backlog for the Reduction and Oxide Conversion Facility (OCF) systems and is halfway toward completion of the outage on the Primary Extraction system. The MPIP is behind schedule due to equipment challenges that generated additional maintenance work orders and extended the OCF outage (see 4/15/16 report). This week, Enriched Uranium Operations personnel completed the first OCF run following its outage.