

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 13, 2019

TO: Christopher J. Roscetti, Technical Director
FROM: Matthew Duncan and Brandon Weathers, Resident Inspectors
SUBJECT: Oak Ridge Activity Report for Week Ending December 13, 2019

DNFSB Staff Activity: DNFSB staff had a teleconference with DOE Oak Ridge Environmental Management personnel to discuss the December 4 Board letter regarding the Oak Ridge Oxide Processing campaign.

Building 9212: Last week, CNS personnel replaced cartridge filters in a stack exhaust system dust collector filter housing supporting the wing in Building 9212 where the casting lines are located. After bringing the bagged filters inside, several continuous air monitors alarmed, indicating airborne radioactivity throughout the area. There were only two people in the area without respiratory protection and they left the area. After the replacement of the filters was completed, all supply and exhaust fans were turned back on. No personnel were externally contaminated, and the area has been decontaminated. Special bioassays will be required for the two people who were not wearing respiratory protection. The filter changeout procedure has been placed on an administrative hold. CNS performed a fact finding and critique. CNS ruled out the bagged filters as a contributor to the problem. CNS continues to evaluate two potential causes and plans to develop corrective actions to address them. The last time a continuous air monitor alarmed in Building 9212 was more than a year ago.

Nuclear Criticality Safety and NPO Oversight: NPO completed an integrated assessment of uranium accumulation corrective actions (see 8/23/19 report). The assessment objective was to determine whether CNS corrective actions to prevent recurrence are adequate. NPO determined that objective was partially met. This determination was based on three of the five evaluation criteria being partially met and that corrective actions associated with a major causal theme (process drift) had not been adequately progressed since the accumulation events occurred. The assessment team identified two performance problems, five observations, and three noteworthy practices. The two performance problems relate to process drift. The first was that training pertinent to identification of and response to process drift had not been developed at the time of the assessment. The second noted that an existing action to establish a process or strategy to ensure individuals have a means for identifying process drift was not sufficiently described in the CNS issues management system. NPO directed CNS to enter all of the issues into the CNS issues management system and provide a response within 45 days with corrective actions to address the two performance problems.

Uranium Processing Facility (UPF): The DOE Office of Enterprise Assessments performed an assessment of UPF construction quality associated with concrete placement and structural steel procurement. The team concluded that CNS adequately plans and effectively implements the concrete placement processes. In addition, quality assurance practices and processes ensure that procurement of risk significant structural steel and associated hardware, and other construction materials, conforms to procurement specifications. There was one deficiency due to the lack of implemented compensatory measures while addressing a self-identified issue concerning the lack of physical verifications for quality level critical inspection attributes.