DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 9, 2021

TO: Christopher J. Roscetti, Technical Director
FROM: Matthew Duncan and Brandon Weathers, Resident Inspectors
SUBJECT: Oak Ridge Activity Report for Week Ending July 9, 2021

NPO Oversight: NPO transmitted the May operational awareness report to CNS. Among the issues discussed in the report, NPO noted that housekeeping issues are a recurring challenge for CNS. In the past, NPO had identified specific housekeeping issues in Building 9204-2E and the E-wing basement of Building 9212. The NPO issue for the E-wing basement has been open since January 2020. Historically, housekeeping in the E-wing basement has been a recurring issue that goes through cycles of housekeeping improvements and relapses (see 8/22/16 report). NPO requested that CNS provide a formal response documenting the suite of ongoing or planned actions intended to produce sustainable improvement for Y-12 housekeeping. In parallel to the NPO issue, the resident inspectors have been discussing recent housekeeping observations and challenges for removing waste from facilities with NPO and CNS.

In a triannual issues management meeting report, NPO identified several new emerging items of interest relating to safety at Y-12. These issues pertain to event management weaknesses, inadequate fire department notifications, and CNS maintenance activity job plan clarity. The resident inspectors noted some examples of inadequate fire department notifications last year (see 11/13/20 report).

Building 9212: As reported last week, several continuous air monitors alarmed during dust collector cartridge filter replacement (see 7/2/21 report). After the first alarm, radiological control personnel posted the area as respirator required, and brought powered air purifying respirators to the workers performing the filter replacements in order to complete the activity. Personnel not associated with the filter replacements exited the area. Radiological control requested bioassay samples from the six workers who donned respirators to complete the activity. Depending on the bioassay results, CNS may need to conduct an internal dosimetry investigation. Radiological control personnel performed a smoke test after the event to investigate the air flow under the configuration used for the filter replacements. That test showed that three supply fans were needed to ensure air flowed out of the stack. One supply fan was operating during the activity. CNS identified an action during the event investigation to revise the filter replacement procedure to ensure that air flows out of the stack.

Nuclear Criticality Safety: CNS reported a nuclear criticality safety deficiency due to insulation around a vent line of the Building 9212 denitrator exceeding the dimensions credited in the applicable criticality safety evaluation. CNS removed the deficient insulation and installed insulation that was confirmed to be within the required dimensions.

Building 9204-2E: On Wednesday, CNS discovered that isopropyl alcohol received by the facility exceeded the maximum anticipated quantity in the hazardous material identification document. One of the gaps that this event exposed was that production personnel did not notify the emergency management organization about the exceedance.