

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 3, 2023

**TO:** Katherine R. Herrera, Acting Technical Director  
**FROM:** Frank Harshman and Clinton Jones, Resident Inspectors  
**SUBJECT:** Oak Ridge Activity Report for the Week Ending February 3, 2023

**Staff Activities:** R. Jackson and W. Dumayas visited the Uranium Processing Facility (UPF) as part of the transition of responsibilities of UPF cognizant engineer duties. During the visit, they met with UPF project staff on follow-up questions pertaining to the equipment procurement and installation review. R. Jackson and W. Dumayas also conducted walkdowns with the resident inspectors to observe current processes in Building 9204-2E.

**Building 9720-82:** CNS is investigating the cause of a catastrophic failure of a ventilation fan. The failure occurred during the fan's restart following unrelated system maintenance and resulted in destruction of the fan belts, impeller, and impeller protective shroud. CNS evacuated the building and the fire department responded due to the smoke produced from the event. No fires were observed and no personnel were injured. CNS had to communicate the evacuation notice via radio because the building's emergency notification and public announcement systems were out of service as a result of issues stemming from a previous fiber optic network outage.

**Conduct of Operations:** While observing a quality evaluation (QE) worker perform a test procedure, a NPO Facility Representative (FR) noticed that the QE worker was performing work while wearing gloves but the work area was not marked as a radiological workstation. Upon discussion with the process engineers who were following along with the procedure, the FR confirmed that the worker was handling radiological material. The worker paused the work and the FR left to consult with the radiological control technician (RCT) that was assigned to the job. The FR confirmed the work was to be performed on a radiological workstation and that the worker was required to wear a lab coat and gloves. The RCT posted the work area as a radiological work area and the worker dressed in the required lab coat. The radiological work permit (RWP) that covered this job was extremely general and applies to assembly, disassembly, and inspection of test/production exposed uranium and components. It requires workers log into the electronic permit prior to starting work in the morning and prior to the first entry after lunch. The worker only signed into the RWP in the morning. The QE worker had not performed this work previously and the process engineers that were observing the work were also relatively new to the position with less than a year of experience. None of the personnel in the area were aware of the radiological material makeup of the components being handled. There was no direct supervisory oversight for this work activity. The test procedure that directed this work does not contain any radiological control requirements and only has one reference to the radiological makeup of the materials that would require radiological controls. That reference was a synonym for the actual material. The procedure does explicitly state industrial hygiene controls and that the presence of an industrial hygiene representative is required through certain sections. After the previous conduct of operations issues experienced in Building 9204-02E (see reports 11/04/22 and 12/09/22) the resident inspector's opinion is that the level of detail in the pre-job briefs, the amount of experienced oversight, the procedural compliance, and level of detail contained in the procedures is inadequate.