DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 20, 2022

TO: Christopher J. Roscetti, Technical Director
FROM: Frank Harshman, Clinton Jones, and Brandon Weathers, Resident Inspectors
SUBJECT: Oak Ridge Activity Report for Week Ending May 20, 2022

DNFSB Staff Activity: J. Abrefah, F. Ruz-Nuglo, D. Shrestha, and S. Thangavelu visited Y-12 to discuss the results of a reactive material hazards review (see 8/6/22 report). F. Ruz-Nuglo and the resident inspectors walked down Buildings 9204-2E, 9212, and Y-12 Development.

Building 9212: CNS has been working to address multiple equipment and instrument issues with certain process equipment for several months. Due to these issues persisting longer than anticipated, CNS has not been able to process material that was loaded into the system in January. In a loaded state, CNS cannot purge the system so that necessary maintenance activities can be performed prior to conducting an annual surveillance. CNS applied the allowed 25% surveillance requirement extension per the Technical Safety Requirements and that extension expired on April 28, 2022. Without completion of the overdue surveillance requirement, the operability requirements for the limiting condition of operation are not met and the system cannot be placed into the operation mode without violating several limiting conditions of operation and other surveillance requirements. However, CNS must enter the operation mode to process the material before completing the expired surveillance requirement.

Last Thursday, NPO approved a safety basis supplement that provided CNS's basis for compensatory actions to allow exceptions to the applicable limiting conditions of operation and surveillance requirements needed to operate the system and perform the expired surveillance requirement. The exception would only be valid for the overdue surveillance requirement.

Y-12 Analytical Chemistry: Earlier this month, CNS inadvertently sent an approximately 100 mL radiological sample to an offsite laboratory in Oak Ridge. CNS's investigation of the event identified that the error likely occurred during the verification of a group of extracts that were to be shipped to the offsite laboratory. An analytical chemistry technician provided a group of items (sample and extracts) to a sample management technician for disposition. The extracts were to be prepared and packaged for further analysis at the offsite laboratory and the sample was to be checked back into the sample management system. During the verification of the items against the chain of custody form, the sample management technician was interrupted and had to return at a later time to complete the verification. CNS suspects that the sample management technician may have resumed the verification at a different spot. After shipping the items to the offsite laboratory, an analytical chemist noticed that one bottle was different from the others and notified their supervisor. The supervisor had personnel leave the laboratory and tape off the area. Radiological control personnel surveyed the area and removed the sample from the laboratory before personnel reentered. CNS did not report this event as an occurrence under DOE Order 232.2A based on contractor-defined guidance that a violation for this reporting criterion must be issued by the U.S. Department of Transportation. That interpretation is inconsistent with other DOE sites. The CNS site-specific occurrence reporting guidance has previously been problematic with respect to determining the reporting criterion for nuclear criticality safety occurrences (see 3/27/20 and 5/8/20 reports).