

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 12, 2024

TO: Timothy J. Dwyer, Technical Director
FROM: Frank Harshman and Clinton Jones, Resident Inspectors
SUBJECT: Oak Ridge Activity Report for Week Ending April 12, 2024

Building 9212: The resident inspector (RI) attended the pre-job brief and observed processing of a previously discovered legacy drum that contains Raschig rings and an unknown uranium-bearing material (see 03/08/2024 report). The RI did not note any issues with the pre-job brief. The processing involves removal of material from the drum and placing it into individual nuclear criticality safety (NCS) compliant containers. CNS commenced using a hammer and chisel then progressed to more aggressive means, utilizing a battery powered hammer when the material became too difficult to remove. During the use of the powered hammer, several small pieces of material ejected from the drum landing on the floor in the vicinity. The RI observed the material had been ejected and alerted CNS personnel who had not anticipated material being out of the drum. Operators sealed the second container and recorded its final weight while the RI raised the concern outside of the tent. CNS personnel determined there was insufficient procedural guidance to reopen the sealed container, requiring them to fully complete the processing of the second can before proceeding. CNS initially intended to fill only two containers as part of the initial processing but determined it was permissible to move forward with a third container after discussions with operations management. CNS elected to fully fill the third NCS container with additional material from the drum to avoid having a container with only the small portion of material from the floor. The RI observed no other issues throughout the remaining portions of the evolution.

Qualification Board: The RI observed a qualification oral board of a shift manager candidate. The questions selected covered a broad range of topics. CNS appropriately designated questions as make-or-break, as required by procedure. The RIs observed CNS not designating make-or-break question in past oral boards (see 03/24/2023). In the RI's opinion, the board was adequate to appropriately evaluate the candidate's level of knowledge. The RI provided feedback on how to enhance one of the questions by removing unnecessary information contained in the question. The question was written in such a way that alerted the candidate to the safety significance of losing one of the facility's electrical busses. In the RI's opinion, removing the reference to the safety significance impact would better evaluate the candidate knowledge of the building's electrical systems and the impacts of electrical system faults on safety-related building systems.

Building 2026: The RI attended a critique of an event where an operator was using a remote manipulator in a division hot cell when a slight shock was felt while depressing the motor assist button on the manipulator arm. The manipulator arm also moved in an untended direction when this occurred. Remote manipulators are used in the handling of radioactive material within the cell however no material was being handled by the manipulators at the time of the incident. Isotek discovered that a wire in the hand grip portion of the manipulator had come loose and was in contact with the housing. Isotek determined that the electrical energy involved does not rise to the level of hazardous energy and therefore does not intend to file an event occurrence report.