

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 24, 2024

**TO:** Timothy J. Dwyer, Technical Director  
**FROM:** Frank Harshman and Clinton Jones, Resident Inspectors  
**SUBJECT:** Oak Ridge Activity Report for Week Ending May 24, 2024

**Building 9204-2E:** The Y-12 Field Office (YFO) facility representative (FR) observed oil on a unit in a glovebox and asked the production supervisor if they had contacted the nuclear criticality safety engineer (NCSE) for guidance. The supervisor acknowledged that they had received guidance from the NCSE regarding the condition and work had continued after the initial oil leak. Later in the shift, the YFO FR followed up with the NCSE on the condition and discovered the supervisor had not contacted an NCSE or the criticality safety officer (CSO) for guidance. The criticality safety evaluation (CSE) that governs the glovebox operations states that “fluids shall not be applied to surfaces with obvious cracks, tears, or open porosity unless authorized by a specific CSE.” The unit in the glovebox was visually not in compliance with the CSE requirements or the similar statement in the procedure that applied to this operation. The CSO initiated a backoff and an administrative boundary on the glovebox in accordance with the procedure for an abnormal condition involving fissile material. Upon further questioning of the supervisor by the FR, the FR discovered that the supervisor addressed the abnormal condition by retrieving almost two-year-old one-time guidance from a previous NCS minor non-compliance (MNC) field report and providing those directions to the workers. CNS is currently working through their NCS MNC process to address the issue of oil leaking onto units being processed through the glovebox. The resident inspector (RI) is following the issue closely due to the initial screening that removed it from the enterprise-level event investigation process and the fact that so far, there has been no identification of the procedural non-compliance or the use of two-year-old guidance to continue working through an abnormal situation.

The RI performed a walk down of the facility and observed three pallets of sealed lead acid batteries that were positioned near the large roll-up door inside of the material access area. The RI asked the shift manager if the batteries were listed on the facility hazardous material identification document (HMID). The following day, one of the shift technical advisors (STA) replied to the inquiry with a justification of why the batteries did not need to be on the HMID. The STA consulted with a facility safety engineer and determined that the batteries were exempt from being listed on the HMID based on being self-contained, commercially available, and to be used for the intended purpose, they were exempt from being listed on the HMID. The RI pulled similar safety data sheets from the Y-12 database on sealed lead acid batteries, including ones by the same manufacturer, and determined the batteries should be listed as hazardous based on the approximately 30 listings that were rated as either hazard level 3 or 4. The CNS procedure, *Hazardous Material Identification*, has various exemptions listed. It also contains a table stating that hazardous material with a health rating of 3 or 4 in a quantity greater than or equal to 40 pounds meets the criteria for providing a maximum allowable quantity in the HMID. The STAs are also required to approve all shipments of hazardous material to be received by the facility. This order of 108 sealed lead acid batteries bypassed the approval process as they were not flagged in the system as hazardous material. CNS was supposed to review the approval system for hazardous material for problems (see 8/18/2023 report), but issues such as this still occur that allow hazardous material to be delivered to the facility without the knowledge of facility operations management.