

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 24, 2018

TO: Christopher J. Roscetti, Technical Director
FROM: Matthew Duncan and Brandon Weathers (acting), Resident Inspectors
SUBJECT: Oak Ridge Activity Report for Week Ending August 24, 2018

DNFSB Staff Activity: Matthew Duncan reported to Oak Ridge on Monday.

Emergency Management: Contractors and federal employees conducted an annual emergency response exercise at the Y-12 National Security Complex on Thursday. The purpose of the exercise was to test or validate the effectiveness of the Y-12 Emergency Response Organization to respond to an emergency event. The exercise focus areas were initial reporting of emergency information from the event scene to the Plant Shift Superintendent; emergency categorization, classification, communications, and notifications; response to a hazardous materials release; emergency facility operations; and emergency public information. The scenario was the maximum possible release of hydrogen fluoride from the storage cylinder on a Building 9212 dock. The resident inspectors observed and assessed aspects of the performance of the players and conduct of the exercise at multiple locations including the Plant Shift Superintendent's office, the Technical Support Center, the Incident Command Post, and the event scene. Any noteworthy findings, issues, or improvement items may be communicated in a future weekly report once the after action report is complete.

Building 9212: The contractor concluded in its disposition of the potential nuclear criticality safety issue that the existing calculations for metal fines in the holden gas furnace (HGF) criticality safety evaluation remain bounding of the oil-wetted metal fines that were processed (see 8/10/18 report). The engineer recommended that the HGF criticality safety evaluation be updated to include the additional analysis for oil-wetted and oil-saturated metal fines.

The resident inspectors attended a critique for this event. The process of loading oil-wetted metal fines into modified hospital cans in Building 9204-2E was evaluated in the applicable Building 9204-2E criticality safety evaluation. The oil-wetted metal fines material type was not subsequently evaluated in the Building 9212 HGF criticality safety evaluation prior to processing the material in the HGF. One of the actions considered at the critique was to determine if the site procedure for the change control process adequately addresses how changes made in one facility may affect other facilities.

Building 9202: Building 9202 is a radiological facility used for production support and technology development. Last Friday night, a sprinkler head failed and flooded portions of Building 9202. The water flowed into a room containing the calciner that is being developed for use in Building 9212. Additional flooding impacted the room used for development of the electrorefining and direct electrolytic reduction processes. After shutting off the water supply to the fire suppression system, fire patrols were established. The areas are being assessed to determine any spread of contamination that may have occurred. A previous water leak in June resulted in over 60,000 gallons of water accumulating in the building (see 6/21/18 report).