DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 29, 2024

TO: Timothy J. Dwyer, Technical Director
FROM: B. Caleca, P. Fox, and P. Meyer, Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending November 29, 2024

Low-Activity Waste Facility: Personnel entering process cell #2 to perform work noted hazy conditions and an abnormal smell. They immediately shut the door and reported the conditions to a control room operator. The control room supervisor confirmed the hazy condition by using the installed process cell camera and entered the emergency operating procedure for a fire. The facility was evacuated, and control of the plant was transferred to the backup control room. Hanford Fire Department responded and entered the process cell but did not identify any fire or hot spots. However, during inspections of the process cell the next day, facility personnel found a small quantity of ash and burned material near the standby film cooler. An event investigation meeting was held. The discussion was useful and identified several lessons learned that are being evaluated to improve procedures. The cause of the event remains under investigation.

Hanford Site: DOE-STD-3020-2015, *Specifications for HEPA Filters Used by DOE Contractors*, requires 100% independent testing and inspection of safety-related high efficiency particulate air (HEPA) filters at the designated DOE filter test facility (FTF). A recent memorandum from the Office of Environment, Health, Safety and Security, Office of Nuclear Safety (EHSS-30), outlines the Department's plans to remove the provision requiring 100% inspection and testing. The memorandum notes that all HEPA filters used in DOE nuclear safety applications are currently manufactured, inspected, and tested under a nuclear quality assurance program prior to being independently tested at the FTF. EHSS-30 also coordinated a technical evaluation of the independent filter test program by Southwest Research Institute (SWRI) and assembled a task group to evaluate the SWRI findings. This group concluded that 100% independent testing of HEPA filters is duplicative of the quality assurance process used during manufacturing and does not improve safety. Therefore, the group determined that changes to the Department's independent HEPA filter testing program are warranted and technically justified. Additionally, EHSS-30 performed a detailed analysis of the FTF filter rejection data for fiscal years 2018-2023 and determined that out of the 11,445 filters tested, only three failed to meet DOE nuclear facility requirements for penetration or resistance. Consequently, EHSS-30 determined that the implemented manufacturing, inspection, and testing program is robust. The memorandum also explains that effective with the EHSS-30 FTF contract extension expiration on June 30, 2025, the decision to independently test and inspect HEPA filters will be left to program and field office discretion. For DOE Environmental Management nuclear facilities, the decision to independently test and inspect HEPA filters will be made by the assigned safety basis approval authority based on an evaluation of the technical justification for the related system as provided in the documented safety analysis. Facilities at the Hanford Site impacted by this change in policy include T Plant, the 324 Building, the Waste Receiving and Processing Facility, and the Waste Treatment Plant. HFO Engineering is evaluating the impacts of the new policy and considering various options, which include contracting directly with the FTF, establishing a local testing and inspection capability, or utilizing existing in-service inspections consistent with facilities' quality assurance programs. The Board's staff is evaluating the planned policy changes.