DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 3, 2025

TO: R. T. Davis, Acting Technical Director
FROM: B. Caleca, P. Fox, and P. Meyer, Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending January 3, 2025

242-A Evaporator: The contractor readiness assessment (CRA) team completed their 242-A Evaporator Facility observations and document reviews (see 12/6/2024 report). The team observed over twenty evolutions during a cold run of the facility. The team identified five pre-start findings and two post-start findings, including some lingering weaknesses in the execution of conduct of operations principles, procedural noncompliance in the development of process memos, and weaknesses in the use of the nonconformance process to address issues identified in the field. Given the general improvements at the facility, the CRA team determined that the contractor has adequately demonstrated facility readiness, subject to the resolution of the pre-start findings. HFO will begin its federal readiness assessment later this month.

PUREX: A resident inspector observed a Hazard Review Board (HRB) meeting held by CPCCo management to review the work package for replacement of the PUREX facility's confinement ventilation system high efficiency particulate air filters. The package was submitted to the HRB with over a hundred unresolved comments. The resident inspector notes that, based on the number of open comments and quality of the work instruction language, the package was not sufficiently mature to support HRB evaluation. However, the HRB evaluation was thorough and the HRB did not approve the work package. The HRB will reconvene once open comments are resolved.

Hanford Site: In October, unauthorized artificial intelligence platforms were blocked from Hanford Site computer networks because of cybersecurity concerns. Since then, the Hanford Site mission integration contractor, HMIS, has been working to develop an internal artificial intelligence tool based on a GPT-4o large language model. This tool is not trained on Hanford data and does not connect to search and other services external to the Hanford Site network. Under its current implementation, data or documents can be loaded to the tool on a case-by-case basis for a specific use instance. This allows users to apply the artificial intelligence tool for tasks such as summarization of large documents, writing automated messages, and analyzing data trends without giving the tool direct access to Hanford data sources. HMIS is establishing an artificial intelligence governance system that will provide guidance on the development, deployment, and management of the tool for site use. The tool is undergoing a phased implementation that initially limits the number of users before a planned site-wide release in spring of this year. HMIS has formed a working group involving appropriate subject matter experts from all Hanford Site contractors to support the development of additional use cases for the tool and allow broader application to Hanford Site operations.

Corey Low has been selected to fill the Hanford Field Office Assistant Manager for Safety and Engineering and Assistant Manager for Safety and Quality positions. The positions have been vacant since the previous assistant manager for the positions retired from the federal service in March of 2024.