

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 8, 2021

TO: Christopher J. Roscetti, Technical Director
FROM: B. Caleca, P. Fox, and P. Meyer, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending October 8, 2021

Tank Side Cesium Recovery (TSCR) System: A DOE team continued their assessment of the Tank Operations Contractor's readiness to startup the TSCR system (see 10/1/2021 report). The team's primary activities included observation of TSCR system simulator and field activities, an operational drill, and interviews of DOE and contractor personnel involved in establishing the TSCR system's startup readiness. The team will conclude their review and out-brief DOE and contractor managers next week. Members of the Board's staff also observed many of the events.

During a readiness assessment change-out demonstration of an ion exchange column (IXC), galling was observed on the IXC vent Chemjoint™ connection threads. The cause of the galling is currently unknown. An evaluation for continuing the IXC change-out demonstration determined the best course of action was to pause and perform a more thorough evaluation and extent of condition. The project plans to inspect all IXC connections, hose connections and process piping connections that involve these fittings. Once the inspection is completed the project will determine a path forward to repair, replace, or use as-is depending on the state of each connection. The project plans to evaluate the conditions that led to the galling and determine any needed changes to design, procedures, or training that are warranted.

Waste Treatment Plant (WTP): A resident inspector observed the performance of a loss of offsite power drill for the on-shift crew. The drill team determined that crew performance met expectations but noted some communication deficiencies. Additionally, the crew and drill team identified several procedure deficiencies that are being corrected. The resident inspector observed that the on-shift crew demonstrated good control of the simulated situation and excellent system knowledge. The drill team's presentation of the scenario and associated prompts was professional; previously noted coordination issues (see 10/1/2021 report) did not recur. However, the drill scenario did not present any anomalies during the simulated plant recovery. The use of anomalies would help identify cases where the procedure might lack adequate flexibility to address equipment problems that might occur during recovery after a loss of power event; a requirement to respond to an unexpected event would also test operator capability. Such challenges would result in better procedures and help further develop watch team knowledge and confidence, resulting in higher performance levels.

Maintenance workers inadvertently interrupted Laboratory Facility (Lab) ventilation while performing a calibration check of flow transmitters. The occurrence of a similar trip after the start of Lab operations could require evacuation of some facility areas and interrupt work. During a meeting held to collect facts, attendees noted that the procedure is generic and not specific to the Lab ventilation system. Consequently, it does not provide specific direction regarding actions necessary to prevent a trip of the system. They also noted that the notification requirement in the procedure is non-specific and only directs workers to "notify operations." In this case, workers notified the Lab Shift Supervisor rather than the Control Room Supervisor. The Lab Shift Supervisor believed that he had only confirmed that the maintenance would not affect work in the Lab, while the workers believed that he had granted permission to start work. The attendees determined that the procedure should contain clearer directions.