

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 3, 2019

TO: Christopher J. Roscetti, Technical Director
FROM: B. Caleca and P. Fox, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending May 3, 2019

Radiochemical Processing Laboratory: Facility management completed their review of the potential inadequacy of the documented safety analysis that they declared after they discovered that the fault current for some electrical components in the facility exceeds either the short circuit current rating for the equipment or ampere interrupting capacity of the equipment's associated circuit breaker (see April 19, 2019 report). Their review determined that an unreviewed safety question does not exist and that no changes are required to the facility documented safety analysis or technical safety requirements. Compensatory measures remain in place to ensure the safety of facility personnel until appropriate repairs are complete.

Liquid Effluent Retention Facility (LERF): The contractor is preparing to replace the cover on LERF Basin 44 and they recently completed pumping the bulk of the liquid in Basin 44 to Basin 42 to support the work. A worker was assigned to replace a failed gage on a filter assembly that they intend to install into the pumping system that they will use to remove the remaining heel from Basin 44. When the worker removed the gage from the filter assembly, residual water containing contamination from use of the filters for other work sprayed onto his face and anti-contamination clothing resulting in contamination in both locations. The worker was decontaminated and subsequently received a whole body count with a non-detectable result. The contractor held an event investigation meeting and determined, since the filter assembly was not installed in a system and had been previously drained, that the likely source of pressure in the filter assembly was trapped air that had been heated by sunlight. Although the system did not contain a vent valve, some method should have been used to relieve and control any pressure or liquid prior to removing the gage.

Plutonium Finishing Plant (PFP): The contractor completed the management assessment of their readiness to safely perform the remaining high-hazard demolition work at PFP (see 4/29/2019 report). In parallel, DOE's Office of Enterprise Assessments (EA) performed its own evaluation of the management assessment and the contractor's readiness to perform high hazard demolition activities. DOE EA and the contractor are expected to document and release the results of their assessments prior to the start of high hazard demolition work at the facility.

As part of the management assessment, the contractor held a field drill that simulated a cascade of smaller events happening at nearly the same time. The drill tested the demolition team's ability to respond to a simultaneous loss of contamination control air flow, which is provided by a temporary ventilation exhaust system, a spread of contamination, and a medical event. Radio communication was improved compared to earlier field drills (see 4/5/2019 and 4/19/2019 reports). Both the workers in the field and the emergency response personnel in the incident command post appropriately prioritized the response to the injured individual. The contractor also identified during the hotwash that a procedure in the incident command post was not up to date and that the completion of personnel accountability checks was delayed.