DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 28, 2018

TO: Christopher J. Roscetti, Technical Director
FROM: P. Foster and P. Fox, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending September 28, 2018

Plutonium Finishing Plant (PFP): At the end of last week, the demolition team performed a full-scale debris loadout dry run in the PFP demolition site HCA/ARA. The dry run resulted in several suggested actions to improve fogger unit placement and work area safety. This week, with DOE-RL approval, contractor management lifted the stop work that has been in place since the December contamination spread events (see 12/15/2017 report) and resumed lower risk demolition work at PFP.

Tank Farms: The resident inspector observed performance of facility emergency response organization activities in the Tank Farms Incident Command Post (ICP) during an emergency preparedness drill. The scenario presented to the team was a leak that occurred in SY Farm during a liquid transfer from the waste tank in 219-S to SY-101. The release did not challenge emergency action levels, but did include caustic liquid waste contamination of an individual. The resident inspector observed that the exercise controllers/evaluators post-event review of the exercise was appropriately critical. In particular, the exercise team noted that the time required to dispatch a team to support field personnel did not result in an adequate event response and there were significant deficiencies in ICP control of the abnormal event. Additionally, the resident inspector noted that the number of radiological control personnel responding to the event did not provide timely support for emergency response personnel, transport of the injured person, or timely evaluation of the radiological conditions at the scene.

The contractor's Corrective Action Review Board (CARB) met to discuss the apparent cause and corrective actions for a lockout/tagout event in the AP Farm. The event occurred when a worker applied a lock to a previously installed locking device and the device disengaged from the breaker switch. The apparent cause identified was that the best available locking device for this breaker type was not used for the initial isolation. The CARB captured multiple corrective actions including the development of a list of each breaker type used in WRPS facilities and its preferred isolation device. The remaining actions institutionalize the use of that list, train the workforce, and capture the event in a lessons learned. The resident inspector noted that these actions should help reduce the likelihood of a similar event occurring the future. However, the identified apparent cause does not appear to address why this particular locking device failed in this application and may therefore miss corrective actions tailored to address this cause.

Waste Treatment Plant (WTP): The contractor recently reported substantial progress related to resolution of WTP technical issues (TI). In particular, the contractor submitted a summary description of technical endpoint deliverables that define an approach for ensuring adequate structural integrity design of vessels and equipment that they consider adequate to resolve TI 7. Additionally, they reported completion of work activities necessary to close TI 5, which addresses erosion/corrosion design, and requested DOE-ORP approval to close the associated level one finding. Lastly, they consider Board concerns related to the HLW Facility Safety Design Strategy resolved based on DOE-ORP's approval of the HLW Facility PDSA.