

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 23, 2016

TO: S. A. Stokes, Technical Director
FROM: P. Fox and D. Gutowski Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending September 23, 2016

Plutonium Finishing Plant. A work team discovered solidified heel material while disassembling 26 inch vacuum piping. They established safe conditions and stopped work. Initial nondestructive assay (NDA) results determined that the criticality value of the material was above the posted criticality prevention specification value. After developing a recovery plan, the team safely moved the pipe to an area with lower background radiation. Follow up NDA in this location determined that the criticality value of the material is much lower.

Plutonium Reclamation Facility (PRF) ventilation was stopped to cut access openings and to isolate the system for demolition. Several hours later, while the facility was unoccupied, continuous air monitors alarmed at locations on the first, third, and sixth floors. Workers subsequently entered PRF, restored ventilation, and are investigating the cause of the alarms.

So far, the contractor readiness assessment (RA) team (see activity report 8/26/2016) has identified twelve prestart and two post-start findings. Additionally, they have determined that the work team has a good knowledge of the activities necessary to demolish the PRF and that a healthy safety culture exists on the project. The RA team requested additional demonstrations to support their evaluation and the project team will provide the demonstrations next week.

Waste Treatment Plant (WTP). The contractor issued the test plan for qualification testing of Standard High Solids Vessel design. Testing is expected to commence in December 2016.

The contractor energized 13.8 KV electrical switchgear busses in building 87. This is the first time WTP permanent plant equipment has been energized from site power systems.

The ORP quality assurance (QA) audit team (see activity report 1/29/2016) determined that the contractor's QA program is adequate, satisfactorily implemented, and effective. The team identified two priority level 2 findings and twenty priority level 3 findings.

Tank Farms. The contractor's Joint Test Review Group met and approved the test results report for the new AP Farm ventilation system. The system is still under test control while three open items are resolved. Most notably, megger testing performed by a subcontractor was not done per procedure and had several data quality issues.

Low Activity Waste Pretreatment System (LAWPS). The site rep toured the Engineering Scale Test Facility for LAWPS with the DOE-EM Chief Engineer. This facility has 1/9th scale cross flow filters and ion exchange columns. A full scale column is being tested in parallel at a test facility in South Carolina.

Office of River Protection. ORP conducted the 2016 Grand Challenge Workshop (see Activity Report 10/23/2015). Ten proposals were selected from 35 candidates for evaluation during the event. The winning proposal was a skid mounted vapor treatment system for the tank farms.