

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 28, 2016

TO: S. A. Stokes, Technical Director
FROM: P. Fox and D. Gutowski Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending October 28, 2016

P. Fox was offsite this week. D. Cleaves provided site rep support.

Tank Farms. Last week there were two contamination spreads. In the first event, six workers performing pit work in AX farm were found with skin contamination and two others had clothing contamination. All were successfully decontaminated and the contractor has completed recovery plan actions. All pit work is suspended until interim corrective actions are complete. The other event occurred when a component owned by the tank farms near B-Plant was opened outside of the approved work scope. Material spilled out and contamination levels exceeded the void limit for the associated RWP. There have been a number of radiological events at the Tank Farms, Effluent Treatment Facility, and 222-S Laboratory in recent months. The contractor is evaluating possible common factors and potential trends.

The staff member observed a limited emergency preparedness drill. The scenario involved a disgruntled former employee driving a truck full of explosives into AN farm and detonating it.

Plutonium Finishing Plant. The contractor is finishing preparations to begin demolition of the Plutonium Recovery Facility. The site rep and staff member performed an external walk down of the facility to observe preparations. Electrical isolations are complete, and temporary power has been removed. The final three mechanical isolations were completed this week. Continuous Air Monitors are all in place and the stationary units feed to a control trailer where they will be used not only for alarms, but also for process control. Emergency preparedness and spare support equipment has been staged. Demolition activities are expected to commence next week.

Workers painting out the inside of the Plutonium Recovery Facility discovered paint residue on the inside of their Powered Air-Purifying Respirators (PAPR), indicating that the cartridges were not sealing effectively with the PAPR unit. The contractor held a critique which determined that bumper guards, which have been used since April 2012 to protect filter cartridges from being knocked off, can interfere with the fit of chemical/filter combination cartridges. Recent smoke tests showed that these units do not seal properly when bumper guards are used with combo cartridges. The contractor is assessing the extent of prior use of PAPRs in this configuration and associated air sampling data. The contractor has swapped potentially affected PAPR units with new units to preclude use of potentially internally contaminated units.

REDOX Plant. The contractor approved the design of a new roof for the REDOX facility and fabrication has started at the manufacturer (see Activity Report 7/7/2014).

222-S Laboratory. An exit survey monitor found skin contamination the forearm of a laboratory worker as they exited a contamination area. The individual was successfully decontaminated. The cause of the contamination was not apparent, however, follow-up surveys of the work area found contamination on the tops of vials in the fume hood where the individual was working and further investigation is in progress.