

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 16, 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 16, 2016

**Plutonium Finishing Plant (PFP).** A site rep observed cause analysis activities and the final Corrective Action Review Board (CARB) for two recent events at PFP (see activity reports 8/12/2016 and 8/19/2016). In both cases, the cause analysis team engagement was good, and the CARB review of the results was thorough and critical. The site rep also notes that both events demonstrate a weakness in craft awareness of hazardous energy sources and related control methods, as well as the appropriate application of skill of the craft methods and practices during work. These two events along with a recent event in the tank farms (see activity report 9/9/2016) represent a significant spike in events of this type.

**Waste Encapsulation and Storage Facility.** The site rep observed workers remove a manipulator from hot cell F. This work is being performed to support stabilization and grouting of the hot cell. Although there was some confusion during preparation, no issues were identified related to the work activity or associated radiological controls.

**100K West Basin.** A worker on basin rounds called a stop work when he discovered that a construction crew in the basin was using a HEPA vacuum not authorized for use since it did not have a current annual aerosol test. The vacuum was being used to support cutting potentially contaminated plywood. At the critique for this event, participants noted that there are weaknesses in control of HEPA vacuum equipment, construction forces had not been trained on the equipment checkout process, and the work package did not allow cutting in the building.

**222-S Laboratory.** A worker discovered contamination on the palm of their hand during surveys when exiting a Radiological Buffer Area/Radioactive Material Area. The worker was successfully decontaminated. A fact finding meeting determined that the probable source was cross contamination from a cart used to transport material from a counting room used to perform clearance surveys which is located inside the contamination area to the contamination area boundary. The fact finding noted weaknesses in contamination control related to carts, and in the physical layout of radiological survey equipment related to radiological area boundaries.

The site reps and ORP Facility Rep met with contractor management to discuss work planning improvements related to upcoming high hazard work (see Activity Report 7/15/2016).

Laboratory personnel started a test bed in the 11A Hot Cells to support Direct Feed Low Activity Waste and the Low Activity Waste Pretreatment System. They have composited 11 L of tank waste supernate and filtered it. Next they will run the clarified supernate through ion exchange columns for cesium removal while performing waste characterization throughout the process.

**Tank Farms.** Tank farms personnel performed a proof of concept mockup for the AP-02A pump disposal project (see Activity Report 10/23/2015). In order to be accepted at the Environmental Disposal and Restoration Facility, the pump oil must be drained. This mockup demonstrated the use of a shielded platform and tools designed for use in this process.