

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 7, 2014

TO: S. A. Stokes, Technical Director
FROM: P. Fox, D. Gutowski and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending November 7, 2014

Board staff members F. Bamdad, J. Meszaros, J. Pasko, and C. Shuffler were onsite to review the safety basis and confinement ventilation system for the Plutonium Finishing Plant. Board staff member T. Hunt was onsite to observe the continuing DOE Office of Enterprise Assessments review of work planning and control in the tank farms.

Plutonium Finishing Plant (PFP). The site rep observed workers removing the first of many segments of contaminated ventilation exhaust piping from the duct level. The contractor's management approved a broad scope work package, but the activity level work planning for specific tasks was deferred until later. As noted in previous Board letters, the failure to address work planning at the task level is a recurring problem at PFP. In this job, workers were unable to separate the segment of pipe after it was unbolted. Rather than pausing to evaluate the hazards associated with removing the stuck segment, workers used a long pipe to pry the section out using another segment of duct pipe as a pivot. This was not addressed in the work package nor discussed at the prejob briefing. Neither the field work supervisor nor the senior supervisory oversight individual stopped this action. Workers also failed to implement lessons learned from similar work (see Activity Report 5/16/2014).

Workers discovered that a glove port and glove had fallen off a glovebox onto the floor. This glovebox is awaiting removal from the facility and is disconnected from the glovebox ventilation system. Workers surveyed the glovebox and taped a cover over the opening. They surveyed to the items on the floor and covered them with damp cloths. The survey showed contamination levels of 2.1 million dpm/100cm² alpha which voided the RWP, and the workers exited the area.

Tank Farms. Members of the Tank Vapors Assessment Team were onsite to brief tank farms personnel on the results of their recently released report. In response to one of the team's recommendations to focus more on higher concentration, transient exposures, the contractor updated the standing order for respirator requirements in the tank farms (see Activity Report 9/26/2014). All single-shell tank farm entries now require supplied air respirators. Double-shell tank farm work now requires supplied air when there is vapor potential (see Activity Report 5/9/2014). These controls will remain in place at least until the effectiveness of chemical cartridges for transient exposures is evaluated.

REDOX Plant. Last month, the contractor requested that RL provide funding for a new roof on the REDOX facility. The roof was last recovered in 1986 and the facility is not expected to be demolished for decades. The contractor stated that increasing in-leakage of moisture is causing contamination migration within the facility (see Activity Report 1/18/2013). No structural degradation has been observed yet, but the contractor noted concerns that water intrusion could degrade facility rebar.

Waste Treatment Plant (WTP). Researchers from Pacific Northwest National Laboratory briefed ORP and WTP contractor personnel on current research efforts on mixing to support WTP vessel design. They presented initial data on modeling of pulse-jet mixers, spargers, and air lift circulators.