

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 23, 2015

**TO:** S. A. Stokes, Technical Director  
**FROM:** P. Fox and D. Gutowski Hanford Site Representatives  
**SUBJECT:** Hanford Activity Report for the Week Ending October 23, 2015

**Plutonium Finishing Plant (PFP).** The contractor is analyzing reacted and unreacted waste samples and is working with subject matter experts to fully understand the unexpected reaction that occurred in trays containing Plutonium Reclamation Facility Pan J waste treated with a glycerin based fixative (see Activity Reports 10/9/2015 and 10/15/2015). The contractor will use information from this deliberate approach to determine if additional processing is required before packaging Pan J waste and whether any additional recovery actions are necessary. Appropriate compensatory measures are in place to prevent additional reactions and preclude introduction of the Pan J waste into the waste stream before required actions are complete.

There were two personnel contamination events this week. In the first event, a continuous air monitor alarmed in the "A" line control room which was not posted as a contamination area. Three individuals observing HA-9A downsizing activities from the control room exited and awaited survey. Surveys found two individuals had contamination on their shoes and one of the two had skin contamination on his hand and in a nasal smear. He was decontaminated. The cause of the event is suspected to be an unidentified air flow path between the "A" line and the control room. The control room is now controlled as a high contamination area and airborne radioactivity area. The second contamination event resulted from a failed seam in a level B suit worn during HA-9A downsizing activities. The exit survey discovered contamination in the worker's hair and the individual was decontaminated. This is the fifth seam failure since June (see Activity Report 8/14/2015). The contractor is tracking the issues and continues to provide information to the suit vendor in an effort to resolve the problems.

**Tank Farms.** The contractor removed the mixer pump from Tank AP-102 (see Activity Report 10/16/2015). During the effort to separate and remove the middle section of the pump, workers experienced high dose rates and some workers had contamination on their PPE. The pump was left as a suspended load for three nights until the work was resumed with a revised work package. The new package added additional sleeving to control contamination and changed the lift plan to raise the bottom and middle sections of the pump together as one piece to avoid disassembly near the gamma field streaming out of the tank riser.

ORP completed an audit of selected elements of the contractor's quality assurance program. The audit identified two low level findings and determined that the program elements reviewed were adequately flowed down to implementing procedures, the procedures are adequately implemented, and that the program was achieving effective results.

**Office of River Protection (ORP).** ORP conducted a Grand Challenge Workshop. The purpose of the event was to identify ideas that could allow ORP to more cost effectively achieve their mission through innovation, creativity, and partnerships. Eleven proposals were selected for presentation and evaluation at the workshop. The winning entry proposed advanced glass formulations to support improved operations at the High Level Waste Facility.