

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 18, 2016

TO: S. A. Stokes, Technical Director
FROM: P. Fox and D. Gutowski Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending February 18, 2016

Tank Farms. The site reps and ORP personnel did a system walkdown of the AY-102 retrieval system led by the contractor retrieval operations manager. This included the new control trailer as well as installed equipment in AY and AP farms.

The contractor completed the transfer from AP-102 to AZ-102 (see Activity Report 2/12/2016) as well as smaller transfer from AP-102 to AP-107. The supernate removed from AP-102 was partially replaced by a small transfer from AN-106 to AP-102. This relatively dilute material will be the sluicing liquid to mobilize AY-102 solids. The contractor has not resolved all issues with the flowmeter interlock meant to protect the pump during the transfers out of AP-102. The same style meter is installed to support the supernate transfer from AY-102. Contractor management plans to continue with alternative flow monitoring to protect the pump rather than relying on the flowmeter interlock. The contractor is also performing the Operational Acceptance Test (OAT) for AY-102 waste retrieval equipment. The site rep observed OAT field activities involving a hydraulic power unit.

The contractor performed a process hazards analysis for a planned evolution to drain a plugged pump in AP-106 by punching holes in the pump column. This is similar to the plan for clearing a pump in AW-106 (see Activity Report 1/8/2016). Senior management has directed that neither evolution use pressurized water to flush the pump while it is partially outside of the tank.

Plutonium Finishing Plant. The contractor's Executive Safety Review Board met to approve the results of a root cause analysis related to recent cases where equipment was radiologically released with contamination present in or on the equipment. This, in turn, resulted in cases of contaminated equipment outside of posted radiological areas (see Activity Report 12/18/2015). The analysis determined that the procedures used to perform clearance surveys were inadequate. In particular, the contractor noted that assumptions used in the development of the procedures were not adequately documented and validated. This in turn resulted in the use of less than conservative clearance survey confidence levels for equipment release. The contractor has implemented an extensive set of corrective actions to prevent recurrence of this issue.

Low Activity Waste Pretreatment System (LAWPS). The LAWPS Safety Design Integration Team met to discuss proposed modifications in the selection of controls for design basis accidents and the work necessary to support hazard control decisions. Hazard control decision changes are being driven by recent decisions related to the methods for preventing flammable gas explosions in tanks and for handling spent resin, and by revised consequence calculations and the use of a different approach for defining requirements for automated controls.

Waste Treatment Plant. ORP's Senior Review Board recommended approval of the Balance of Facilities (BOF) PDSA realignment (see Activity Report 3/6/2015). The realignment includes a series of safety basis change packages that move controls previously in the BOF PDSA into the General DSA or facility specific PDSAs.