

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 14, 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 14, 2016

Members of the technical staff participated in a teleconference with ORP and contractor representatives to further discuss the hydrogen control strategy for Waste Treatment Plant tanks and vessels (see Activity Report 10/7/2016).

Plutonium Finishing Plant. Work in the Plutonium Reclamation Facility (PRF) was stopped to address rain water accumulation that occurred when water entered the facility through the openings that were cut to allow removal of gloveboxes from the 4th, 5th, and 6th floors. Some of the water had pooled around temporary electrical power distribution centers and the associated distribution cords resulting in an electrical safety concern. However, the event did not cause any contamination spreads. The stop work was lifted after the safety issues were addressed.

Over the last two weeks, workers removed two column gloveboxes, the five miscellaneous treatment (MT) gloveboxes, the MT conveyor, and one filter box from the upper three floors of the PRF. One additional column glovebox is scheduled for removal next week. Its removal will complete the major pre-demolition phase equipment removals.

Tank Farms. The contractor briefed ORP on their planned approach for implementing safety-significant (SS) temperature and annulus level monitoring in double-shell tank farms (see Activity Report 8/12/2016). Programmable logic controllers, I/O devices, and the communications protocol will be SS and certified to IEC 61508, *Functional Safety of Electrical/Electronic/Programmable Electronic Safety-related Systems*. This communications protocol will allow communications over non-credited network components. The contractor is nearing completion of the safety basis amendment for this project.

618-10 Burial Ground. The contractor suspended use of close-fitting air purifying respirator (APR) masks within the 618-10 Burial Ground when they discovered that workers had been issued and were using improperly configured APR masks. A type of mask that was not certified by the manufacture for installation of a T-bar to support combination cartridge use had been fitted with T-bars from a different type of mask. The modification invalidates the assigned protection factor. Contractor managers were not able immediately determine whether the modification had had been approved or if the approval was properly reviewed. The contractor is performing an extent of condition review and is determining necessary follow-on actions to recover from this event. The suspension did not affect the use of TL Portable Air Purifying Respirator hoods or airline fed masks, both of which were verified to be properly configured.

Building 324. The contractor intends to start work associated with the clean out of the facility hot cells in early November. This work supports the eventual remediation of the heavily contaminated soil located under the B hotcell.

Office of River Protection. A facility representative passed his final oral board and completed initial qualifications. He will be assigned to oversight of Tank Farms Production Operations.