

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 30, 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 30, 2016

P. Fox was at the Savannah River Site for training and site rep support.

Plutonium Finishing Plant. The contractor performed an additional demolition demonstration for the Plutonium Recovery Facility (PRF) Demolition Readiness Assessment Team. The intent was to simulate three activities: 1) ability of long reach equipment and water cannons to reach the top levels of the PRF, 2) size reduction and packaging of a highly contaminated piece of equipment, and 3) placing contaminated rubble into a container. Due to increasing wind, only the first two activities were completed. The contractor also removed a portion of the PRF roof and started removal of gloveboxes and a filter box from the upper PRF floors.

Tank Farms. The contractor exited the ventilation operability LCO for AP farm after turning over the new ventilation system from startup to operations and declaring the system operable per TSR definition (see Activity Reports 7/29, 9/23/2016). The contractor issued a technical evaluation justifying acceptance of questionable megger data collected by a subcontractor.

Contractor quality assurance personnel completed their surveillance of the projects marshaling yard (see Activity Report 8/26/2016). Their report includes six findings and notes that this represents only a small fraction of the equipment storage problems in the yard.

The contractor has installed a public address system around AP farm and began functional testing this week. This is a pilot system intended to improve communications with workers in the field (see Activity Report 3/27/2015).

Radiochemical Processing Laboratory. A PISA involving the criticality alarm system was determined to be a positive unreviewed safety question (USQ) (see Activity Report 9/9/2016). This is the second positive USQ involving the basis calculation for the alarm system (see Activity Report 7/17/2015).

Low Activity Waste Pretreatment System (LAWPS). The contractor completed a calculation for radiological consequences of spray leaks. They had previously assumed that any spray leak consequences would be bounded by the significant on-site consequences determined for Tank Farms spray leaks. The new calculation shows significantly lower consequences due to lower pump pressures and lower solids fractions at LAWPS. This calculation will be further refined as the design progresses and pump curves are established, however it is not expected that the consequences will exceed 100 rem at 100 m.

Site Infrastructure. Last week, there was a brief power outage in 100 Area due to an error in relay testing. The procedure was revised in an attempt to make it less ambiguous. However, the same activity with the revised procedure caused another brief power outage for portions of 100 Area this week. The activity has been suspended and the contractor held a critique and reported this as a management concern.