

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 15, 2016

TO: S. A. Stokes, Technical Director
FROM: P. Fox and D. Gutowski Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending July 15, 2016

B. Boser was onsite to discuss Waste Treatment Plant safety basis, quality assurance, and technical issues and to observe a Low Activity Waste Pretreatment System design review.

Site Infrastructure. A switching error at a substation caused a brief power loss to 200W, 200E, and 600 areas. Impacts were substantial and included: loss of ventilation in all double-shell tank farms, evacuation of the 222-S Lab, and orderly egress of workers from the Plutonium Finishing Plant due to loss of ventilation. Normal facility operations were restored later the same day.

Tank Farms. The Hanford Atomic Metal Trades Council President enacted a Stop Work on all activities in any tank farm boundary without supplied air respiratory protection. Contractor management responded by placing supplied air use for all double-shell tank (DST) farms into the management directed respiratory protection form (see Activity Report 11/6/2015).

ORP approved a safety basis amendment that addresses the positive unreviewed safety question determination regarding pumping DST leak detection pits (see Activity Report 4/15/2016).

Building 324. The site reps met with RL and contractor personnel to discuss the implementation of the TSR control of combustible material in the hot cells and associated air locks. The site reps note that the linkage between the safety basis and the implementing procedure is weak in that the scope of the quarterly fire protection engineer (FPE) surveillance is determined by the individual who accomplishes the surveillance instead of being procedurally defined. Further, the implementing procedures are confusing and lack expected signature requirements. Lastly, the TSR states that a qualified delegate may perform the quarterly FPE inspection instead of the FPE. However, the implementing procedures do not provide criteria for the qualifications.

Waste Treatment Plant. The Single High Solids Vessel test vessel arrived from the vendor and has been placed in the Full Scale Test Facility.

This month's ORP construction oversight surveillance exit meeting included a noteworthy surveillance performed by a Facility Rep. The surveillance tracked a specific design feature identified in the PDSA through implementing documents and subsequent field installation. The Facility Rep identified deficient requirement flow down, as well as a number of inadequate field installations which are now being corrected by the contractor.

The contractor withdrew a safety basis change package related to control of hydrogen in piping and ancillary vessels (see Activity Report 5/6/2016) because of ORP review comments.

222-S Laboratory. The contractor's Joint Review Group sent a work package for an investigative survey of the 219-S vault back for additional planning. The vault is an infrequently accessed high contamination area. The investigative survey supports replacement of a failed pump which is used to transfer waste to SY-101.