

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 29, 2013

TO: S. A. Stokes, Technical Director
FROM: D. Gutowski and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending November 29, 2013

Plutonium Finishing Plant (PFP). For the second week in a row, the individual qualifying as the contractor's new fire safety office (FSO) at PFP identified additional non-compliances with the implementation of fire protection controls (see Activity Report 11/22/2013). The new FSO noted that a safety-significant fire-protection wall was damaged, apparently from a door hitting an adjacent conduit support. The new FSO also noted that another fire-protection wall had a penetration that was added to install temporary power to an adjacent room. The contractor initiated corrective actions to address these degraded design features including ensuring that there is a 10-foot separation between any fuel package and the deficient conditions. They also determined that an extent of condition review is necessary and the surveillance procedure for fire barrier inspections needs to be reviewed for adequacy.

The site rep, accompanied by a Richland Operations Office facility representative, performed a walkdown of a portion of the fire-protection walls designated as safety-significant design features. The areas they observed appeared to be adequate with the exception of one of the problems noted by the FSO. However, they noted that some doors which are not fire barriers were identified with signs indicating they were. The contractor agreed that the signs were not appropriate and would evaluate the extent of condition for this problem.

Waste Treatment Plant. The Safety Design Integration working team completed seven design basis accident travelers, which include accident scenarios and proposed control strategies. These were for: liquid spills, liquid sprays, fires, waste drops, molten glass spills, hydrogen explosions, and ammonia events. Five travelers have been transmitted to contractor management for review and comment. These are the first of the eleven travelers that will support the development of a Safety Design Strategy for the High Level Waste Facility (see Activity Report 10/11/2013). The working team specifically noted areas where they did not have consensus and will require management direction.

Last month, DOE released the final report for their audit of the contractor's quality assurance program (see Activity Report 5/31/2013). There were two Level 1 (the most significant) findings: 1) the contractor's quality assurance program has not been implemented in accordance with requirements and is not fully effective; 2) the contractor's corrective action program has not been implemented in accordance with requirements and is not fully effective. DOE has directed the contractor to develop corrective action plans for the findings as well as a managed improvement plan to address systemic issues. DOE directed that the improvements in the quality assurance program are to be completed and effectively implemented within two years.

Tank Farms. Last week, the contractor noted an unexpected drop in one of the Enraf level instruments in single-shell tank SX-102. They checked the interstitial liquid level using the liquid observation well and saw no changes in that reading. A video inspection showed that shifting salt solids were responsible for the measured level drop; the plummet of the Enraf had fallen into an irregularity in the salt surface. The inspection also showed that SX-102 has active water intrusion which is being evaluated.