

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 14, 2015

TO: S. A. Stokes, Technical Director
FROM: P. Fox and D. Gutowski Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending August 14, 2015

Board staff members M. Bradisse and C. Shuffler were on site to visit AP Tank Farm, the 242-A Evaporator, and the 222-S Lab, and to discuss Recommendation 2012-2.

Plutonium Finishing Plant (PFP). The contractor continues work on three high hazard jobs that require the use of supplied air. Although work has been progressing, the contractor continues to experience problems (see Activity Reports 6/26/2015 and 7/31/2015) related to the use of the OSHA level B suits. This week, there were two skin contamination events related to the ongoing HC-9B glovebox size reduction. In both cases, the workers were decontaminated to less than detectable levels. The first problem occurred when a factory-fabricated seam in a suit failed. This is the fourth seam failure in the last three months. Two of the failures, one of which was in a non-critical seam, were identified during pre-inspection activities. The other two were not detected during pre-inspection and failed during use resulting in skin contamination events. The cause of the second contamination has not been identified and occurred despite recent changes in work practices and modifications to the inner PPE suit worn by the workers. The work team noted that the ongoing problems appear to be linked to a recent redesign of the suit, and that the type of loose surface contamination contained in the current work area is highly mobile compared to that found in other work areas. The contractor decided to restrict work using the level B suits pending completion of a review of the suit design, work practices used to doff the suits, and inner PPE selection, and is engaging with the vendor to resolve quality issues.

The site rep attended the contractor's quarterly Corrective Action Review Board meeting. The information presented during the meeting confirmed previously noted adverse trends (see Activity Report 8/7/2015) related to the number of radiological and worker injury events. Contractor management subsequently issued a management concern report related to the trends in the Occurrence Reporting and Processing System.

The contractor provided an update on the development of plans related to the demolition of the remaining PFP facilities. The contractor has engaged a structural engineering firm that specializes in large facility demolition to support the planning. The plan, which is about 50% complete, shows a controlled and methodical approach for demolishing the facility.

Tank Farms. The contractor is raising the fill limit in Double-Shell Tanks (DST) AP-104 and AP-107 from 422" to 454." In order to perform this level rise, they will fill the tanks up to 458" while checking for leaks, then lower the level to below the new operating limit. Four other tanks in AP farm have already had their levels increased and all of the AP tanks have been structurally evaluated up to 460" (see Activity Report 7/3/2009). This week, AP-107 was filled to 458." The transfer was evaluated per the SAC for DST induced gas releases and the evaluation showed that the LCO on DST induced gas release flammable control was applicable. The contractor placed administrative restrictions on activities in AP Farm due to the potential to enter that LCO. Tank AP-107 has been held at 458" for greater than the required 48 hours with no anomalies detected.