

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 14, 2014

TO: S. A. Stokes, Technical Director
FROM: D. Gutowski and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending February 14, 2014

Staff members R. Eul and R. Grabarkewitz, were on-site to complete training.

Plutonium Finishing Plant (PFP). A team from the DOE Office of Safety and Emergency Management Evaluations (HS-45) completed a review of the ventilation systems at PFP and preliminarily identified a number of opportunities for improvement. The team noted that the implementation of system health reporting at PFP was one of the best in the complex.

Workers size-reducing pencil tanks in the Plutonium Reclamation Facility stopped working due to a concern that the ventilation flow direction in a corridor was not as expected. The apparent reason for the flow reversal was that a non-safety roughing filter had plugged. These roughing filters reduce loading on the credited HEPA filters. All roughing filters had been scheduled for replacement six months ago but this was not completed because facility managers assigned workers to D&D efforts over this preventative maintenance task. The filter replacements are now being performed.

Waste Treatment Plant (WTP). As a result of the Reliability Validation Process (see Activity Report 10/26/2012), the contractor concluded that significant improvements were needed in the procedures and guides used by the engineering organization. Implementing these changes is required before the Office of River Protection (ORP) authorizes the contractor to proceed with engineering, procurement, and construction of the High Level Waste Facility. The contractor plans to implement these procedure changes next week. The site rep observed one of the training sessions for the new procedures and noted that many of the participants were engaged. One key aspect of the changes is a more rigorous systems engineering approach. The lead for the new systems engineering group said she expects to have a validated set of design requirements identified by the end of 2014. These requirements will flow down into verification matrices for individual systems, structures, and components. Another significant change is the use of Engineering Impact Evaluations which are intended to identify impacts to documents, procurements, and installed equipment from changes to design documents. This may help ensure that the safety basis and engineering documents remain aligned once existing discrepancies are resolved. Other changes addressed issues such as calculation quality, design verification, design change control, preparation and checking of drawings, and procurements.

The contractor briefed ORP personnel on programmatic preparations for startup and commissioning. One planned activity for this year is the development of safety management programs to support completion of the WTP General Documented Safety Analysis.

One System. The One System Nuclear Safety Steering Committee met to discuss proposed methodologies to analyze hydrogen events, seismic events, and chemical hazards as well as how to address calculation inputs and assumptions. If implemented, the proposals are intended to provide a consistent approach to nuclear safety analysis between WTP and the Tank Farms.