

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 2, 2014

TO: S. A. Stokes, Technical Director
FROM: D. Gutowski and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending May 2, 2014

Board staff member R. Rosen was onsite to observe a meeting on tank integrity.

Plutonium Finishing Plant. Workers performed borescopic inspections and collected gas samples from pipe segments and related equipment that experienced an exothermic event during size reduction activities (see Activity Report 4/25/2014). Preliminary reports indicated no significant quantities of material in the pipes. Results from the gas sampling are expected early next week.

RL is reviewing the revised Enhanced Maintenance Plan and safety basis changes that were submitted following the catastrophic failure of exhaust fan EF-1 (see Activity Report 2/21/2014). The safety-significant exhaust fans used for confinement ventilation have continued to degrade; fan EF-4 has been designated for emergency use only because of significant vibrations. Additionally, the contractor has noted maintenance problems with the supply fans. Although the supply fans are not safety-significant, they are important to worker safety because they ensure there is sufficient air flow from the less contaminated to more contaminated areas.

The contractor reported that the non-destructive assay results for fissile material removed combined with the holdup in glovebox HA-10 was marginally less than the amount assumed in accident analysis but was significantly higher than allowed by the criticality prevention specification (see Activity Report 11/15/2013).

242-A Evaporator. ORP directed the contractor to implement a compensatory measure to address potential inadequacies of a steam isolation valve performing its safety function until a planned improvement listed in the safety basis is completed. The compensatory measure must be added prior to start of evaporator operations.

Tank Farms. The contractor started retrieving waste from single-shell tank C-102 to double-shell tank AN-101. C-102 contains more than half of the remaining waste in C farm and its retrieval will exceed the current sludge depth limits in place for tank AN-101 (see Activity Report 2/28/2014). The contractor proposed an incremental Justification for Continued Operations (JCO) to authorize greater sludge depths until the full safety basis amendment being developed out of the deep sludge research program is completed. The incremental JCO is supported by a different technical basis than both the basis for the current JCO and the draft basis for the planned safety basis amendment.

Central Plateau. The contractor's Nuclear Safety Performance Evaluation Board (NSPEB) completed their review of the Sludge Treatment Project/100K and Surveillance and Maintenance organizations. At the outbrief, the team identified 22 preliminary findings and noted that performance had improved since the last time these projects were reviewed. One NSPEB finding involved workers expanding the scope of work beyond that which had been authorized. A challenge noted by the NSPEB team was that there was little field work to observe in these facilities because funding levels for these projects is low.