

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 15, 2014

TO: S. A. Stokes, Technical Director
FROM: D. Gutowski and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending August 15, 2014

242-A Evaporator. ORP completed their readiness assessment (RA) for the 242-A Evaporator. The RA team identified four prestart findings, four poststart findings, and eight opportunities for improvement (OFI) for the contractor. They also identified one post-start finding and three OFIs for ORP. The team-identified problems included: development and compliance with technical procedures, the contractor did not develop and execute process-related emergency preparedness drills, the startup plan did not include adequate equipment testing, a lack of adequate analysis for a potential corrosion mechanism in the safety-significant reboiler, and insufficient numbers of qualified staff for emergency preparedness. The ORP RA team also found that the contractor RA did not meet all of the objectives of their approved Plan of Action, specifically that facility modifications had not been adequately evaluated during the contractor RA.

222-S Laboratory. Workers performing surveys on contaminated lead objects in the 222-S Laboratory encountered alpha contamination levels in excess of the void limits on their radiological work permits. Instead of stopping immediately, the workers placed the job into a safe configuration prior to contacting a supervisor to request direction. The rad con supervisor recognized the void limit was exceeded and directed the cessation of activities.

Plutonium Finishing Plant (PFP). The site rep observed a second test for filling gloveboxes with a light-weight concrete mix after the results from the first test were unsatisfactory (see Activity Report 6/27/2014). The two primary differences from the earlier test were using a concrete mix screw pump and having the glovebox in a tent rather than exposed to the elements.

The contractor held a hazard review board (HRB) for a work package that will prepare Building 242-Z for improved ventilation. The 242-Z facility is highly contaminated with americium and plutonium from an explosion in 1976. The HRB members were prepared for the review and noted some relatively minor changes that needed to be made to the work package. The package was rejected until these changes are incorporated.

Tank Farms. The contractor started a graded RA (checklist) for the new Core Sampling System. This system will replace the capabilities of the Core Sample Truck.

The contractor completed the third retrieval technology for single-shell tank (SST) C-107.

The contractor briefed ORP on proposed technology development activities to support future retrievals in A and AX farms. The waste in these farms contains approximately one quarter of the total remaining SST curies and retrieval equipment will be exposed to higher dose rates.

Tornado. A small tornado touched down on the site this week. No nuclear facilities were impacted. The site wind hazards are bounded by straight line winds rather than tornadoes. An RL facility representative noted that backshift worker responses and take cover locations may not have been appropriate.