

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 17, 2013

TO: S. A. Stokes, Acting Technical Director
FROM: D. Gutowski and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending May 17, 2013

R. Quirk was off site this week.

Radiochemical Processing Laboratory (RPL). There was a tritium contamination spread in the RPL. Two workers found contamination on their skin and personal clothing and had positive nasal smears. A third worker had personal clothing contamination only. The individuals were successfully decontaminated and were issued bioassay kits. The work was being performed inside a fume hood and contamination spread into the room along the routes to radiological trash disposal and the smear counting room. Contamination levels on the floor immediately adjacent to the fume hood were well above the threshold for a High Contamination Area. The contractor developed a recovery plan and decontaminated the impacted areas.

Tank Farms. The personal clothing of two workers was contaminated in AN farm. They were fixing the hoist cable for the slurry distributor in double-shell tank (DST) AN-106. The cable winch was highly contaminated. No action levels were reached, but the higher than expected contamination led to the Field Work Supervisor directing the workers to begin exiting the area. One worker's contaminated clothing was discovered at the contamination area exit survey. The second was caught by instruments at the farm exit. No skin contamination was detected on either worker. Notification of this contamination was not issued until the following day. The site rep observed follow-up work for this job which included a substantial effort to reduce contamination levels in the work area.

Retrieval from single-shell tank (SST) C-101 to DST AN-101 resumed this week.

Waste Treatment Plant (WTP). The contractor held a meeting to discuss lessons learned and assess their recently completed process to develop Authorization Basis Amendment Request (ABAR)-1 for the High-Level Waste (HLW) facility. The intent of ABAR-1 was to clean up the Preliminary Documented Safety Analysis for HLW but not to change any controls or accidents which would require Office of River Protection (ORP) approval. The ABAR-1 process generated more than 1000 comments. The contractor plans to initiate ABAR-2 for HLW shortly. This second effort is expected to revise controls and will require ORP approval. The contractor is developing recommendations to improve the ABAR-2 effort based on the lessons learned from the ABAR-1 process.

The DOE Office Health, Safety, and Security started a review of the Documented Safety Analysis development for the Low Activity Waste Facility. This is a follow-up to the review in October 2012 that led to the contractor halting hazards analyses (see Activity Report 11/9/2013).

Waste Feed Delivery. A pump vendor met with ORP and the contractor to discuss possible technical solutions that could address the hazards of delivering large, dense particles to WTP. The vendor proposed incorporating particle processing capability such as separators or grinders into the design of transfer and or mixer pumps.