

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 25, 2014

TO: S. A. Stokes, Technical Director
FROM: D. Gutowski and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending April 25, 2014

Board staff members B. Boser and R. Kazban were onsite to discuss the recently submitted Safety Design Strategy (SDS) for the High Level Waste Facility.

Plutonium Finishing Plant. Late last week, workers were size-reducing a stainless steel, half-inch diameter demister drain line inside a glovebag when they heard a loud noise and saw a flame shoot from the end of the pipe. The workers, who were wearing a full set of protective clothing and respirators, did not see any indications that the confinement had been pressurized. They responded appropriately, determined the confinement was not breached, and left the area. This was the first size reduction of any demister drain lines so the shift manager stopped all work on this type of line. A worker expanded this work curtailment by initiating a stop work for all mechanical cutting of piping, ducts, and vessels. The contractor held a detailed critique meeting that was well attended by the workers involved, contractor managers, subject matter experts, as well as several RL personnel. At the end of the critique, the senior contractor manager present apologized to the crew, noting that the hazards analysis for this work was deficient. The contractor sent a team of workers back into the room to perform a more detailed inspection of the confinement and concluded that it had not degraded. The team also photographed the area to support planning a work package to sample and characterize material inside the confinement, pipe stubs, the demister, and the glovebox where liquid from the drain line had dripped when the drain line was removed.

Waste Treatment Plant. Last week, the DOE High Level Waste Facility SDS review team finalized their review plan to address the expectations in the relevant Standard Review Plan that was recently issued by the Chief of Nuclear Safety. This week, many of the headquarters members of the team were onsite to assist ORP in the review and approval process for the SDS. The site rep and staff members met with the review team to discuss some initial staff observations regarding the submitted version of the SDS (see Activity Report 4/11/2014).

242-A Evaporator. ORP completed an independent verification review of the contractor's implementation of changes to the safety basis. ORP identified six low-level findings and three opportunities for improvement as well as three assessment follow-up items.

The contractor completed their evaluation of the evaporator reboiler leak test to certify the integrity of the reboiler. The concentrations of dye detected in the samples from the test were well below the leak tightness criteria developed by the contractor.

The contractor completed their implementation plan for the evaporator readiness assessment.

Radiochemical Processing Laboratory. The contractor discovered another difference between the as-designed and as-built configuration of the fire suppression system (see Activity Report 5/10/2013) and declared another Potential Inadequacy in the Safety Analysis. They noted that there were three sprinkler heads on a one-inch header segment. However, the design drawing only included two heads which is consistent with the code requirements.