DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 30, 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 August 30, 2013

Tank Farms. The contractor concluded the higher than expected beta radiation levels on a waste transfer enclosure were the result of legacy contamination on concrete rather than a leak from recent waste retrieval activities (see Activity Report 8/23/2013). The enclosure, known as the single-shell tank (SST) C-101 sluicer transfer hose cover assembly, sat on concrete that had been contaminated years ago. The contractor's conclusion was the result of an investigation that included radiological surveys and visual inspections of the interior and exterior of the enclosure and adjacent sluicer box as well as the concrete cover block that supports the enclosure. The contractor also performed an assessment of the initial response to the event, and is still performing an effectiveness review of the corrective actions for the spill of waste at SST S-102.

These reviewers identified seven items that the contractor plans to close before resuming waste retrievals, as well as more than 30 post-start items. The pre-start items include: evaluating the technical basis for the waste transfer shutdown criteria and then reconciling differences between the radiation monitoring plans and retrieval operating procedures; ensuring the radiation monitoring plans and emergency action levels for transfers are consistent; characterizing the transfer route for retrievals from SSTs C-101 and C-110 and dispositioning locations where elevated beta dose readings exist; and addressing lighting deficiencies in C tank farm. The contractor removed most of the administrative holds they had placed on waste transfers last week as well as the special control for entering C tank farm. The only hold left is for waste transfers that use hose-in-hose transfer lines. It will be removed when the pre-start items are closed.

Waste Treatment Plant (WTP). Last week, the contractor paused the hazard analyses (HAs) for WTP following concerns from the Office of River Protection regarding the appropriate software classification of the database used in the HA process.

The leads for the WTP HAs also provided feedback to senior contractor management regarding the challenges facing the HAs for WTP. Key concerns include the lack of adequate subject matter expert support and the conflict between performing the HAs to an appropriate level of detail and supporting the current schedule baseline for safety basis development.

River Corridor Closure. Last week, the contractor and Richland Operations Office personnel briefed the site rep on their plans for removing the below grade portion (vault) of Building 340 (see Activity Report 8/16/2013). The contractor plans to remove much of the highly contaminated soil below the vault while driving five large horizontal caissons under it. They will then use pull-up gantries to raise the 1,100 ton vault approximately eight feet. Next, the contractor will use remote-controlled excavators to remove the remaining soil beneath the structure. They will drive a large transporter under the elevated vault and then lower the load onto it. Finally, they will drive the transporter to the onsite burial ground for grouting of all void spaces and ultimate disposal.

Plutonium Finishing Plant (PFP). The contractor announced that M. Swartz is the new Vice President for the PFP Closure Project.