

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 20, 2012

TO: T. J. Dwyer, Technical Director
FROM: W. Linzau and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending April 20, 2012

Board staff members T. Cutler, T. Hunt, and S. Lewis, and outside expert D. Boyd were on-site reviewing the conduct of operations at the Tank Farms. J. Troan and C. Johnson were on-site reviewing various Richland Operations Office projects.

Plutonium Finishing Plant (PFP): PFP management stopped all work in the Plutonium Reclamation Facility (PRF) after the second near miss event in less than a week. On Monday, the contractor completed a critique for an event last week that resulted in a cracked canyon window. Contrary to what was reported then, they concluded that the wrench that cracked the window was dropped by a worker on the second floor of the facility. Later this week, a crane operator error resulted in connecting the PRF canyon crane hook to an incorrect lifting bail. When the operator tried to raise the intended load, a pencil tank assembly counter balance weight, the crane hook actually lifted the strongback, which was still keyed into the canyon wall. The contractor is evaluating if there was any damage to the crane and other equipment. Until recently, workers in PRF had been very successful in completing work without extra management oversight, but the contractor is evaluating if additional oversight is required.

Office of River Protection (ORP): ORP performed a critique to determine why they allowed the Tank Farms contractor to use garnet for cutting a large riser in the top of a single-shell tank (see Activity Report 4/6/12) before resolving significant technical issues identified by two ORP personnel assigned to the Waste Treatment Plant (WTP). The issues were related to the adverse impact the garnet could have on WTP, such as increased erosion of piping, vessels, and equipment. Before the critique, the first ever for ORP, the ORP Assistant Manager for Tank Farms directed the contractor to not use garnet for cutting a hole in another tank until all the issues are adequately addressed. Corrective actions include developing procedures for ensuring technical issues raised by ORP employees or contractors are adequately addressed and closed.

The Safety Basis Review Team (SBRT) met with the contractor's DSA manager to discuss the process and schedule of the first safety basis documents the team will be reviewing. The SBRT is composed of ORP's Nuclear Safety Division and technical staff, and personnel from DOE HQ Chief of Nuclear Safety and EM-40. The SBRT will review the contractor's DSAs and TSRs for the Low Activity Waste, Analytical Laboratory, and the Balance of Facilities. The SBRT Leader reports to the designated Authorization Authority, which is the ORP Manager.

Tank Farms: ORP and EM performed a joint assessment of the contractor assurance system (CAS). At the outbrief, they identified a number of problems and concluded that the CAS requires improvement, but all the elements of an effective program are in place.

Spent Nuclear Fuel (SNF): After drying SNF at the Cold Vacuum Drying Facility, the contractor discovered that the first and second pressure rebound test did not meet the acceptance criterion for repeatability of the dryness measurement. The project has loaded 389 MCOs with SNF, but this is the first time that this has happened, and the procedures do not address recovery actions. The contractor developed a recovery plan and expects to complete the processing this weekend.