

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 6, 2015

TO: S. A. Stokes, Technical Director
FROM: P. Fox and D. Gutowski Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending March 6, 2015

Board staff members B. Boser, F. Sutherland, and M. Wright were onsite to review Critical Decision 1 documentation for the Low Activity Waste Pretreatment System. They also walked down the Waste Treatment Plant and reviewed sampling for Waste Feed Delivery.

Plutonium Finishing Plant. While using a remotely operated crane to remove waste from the Plutonium Reclamation Facility (PRF) canyon, the work team inadvertently dislodged a counterweight that was hanging on a pencil tank strongback when the block of the crane came in contact with it. The 1140 pound counterweight fell approximately 12 feet to the canyon floor. There were no personnel in the canyon when the event occurred and visual inspections performed through canyon windows and using a camera system have not revealed any damage to the canyon floor or the counterweight. The work team stopped work and placed the area in a safe configuration. A critique revealed that the crane operator, spotters, and operators were focused on the hook and load, and they did not see the crane block come in contact with the counterweight. Additionally, a safety device that should have locked the counterweight in place was not operational and it appears that this condition has existed for many years. The site representative also noted that workers were not aware of the existence of the safety device and that, although the engineering staff knew about the device, they were not aware that it was not operational. Further, the device was not called out in the work instructions or pre-operational checklists, and there were no precautions identified for work without an operational safety device. Work in the PRF canyon has been suspended pending the performance of engineering evaluations of the crane components, counterweight, and canyon floor, and revision of the work instructions to include appropriate compensatory measures.

The site representative observed a Root Cause Analysis meeting designed to start the process of identifying actions necessary to prevent events similar to the recent unexpected exposure of workers to chemical vapors in the PRF south canyon airlock (see Activity Report 2/13/2015). The results of the meeting will be used to define a scope for further causal analysis.

Waste Treatment Plant (WTP). The contractor briefed ORP nuclear safety personnel on plans for realignment of the Balance of Facilities (BOF) PDSA. There are no physical changes to WTP as part of this process, but the plan is to move documentation for safety systems such as the ammonia reagent system and emergency turbine generator system out of the BOF PDSA and into specific facility PDSAs. Non-safety systems in BOF will be included in the General Information PDSA.

618-10 Burial Ground. A site representative observed a mockup and demonstration of the installation of a vertical pipe unit (VPU) overcasing. The overcasings will be used to support containment of waste during remediation of the VPUs. They are installed using a 40,000 pound vibratory hammer. There were no issues during the evolution.

Tank Farms. The contractor started the installation of a refurbished portable exhaustor system for tank T-111. This exhaustor is intended to remove remaining supernate in the tank.