

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 20, 2014

TO: S. A. Stokes, Technical Director
FROM: D. Gutowski and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending June 20, 2014

Board staff members M. McCoy and J. Meszaros were onsite providing site rep support during the site annual graded exercise.

Extent of Condition Review of Deferred Maintenance. In response to DOE-EM direction following the WIPP accident, both RL and ORP submitted their reports for their extent of condition reviews for deferred maintenance. The RL report states that, in general, deferred maintenance has not been a significant issue for facilities on the Central Plateau and River Corridor. However, it notes that the scope of annual inspections in deactivated facilities, such as the REDOX and PUREX canyons, has decreased due to degraded conditions that limit access to some areas. It also reports that preventive maintenance for site-wide utilities has been reduced to minimum safe levels and the number and severity of failures of these systems is increasing. The report adds that these systems are operating well beyond their intended life. The ORP report notes that the tank operations contractor applied sufficient resources to maintenance of equipment and to configuration management. Similar to the infrastructure issues at RL, the ORP report notes that the aging infrastructure of the tank farms needs to be upgraded. Both RL and ORP have planned initiatives to address this aging infrastructure.

Emergency Preparedness. The staff and site reps observed the site annual graded exercise. The simulated event was a criticality accident in Building 325. The exercise scope was limited to the 300 Area, nearby portions of the 600 Area, and emergency response organizations. One goal of the exercise was to test the impacts of reduced staffing in the Emergency Operations Center (see Activity Report 2/28/2014). Another goal was to validate the ability of the offsite medical facility to respond to multiple casualties.

One System. The site rep and staff observed activities at the Tank Operations Contractor's Remote Sampler Demonstration test loop. The contractor was performing scoping work with a sampling consultant in order to address one of his recommendations from a previous visit. This work is intended to validate remote sampler accuracy using a reference sampler.

Site Wide Risk Review. The core team for the Site Wide Risk Review met to discuss proposed methods for continued risk evaluation and the initial results of their six pilot reviews (see Activity Report 5/30/2014).

Plutonium Finishing Plant. The site rep observed the contractor test a light-weight concrete mix for stabilizing material in gloveboxes and other equipment. They tested separate sections of a glovebox; one section had been sprayed with a fixative and another section used powder to simulate surface contamination without the fixative. The supplier of the aerated concrete mixture reported the material does not shrink like a foam, has good compressive strength, and is nonflammable. Subsequent tests will examine how the material responds to size reduction activities. During the test, RL personnel noted that this product appears to resolve their concerns with foam shrinkage and flammability (see Activity Report 11/15/2013). However, further hazards analysis is required.