

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 1, 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 March 1, 2013

Tank Farms. The contractor discovered that a level detection instrument was not positioned correctly in the annulus of double-shell tank AZ-102. These instruments are primarily used for leak detection in tank annuli and for tank level measurements. The mispositioned device was 32" above its expected location near the bottom of the annulus to detect any primary tank leakage. An extent of condition review is in progress and has so far found evidence that one additional instrument may be in the wrong position. These instruments are not credited as safety-significant equipment, but some support specific administrative controls and the Office of River Protection (ORP) has committed to upgrade this group to safety-significant.

ORP's Safety Review Board approved the Justification for Continued Operations to allow sludge layers beyond 170" in double-shell tanks AN-101 and AN-106 (see Activity Report 2/8/2013).

Plutonium Finishing Plant. Last week, the hoist of the Plutonium Reclamation Facility (PRF) canyon bridge crane failed after a worker observed white smoke coming from the hoist drive belt cover (belt guard). Workers had recently replaced the drive belt after it failed (see Activity Report 12/14/2012), and the contractor believes this may be the first time the belt was replaced since the facility was constructed in 1963. This week, the site rep observed workers enter the highly contaminated canyon to determine why the hoist failed again. Work by the large group of personnel was well coordinated and the drive belt cover, drive belt, and pulley on the drive motor were successfully removed. Workers later replaced the belt and both pulleys before discovering that a relay in the electric brake circuitry inside the canyon appeared to have failed. The contractor plans to modify the brake circuitry to make it more consistent with the vendor's original design and recommendations from industry experts. They will leave the belt guard off during initial hoist tests to determine if the pulleys and belt are operating properly.

One System. The Nuclear Safety Steering Committee for One System met again this week (see Activity Report 1/25/ 2013). The committee approved recommendations related to the adequacy of preventive controls and determination of justifiable event durations for hydrogen accidents. They also discussed implementation plans for some previously approved recommendations.

Waste Treatment Plant (WTP). The site reps met with a member of the ORP oversight team for WTP startup and discussed the status of facilities being turned over from the contractor's construction organization to their startup group. The ORP engineer discussed the less than adequate rigor in some of the testing completed for equipment in the electrical distribution facility, Building 87. He stated that one reason for the low level of rigor appears to be that the DOE conduct of operations order is not required to be used during this testing because the order is not applicable until commissioning. Although the 13.8 kV equipment in this building is not classified as nuclear safety related, the proper functioning of this equipment is critical to mission success as well as the electrical safety of workers.