

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 25, 2013

TO: S. A. Stokes, Technical Director
FROM: D. Gutowski and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending October 25, 2013

Tank Farms. In August, the contractor learned that new hose-in-hose transfer lines (HIHTL) did not meet requirements in the procurement specification; specifically the Certified Material Test Report for the compression nuts in the hose connectors was not provided. The extent of condition is not completed yet. This week, the Office of River Protection (ORP) questioned if the existing safety-significant HIHTLs have been compliant with safety basis requirements. As a result, the contractor placed an operational restriction prohibiting all transfers through lines containing this type of connector. The contractor believes the nuts are adequate for both new and existing transfer lines and is developing a detailed technical evaluation to justify this.

The contractor attempted to remove the failed slurry pump in single-shell tank C-107 (see Activity Report 10/18/2013). The first attempt halted when the pump became stuck during the lift. The job stopped and was reevaluated. A modified work package that included additional work in the highly contaminated containment box was developed and the site rep observed the second attempt to remove the pump. Workers in the box noticed that the pump was not fully retracted as expected and the job was halted. The work package did not include a step to ensure that the pump was retracted into the expected configuration for lifting it from the tank.

The contractor performed a preliminary hazards analysis for the planned task to insert a robotic device into the leak detection piping beneath tank AY-102. The intent of the device is to inspect the condition of the leak detection piping and to determine possible causes of water intrusion into the leak detection pit.

242-A Evaporator. The site rep began a detailed review of the safety basis changes to the 242-A Evaporator, including the addition of three new safety-significant controls that are intended to prevent flammable gas events in the evaporator vessel, overflow of waste into the condenser, and drain the waste from the evaporator during a seismic event. The site rep questioned if the seismic shutdown administrative control should be upgraded to a Specific Administrative Control. He also noted minor discrepancies between the approved safety basis and the issued piping and instrumentation drawings. This week, the contractor identified that some installed equipment for the new systems are not consistent with the functional requirements document. An ORP facility representative also identified apparent weaknesses in the level of knowledge of the system boundaries for these new systems.

Plutonium Finishing Plant. The site rep observed a Plutonium Reclamation Facility (PRF) canyon entry to repair the PRF Canyon Crane. The entry and exit into the highly contaminated PRF canyon proceeded smoothly. However, the workers inside the canyon skipped a step in the work document for repairing the crane. The step was to torque bolts on the stator housing. A second canyon entry completed the repair and the contractor completed post-maintenance and operational testing of the crane.