

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 2, 2015

**TO:** S. A. Stokes, Technical Director  
**FROM:** P. Fox, D. Gutowski and R. Quirk, Hanford Site Representatives  
**SUBJECT:** Hanford Activity Report for the Week Ending January 2, 2015

R. Quirk was off site this week.

**Low Activity Waste Pretreatment System.** ORP's Senior Review Board approved the Conceptual Safety Validation Report (CSV) for the contractor's Conceptual Safety Design Report (CSDR). The CSV concluded that there was sufficient information provided in the CSDR to proceed with preliminary design efforts, but that future design and safety design basis documents will need to incorporate DOE Order 420.1C and its associated standards including DOE-STD-3009-2014.

**Tank Farms.** Multiple members of a work crew using supplied air respirators as protection for chemical vapors in C farm experienced respiratory equipment failures in the field because of low temperatures. Equipment freezing is a problem noted in the lessons learned from earlier periods when supplied air was used extensively in the tank farms. The mitigative actions taken to prevent this problem were not effective. The contractor is evaluating the problem to identify additional actions necessary to prevent freezing of respiratory equipment during cold weather.

The site reps observed control room operations for the startup of the waste transfer from double-shell tank (DST) AP-103 to DST AW-102. Field personnel taking temperature readings to support the requirements of the Specific Administrative Control for waste transfer system freeze protection reported to the Operations Engineer (OE) that their measurement equipment was able to take readings, but was not functioning as expected. The OE consulted with engineering and management and they chose to postpone the transfer until the temperature monitoring equipment was repaired. The transfer of 250,000 gallons was completed successfully later in the week.

The contractor's Joint Review Group approved two work packages supporting future retrieval of Tank AY-102. The first package is to slightly raise the position of an existing pump in DST AP-102, the planned receipt tank for AY-102 sludge. The second package is to remove another existing pump from Tank AY-102 (see Activity Report 12/26/2014).

**Waste Treatment Plant.** The contractor issued the volume of the Hazards Analysis Report for the Low Activity Waste facility that includes ammonia and other reagent systems (see Activity Report 5/30/2014).

**Environmental Restoration Disposal Facility (ERDF).** The protective polyvinyl chloride coffin surrounding a long-length waste package from the tank farms cracked while being lifted at ERDF. The work crew immediately stopped the lift and returned the component to the supports provided in the shipping container. Initial radiological surveys detected no spread of contamination. The contractor's fact-finding meeting determined that the rigging used for lifting the component (a sluicer) did not provide adequate support and that the same lift is performed in a different manner at the tank farms. The fact finding also determined that the communications between the different facilities regarding rigging plans should be improved.