DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 21, 2014

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 November 21, 2014

Board staff members M. Horr and D. Owen were onsite to observe the conduct of operations in the tank farms.

Tank Farms. The contractor started performing oral boards for all Operating Engineers (OE). OEs supervise field activities such as waste transfers. These boards are part of the response to recent TSR violations (see Activity Report 11/14/2014) and their intent is to assess the OEs' knowledge base, specifically on waste transfers and TSRs. The Board is also assessing leadership skills.

The site rep and staff members observed a training course on positioning and verifying the position of valves. The contractor developed this course in response to recent valve misalignments at the farms (see Activity Report 10/17/2014) and is giving it to workers who perform initial valve positioning or independent verification. The training also includes a field demonstration.

The contractor discovered that several safety-significant (SS) NEMA enclosures that are part of the SS waste transfer freeze protection temperature monitoring system were procured as NEMA type 3R rather than type 4 as required by the Design Analysis Report for the system. The contractor completed a non-conformance report for this issue. All transfers that rely on these enclosures have been restricted.

REDOX Plant. The contractor continued entries into the REDOX Plant to perform the annual surveillance of the deactivated facility (see Activity Report 11/14/2014). Workers terminated their entry into the storage gallery (lowest level of the facility) and backed out of the facility when they discovered beta/gamma contamination levels of 2.2×10^6 dpm/100cm^2 on smears taken ahead of the planned path. This exceeded the 1×10^6 dpm/100 cm^2 beta/gamma void limit in the Radiological Work Permit. Alpha contamination levels were negligible. Contractor management temporarily paused this work to evaluate the radiological controls.

Waste Encapsulation and Storage Facility. The contractor completed the biennial Inner Capsule Movement (clunk) test for 20 percent of the capsules in the pool cell and all passed. The clunk test is used to verify that the inner capsule is free to move in the outer capsule. The purpose of this is to demonstrate that the inner capsule has not swelled from excess internal pressure and water has not leaked into the inner capsule.

Central Plateau Contractor. The contractor's Nuclear Safety Performance Evaluation Board held an outbrief for their review of the Soil and Groundwater Remediation Project. They concluded there was significant improvement in the formality of operations since their last review in 2012 (see Activity Report 4/13/2012) and subsequent review by EM-42. They had no initial findings or observations in the area of nuclear safety or radiological controls but had several in the area s of conduct of operations and industrial safety. A repeated discussion topic was that additional improvement is needed in the area of work planning and control.