

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 5, 2015

TO: S. A. Stokes, Technical Director
FROM: P. Fox and D. Gutowski Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending June 5, 2015

Tank Farms. The vendor for the Extended Reach Sluicing System (ERSS) performed an additional inspection of an ERSS unit slated for installation in Tank C-111. This inspection was part of a follow-up from the ERSS leak in Tank C-102 (see Activity Report 5/15/2015). No anomalies were discovered during the inspection. This unit is also the first ERSS using a new type of hydraulic hose intended to eliminate fluid leakage (see Activity Report 10/11/2013). ORP has informally directed the tank farms contractor to develop a set of long term actions to determine the failure mode of the C-102 ERSS sluicer while considering the worker hazards of evaluation activities.

Plutonium Finishing Plant. The contractor demonstrated some of the equipment that they will use to remove remaining gloveboxes, piping, and other equipment from the facility during demolition. The equipment evolutions were conducted in an open area. During the demonstration, the contractor used an excavator mounted hydraulic grappling claw to lift and manipulate a glovebox mock up, and then demonstrated the ability of a similarly mounted hydraulic shear to cut four inch schedule 40 pipe. Both pieces of equipment performed their functions effectively during the open area demonstration.

The contractor temporarily paused deactivation work in 242-Z to evaluate conditions and revise their approach for controlling heat stress hazards in 242-Z. Their current intent is to obtain cooling units to provide additional cool air to individuals working in the Level B protective suits.

242-A Evaporator. The contractor selected new instrumented controls instead of mechanical controls to address the planned improvements in the 242-A Evaporator DSA related to fires and seismic events (see Activity Report 12/19/2014).

Waste Treatment Plant (WTP). The contractor submitted a PDSA change package for the redesign of the Radioactive Liquid Waste Disposal System (RLD) to ORP. The High Level Waste Facility design has been changed to prevent non-Newtonian fluids from being introduced into RLD. As such, the contractor requested ORP close a condition of approval from 2005 which required the contractor demonstrate the mixing process planned for RLD vessels. Completion of this change package was an exempted activity from the ongoing management suspension of nuclear safety work (see Activity Report 4/24/2015).

ORP notified the contractor that they concur with the contractor's proposed approach for conducting an Integrated Safety Management System Phase I verification for the commissioning and operations phase of the WTP project. The scope of the ORP and contractor verification reviews will include commissioning and operations programs and engineering, procurement, and construction programs that may impact commissioning and operations.

Effluent Treatment Facility (ETF) Area. There have been repeated instances of biologically spread radiological contamination from the ETF area this spring. The contractor declared a recurring category occurrence report and is starting a root cause evaluation.