

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 29, 2015

TO: S. A. Stokes, Technical Director
FROM: P. Fox and D. Gutowski Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending May 29, 2015

Board members Sullivan and Santos, accompanied by staff members Pasko and Horr were on site this week. They walked down portions of the Plutonium Finishing Plant (PFP), T-Plant, the Sludge Treatment Project Annex, the Waste Encapsulation and Storage Facility, the Waste Treatment Plant, the 242-A Evaporator and AP Farm. They also observed activities in the main tank farms control room and active retrieval in the C-105 retrieval control trailer.

Tank Farms. The contractor removed a failed slurry pump from tank C-111. The removal was more difficult than expected because of interference between the pump and the riser top hat. The site rep attended a pre-job brief for the pump removal activity and noted that the field work supervisor provided a very thorough brief and effectively involved key participants in presenting necessary information. Participation by the work force in the pre-job brief was also noteworthy. The contractor will install a replacement pump to support scheduled retrieval activities.

The contractor transferred approximately 65,000 gallons of supernate from tank AN-101 to AP-104. This is to support continued single-shell tank retrieval into AN-101.

Plutonium Finishing Plant. The contractor started in situ size reduction of glovebox HC-9B. Initial activities include removal of lead shielding and draining of shield tanks. Workers are performing these less intrusive activities wearing traditional anti-contamination clothing and portable air purifying respirators. Once this preparatory work is complete, workers will perform the more intrusive size reduction activities wearing the same level-B protective suits that are used to support deactivation activities in Building 242-Z. During the lead removal, one worker injured his hand when he lost control of a piece of lead shielding. Contractor management conducted a critique of the event. Based on information obtained from the critique, they intend to modify practices for controlling loads during similar activities.

242-A Evaporator. The contractor replaced the airline for the evaporator feed valve (see Activity Report 5/22/2015). They found that the line had sheared at a connection point. The contractor will perform an engineering analysis to determine the cause of the failure.

Site Wide. Environmental conditions at the site are entering the summer heat cycle and heat stress is becoming a significant factor affecting work execution. The heat problem is exacerbated by the substantial personal protective equipment required for almost all activities. Examples are the level B protective suits at PFP and the use of self-contained breathing apparatuses in the Tank Farms. Site contractors are working to mitigate the problem through training and personal monitoring, and by controlling work activities and modifying schedules. The tank farm contractor intends to place a significant part of its work force on a night shift schedule starting in early June to take advantage of the cooler nighttime temperatures.