

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 27, 2015

TO: S. A. Stokes, Technical Director
FROM: P. Fox and D. Gutowski Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending November 27, 2015

618-10 Burial Grounds. The contractor completed surveys following the contamination spread that occurred during last week's high wind event (see Activity Report 11/20/2015) and briefed their status and the timeline of events to representatives from RL, the Washington Department of Health, and the EPA. The event started when they processed high strontium drums just prior to the windstorm. The contractor discovered the initial contamination spread shortly after processing the drums and they attempted to stabilize the material with fixative (Envirotac II "Rhinosnot"). However they could not effectively cover some areas prior to the windstorm. RL and the contractor are evaluating corrective actions designed to improve contamination control when processing concreted drums, especially those with high strontium.

Plutonium Finishing Plant (PFP). A skin contamination occurred during asbestos abatement activities. The contractor suspects that the contamination occurred when the worker pulled a pipe away from the wall to install a glove bag. Although the worker was wearing a single set of anti-contamination clothing, they believe that perspiration compromised the effectiveness of the clothing resulting in wicking of the contamination to the worker's forearm.

100-K Area. While reviewing K-west basin air sample results, a contractor radiological engineer noted a value from July higher than 20% of a DAC, the contractor's limit for establishing an Airborne Radioactivity Area (ARA). Upon further investigation, the contractor determined that workers had entered the basin without respiratory protection on several occasions while the basin was improperly posted. The contractor is evaluating their communications protocols regarding air sample results and is evaluating the potential exposure to the workers who entered the basin without personal monitoring or respiratory protection.

Tank Farms. The contractor has been recirculating caustic in tank C-111 using a slurry pump that continues to leak hydraulic fluid (see Activity Report 11/13/2015). So far, 42 gallons of hydraulic fluid have leaked into to the tank from this pump. The Process Control Plan for C-111 restricts hydraulic fluid addition to the tank during ongoing operations to 172 gallons. This restriction was established to prevent exceeding the 275 gallon limit which exists to prevent the formation of a separable layer of hydraulic fluid in double-shell tanks. The limit for C-111 also accounts for hydraulic fluid leakage during previous retrieval attempts (see Activity Report 10/11/2013) and provides a margin to protect against catastrophic equipment failure. If hydraulic leakage reaches the limit or the pump completely fails, the contractor has an approved work package to perform a pump replacement to complete the retrieval.

ORP completed their triennial assessment of the contractor's fire protection program and concluded that it meets DOE expectations. There was one preliminary finding related to the 242-S Evaporator, which has been shut down since the 1980's. The contractor shut down the fire systems in the facility in 2012 without performing a comprehensive evaluation, and without approval by ORP. The contractor noted this deficiency in their corrective action system.