

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 3, 2013

TO: S. A. Stokes, Acting Technical Director
FROM: D. Gutowski and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending May 3, 2013

Board staff member M. Helfrich was on-site to observe the DOE headquarters review of the site emergency preparedness organization's ability to respond to severe natural phenomena events.

Plutonium Finishing Plant. The contractor completed repairs to the Plutonium Recovery Facility (PRF) canyon crane late last week. After completing routine maintenance tests, they were able to complete the last cut required for the size reduction of a pencil tank. This work was a continuation of a job that was underway when the crane failed (see Activity Report 3/1/2013). The site rep noted excellent communications between the field work supervisor, the crane operator, and the operators who functioned as spotters. However, the crane hoist failed again when the power fuses blew. The contractor is investigating the cause of the failure, which may be related to the brittle wires that have been in use for approximately 50 years. The contractor is also investigating other options for size-reducing the pencil tanks, including having workers enter the canyon to perform the work rather than doing it through glove ports.

618-10 Burial Ground. The contractor completed a causal analysis report for the events leading to the conclusion that the retrieval of drums from the 618-10 trenches needed to be upgraded from less than a hazard category (HC)-3 to a HC-3 activity (see Activity Report 4/26/2013). The report makes it clear the contractor failed to implement the appropriate level of oversight required to ensure the HC-3 threshold was not breached. Additionally, issues raised by radiological engineers concerning the technical approach for characterizing the waste drums were not addressed by contractor management. The contractor is implementing new processes to prevent problems with inadequate controls for calculations and development and validation of models. They are also retraining personnel on the differing professional opinion process.

Tank Farms. Following questions from Office of River Protection (ORP) personnel, the contractor held an event investigation for an incident in AP Farm. A worker had contamination levels on his gloves above the void limits in the Radiological Work Permit (RWP). The Field Work Supervisor initiated appropriate actions for exceeding void limits. Later in the day, contractor personnel decided the void limit had not been exceeded and cancelled the response to the voiding of the RWP. The contamination was from radon, but the muddled response to this incident shows a need to reinforce the purpose and intent of void limits in RWPs. A related item that came out during the event investigation was that many RWPs use one set of void limits for work in areas with different postings for radiation and contamination.

Canister Storage Building. The site rep observed workers take a gas sample from a Multi Canister Overpack (MCO). The MCO contained "found" spent nuclear fuel that was processed from the K-West Basin last summer. This surveillance is not performed frequently, but the workers were proficient. However, the process control engineer (PCE) had the wrong revision of the associated data package known as a Traveler, and this was not noted until midway through the sampling process. This error was corrected by the PCE under close oversight by the quality assurance engineer assigned to the job.