

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 3, 2017

TO: S. A. Stokes, Technical Director
FROM: P. Fox and D. Gutowski, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending March 3, 2017

Tank Farms. The contractor lifted the AP-02A pump out of its temporary shield cave into a new shielded disposal box (see Activity Report 12/16/2016). The lift proceeded rapidly with the high dose pump only in the air outside of shielding for a few minutes. Although there was significant work in a high contamination area, there were no skin or personal clothing contaminations. The work crew also bagged most of the chunks of solid material that had fallen off of the pump into the shield cave. Additional decontamination will be performed in this area and the boxed pump will be moved out of AP farm to drain hydraulic oil before sending it to the Environmental Restoration Disposal Facility. The contractor plans to start placing equipment removed from the tanks, such as pumps, directly into disposal boxes rather than staging them in the farms for long periods of time.

Waste Encapsulation and Storage Facility (WESF). The contractor held a Hazard Review Board (HRB) meeting to review the work package that will be used to remove temporary ventilation equipment that became contaminated during hot cell grouting and is causing high radiation fields in the WESF canyon (see Activity Report 12/23/2016). The work package also modifies the temporary ventilation system to support completion of hot cell grouting. The HRB approved the work package with comments. The work team conducted several dry runs over the last week and is prepared to perform the activity.

B-Plant. Unexpectedly high contamination levels were discovered during the replacement of exhaust ventilation system pre-filters resulting in a void of the Radiological Work Permit that provided controls for the task. The work team placed work in a safe condition, suspended the work package, and held an in-progress ALARA review (IPAR) to understand the event. The IPAR did not identify a specific cause for the high contamination levels. The contractor is re-planning the work to ensure controls are adequate to deal with the higher contamination levels.

REDOX Plant. The contractor started work to install the new roof over the REDOX facility (see Activity Report 10/28/2016).

Low Activity Waste Pretreatment System. The contractor's Safety in Design Integration Team (SDIT) is evaluating a new calculation on overpressures resulting from hydrogen deflagrations and detonations in the Ion Exchange Column and connected piping. Calculation results suggest that the piping and vessels would be able to withstand these overpressures without failing. The SDIT is evaluating whether to retain the safety-significant Gas Removal System that prevents this accident.

Effluent Treatment Facility. The pump in basin 43 of the Liquid Effluent Retention Facility failed recently. The contractor's Joint Review Group met and approved, with comments, a work package that the facility will use to replace the pump. The meeting was professionally conducted, the quality of the document package was good, and the participants were fully prepared resulting in a meaningful discussion regarding the anticipated work.