

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 9, 2017

TO: S. A. Stokes, Technical Director
FROM: P. Fox and D. Gutowski, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending June 9, 2017

Plutonium Finishing Plant (PFP). The contractor started removal of the Plutonium Reclamation Facility gallery gloveboxes. The first two sections of the glovebox located on the second floor of the west side of the canyon were removed without incident. However, a demolition area boundary continuous air monitor alarm occurred shortly after the third section was removed. Workers stopped their activities and took cover per the pre-planned response for this type of event. Radiological Control Technicians performing event response surveys subsequently identified high contamination levels north of the 234-5Z building and outside of posted contamination areas. The affected area contains primary support facilities including the main PPE change station, the respiratory protection equipment issue station, the instrument shop, and the tool crib. Workers are performing recovery operations and initial efforts focus on recovery of the support facilities. Fixative has been applied to the areas that have the highest levels of contamination and that area will be covered with a layer of gravel to allow continued operations. Contamination in other areas is being removed. There have been no cases of personnel contamination and air samples taken throughout the event are below action levels. However, as a precaution, contractor management has notified the workforce that bioassays will be required for all employees that were at PFP during the take cover event.

Tank Farms. The contractor held a post job ALARA review to collect lessons learned from last week's AW-106 pump removal (see Activity Report 6/2/2017). Their review determined that the specialized equipment that contractor engineers designed in close coordination with the work team to reduce time and dose worked as intended. In particular, the equipment provides four capabilities that enable the above objectives including a tensioning device to reduce the need for manual handling of the contamination control sleeve, a nozzle ring that provides high pressure rinse of the pump during removal, a hydraulic punch that creates openings in the shaft which allow residual waste to drain from a plugged pump, and a dispensing device that assists in the installation of preformed pipe insulation on the pump shaft to reduce beta dose to workers near the pump. The new system also provides improved video capability and incorporates dosimetry telemetry. Both capabilities helped provide a clearer status of the pump and improved control of the removal operation. The review also identified suggestions for improvement including better communication capability between the field work supervisor, monitoring team, and rigging team, more secure anchoring of the lower rigging strap, better guidance regarding heat stress control for individuals wearing anti-contamination clothing, enhanced onsite training and mockup capability, and better positioning of cameras and other equipment.

Waste Treatment Plant. The contractor responded to ORP's letter of concern regarding their implementation of hazardous energy controls during work (see Activity Report 5/12/2017). They are pursuing eight specific actions to address the concern. Most of the permanent actions identified in the letter are administrative, do not materially affect work methods or practices, and are not likely to improve hazardous energy control during work. Consequently, improvement will depend on any new actions identified during completion of the associated trend review.