

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 24, 2015

TO: S. A. Stokes, Technical Director
FROM: P. Fox and D. Gutowski Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending December 25, 2015

Plutonium Finishing Plant (PFP). The contractor identified contamination in a non-radiologically controlled area of the PFP facility. The area was small and was located in the C line control room next to a seal-taped door that enters into the A line room where the HA-9A glove box is being downsized. Additional spread of the contamination was prevented by Radiological Control Technicians who recognized the potential for a leak between the rooms and took appropriate precautions prior to performing the survey.

Central Plateau Contractor. A used battery from a radiologically controlled vehicle (RCV) was prematurely released from a Radioactive Material Area (RMA). Although the contractor had completed an external survey of the battery, contractor procedures require the completion of a more comprehensive survey plan because of the potential for internal contamination. Upon discovery of the problem, the battery was returned to the RMA and appropriate areas were surveyed. None of the areas were found to be contaminated. The contractor's critique of the event revealed internal control weaknesses as well as a weakness in the coordination between different site contractors. Additionally, the critique identified errors in procedure compliance for both the Central Plateau Contractor, who was the custodian of the equipment, and the Mission Support Contractor, who performed the RCV maintenance. This is the second case of a premature release of potentially contaminated material by the Central Plateau Contractor within a three week period.

Waste Treatment Plant. ORP completed their review of the contractor's evaluation of the Low Activity Waste (LAW) Facility's confinement ventilation system (see Activity Report 11/13/2015). ORP stated that the proposed control strategy was underdeveloped and did not demonstrate adequate protection of the facility worker from chemical hazards in the event of an offgas system release. They directed the contractor to 1) demonstrate that the C5V system can ensure the melter annulus remains negative if the LAW process offgas system fails, 2) perform an engineering study to evaluate failure modes and survivability of LAW process offgas and C5V systems, and 3) evaluate inclusion of a safety-significant engineered control to stop melter feed upon detection of the loss of C5V.

The site reps walked down LAW and the Analytical Laboratory to observe construction progress.

Tank Farms. The contractor performed troubleshooting on one of the sluicers in Tank C-111 due to spray direction problems and resolved the issue. They also made repairs to the second sluicer to improve performance. Retrieval resumed following the repairs to the sluicers. A sample of the supernate surface of the receiving double-shell tank, AN-101, showed no visible organic layer. This allowed retrieval operations to reset their hydraulic oil leakage into C-111 back to zero (see Activity Report 11/27/2015).