

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 17, 2014

TO: S. A. Stokes, Technical Director
FROM: P. Fox, D. Gutowski and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending October 17, 2014

Board staff members R. Kazban, P. Meyer, and F. Sutherland were onsite to attend the Small-Scale Solids Delivery Testing and Isolok Accuracy Testing Results Review. The visit included a walkdown of the Full-Scale Test Platform to observe pulse jet mixer control system testing.

Tank Farms. Within the past few weeks, there were three events related to improper positioning of valves (see Activity Report 10/3/2014). Two of the events happened this week and the second of these occurred before corrective actions from the first were completed. Review of the events reveals findings that are common to more than one event. Those include: (1) workers are not correctly following operational procedures, (2) there are weaknesses in the format of the procedures that can increase the likelihood of worker error, and (3) worker knowledge of valve operation and the intended actions expected when specific action verbs are used in the procedures appears inadequate. The events involved multiple workers on multiple shifts. This implies a more general weakness in the areas of conduct of operations and procedural compliance. ORP is working to ensure that corrective actions are broad enough to address the issues. The Technical Staff has plans to Review Tank Farm operations.

222-S Laboratory. The contractor discovered a plastic waste container in a contaminated fume hood that had been thermally damaged by an adjacent hotplate. Two hotplates were stacked in the corner of the hood. The bottom one was energized which melted the control knobs off of the upper plate and damaged the waste container. There were other combustible items in the fume hood. The contractor reported this as a near miss due to the possibility of a fire.

Central Waste Complex (CWC). The contractor improperly exited a Limiting Condition for Operation (LCO) in place to support a firemain riser flow check surveillance. The event occurred in April, but was not discovered until last week through follow-on document checks. CWC personnel exited the LCO although pressure data obtained during the surveillance was below the allowed band. Upon discovery of the low reading the contractor re-entered the LCO, performed the surveillance with satisfactory results, and exited the LCO.

Plutonium Finishing Plant. Contractor personnel stopped grout removal work and exited the work area when they exceeded their surface contamination void limit of 2 million dpm alpha per 100 cm² by 25 percent. The contamination was found beneath a section of grout that was chipped out to support the removal of a glovebox. There was no indication of increased airborne contamination levels or any personnel contamination as a result of the event.

The contractor entered the Limiting Condition of Operability for fire sprinkler operability after a sanitary water leak caused the system to drop below its required pressure. The situation was resolved promptly.

Low Activity Waste Pretreatment System. The contractor held a control decision meeting to determine safety integrity levels for proposed safety-significant instrumented systems. They also discussed how the safety integrity levels may change if the DOE Standard for safety-significant instrumented systems is implemented in the future.