

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 4, 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 October 4, 2013

242-A Evaporator. While removing equipment from a non-radiological system, six workers were exposed to an unknown liquid. The equipment was part of a chemical flush system and had been deactivated and out of service for many years. Approximately one half to one gallon of liquid came out of a section of piping when the workers removed it. The workers with substantial skin contact reported symptoms and all six individuals were transported to the hospital. Sampling of the chemical during recovery actions determined that the material was caustic. No radiological constituents were detected. The job hazard analysis (JHA) for this task did not include the potential for any chemical exposure. Planning assumed that only minor amounts of water could potentially be held up in this system.

Tank Farms. There was a Technical Safety Requirements (TSR) violation in the tank farms associated with the specific administrative control (SAC) for double valve isolation. This SAC requires independent verification of the position of identified safety-significant isolation valves. During C-101 to AN-101 retrieval operations, the Operating Engineer (OE) directed that administrative locks on the slurry pump be removed in order to begin the waste transfer. This direction occurred prior to completing the independent verification of the valve positions. The OE identified the mistake, directed that the administrative locks be reapplied, and reported the error prior to slurry pump activation.

Plutonium Finishing Plant (PFP). The site rep observed technicians perform the monthly operability test of the criticality alarm system. This TSR-required test procedure is a continuous use procedure which means that workers need to have the procedure open and follow it step-by-step. However, steps in this procedure permitted technicians to use just the data sheets to perform most of the task. The procedure also notes that if personnel need detailed instructions to complete the operability test, they should follow the 54 steps in another procedure. The site rep discussed the situation with PFP managers who agreed that allowing personnel to rely on their memory to perform this TSR-required test was inappropriate and would take appropriate actions, including an extent of condition review.

The site rep met with contractor managers and a facility representative to discuss a work package for repairing the bridge crane in the Plutonium Reclamation Facility canyon. The package was similar to one used last year for repairing the crane and addresses canyon entry and exit activities. The actual crane repair work is detailed in maintenance service requests that are incrementally added to the work package. A new JHA was not performed when the package was developed. Instead, the JHA from last year's work package was included. This JHA does not reflect the work for this year nor does it reflect the likely hazards of work in the maintenance service requests. Other supporting documents for the work package were also not updated.

River Corridor Project. Contractor management initiated a one-day work pause in the 100N Area to remind workers that they need to use their stop-work authority when actions appear to be unsafe. The pause came after work by a subcontractor caused the handle of a two-foot aluminum pipe wrench to fail and fly through the air at least 10 feet before landing near support workers.