

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 28, 2014

**TO:** S. A. Stokes, Technical Director  
**FROM:** D. Gutowski and R. Quirk, Hanford Site Representatives  
**SUBJECT:** Hanford Activity Report for the Week Ending March 28, 2014

Board staff members F. Bamdad, M. Horr, and M. McCoy were on site to review the new Documented Safety Analysis for the 242-A Evaporator.

**Plutonium Finishing Plant (PFP).** The site rep observed workers install a large sleeve and then safely separate two gloveboxes in the Remote Mechanical C Line. They did this in a safe and efficient manner and detected no spread of contamination after the separation. The site rep, facility representative, and field work supervisor discussed a few issues with the work package that need to be resolved before other portions of the work scope can be performed. These included the need to perform an engineering analysis prior to removing external equipment and the need to properly sequence work tasks.

The site rep observed the contractor's initial meeting to determine the root cause for a criticality safety infraction associated with a blocked criticality safety drain (see Activity Report 3/21/2014). The contractor team identified various barriers that should have prevented the infraction as well as discussed historical reasons why the outlet of the drain had not been routinely inspected. One compensatory action taken by the contractor is to include periodic visual inspections of the drain outlet in the work package for pencil tank size reduction. However, a criticality prevention specification invoked by the work package already requires the inspection of the drain. Adding this step to the work package appears to be an appropriate action, but may conflict with management's effort to eliminate redundancy in work packages. Richland Operations Office and DOE Headquarters personnel had significant oversight presence at the meeting and provided appropriate feedback.

**242-A Evaporator.** The staff and site rep walked down the 242-A Evaporator and held discussions with Office of River Protection (ORP) and contractor personnel as part of a review of the facility's new Documented Safety Analysis. Preliminary items of concern include: the malfunction of safety-significant solenoids due to high temperature conditions had been postulated but not evaluated, there are no compensatory measures in place until a planned improvement to upgrade a steam isolation valve to safety-significant completed, and some hazards do not have identified controls in the safety basis.

The contractor briefed the team that will perform the contractor readiness assessment (RA) for upcoming restart of 242-A. The team is developing their implementation plan. The contractor proposed a short duration RA with a limited set of activities for observation by the RA team. However, the contractor RA team leader questioned if these would meet the scope described in the ORP-approved Plan of Action. A senior contractor manager indicated that waste tank space limitations, which will be adversely impacted by operations during the contractor RA and subsequent ORP RA, were a factor in determining the duration and number of proposed operations. The manager also suggested that the team could observe simulated operator actions on the new control room simulator.

**Tank Farms.** The contractor initiated a safety stand down due to numerous incidents where workers reported unexpected odors in various farms over the past two weeks. Some of these workers reported symptoms consistent with vapor exposure. In all instances, the workers entered the appropriate abnormal operating procedure for response to potentially hazardous vapors. The vapor sources for these events have not been positively identified yet. Initial data suggests that the incidents in A farm, S farm, and AY farm were due to tank waste vapors and a T farm incident may have been due to nearby herbicide spraying. The contractor held a series of briefings to all field personnel to provide additional information to the workforce on industrial hygiene monitoring.