

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 15, 2009

TO: T. J. Dwyer, Technical Director
FROM: W. Linzau and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending May 15, 2009

Waste Treatment Plant: The project is making a significant change to its approach to implement revised material at risk (MAR) changes in the Preliminary Documented Safety Analysis (PDSA). The previous strategy was to create a Justification for Continued Design, Procurement, and Installation (JCDPI) or an Authorization Basis Amendment Request (ABAR) to implement changes to individual systems. The project was working to gain approval and implement the first changes to a system in the Pretreatment Facility (PTF) by the end of the month. This approach has been abandoned and now the project is planning to create an ABAR that contains an addendum to the PTF PDSA and it will address all changes to structures, systems, and components (SSCs) derived from the reduced MAR. In addition, the changes to hydrogen controls have been excluded from this addendum, and it will only address the reduced MAR. The Office of River Protection (ORP) is considering limiting which activities will be authorized with the approval of this ABAR. They have expressed that only reductions in classification of SSCs from safety-class to safety-significant (SS) will be authorized, but reductions from SS to less than SS will not be allowed. ORP approval of the addendum is scheduled for mid-June.

Plutonium Finishing Plant: The contractor identified a deficiency in a criticality safety evaluation report (CSER) in which activities were incorrectly classified as “unlikely.” Richland Operations Office (RL) directed a review of CSERs to ensure criticality safety problems similar to those in a January 23, 2009, Board letter do not exist at Hanford. The affected operations were for packaging of fissile material residues and were suspended until the CSER is revised.

The PFP D&D Technical Safety Requirements (TSR) uses the term “operationally clean” to specify when safety requirements, such as fire protection and ventilation, can be relaxed in selected areas. To be operationally clean, fissile material limits must be met for the area and all contaminated process equipment and components (e.g., tanks, piping, gloveboxes, hoods, ductwork, and HEPA filters) must be removed. However, in order to expedite D&D, the contractor plans to submit a change to the TSR that will not require all equipment to be removed. The site reps were informed that the details of the change have not been determined but will be submitted to RL in the next few months.

The contractor briefed the site reps on the D&D backout plan, which takes an integrated approach to facilitate sequential deactivation of equipment. Interfaces between SSCs have been mapped and their associated safety functions have been documented. In addition, nuclear safety and regulatory requirements and their interfaces were documented in the plan to prevent violations. Small work teams are being created and will start the detailed D&D planning based on the sequential equipment deactivation map laid out in the backout plan.

The critique report for the grounding of a 240-Vac electrical cable in a cable tray (Activity Report 5/1/09) was issued but did not address the failure to ensure cables in the cable tray were deenergized before beginning work. The site rep expressed concern that the cables were not deenergized nor were controls specified for working near energized cables.