

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 2, 2010

TO: T. J. Dwyer, Technical Director
FROM: W. Linzau and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending April 2, 2010

Tank Farms: Last week the contractor completed the assessment for their readiness for implementing major changes to the safety basis (see Activity Report 2/19/10) and the Office of River Protection (ORP) completed an Independent Verification Review (IVR). The contractor team verified that the DSA and TSR controls and requirements were effectively flowed down and implemented, and the second round of training on the many changes was effective for key people, e.g., shift managers. The team identified seven pre- and 14 post-implementation issues. The pre-start findings were mostly administrative, including one noted by the ORP IVR team concerning errors in the revised operator rounds sheets. One of the post-implementation actions is to provide the detailed training given to the shift personnel to a wider audience.

On Sunday, the contractor implemented the revised safety basis, bringing it into compliance with DOE-STD-3009 Change Notice 3 as well as designating the primary boundary of waste transfer piping and components as safety-significant (SS). This implements changes that were formulated in 2007 and 2008 (see Activity Reports 9/21/07, 2/1/08 and 1/8/10). Last week ORP approved minor changes to the safety basis, resolving issues raised by ORP during their IVR. ORP also approved another Justification for Continued Operation (JCO) associated with the backflow preventer for the waste transfer pump in double-shell tank AN-101. This JCO is similar to the recent JCO for this SS device (see Activity Report 10/30/2009) but addresses debris blocking the test cock from closing as opposed to the primary seating surface.

The contractor concluded that a nitrogen-fed seal on waste transfer pump in AN-101 has failed and they will replace the pump with another style pump. This will resolve the issue raised by the site rep on the overpressure event caused by a VFD over-speed failure (see Activity Report 11/20/09) as well as the new JCO noted above. There are no other active JCOs in the tank farms.

The contractor is in the early stages of revising the safety basis for the 242-A evaporator so that it complies with DOE-STD-3009 Change Notice 3. The site rep questioned if waste transfer piping in the 242-A will be upgraded to SS as was done in the rest of the tank farms. The contractor does not plan to upgrade it to SS but will evaluate this during their review.

Plutonium Finishing Plant (PFP): The contractor determined they will do a full root cause evaluation of the event in which a worker inhaled nitric acid fumes last week.

The site rep attended a fact finding for an event involving reversal of airflow during dismantling of a ventilation exhaust duct. The work package sequence of equipment removal deviated from the approved design change package and resulted in the flow reversal. Lack of clear communication with the appropriate engineer prior to changing the sequence was the cause. Lessons learned from earlier unanticipated ventilation changes were not addressed in the work package or the pre-job briefing (see Activity Report 1/15/2010).

The site rep questioned contractor management if the recent events at PFP are leading indicators of a more serious problem. Management will meet next week to address this question.