

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 4, 2010

TO: T. J. Dwyer, Technical Director
FROM: W. Linzau and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending June 4, 2010

Board staff members E. Gorrepati, A. Poloski, and S. Stokes were on-site reviewing data from mixing testing for the Waste Treatment Plant. S. Lewis and L. Zull were on-site reviewing American Recovery and Reinvestment Act work at Tank Farms.

Waste Treatment Plant: The contractor conducted a Safety Input Review Committee meeting to review changes to the Low Activity Waste (LAW) safety basis related to the melter offgas ventilation system. The changes were necessary because of a problem noted during the Broad Based Review in 2008 and subsequently noted by ORP during their review of the LAW offgas system in early 2009. The contractor had designed the system such that significant portions of the duct work and gas treatment equipment were at a positive pressure. ORP had concluded that small leaks could introduce dangerous levels of hazardous gases into occupied areas of the facility. The contractor has revised the design to have the ventilation exhaust fans downstream of the gas treatment components, keeping the equipment and duct work at a negative pressure. The change from positive to negative pressure inside the ducts required a significant revision to the safety control strategy, which is detailed in this safety basis change request. This change request also includes multiple other revisions that were held until all the changes could be evaluated as a complete package. The committee approved the proposed changes and the contractor will submit the request to ORP for their review and approval.

Tank Farms: The tank farms contractor declared a potential inadequacy in the safety analysis (PISA) related to the possible isolation of the safety-significant relief valve on the discharge of a waste transfer pump. The connection between the discharge of the waste transfer pump in single-shell tank C-104 and the relief valve is a flexible hose, and an engineer postulated the hose could buckle (kink), isolating the relief valve. Last week, the site rep questioned if this scenario, which had been under review for a month, was a PISA but not reported as one within the allowed period for evaluation (hours to days, not weeks or months). Contractor engineers believe they can prove this scenario is not credible, but contractor management agreed with the site rep that this needs to be processed as a PISA until they confirm this event is not credible.

TRU Retrievals: The site rep met with the contractor and discussed the status of recovery actions and restart of waste retrieval operations. The contractor completed corrective actions to restart work in Trench 17 and is completing the final corrective actions to start work in other trenches. The project senior managers expressed that work will proceed at a deliberately slow pace and that senior supervisory watches will continue to be utilized.

Chronic Beryllium Disease Prevention Program (CBDPP): The DOE Office of Health, Safety, and Security (HSS) issued their report on the review of the CBDPP at Hanford and noted four findings and 12 opportunities for improvement. The findings were: beryllium inventories and assessments had not been properly performed, some workers were not adequately trained, the site occupational health provider had not adequately analyzed potential sources of exposure that could have caused recently identified cases of CBD or sensitivity to beryllium, and weaknesses in work planning and control for beryllium hazards.