

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 31, 2012

TO: T. J. Dwyer, Technical Director
FROM: W. Linzau and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending August 31, 2012

Tank Farms: The Office of River Protection (ORP) completed an assessment of the contractor's implementation of the Unreviewed Safety Question (USQ) process and identified two relatively minor findings and a number of more significant observations. Several of the deficiencies relate to a lack of rigor in the application of the USQ process. DOE revised their guidance for performing USQs more than two years ago, but the contractor has not revised their program. ORP is now performing an in-process review of the contractor's proposed changes to the USQ process such that it is more consistent with the new guidance.

The contractor's plant review committee (PRC) approved changes in the TSR and DSA for the waste transfer system that address concerns expressed in the April 26, 2011, letter from the Board. The PRC also approved the negative USQ evaluation for the potential overheating of waste transfer system components (see Activity Report 6/10/11).

Liquid Effluent Retention Facility (LERF): The contractor assembled their Hazard Review Board (HRB) to review the work instruction for cleaning the polyethylene cover of one of the LERF Basins. LERF has three basins that accept and store waste water from across the site before it is transferred to the Effluent Treatment Facility. The cover of Basin 44 has water, sand/mud, and vegetation with an estimated 2.5 curies of contamination, and it is believed that this water and mud is the source of contamination spread by birds nesting in the area. Therefore, the contractor is planning to clean the surface of the cover and inspect it. The contractor's plan involved using aerial lifts extended horizontally over the basin. Workers in a lift would collect potentially contaminated vegetation with long reach tools and then load the debris into a container suspended from a crane. While the aerial lift can only extend 69 feet horizontally, the debris is roughly 100 feet from the basin's edge. In addition, other steps of the procedure utilized a submersible pump to suck the water/mud to filters and then return the water back under the basin cover. The HRB rejected the work instruction and will require it to be presented again to the full HRB once it is revised. The site rep noted a number concerns, including: mock-ups and dry runs had not been conducted before the review, discussions on emergency response with the Hanford Fire Department had not occurred, and no engineering evaluation of this specific use of aerial lifts had been conducted.

Waste Treatment Plant (WTP): The contractor started the hazard analysis (HA) for the hot cells in the Analytical Laboratory (LAB). The HA team is using a "what if" approach and have defined the nodes in the hot cells based on the processes that will occur in the cells, such as sample receipt, preparation, and analysis. They are including analyses of hazards that could be present in the ventilation system, radioactive drains, and the waste handling equipment.

Plateau Remediation Contractor: The contractor submitted an occurrence report categorized as recurring for failure to follow prescribed hazardous energy control processes. Specifically, the report notes that between January and August, the contractor identified four events related to work in electrical cabinets with exposed electrical terminals at various facilities.