

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 21, 2005

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending January 21, 2005

Waste Treatment Plant (WTP): The Office of River Protection (ORP) has directed Bechtel to assume that certain feed streams with high hydrogen generation rates (primarily tank AZ-101 waste) will be blended down prior to receipt at the WTP. The main expected benefits include 1) reducing the design basis hydrogen generation rates and associated vessel vent and pulse jet mixer air demand and 2) simplifying or reducing the design features required to address hydrogen in piping and ancillary vessels. ORP has also stated that Bechtel has not adequately managed the long known issues associated with hydrogen in piping and ancillary vessels which has created significant uncertainty in plant wide design and the need to revisit numerous design elements. ORP has requested that Bechtel provide a preliminary estimate of the cost and schedule impacts of these potential design changes and a technical plan and schedule for resolving them by the end of January.

The actual number of welds that were repaired on two Pretreatment vessels with the wrong weld filler material is still unknown, but the number of nozzles that are suspect ranges between 18 and 33. Bechtel has informed the vessel vendor that their proposed procedure revisions and corrective actions were inadequate and that Bechtel will take control of future repairs.

Tank Farms: CH2M Hill Hanford Group has been examining whether failures of variable frequency drives (VFD) could result in accident calculation assumptions being exceeded. A Potential Inadequacy of the Safety Analysis was declared after it was identified that the portable exhaustor VFD associated with C-200 vacuum retrieval system could result in higher ventilation flow rates than analyzed for filtration failure accidents. In response, a Justification for Continued Operations was submitted and approved. The main compensatory action is to credit the exhaustor stack as a design feature since it increases the atmospheric dispersion of aerosols.

The retrievals of S-112 and C-203 are about 97 and 91 percent complete, respectively. Shims were installed on the S-102 pump this week to raise the pump suction above a sludge layer. It will not be known for a few days whether this will finally eliminate or reduce the plugging of the pump suction screen which has prevented almost any retrieval from S-102 so far. If this is not successful, the next potential fixes will be considerably more expensive and time consuming.

The Site Rep observed workers size reduce contaminated equipment that had been removed from 244-CR. Before the size reduction had started, a worker in street clothes crossed the rope barrier defining the contamination area.

cc: Board Members