

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 30, 2004

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending January 30, 2004

Sludge Retrieval and Disposition Project (SRDP): The Plant Review Committee determined the Documented Safety Analysis (DSA) for retrieval of the North Load Out Pit sludge was adequate to submit to DOE-Richland. During the discussions it became apparent that the DSAs for transportation and for Building 325 receipt and processing of this sludge are in various stages of preparation. These DSAs are likely to have additional controls that the SRDP must implement in the sludge retrieval to protect assumptions in the analyses. However, these controls are not currently reflected in the K Basins DSA (for comparison, controls from other safety basis documents for Multi-Canister Overpacks are identified explicitly in the K Basins Technical Safety Requirements). This situation could also result in a change in the level of readiness review required for the project. The failure to integrate the DSAs for multiple facilities was also encountered during the sludge startup activities last year. (IV-P3C, W6)

Tank Farms: The tank bump accident scenario was removed as a representative accident during the Documented Safety Analysis (DSA) review process because the current tank configuration did not make this a credible scenario. However, engineers believe that the upcoming retrieval of the sludge in tanks C-103 and -105 will add enough heat load to the receiving tank that this scenario will have to be added back to the DSA as a credible accident.

Preliminary analysis indicates that the next evaporator campaign (and likely future ones) could cause the time it takes the receiving tank to reach 25% of the lower flammability limit (LFL) under unvented conditions to be shorter than the 13 days allowed in the DSA. The new DSA has a more restrictive time to 25% LFL limit and calculations must now account for the increased gas generation due to the evaporator's heating. CH2M Hill Hanford Group engineers are evaluating various options for addressing this concern, such as transferring waste out of AW-106. (II)

Waste Treatment Plant: While preparing for an upcoming placement at the High-Level Waste facility, it was discovered that four pieces of rebar were missing from an earlier placement. (III)

Waste Management Project: The Implementation Validation Review (IVR) for the Master Documented Safety Analysis (MSDA) concluded this week. The team identified five pre implementation and five post implementation findings. The findings included maintenance not being trained on new engineered safety features, other training program deficiencies, safety equipment list deficiencies, and some minor procedure problems. Most of the findings were corrected during the review and all corrective actions are anticipated to be checked by the IVR team by the time a final report is issued. (IV)

Cc: Board Members