

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 14, 2003

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending March 14, 2003

Spent Nuclear Fuel Project (SNFP): An independent Fluor Hanford management team assessed the SNFP's readiness preparations for the K-East sludge water system. Following this assessment and problems conducting dry runs of the operations activities, the SNFP has postponed the contractor Operational Readiness Review to allow sufficient time to complete the readiness preparations. The project also decided to conduct a review of completed contractor readiness self assessment forms for adequacy. Problems with the adequacy of some of these forms were noted in last weeks activity report. (III-A)

Waste Treatment Plant: The switch to a DOE-STD-3009 approach to safety classification would result in the downgrading of many controls. At the High-Level Waste Facility, the 24 safety design class structures, systems and components (SSC) would be reclassified as 17 safety class (SC), 8 safety significant (SS), and 1 risk reduction class (RRC) or defense-in-depth SSCs (note that some are split over 2 classes). The 26 safety design significant SSCs would become 12 SS, 14 RRC, and 1 design feature SSCs.

As part of the staff's review of H₂ mitigation, the staff asked for the basis for the position that half of the pulse jet mixers (PJM) operating intermittently and sequentially in a tank during power loss are adequate to prevent greater than 50 percent H₂ retention. However, a review of the analytical model report provided states that "in the absence of any meaningful correlation relating PJM parameters to actual gas release size and rate, the models do not provide specific guidance on the number of PJMs or minimal frequency of operation during loss-of-power conditions or during restart of degassing activities." The staff will pursue this further in an upcoming review. (I-C)

Plutonium Finishing Plant (PFP): Prompt gamma screening of high-chloride oxides is finding that only ~6 percent of the high-purity (>70 w/o Pu) oxides have less than 1percent Cl, much less than the 80 percent that PFP had estimated would be suitable for thermal stabilization without Cl washing. (III-A)

Tank Farms: In preparation of the upcoming Documented Safety Analysis (DSA) review and to address Board concerns, the Office of River Protection is having a 12-member team (some of whom are former Tank Advisory Panel members) review the Best Basis Inventory (BBI) system. The assessment is looking at the sources of the characterization data, the use of BBI data in the DSA, and software quality assurance. While the team appears to be fairly comfortable with the use of supernate BBI data in the DSA because of mixing (either natural or induced), they are pursuing issues with the use of sludge solid and template-derived data. (I-C)

cc: Board Members