

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 28, 2001

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending December 28, 2001

Plutonium Finishing Plant: Reviews of can porosity data have not identified any correlations so far. Areas that will receive additional investigation include the relationship of tack welds to pores, current settings and travel speed, shell wall thickness, the combined effect of large chamfers with old weld tips, and the vendor's cleaning process. The cause of the pore that was located 80 degrees from the start of the weld is suspected to be a new mechanism.

PFP is finalizing their protocol for using thermogravimetric analysis (TGA) for solution precipitate cake that contains significant quantities of uranium, which could gain weight when heated. The TGA-mass spectrometer is now operational although its throughput is limited. PFP is also planning to qualify their thermal stabilization process in the new Project W-460 glovebox line where humidity is limited. If successful, this should prevent the TGAs from becoming a bottleneck. Process demonstrations of the stabilization of plutonium fluorides and polycubes may occur during January. (III-A)

224-T: Fluor Hanford declared a criticality nonconformance for the C-Cell sump partly in response to questions Mr. Sautman raised concerning assumptions in the criticality safety evaluation versus the flooded condition found last week. (III-B)

Integrated Safety Management System (ISMS): Mr. Sautman has been observing CH2M Hill Hanford Group's Corrective Action Review Board (CARB) meetings, which is the final review of corrective action plans for significant problems. Under the guidance of the chairman and key members, the CARB has been improving the rigor of the root cause analyses, the appropriateness of the corrective actions, and the thoroughness of the problem extent and generic implications. The CARB frequently rejects or requires significant rework of proposed corrective action plans that do not meet their standards. (I-C)

Over the last few months, the Office of River Protection Integration Group has made noticeable progress in addressing the long neglected corrective actions from last year's ISMS self-assessment report. In particular, several ORP Implementing Directives have finally been issued to institute processes and clarify roles and responsibilities for performing assessments, training and qualification, corrective action management, configuration management, etc. (I-A,B,C)

Waste Treatment Plant: Bechtel National has submitted their Partial Construction Authorization Requests (PCAR) to allow the installation of the basemat for both the high level and low activity waste (LAW) vitrification facilities. The Office of Safety Regulation (OSR) rejected the first LAW PCAR due to insufficient information concerning the design and hazard evaluations. The Board staff has initiated their review of the structural design and the portions of the Preliminary Safety Analysis Report that define the safety basis for the basemats. (III-A)

cc: Board Members