

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 1, 2002

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending March 1, 2002

Spent Nuclear Fuel Project (SNFP): The DNFSB staff conducted a review of the SNFP design and construction activities. The staff continues to observe problems related to poor engineering evaluations of conditions at the project and during design activities. Some examples of this include: a) the sintered metal vent for the sludge storage container is assumed to be operable for the life of the container (30 years), no provision for functional testing is incorporated in the design or planned, b) the reliability for the fuel transfer system lift table, and need for spare parts, has not evaluated accelerated wear due to the high particulate content in K-East Basin, and c) an evaluation of a process upset at the Cold Vacuum Drying Facility did not evaluate whether the safety basis assumptions for water inventory at the completion of processing would be exceeded by additional chemisorbed water on uranium oxide particulate generated while the multi canister overpack was in a condition favorable for accelerated corrosion. (III-A)

T Plant: The second contractor Operational Readiness Review (ORR) for removing fuel began. Mr. Sautman observed dry runs in the canyon and tunnel as well as preparations for the shield plug. Mr. Sautman met with the ORR team lead to pass on an observation that it was unusual that the operations/procedure team lead had not observed any of the 2 days of dry runs in the field (although he watched portions remotely with a camera). Department of Energy (DOE) line management presence during the ORR so far is also less than expected. (III-A)

Tank Farms: The first phase of caustic additions to tank AN-107 was completed. (III-A)

Plutonium Finishing Plant (PFP): PFP hopes to resume welding of outer 3013 cans Monday after getting acceptable porosity results from the recent 25-can run using new controls. In addition, after listening to a systems engineer discuss how he made a "spur of the moment decision" when faced with a transformer degradation issue noted in a recent Board letter, it appears that PFP (and possibly Fluor Hanford) might benefit from using a more rigorous and documented process for analyzing the operational and safety impacts resulting from equipment degradation. This would provide management with a better basis for making decisions. (I-C, III-A)

Building 325: Mr. Sautman performed a walkdown of Battelle's Radiochemistry Processing Laboratory, which works with plutonium, high-level waste, and tritium. There is a single systems engineer for the entire facility. It is not clear why this facility is apparently being excluded from DOE-Richland's plans to institutionalize assessments of vital safety systems especially since it has a relatively long mission. Mr. Sautman will be discussing this and facility representative-related issues with DOE line management next week. (I-C)

Waste Treatment Plant: Mr. Sautman met with Bechtel National Inc.'s (BNI) Manager of Engineering Technology to discuss staff observations on design reviews. BNI explained their design process and the Site Rep requested to be notified of internal design reviews in order to get a better appreciation of the BNI process. BNI staff acknowledged many of the issues noted in last week's report and said they were taking steps to improve their reviews. (I-C)

cc: Board members