

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 24, 2003

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending October 24, 2003

Spent Nuclear Fuel Project (SNFP): In last week's Activity Report the need to evaluate sludge settling on fuel baskets using the Unreviewed Safety Question Process was discussed. This week the SNFP declared a Potential Inadequacy in the Safety Analysis in that the particulate settling on baskets may exceed AB assumptions for particulate in MCOs with two scrap baskets, but sufficient margin should exist if one or no scrap baskets are loaded into an MCO. The staff will continue to follow resolution of this issue. (I-C)

K-Basins Sludge Project: Fluor Hanford issued a subcontract for the design of the K-West Basin sludge retrieval system to BNFL Inc. This week a pre-conceptual design review was conducted. The design calls for sludge to be recovered and placed into storage containers approximately the size of the fuel baskets being used to remove fuel from the basins. Several of these containers would then be placed into a Multi-Canister Overpack (MCO) type of container using the existing MCO loading equipment. The existing MCO casks would be used to transport the sludge to T Plant for storage pending processing for disposal. One potential concern would involve the retrievability of the sludge from these containers, specifically the removal of the inner containers from the MCO like outer container. The loading takes advantage of specialized equipment for handling and as well as the basin water and MCO cask for shielding to allow workers to conduct hands on closure of the MCO. While removal of these containers in the future is feasible, it is not clear whether the potential impacts associated with the future handling of this small number of containers has been adequately considered in the handling interface design. (I-C)

Functional testing is underway for the Active Inert Venting System (AIVS) for the K-East Basins Sludge Water System. The AIVS is a Safety Significant System to prevent hydrogen deflagrations in the sludge storage container. While the testing of the control system went well, it was determined that the system was not able to provide the argon pressure or flow rates necessary to purge the sludge container or shipping cask. The project is conducting a review of the engineering calculations as well as an evaluation of system components to identify the cause of the problem. (III-A)

Tank Farms: This week the review of Document Safety Analysis implementation open item closure was conducted by the management verification team. All prestart items were determined to be satisfactorily complete except the performance of training on changes made with issuance of the Safety Evaluation Report, the training packages were reviewed and determined to be adequate. CH2M Hill Hanford Group is planning to declare the DSA implemented on the morning of October 27, 2003. (I-C)

Cc: Board Members