

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 02, 2004

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending July 02, 2004

Mr. Sautman was out of the office this week. Messrs. Ogg and Tontodonato were onsite reviewing the Sludge Retrieval and Disposition Project.

Sludge Retrieval and Disposition Project (SRDP): Sludge retrieval from the K-East Basin North Load-Out Pit continues to be problematic. Sludge loading on the Large Diameter Container (LDC) filters has resulted in the allowable filter differential pressure to be exceeded in minutes, often before the vacuum head can be placed into the sludge. Multiple decant and back flush cycles were conducted in series to try to clear the filters with little improvement in performance. Engineering and operations personnel are working to evaluate new operational parameters to increase sludge retrieval times. These include extending the allowable filter differential pressure range to the maximum manufacturer recommended value, decreasing flow rates to enhance settling and increasing backwash flow rates. Another option being evaluated is to decant the LDC and start the system with the vacuum head in the sludge to try batch retrieval with extended settling between batches, which would eliminate the need for the filters. All options are planned to be evaluated by the responsible organizations and attempted in accordance with formal procedures.

The level indicator problems are believed to be caused by the scattering of the ultrasonic signal by sludge and the elliptical bottom of the LDC which is preventing sufficient signals from returning to the receiver. It is estimated that 0.5 to 1 cubic meter of sludge may need to be retrieved before a positive signal is acquired. (II)

Spent Nuclear Fuel Project (SNFP): The SNFP completed removal of canisterized fuel from the K-East Basin on July 1, 2004. The project had expected the removal to be completed earlier in the week, however, the final shipment was delayed when the K-West annex crane malfunctioned. This crane transfers the fuel cask from the tractor trailer to the equipment that moves the cask into the basin. The failure was determined to be a broken wire which prevented the crane control systems from working properly. The project is now evaluating actions needed to place the system in extended standby until sludge containerization in K-East Basin is complete and any found fuel and scrap is ready for transfer to K-West Basin. The project is also determining whether to attempt decontamination of the heavily contaminated shielded transfer casks prior to this standby storage.

The project also has worked off the backlog of scrap fuel that was generated during the approximately three years of operations when processing capability for this was not available. Scrap is now being processed as it is generated avoiding additional rewashing. (II)
cc: Board Members