

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 29, 2002

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
J. J. McConnell, Deputy Technical Director
FROM: R. T. Davis/ T. D. Burns
SUBJECT: SRS Report for Week Ending March 29, 2002

DNFSB Staff Activities: Staff members L. Zull and H. Massie were on site to review upgrade efforts for the high level waste system safety basis and to review recent operational activities. The safety basis review focused on the processes for developing reasonably conservative inputs and assumptions. The staff reviewed the following recent operational activities: the waste leak in the 3H evaporator (site rep weekly 3/22/02); resolution of hydrogen accumulation in below grade process support equipment (site rep weekly 12/28/01); and problems with the DWPF pour spout (site rep weekly 2/22/02).

Staff members R. Robinson and W. Yeniscavich participated in a workshop on vapor-phase corrosion (VPC) in high-level waste tanks with corrosion experts from around the DOE complex. The corrosion group agreed that VPC is a potential degradation mechanism that warrants increased attention; however, specific tank inspection protocols remain a subject of debate. Dr. Yeniscavich also met with Tritium Extraction Facility (TEF) personnel to discuss project status.

TEF Project: In response to NNSA concerns about cost over-runs and schedule delays, WSRC has completed a re-baseline proposal for the TEF project. Several reviews by both NNSA-HQ and independent personnel were performed over the past month in support of the re-baselining effort and additional NNSA-HQ assessment of the final WSRC proposal continues. A decision by the NNSA Deputy Administrator for Defense Programs, Dr. E.H. Beckner, on a path forward is expected the first week of April 2002.

Public Interaction: On Tuesday, Mr. Davis briefed the Citizens Advisory Board on DNFSB activities at the Savannah River Site. Mr. Davis provided an overview of nuclear material stabilization activities covered by Recommendations 1994-1 and 2000-1. The status of F-Canyon PUREX operations was discussed and it was noted that the Board issued a letter to the Secretary of Energy on March 28 that would be available to the public soon. Mr. Davis also discussed the Board's recent letter on depleted uranium storage at the site.

F-Canyon: On Monday, F-Canyon operators responded to a sump alarm in section 7 and identified that Tank 7.4 had overflowed. Operators responded appropriately to correct the problem and little material was released into the cell. This tank was recently returned to service with high activity waste transferred to the tank in February. The overflow was caused by steam leakage past an isolation valve. It appears that several conduct of operations problems contributed to this event. When the tank was returned to service in February, instruments were not verified to be operable (high level alarms had failed) and tank surveillances were not added to operator rounds. In addition, the steam isolation valve was used even though a site condition tag identified that the valve was leaking.