

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 23, 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 August 23, 2002

**DNFSB Staff Activities:** Staff members L. Zull, H. Massie, W. Von Holle, and J. Shackelford were on-site to review the results of the High Level Waste (HLW) Documented Safety Analysis upgrade project. L. Zull and H. Massie also reviewed recent HLW operational activities. In addition, staff members R. Zavadoski and D. Ogg reviewed the ventilation system at the 235-F facility. Several maintenance and formality of operations issues associated with this system have occurred over the last few years. WSRC is working to improve performance and appears to be proactive relative to ventilation system issues.

**Defense Waste Processing Facility:** Last week, a new pour spout insert that takes advantage of helium expansion in a circumferential bladder to provide a leak tight mechanical seal was installed to enhance pour stream stability (site rep week 8/2/02). This new insert is the first stability enhancement component introduced into the pour spout that is not intended to be removable.

Upon resuming pouring operations this week, instabilities persisted. Subsequent camera inspections indicate that the diameter of new insert may be too small to make a complete seal. Efforts to remove the insert are underway.

**TEF Project:** The NNSA-HQ validation team completed its review of the revised Tritium Extraction Facility (TEF) project baseline (site rep weekly 7/26/02). No significant issues were identified, and the revised baseline will be transmitted to the NNSA Deputy Administrator for Defense Programs, Dr. E.H. Beckner, for approval by the end of the month. Previously considered reductions in project scope will not be pursued and additional scope has been proposed to handle costs of new E-Area vaults for disposing of tritium contaminated equipment and spent Tritium Producing Burnable Absorber Rods.

**H-Canyon:** WSRC continues to analyze the Potential Inadequacy in the Safety Analysis identified last week associated with the Low Activity Waste system. An unsafe failure mode has been identified for temperature interlocks that help prevent a red-oil run away reaction accident scenario for several canyon evaporators (site rep weekly 8/16/02). The thermowell that contains the resistance temperature devices (RTDs) appears to be degrading in the high temperature, acidic environment. To allow operation of the system for a limited time (3 months), WSRC has performed an Unreviewed Safety Question Evaluation. The RTD failure has only occurred after at least 18 months of service. WSRC will ensure that RTDs have been installed or inspected recently prior to evaporator operations. In addition, WSRC will implement compensatory measures to monitor temperature indication and evaporator specific gravity which will help identify problems with the RTD and provide an indication of excessive evaporator temperature.