

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 21, 2004

**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 May 21, 2004

Staff members L. Zull and H. Massie were on-site this week to review operational safety in the tank farms. Specific areas covered by the staff included the transfer control program, recent changes to the Documented Safety Analysis, and hydrogen generation and retention calculations supporting the tank farms accident analyses.

**TCON Project:** Leak testing of the process piping additions to Room 44 of Building 233-H have been successfully completed. Hot testing of the Thermal Cycling Absorption Process columns for hydrogen isotopic separation commenced on Wednesday and will continue through June (site rep weekly, 4/9/04). Successful completion of this testing to validate column performance is the last remaining open item to be addressed prior to closeout of this portion of the project.

**DWPF Activities:** After sludge material has been processed in the Sludge Receipt and Adjustment Tank, it is sampled to ensure the mercury levels are low enough to allow for transfer into the Melter Feed Tank. The chemical analysis for mercury requires the sludge sample to be mixed with a lab standard that contains hydrochloric acid.

While preparing a laboratory standard for mercury analysis, a laboratory technician errantly added nitric acid instead of hydrochloric acid. The subsequent exothermic reaction caused the plastic laboratory standard bottle to rupture. Fortunately, no one was injured. Although the event was attributed to human error, it was observed that the two acids were stored in similar containers. As a corrective action, the facility will re-label the hydrochloric and nitric acid containers in a more distinguishing manner.

**TRU Waste Activities:** DOE-SR has approved a Justification for Continued Operations (JCO) to allow over 2,000 drums of questionable characterization to undergo non-destructive assay in Building 724-8E (site rep weekly, 4/23/04). Because the drums to be assayed have the potential to contain radionuclide inventories in excess of HC-3 limits, this JCO increases the hazard categorization of Building 724-8E from HC-3 to HC-2 for the 6 month duration of the assay campaign.

This week, WSRC performed a Readiness Assessment (RA) to determine if the JCO has been adequately implemented in Building 724-8E. The RA resulted in 10 pre-start findings, the majority of which concerned drum tracking and assay procedures. One finding of concern indicated inadequate involvement of criticality engineering in the development and review of the JCO. WSRC expects to issue a corrective action plan on Monday.