

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 6, 2003

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 June 6, 2003

Diversion Box Valve Leak: On Tuesday, during a waste transfer between the drop and feed tanks for the 3H evaporator (Tanks 37 and 32, respectively), a valve leak along the transfer path at H-Diversion Box-6 (HDB-6) occurred. Operators observed a level increase in the HDB-6 cell sump and responded by shutting down the transfer. Subsequent measurements by Radiation Control personnel indicated that radiation rates near HDB-6 had increased above the 5 mrem/hr background level, and remote camera inspection of the HDB-6 interior visually confirmed that a valve bonnet had leaked. The waste that leaked to the sump (~10 gallons) was transferred by steam jet to Tank 35.

WSRC is developing a path forward to restore the integrity of the failed transfer line valve and expects to return the transfer line to service by the end of next week. Congested jumper configurations and relatively high contamination levels in HDB-6 may complicate repair efforts. The site reps plan to closely monitor this repair work in light of recent problems with job hazard analyses and work planning for non-routine activities.

Low Curie Salt: DOE-SR has decided to scale back the initial salt dissolution effort in Tank 41 from 100,000 gallons to 25,000 gallons of salt-cake. This change is being pursued primarily as a contingency measure to conserve Type III tank space in the event that the regulatory approvals necessary for dispositioning low-curie salt material via the Saltstone Disposal Facility cannot be obtained in a reasonable time frame.

Interstitial pumping in Tank 41 has been suspended due to pump failure. Though the original target volume of interstitial liquid has been removed, additional removal was desirable to minimize the potential contamination levels in the dissolved salt that is to be sent to Tank 50. This week, a second salt well has been mined in Tank 41, and the transfer pump for the dissolved salt-cake was installed. Addition of the salt-cake dilution medium (inhibited water) is scheduled to commence next week.

An issue with the recently established dedicated transfer path for dissolved salt-cake between Tank 41 and Tank 50 has emerged. Potentially inadequate vent capacity at the high point of the transfer path (the newly installed jumper in the 2H Evaporator cell) has cast doubt on the ability of the line to drain. WSRC is currently evaluating the drain capability of the existing line, and is pursuing refabrication of a new vented jumper in parallel.

The Saltstone Production Facility has shut down operations and has entered an outage to perform system modifications necessary to support processing LCS material with radioactivity levels of up to 0.1 Ci/gal.