

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 28, 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 March 28, 2003

Staff members J. Contardi and R. Robinson were on-site this week to review progress on the high-level waste accelerated clean-up initiative. Specific areas of focus included low-curie salt processing, sludge removal, Defense Waste Processing Facility restart, 512-S facility modifications to support actinide removal processing, and Saltstone Processing Facility reliability upgrades.

H-Canyon Ventilation: This week, the staff (R. Kasdorf and R. Zavadoski) held a video conference with DOE-SR and WSRC to discuss issues and path forward for the Old HB-Line (OHBL) ventilation issue (site rep weekly 1/31/03). Air leakage from the canyon tunnel to the OHBL duct could allow an unfiltered ground level release during a canyon accident. A recent remote camera inspection of the duct work appears to indicate where the leakage is occurring. The inspection also identified that several duct hangers have failed. However, initial WSRC structural evaluation indicates that there is adequate support for the duct. DOE-SR plans to pursue a line item project to install a new ventilation system for OHBL. The current system will be blanked and abandoned in place. This project will eliminate the potential unfiltered ground level release. Compensatory measures will remain in place while this project is implemented.

Transfer Jacket Integrity: During the last two weeks, two Safety Class waste transfer line jackets failed their leak tests. The waste transfer line jackets provide secondary waste confinement and leak detection functions.

Last week, the transfer line segment between Diversion Box 3 and Tank 33 failed its integrity test (test measures ability of the volume between the core pipe and the jacket to hold pressure). Subsequently, helium detection testing was performed to determine the actual location of the leak and ensure that pressure losses were not due to compromised integrity of the core pipe. The helium tests verified the core pipe integrity and indicated the transfer jacket had failed along the buried section of the line near Tank 33. Failure of the carbon steel jacket is suspected to be corrosion induced. WSRC has commenced excavation work to repair the failed jacket. Repair efforts are expected to be complete next week to support the transfer of residual americium/curium material from F-Canyon to Tank 33 in early-April (site rep weekly 3/14/03).

This week, the vent line from the 2H evaporator separator pot to Tank 43 failed its integrity test. Subsequent helium detection testing again verified core pipe integrity. In this case, however, the jacket failure was determined to be within the tertiary confinement of Tank 43 itself. WSRC has issued a non-conformance report to document the degraded jacket condition, but intends to pursue use of this transfer line "as-is" given that the location of the leak does not negatively impact the waste confinement or leak detection functions of this transfer line segment.