DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 5, 2001

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers / R. T. Davis
SUBJECT: SRS Report for Week Ending January 5, 2001

Contract Extension: On Friday, DOE-SR announced that the WSRC contract is being extended to September 2006. It includes new performance-based incentive features retroactive to October 2000.

Recommendation 94-1: This week, WSRC began the design review for the conceptual design of the 235-F plutonium Packaging and Stabilization (P&S) Project, which is part of the DOE Recommendation 94-1/2000-1 Implementation Plan. The review is scheduled to be completed by February 7th; however, WSRC has a contract incentive to be done earlier. Also this month, the project intends to issue a study on process alternatives to the BNFL system, a new programmatic risk assessment, updated cost/schedule estimates, and a final conceptual design report. At this stage, the project is less than 5% complete and has focused on developing a design baseline and systematically identifying requirements and facility interfaces. The BNFL design stabilization and packaging system is part of the baseline since it is likely bounding on cost and complexity (e.g., laser welders, maximal automation). This is also the first SRS project to be executed to the new DOE project management order (DOE Order 413.3), resulting in a more thorough job and more up-front planning but less overall progress compared to previous projects at this stage of design.

Technically, the challenges are as previously identified (site rep weeklies 10/8/99, 3/17/00, 7/21/00). Extensive facility modifications are being considered which include a replacement diesel generator, interior wall upgrades, stack demolition, and upgraded chilled water, breathing air, instrument air, air monitors (CAMS), building exhaust fans, supply and exhaust dampers. Additions being considered include not only the P&S system but also new security features, a second diesel generator (with a building), criticality monitors (NIMS), fire suppression, and non-destructive assay equipment. When finally started up in 2006, SRS would have modern plutonium handling capabilities, independent of F-Canyon and FB-Line, capable of DOE-STD-3013-00 stabilization, packaging, and surveillance. As discussed last week, DOE may be able to expedite stabilization and packaging using FB-Line; however, the 235-F project constitutes the site's vision for long-term nuclear material management.

HLW Operations: Tank 49 material disposition activities continued this week after repair of the CLFL analyzer. The tank has been heated to about 30°C and should reach 40°C by Monday. Vapor space benzene concentration is approximately 50 ppm. Also this week, WSRC transferred about 330,000 gallons of low-curie waste from H-Area to tank 6 in F-Area. No issues with the reuse of tank 6 (a Type I tank) were identified. This transfer provides additional tank space in H-Tank Farm to receive DWPF recycle waste and ensure continued waste vitrification. WSRC plans to next re-wet the dry sludge in tank 5 and transfer low-curie waste to it by March. Next week, WSRC will begin transferring sludge from tank 8 to H-Tank Farm to support sludge batch 2 preparation.

HB-Line Phase I: On Friday, WSRC resumed mixed scrap processing in HB-Line. This activity was suspended in September because of a potential hydrogen generation issue (site rep weekly 9/15/00). Controls are now in place to ensure adequate purge in the HB-Line dissolvers. WSRC completed a Readiness Assessment for this activity earlier this week.