

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 21, 2000

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers / R. T. Davis
SUBJECT: SRS Report for Week Ending July 21, 2000

L-Area Experimental Facility (LEF): Staff members Yeniscavish and Zull were on site this week observing the 70% design review. WSRC intends to complete the design in September.

Preliminary Notice of Violation: On Tuesday, DOE (EH-1) issued a Preliminary Notice of Violation to WSRC for the FB-Line personnel contamination event last September (site rep weekly 9/3/99). The notice includes a proposed civil penalty of \$220,000. The penalty was based on one worker's exposure exceeding the annual limit; quality deficiencies leading to the defective container weld; substandard radiological control practices; inadequate design features and controls (e.g., ventilation); and deficiencies found in common in this event and a 1996 F-Canyon event, indicating incomplete corrective actions for known problems. The notice acknowledged WSRC's thorough investigation and focus on applying lessons learned to facilities across the site.

3H Evaporator: The Tank 30 backflush valve has been reinstalled, and the evaporator has been restarted. Introducing steam and lifting waste avoids buildup of flammable gas (site rep weekly 7/14/00). During a descaling operation earlier this week, the lance was not agitating waste, contrary to procedure. The waste stratified, affecting level indicators used by the operators (the indicators are compensated for specific gravity, assuming homogenous mixing). The actual level exceeded the TSR limit by 3/4 inch for 2 to 3 hours. The maximum pot level is a key assumption in several accident analyses. WSRC is briefing operators on this occurrence and revising procedures to include TSR criteria for lance operation and for level and specific gravity determination.

235-F Sub-Project: DOE-SR has authorized WSRC to initiate the conceptual design for the 235-F sub-project (i.e., plutonium stabilization and packaging to STD-3013). This meets a commitment in the DOE 94-1 Implementation Plan (rev. 3). Due to uncertain FY 01 funding, DOE asked WSRC to provide a schedule reflecting conservative use of funds until October 1. Relatedly, the Project Team intends to issue a study next week of possible equipment locations in 235-F. Preliminary results indicate that the old Met Lab (toured by the Board in August 1999) is the preferred location in order to minimize construction cost and schedule. This area is easier to isolate during construction, which addresses security needs. Other locations would provide more centralized operations and better material flow than old Met Lab, potentially reducing life cycle costs. However, those options would also be slower and more costly to execute since they would impact current building operations.

HB-Line Mixed Scrap Campaign: Next month, HB-Line intends to begin receiving plutonium scrap from FB-Line, dissolve it, and transfer the solutions to H-Canyon. In preparation, WSRC has proposed Authorization Basis changes and has upgraded Phase I equipment and systems. The staff has scheduled a televideo conference to discuss proposed changes to the Double Contingency Analysis (DCA). The number of criticality scenarios are reduced based on a new methodology for classifying scenarios as incredible. The system hardware modifications are essentially complete and being tested. WSRC has recently replaced a leaking dissolver and installed a new transfer line to H-Canyon (passing through old HB-Line). These were radiologically challenging jobs done without incident. The DOE Readiness Assessment is scheduled during the week of August 14.