

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 11, 2000

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers / R. T. Davis
SUBJECT: SRS Report for Week Ending August 11, 2000

C. Graham was on site this week reviewing distributed control systems and receiving training.

H-Canyon Outside Facilities: This week, several fundamental conduct of operations weaknesses were identified during performance of a safety-related surveillance for the acid recovery unit (ARU). Maintenance personnel were performing a functional test of the reboiler high temperature interlock and observed that the interlock failed to latch as required. They immediately began troubleshooting activities but did not obtain the appropriate procedure. The person in charge of this activity was in a meeting elsewhere. During troubleshooting, personnel incorrectly tripped a relay for a NIM alarm interlock. The outside facilities control room operator received indication of the interlock, which stops pumps in response to a NIM alarm, but did not receive any other indication of a NIM alarm. The control room supervisor was notified and decided to attempt to start a pump (challenging the NIM alarm interlock) to verify the indication. The pump started and was immediately stopped. Subsequent, discussions between the supervisor and maintenance personnel identified the mis-positioned NIM relay, which was then manually returned to the previous position.

This series of events may indicate fundamental weaknesses in control of work activities and appropriate response to alarm conditions. WSRC entered the appropriate Limiting Condition for Operation for the ARU interlock and developed a lessons learned package for review with maintenance and operations personnel.

Tritium Extraction Facility: The excavation for the Remote Handling Building should be completed this month. Next week, the project expects to issue a request for construction bids for the two buildings (site rep weekly 6/23/00). WSRC is also planning to determine the maximum tolerable differential settlement (up to 6 inches) for the current design of the Remote Handling Building. The foundation design for the second building (the Tritium Processing Building) is not yet defined. Therefore, its robustness to settlement is to be determined.

235-F Sub-Project: Last week, DOE-SR requested WSRC to expedite conceptual design of the plutonium stabilization and packaging system, with a goal to complete it no later than January 2001. The DOE 94-1 Implementation Plan (rev 3) milestone for this activity is January to April 2001. This action appears to release WSRC from an earlier funding restriction (site rep weekly 7/21/00). DOE-SR appears highly committed to pursuing this project.

Recommendation 94-1: The site reps are pursuing the status and interim plans for SRS plutonium metal and oxides, given the multi-year delays in STD-3013 stabilization and packaging (i.e., the 235-F sub-project). DOE-SR is currently unwilling to commit to meeting the Interim Safe Storage Criteria (ISSC). The technical basis for this position is still being developed. The long-term lack of a technical basis for current storage conditions was a DOE finding in the recent FB-Line Type B Investigation. DOE will likely not decide whether to apply the ISSC before WSRC completes an evaluation, due September 30, 2000.