

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 27, 2006

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: J. S. Contardi/M.T. Sautman, SRS Site Representatives
SUBJECT: SRS Report for Week Ending October 27, 2006

Salt Waste Processing Facility (SWPF): The Site Rep discussed with contractor and Department of Energy (DOE) management the need to address software quality assurance issues with the finite element model used for dynamic analysis that came up during last week's review. Parsons issued three Condition Reports that address not reporting anomalous software results (i.e., unusually high axial forces) per procedure, the use of a prerelease feature of the model that may not have been covered under the vendor's quality assurance/quality control program, and the use of relative rather than absolute acceleration to generate in-structure response spectra. The SWPF Project Manager convened a Senior Review Board to examine the facts and develop an action plan. Parsons is evaluating whether the use of the prerelease feature produces incorrect results, determining the extent of condition with the use of model prerelease features, and seeing if this situation has other implications for the engineering organization and software quality assurance (SQA). The DOE has also initiated a review of Parsons implementation of SQA processes for the software.

H-Canyon: Since last week's effort to remove the 13.1M mixer-settler (1A-Bank) pluggage with basic pneumatic methods was not successful, engineers are pursuing dissolving the solids and/or removing them mechanically. Much of this week was spent testing solid samples, inspecting the mixer-settler, preparing to float the solvent out of the mixer-settler, and getting a mock-up ready.

Tritium Extraction Facility: The National Nuclear Security Administration Operational Readiness Review for the Tritium Extraction Facility commenced. The initial facility drill was cancelled because facility ventilation was lost right before the drill was initiated, possibly due to a supply fan heating element overheating. As was seen during the contractor review, equipment issues delayed several demonstrations. For example, the crane was out-of-service the first few days, electronic procedure steps were skipped on the operator console, there was an overspeed trip with the crane, and one of the crane trolleys would not operate.

Saltstone: The contractor continues to investigate flow rate variations from the salt feed tank. A camera inspection of the tank indicates that the agitator may be adversely influencing the inlet to the pump (e.g., creating cavitation). The contractor has been able to recreate the problem by running the agitator while pumping from the tank.

F-Canyon Transuranic Waste Repacking: A standing order was issued that requires disposal of the box cutter once the blade becomes dull to avoid a potential cut or puncture while changing the blades by hand. (See 10/20/06 weekly report).

Modular Caustic-Side Solvent Extraction Unit (MCU): This week the Site Reps walked down the MCU construction site. Construction activities are progressing on schedule to support startup later this fiscal year. Nearly half the construction work packages have been turned over to the startup group and the remaining are expected to be turned over by mid-November.