

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 17, 2010

TO: T. J. Dwyer, Technical Director
FROM: M. T. Sautman and D. L. Burnfield, Site Representatives
SUBJECT: Savannah River Site Weekly Report for Week Ending December 17, 2010

Saltstone/SRR Training: The recent Operational Readiness Review identified several, typical findings. Training was one functional area with several findings. As discussed last week, knowledge of the Technical Safety Requirements by operations staff, engineers, and the Shift Technical Engineers (STE) was less than adequate. In addition, both a STE and a shift operations manager (SOM) were qualified without completing all requirements. The ORR team's review also identified that SOM candidates have been provided the exact same written comprehensive examination for the last four years. Field observations identified training weaknesses such as an operator who performed equipment rounds but did not understand decimals and workers who had not been trained how to conduct a leak check (i.e., they checked for leaks before the pump was started).

The 11/5/10 weekly report discussed weaknesses in the conduct of SRR SOM oral boards. Although system engineer oral exams are not meant to be as formal as oral boards, the site rep observed several weaknesses in a tank farms exam this week. The candidate did not understand the format or expectations of the exam, a board member arrived without prepared questions, and the candidate was allowed to frequently reference and read from system files that he brought to the oral exam. The lack of a clear policy regarding the use (or overuse) of reference materials has led to a growing misperception that being able to use a table of contents and read from a reference document is the same as knowledge of the subject.

Defense Waste Processing Facility: The staff questioned a proposed specific administrative control (SACs) that requires sufficient diluent to be added to the strip effluent feed tank prior to receiving strip effluent with high Isopar LTM. The issue is that the proposed SAC includes recovery actions if they end up transferring a larger volume than assumed in the dilution calculation. While SACs written in a LCO format allow facilities to take action to bring inventories within SAC limits without a TSR violation, DOE-STD-1186 states that directive action SACs (like this one) do not support action times to address limit exceedance, but rather require an immediate TSR violation.

Tank 48: DOE approved CD-2A/3A for long lead procurement and completed 35% design of the Tank 48 Treatment Project.

Heavy Water Components Test Reactor (HWCTR): The site rep observed a Management Review Board and mockup for the removal of irradiated ion chambers from the pin room. (DOE sent SRNS a letter about the planning for the initial attempt to remove these – see 11/19/20 report). Workers used tools to remove the ion chambers from the cable and deposit them into buckets filled with lead shot. Despite dose rates of several rem/hour, the activity was accomplished with relatively little dose received (approximately 35 mrem total).

Safety Fans: The site rep met with engineers to discuss multiple failures of safety and non-safety fans at H- and F-Canyons, F/H Laboratory, and 235-F. While some failures are isolated events or due to vendor quality problems, systems engineers determined that the axial load could be reduced by switching the bearing design, that a previous preventive maintenance (PM) optimization effort reduced the PM frequency by a factor of 4-8 times the vendor's recommendation, and that the disbanding of a dedicated fan maintenance group led to a loss of institutional knowledge.