

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 5, 2008

TO: T. J. Dwyer, Technical Director
FROM: M. P. Duncan and M. T. Sautman, Site Representatives
SUBJECT: Savannah River Site Weekly Report for Week Ending December 5, 2008

Heshmatpour, Massie, and Zull were at SRS to review safety system maintenance at the Tank Farms. Gutowski and Sharpless attended a meeting on plans to consolidate special nuclear material at SRS.

Tritium Facilities: An Implementation Validation Review (IVR) for recent significant changes to the Documented Safety Analysis and Technical Safety Requirements began this week. The Site Rep observed a drill that simulated a malfunctioning Kanne tritium monitor when no backup capability was operational. The operator used a draft alarm response procedure. The implementation team had purposely kept some procedures draft as many could not be implemented under the current safety basis. However, they had gone through thorough reviews and walkdowns to ensure they implemented the requirements of the new safety basis. The Site Rep questioned this strategy, the level of approval these procedures had received, and whether it was appropriate generally to perform an IVR using draft procedures. SRNS has decided to postpone the IVR and projected restart in early January.

About two years ago, a vendor supplied a gas mixture with an analytical accuracy of $\pm 2\%$ instead of $\pm 1\%$ as specified in the purchase order. For about a year, this gas was repeatedly used to calibrate safety-significant oxygen monitors before the discrepancy was discovered last week. Receipt inspection personnel at Central Shops were supposed to verify that the specification on the purchase order matched the value on the Certificate of Analysis, but the written requirement was interpreted differently than intended. Fortunately, calculations using the overall gas specifications determined that there was no actual negative impact on recent calibrations. Similar problems with receipt inspections for specialty gas cylinders have occurred previously (10/5/07 report).

F-Tank Farms: DOE authorized operation of the Tank 18/19 Mechanical Waste Removal system. The Site Rep observed the night shift crew perform prerequisites and start up the system. So far, the sand mantis has been able to easily navigate around Tank 19 and effectively remove sludge without the need for its sprays. Electric noise from the particle grinder set off the leak detection alarm for the transfer line from Tank 18. Since this was a spurious alarm associated with a line that was not even being used, it was temporarily removed from service. Operations were also shut down after receiving a high temperature alarm for the grinder. After getting the vendor's approval, the high temperature alarm and interlock set points were raised. The vendor had previously tested the grinder at these revised temperature set points. Although the controls are to be continuously manned, the subcontractor left them unmanned for a short period of time.

Industry Codes: After DOE-SR challenged a contractor-approved code equivalency, DOE-SR conducted an assessment of past equivalencies granted by the contractor. This prompted the DOE-EM Technical Authority Board to start developing a policy on the roles of DOE and its contractors when it comes to approving code equivalencies. In the interim, DOE-SR will have a non-voting member sit on the contractor Engineering Standards Board when it reviews equivalency requests. Another recent issue also prompted the review of site standards to identify any embedded code equivalencies or variances they may contain, especially those affecting codes (e.g., ASME B31.3) that are referenced in 10 CFR 851 and require Under Secretary approval. (10/3/08 report)

Saltstone: WSRC declared a Potential Inadequacy in the Safety Analysis (PISA) for the Saltstone Disposal Facility. The current hazard categorization evaluation excludes the radionuclide inventory in the grout from the calculation. It does not explicitly address the portion of grout that may still be somewhat dispersible during and following grout pouring operations. While not expected, the required re-evaluation could increase the facility's Hazard Category from 3 to 2. DOE communicated this issue to WSRC informally months ago. Ideally, the New Information/PISA process should have been initiated at that time.