DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 4, 2013

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 January 4, 2013

2012 Year in Review Part Two: SRR's accomplishments this year included the following:

- Defense Waste Processing Facility (DWPF) personnel poured 230 canisters, bringing the total to 3560.
- The next generation melter bubblers were designed, fabricated, and installed in DWPF. The new design allows 90 percent of each bubbler to be re-used and only the wet end requires disposal.
- Processed ~400 thousand gallons of salt solution through the Actinide Removal Process and Modular Caustic Side Solvent Extraction Unit, bringing the total to more than 5.8 million gallons salt processed including that material previously processed through Deliquification, Dissolution and Adjustment (DDA).
- Implemented Modular Caustic Side Solvent Extraction Unit (MCU) life extension upgrades and operational and maintenance reliability improvements. This effort included SRR rebuilding all 18 centrifugal contactors to increase the life expectancy and improve performance for the Interim Salt Disposition Process (ISDP) process.
- Completed the Saltstone Enhanced Low Activity Waste Disposition outage to improve reliability and processed more than one million gallons through the Saltstone production facility in the two months following restart.
- Completed the construction, testing and start-up of Saltstone Disposal Unit (a vault like structure) 2. Completed construction and water tightness tests for the four cells of Saltstone Disposal Units 3 & 5.
- Removed tanks 18 and 19 from the DSA and completed grouting these tanks.
- Completed closure sample analysis, characterization and inventory determinations for Tanks 5 and 6.
- Implemented a Focus on Excellence in response to an uptick in leading indicators, errors, and events. The response was implemented during a period that required high activity to complete outage work, readiness reviews, and facility restarts. SRR developed a comprehensive response plan which included Nuclear Safety Culture briefings and a safety pause for a refocus on safety. The result was that the potential negative safety trends were reversed and performance was improved.
- Completed the Tank 48 alternate technology maturation through simulant testing and prepared for real waste testing.
- SRR received DOE's Voluntary Protection Program (VPP) Star of Excellence award for its commitment to ensure the safety of employees. This program is considered to be an integral part of the integrated safety management system and now considers elements of radiological as well as occupational safety. DOE awarded the VPP Star to the SRS liquid waste operations group for the 11th time and the 3rd time for SRR since it became the SRS liquid waste contractor in 2009.

Implementation Verification Reviews: In response to the Board's letter of February 5, 2008 regarding the need to ensure independent verification of the implementation of Safety Basis controls, DOE issued a revision to DOE Guide 423.1-1A, *Implementation Guide for Use in Developing Technical Safety Requirements* in November of 2010. Specifically, the new Appendix D to that guide discusses methods for the performance of initial Implementation Verification Reviews (IVRs), and the use of periodic IVRs to meet the safety basis implementation and independent assessment requirements of 10 CFR 830, *Nuclear Safety Management*. To date, DOE-SR has not yet addressed the acceptability of the methods the contractor uses to periodically assess the implementation of Safety Basis controls.