

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 2, 2015

TO: S. A. Stokes, Technical Director
FROM: D. L. Burnfield, Site Representative
SUBJECT: Savannah River Site Weekly Report for Week Ending January 2, 2015

2014 Year in Review Part Two: SRR's accomplishments this year included the following:

- Liquid Waste Operations (LWO) successfully closed High Level Waste (HLW) storage Tanks 5 and 6. In addition, LWO completed the final closure sampling of Tank 12. This effort was significantly hampered by numerous interferences. To overcome these interferences LWO personnel deployed engineered ramps and used dual remote controlled crawlers to complete crawler-to-crawler sample transfers.
- LWO completed the conversion of the Modular Caustic Side Solvent Extraction Unit (MCU) to the Next Generation Solvent (NGS) and completed the first large scale demonstration of NGS which increased the cesium decontamination factors by several orders of magnitude.
- In January and February, SRS experienced a combination of extremely cold weather and a loss of steam. In conjunction with the freeze event, SRR was forced to enter their Abnormal Operating Procedures and shut down operating facilities because of a 4.1 magnitude earthquake. This resulted in further delay of programmatic work as SRR was forced to evaluate their facilities for damage. Upon completion of required actions, SRR determined there was no damage to any facility and continued corrective actions from the freeze. In spite of the related delays, SRR achieved 1.25 million gallons of space gain through 2H Evaporator, effectively eliminating the backlog of DWPF recycle in the system. For the year, SRR processed 0.66 million gallons of salt solution through the Actinide Removal Process (ARP) and MCU, dispositioned 1.1 million gallons of decontaminated salt solution into grout at saltstone, and poured 155 canisters of glass at DWPF.
- Following the winter freeze event, SRR performed inspections and structural integrity evaluations to determine the condition and integrity of the saltstone grout line. These actions identified not only areas of the line requiring repair, but also identified non-conforming items and legacy design issues. SRR documented each non-conformance and then executed modifications to the grout line to meet structural analysis requirements and provide additional controls for safe operation of the facility.
- SRR continued progress in the construction of Salt Disposition Unit 6, a 32 million gallon grout storage tank.
- SRR proposed and confirmed the technical feasibility of reconfiguring the storage of canisters in the existing Glass Waste Storage Buildings (GWSBs) by double stacking them to increase capacity. This action delays the need for construction of a new GWSB.
- LWO provided engineering and radiological support to Waste Isolation Pilot Project (WIPP) following a radiological release.