

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 3, 2014

TO: S. A. Stokes, Technical Director
FROM: M. T. Sautman and D. L. Burnfield, Site Representatives
SUBJECT: Savannah River Site Weekly Report for Week Ending January 3, 2014

HB-Line: In order to determine the cause of last week's spray leak, SRNS inspected the orifice plate connected to the column feed tank. The inspection found that a gasket was not installed on the tank side of the orifice plate. The site rep observed a demonstration of plutonium oxide sampling and loading out performed for the facility self-assessment team.

Training: The site rep is reviewing the qualifications of facility representatives, safety system oversight, and senior technical safety managers (STSM) at both DOE offices. The qualifications for one STSM at DOE-EM have expired, but the Order allows a six month extension. Using the process in DOE-STD-1063, NNSA should have four facility representatives, but NNSA feels experience has shown the current three are sufficient. The site rep will be reviewing facility representative written examinations and the process for requalifications and cross qualifications.

K-Area: The site rep is reviewing the inventory of plutonium items that are not packaged per DOE-STD-3013, but rather DOE M 441.1-1 *Nuclear Material Packaging Manual* (or what used to be called Interim Safe Storage Criteria). Because SRS no longer has any 3013 packaging capability, this inventory is increasing due to 3013 sampling, Mixed Oxide Fuel Fabrication Facility feed preparation, and Global Threat Reduction Initiative receipts. The site rep has questioned whether the 9975 surveillance program and contamination surveys of the exterior drum fully satisfy the DOE M 441.1-1 requirements for a maintenance and surveillance program of the nuclear material storage package and filters. In addition, some of the 9975 shipping containers in K-Area are nearly 13 years old and the current 9975 shipping package life is 15 years. The site rep asked SRNS what their plans are to prevent shipping packages from exceeding their defined life.

2013 Year in Review Part Two: SRR's accomplishments this year included the following:

- SRR established a team of international processing experts to review Defense Waste Processing Facility (DWPF) operations and programs in order to identify ways to improve facility performance. The resulting actions along with previously planned improvements led to a record month in August 2013 and a total of 195 canisters poured in 2013. The total number of canisters poured at DWPF is 3755.
- The Actinide Removal Process (ARP) and Modular Caustic Side Solvent Extraction Unit (MCU) set new daily, monthly and annual production records. ARP/MCU processed over 1.3 million gallons of salt waste in 2013. Since ARP/MCU started operations in 2008, the contractor has processed over 4.06 million gallons at ARP/MCU. Including Deliquification, Dissolution and Adjustment, more than 6.8 million gallons of salt has been processed.
- SRR completed the MCU life extension project and the next generation solvent (NGS) was approved and deployed in the facility.
- SRR processed more than 1.2 million gallons of decontaminated salt solution at Saltstone for a total of nearly 13 million gallons since startup in 1990.
- SRR commissioned Saltstone Disposal Units (SDU) 3 and 5 and obtained approval for radioactive operations.
- SRR filled Tanks 5 and 6 with grout.
- DOE obtained agreement with the South Carolina Department of Health and Environmental Control and the EPA to cease waste removal from Tank 16 and began final sampling and analysis.
- SRR completed consolidation of the 1F and 74F control rooms into the 3H control room.
- SRR safely completed chemical cleaning of Tank 12 allowing initiation of the transition of the waste tank into the closure process.