

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 24, 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 December 26, 2014

Defense Waste Processing Facility: As a result of last week's positive Unreviewed Safety Question, SRR temporarily shut down processing activities. Both the Recycle Collection Tank and the Off-gas Condensate Tank were full and needed to be emptied, but in order to empty these tanks, SRR would need to transfer their contents through the Low Point Pump Pit's Recycle Pump Tank (RPT). Because the agitator in the RPT was not operating, an engineering evaluation is required to ensure that the release of any retained gas will not exceed 95% of the composite lower flammability limit when the agitator is restarted. SRR engineers were preparing evaluations for this and seven other tanks subject to this compensatory action.

2014 Year in Review Part One: SRNS's accomplishments this year included the following:

- L-Area processed 4 fuel casks containing 32 fuel assemblies and shipped 14 fuel casks to H-Canyon.
- HB-Line declared readiness to restart Phase II, implemented an upgraded documented safety analysis, and produced the first six cans (5 kgs) of plutonium oxide from Alternate Feed Stock-2 material.
- Dissolution activities in H-Canyon included:
 - Completed the Sodium Reactor Experimental (SRE) fuel campaign which included a total of 147 fuel bundles. In 2014, this included dissolving 19 bundles of SRE fuel and 70 bundles DR-3 reactor fuel. SRNS transferred two dissolver batches to tank farms.
 - Initiated the Material Test Reactor campaign and completed two dissolver batches containing a total of 40 bundles.
 - Supported HB-Line by dissolving ten plutonium bundles.
- Completed the ventilation upgrades for the H-Area Ground Level Release project and inspected 320' of the H-Canyon exhaust tunnel.
- K-Area completed nine destructive examinations as part of the 3013 Surveillance Program, completed 19 plutonium verification measurements, and completed construction and Critical Decision-4 for the Final Storage Vault project.
- K-Area repackaged ten high Am-241 items for shipment to support an Idaho National Laboratory initiative.
- The 235-F Project completed the removal of fixed combustibles, de-energized electrical circuits not required to support deactivation, and replaced outdated Fire Detection and Alarm System components.
- The Solid Waste Management Facility completed remediation and packaging of legacy transuranic (TRU) waste into Waste Isolation Pilot Plant (WIPP) compliant packaging.
- The Waste Solidification Building achieved mechanical completion.
- Completed 100% of tritium mission deliverables (e.g., reservoirs, surveillance) and extraction of Cycle 11A Tritium Producing Burnable Absorber Rods in the Tritium Extraction Facility.
- SRNL replaced 5 leaking shielded windows in A Block of the SRNL E Wing Shielded Cells Facility and upgraded utilities and control cabinets serving each cell.
- SRNL closed 60 fire sprinkler deficiencies and 4 fire water supply deficiencies identified in the SRNL Fire System Backfit Analysis. To date, SRNL has resolved 72% of the total fire sprinkler deficiencies and completed 89% of the fire water supply deficiencies.
- SRNS hired 400 new workers including the first class of nuclear production operators in more than 15 years.