

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 8, 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 August 8, 2014

Defense Waste Processing Facility: SRR had three maintenance related events this week.

- Thirty minutes after performing maintenance on a chemical process cell air dryer and returning it to service, the sludge receipt and adjustment tank (SRAT) low purge flow alarm actuated. The resulting interlocks shut down SRAT operations and stopped a strip effluent feed tank transfer. The system has a backup nitrogen supply, but it did not turn on because the pressure stayed constant even though the flow rate dropped. The cause is still under investigation.
- For the third time since last July, a common return line plugged, causing the SRAT gas chromatograph sample pump interlock to trigger due to high discharge pressure. Following the previous plug in January, SRR identified a corrective action to conduct quarterly blowdowns of this line, however, this had not been performed yet when it replugged six months later. In the future, preventive maintenance that is identified as a corrective action will be performed upfront rather than waiting for the specified time to elapse before conducting it.
- While installing a lockout to support electrical cable testing, maintenance workers did not fully complete a procedure before moving onto the next step in the lockout order, which involved a second procedure. The resulting inrush current tripped a feeder breaker, causing power to be lost to two load centers. This caused power to be lost to all zone 1 and 2 supply fans, various transfer and sump pumps, building lighting, and two of the three operating melter dome heaters.

Saltstone: SRR successfully transferred grout into one of the new Saltstone Disposal Units with their larger grout pump. Pump performance met expectations.

K-Area Material Storage: While performing rounds, operations personnel discovered a metal rod resembling rebar protruding out of the building structure near the stack. Structural engineering evaluated the rod and believes it is one of the eight seismic tie-rod anchors originally installed during the reactor restart upgrades. They are continuing to evaluate the extent of condition to determine the likelihood of additional rods failing.

L-Area: L-Area criticality engineers discovered that a grating covering the oversize can racks inside the Disassembly Basin was not in place per the design specification. When personnel performed further examination of the remaining grating, they determined that four additional grates were not in place correctly. Based upon the limited visibility, the site rep questioned whether previous Technical Safety Requirement's surveillance requirements could have been performed correctly without the assistance of a camera.

Solid Waste Management Facility (SWMF): In 2010, when workers moved an overpacked 55-gallon drum of transuranic waste off a pallet in Pad 16, liquid began to "gush" from the bottom of the carbon steel overpack. Approximately 13 gallons leaked from the overpack and drained down the sloped pad towards a sump (See July 30, 2010 report). Workers later entered the area and found wet smears up to 50 million dpm α on the pad. Workers completed recovery actions and covered the pad with protective material to preclude the release of radioactive material. SRNS is now planning the activities necessary to allow the pad to be decontaminated to the maximum extent practical. The site rep discussed the planned activities with the DOE facility representative as well as the facility safety representative and received the schedule for the planned mockups as well as planned decontamination activities.