

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 4, 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 April 4, 2014

Perspective: During the first quarter of 2014, the site has experienced a mixture of external events, legacy issues, and events caused by inattention to detail, poor quality, or a failure to call a time out. This combination is affecting the productivity of several facilities and worker safety.

- After a long period with few issues, the trend for hazardous energy control has turned negative across the site with six recent reportable events. This week, SRR identified they had not been adequately controlling the radiological hazard of the hydro test rig used for testing the grout line integrity. SRNS had another lockout in 235-F where an energized component was unexpectedly found within the bounds of work that was previously deenergized.
- On five occasions, SRNS and SRR have not complied with their Technical Safety Requirements (TSR).
- During January and February, SRR had five contamination events at the Defense Waste Processing Facility (DWPF) compared to only two in the previous 10 months.
- At two SRNS non-nuclear facilities, a worker suffered a hand laceration with a reciprocating saw and another was sprayed in the face and eyes with a chemical solution.
- SRNS and SRR have declared five Potential Inadequacies in the Safety Analysis (PISA) in 2014. This is on top of 21 PISAs declared last year.
- SRNS stopped dissolver operations at H-Canyon last week when SRNL identified that measured hydrogen gas generation rates may be greater than the calculated hydrogen gas generation volume percent. As a result, SRNS declared a positive Unreviewed Safety Question this week. H-Canyon also went into warm standby mode this week and will remain in standby for approximately eight weeks. Much of this time will be spent making modifications to the ventilation system to address the ground level release PISA.
- As a result of a TSR violation, the pace of Rec. 2012-1 work in 235-F was reduced for several weeks. This pace will be further impacted after engineers identified that several facility drawings were not readily accessible on the site's document control system.
- F/H Laboratory, H-Area Old Manufacturing (HAOM), and H-Canyon continue to repair air handling unit and fire protection systems damaged by the loss of steam in early January. As temperatures reached the upper 80s, SRNS had to curtail some laboratory operations to protect equipment and maintain accuracy and precision. SRR is still repairing and testing the damaged grout line at Saltstone. SRNS was able to declare the HAOM fire suppression system operable yesterday and exit their recovery plan.

DOE and contractor managers have been very sensitive to these negative trends and have been trying to take action before a more serious event occurs. SRNS conducted safety pauses at their facilities this week. H-Canyon and HB-Line maintenance also held a pause to deal with recent performance issues. Last month, SRNS engineering held a pause to deal with technical rigor issues. SRR conducted a common cause analysis of their contamination events and has been trying to reduce the frequency of future ones by aggressively decontaminating and surveying parts of DWPF. Several organizations have or are developing improvement plans. The site reps continue to meet with operations, maintenance, radiological protection, training, and engineering management to discuss the above issues and the actions being taken to improve performance.

Tank Farms: The pump in F-Pump Pit 1 serves to transfer high-level waste from F to H-Tank Farm. SRR personnel failed to properly seat the instrument jumper for the flow and pressure instruments and damaged the connections for these instruments. SRR engineering evaluated the damage and was able to accept the installation as-is. SRR will begin post maintenance testing next week and they will continue into May.