

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 22, 2013

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 November 22, 2013

H-Canyon: An operator alarmed a personnel contamination monitor (PCM) after she prepared doorstops for use and assisted other operators taking a tank sample. (“Doorstops” are shielded containers that provide a remote method for obtaining samples from hot canyon tanks.) Despite wearing two pairs of anti-contamination clothing, she had 100,000 dpm $\beta\gamma$ on one index fingertip and 30,000 dpm $\beta\gamma$ on the other. When SRNS later surveyed the contents of the laundry bag at the step off pad, they found a cotton glove liner with 5,000,000 dpm $\beta\gamma$ on one finger and 1,000,000 dpm $\beta\gamma$ on a rubber glove finger. Lower levels were found on a respirator strap and coverall sleeves. In addition, very high contamination was found inside one of the doorstops which suggests it may not have been properly decontaminated before it was reused. The operator’s glove may have been breached while preparing this doorstop for sampling and then this contamination spread to other locations due to doffing techniques. SRNS is taking actions to preclude another event.

Open Issues: Due to funding, resources, and prioritization issues, a number of Board and staff issues are taking longer than anticipated to close.

- DOE’s May 30, 2012 letter stated that they anticipated completing the acceptance testing of the new diesel and electric fire pumps in K-Area by 11/30/12. (See 3/27/12 Board letter). Installation of the new electric pump has been dragging on for months.
- In response to staff concerns, DOE directed SRNS to reclassify the HB-Line diesel generator and vessel vent system piping from important-to-safety back to safety significant (see 2/8/13 report). SRNS currently estimates this will be implemented in October 2014.
- SRNS does not expect to eliminate the use of a 0.2 leak path factor for F/H Laboratory for full facility and glovebox fire scenarios until June 2014. The staff identified this issue three years ago (see 10/29/10 report).
- The Fire Department’s (FD) only ladder truck is 23-years old and continues to be extremely unreliable and may be retired. The FD continues to use 20 year old fire engines and rescue vehicles. Funding for replacements dried up a few years ago (see 1/20/10 Board letter).

Meanwhile funding for continuing the upgrades of the SRNL ventilation (Rec. 2004-2) and fire systems (3/27/12 Board letter) and Recommendation 2012-1 is highly uncertain.

Solid Waste Management Facility (SWMF): On October 10, 2012, an SWMF employee retired and submitted an exit in-vitro bioassay sample. On January 14, 2013, SRNS reported that the sample was positive for ^{239}Pu . SRNS analyzed the remaining split of the same sample and could not conclusively determine if the sample was positive. SRNS contacted the employee and obtained a follow-up in-vitro bioassay on April 25, 2013. Both splits from this sample were reported as positive for ^{239}Pu last summer. While the employee was known to have been involved in an incident involving a significant internal dose from ^{239}Pu several years ago, there had been several negative routine samples between that event and the exit bioassay. SRNS conservatively assigned a positive dose based upon the assumption that this is related to a second unidentified uptake event.

H-Tank Farm: The Tank 37 had a build-up of contaminated liquid in the fan housing (300,000 dpm $\beta\gamma$). SRR personnel installed a temporary ventilation unit to begin troubleshooting the cause of the liquid buildup. SRR personnel secured steam to the reheater and will perform further troubleshooting to determine the source of the liquid and correct the problem.

K-Area: SRNS successfully removed the Double Port Transfer Exchange (DPTE) from the KIS vault glovebox and repackaged the 3013(see 11/15/13 report.)