

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 20, 2013

TO: S. A. Stokes, Technical Director
FROM: D. L. Burnfield, Site Representative
SUBJECT: Savannah River Site Weekly Report for Week Ending December 20, 2013

Modular Caustic Side Solvent Extraction Unit (MCU): For several months, MCU has been in an outage while SRR personnel prepared MCU to start using the next generation solvent. Last week SRR found that the wiring of the A and B pumps were crossed and as a result, the A pump had started when SRR tried to start the B pump. (See 12/13/13 report.) This week SRR noticed increased current and vibration from extractor contractor #6. They performed a video inspection of the contactor and found that it was rotating backwards and had resulted in a solvent carry over event. SRR had replaced the drive unit for this contactor as well as the other seven drive units for the extraction contactors during the recent outage. Troubleshooting of this problem led SRR to determine that the leads of this drive unit were also swapped. SRR management is reviewing the causes for these errors in configuration management that occurred during the last outage.

Tank Farms: SRS closure personnel completed grouting the final risers in Tanks 5 and 6. This allows the tanks to be formally closed next year once they obtain formal agreement from the state.

Problems completing outages in both H-Tank Farm and F-Tank Farm have resulted in F-Tank Farm being isolated from H-Tank Farm for longer than was originally planned. Combined with the earlier decision not to repair the evaporator in F-Tank Farm (see 4/4/13 report), SRR now runs the risk of not having adequate space to transfer waste from one tank to another should damage to a tank make it desirable to do so.

Site Services (SS): HB-Line prepared two boxes of radioactive waste for shipment to the Solid Waste Management Facility (SWMF). SWMF called site services and set up the shipping of the waste from HB-Line to their facility. HB-Line placed the waste on the loading dock and waited for SS to call their point of contact to have the waste picked-up, as is normal procedure. The teamster received the paperwork normally used for the transfer and reported to H-Area. Once in H-Area, there were several conduct of operations problems associated with training of the teamster, poor communication practices, inadequate paperwork, and less than adequate direction, resulting in the teamster transferring two empty containers to the SWMF instead of the containers containing radioactive waste. SRNS is evaluating the necessary corrective actions for both SS and H-Area personnel.

SWMF: In order to specify the assay values for their transuranic (TRU) waste, SRNS uses values obtained from an outside expert who has a contract with the Waste Isolation Pilot Plant, but neither SRNS nor DOE-SR. SRNS compares these values to the inventory limits that are used in their documented safety analysis to protect the workers and the public. Unfortunately the values that are initially obtained locally often vary significantly from the values that are obtained from the outside expert, and the outside expert often takes several days to provide these values to the site. In the latest example, the values received from the outside expert were approximately three times the values obtained locally. Because the shift operations manager knew of the problem, the box in question was placed in a storage area reserved for higher activity containers. However, the cumulative value of all containers ended up exceeding the limit that was permitted for that storage area. SRNS did not immediately recognize the fact that the cumulative value was exceeded, and the computer program used to track inventory did not immediately identify the issue. This container remained in the area for several days before the problem was identified, and the container was then moved to a safe location.