

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 6, 2012

TO: T. J. Dwyer, Technical Director

FROM: D. L. Burnfield, Site Representative

SUBJECT: Savannah River Site Weekly Report for Week Ending April 6, 2012

HB-Line: HB-Line currently operates under a Justification for Continued Operation (JCO) because the room exhaust system may not perform its intended function during certain fire scenarios for the fifth and sixth levels. Without the room exhaust system being operational, the collocated workers could potentially receive doses approaching 100 rem during one of these postulated events. An engineered solution is planned for later on this year, but has not yet been installed. SRNS was planning to extend the current JCO until this solution is implemented; however additional material at risk has been discovered, which increases the potential collocated worker dose to approximately 130 rem. The contractor has approved a revision to the JCO and awaits DOE action.

H-Tank Farm: SRR personnel successfully cut the bottom of the telescoping transfer pump (TTP) in Tank 30. They then drained the dead leg, pulled the pump from the tank, placed the TTP in a waste box, and subsequently moved the box to N-Area for temporary storage. In the process however, the work crew discovered a tube that extended through the plates covering the riser that had not been adequately analyzed during pre-job work planning. H-Tank farm personnel were able to perform a field change and execute that part of the procedure with no significant issues. While placing the pump into the waste box, SRR personnel accidentally tore the plastic sleeve, used for contamination control, while the pump was suspended from the cranes. They were able to complete the operation without any spread of contamination. (See 2/2, 2/24, and 3/16/2012 reports.)

Because space is required in Tank 51 for the upcoming sludge batch to be processed, SRR needs to address the TTP in that tank which is failing. SRR had planned to manually replace the packing on the pump; however, the dose rates to the extremities now appear to be in excess of 400 rad/hour β/γ . SRR is pursuing other means of repairing or replacing this TTP.

F-Tank Farm: The 2F Evaporator is shut down due to high activity overheads while engineers determine a path forward. F-Tank farm has a spare evaporator pot in storage which may be necessary to use if the activity in the overheads continue to rise.

This week, SRR began the grouting of Tanks 18 and 19. More than 100,000 gallons have been placed in the tanks. However, the flexible tubing that they are using for placing the grout in the bottom of the tank developed a leak near the top of the tank. SRR has designed the hose to be disconnected in pieces, and will take advantage of this design to release the hose piece by piece and install a new hose in the tank so that grout placement can continue.

690-N (Ford Building): More than 20 years ago the site reactor operators removed numerous heat exchangers from the reactors and stored them for burial at a later date. SRNS is now moving these retired reactor heat exchangers from the Ford Building to E-Area for burial. As they were loading heat exchanger #31 onto the trailer for transport, they noticed that the heat exchanger weighed more than was expected. The previous research into the storage of the vessels indicated the vessel's heads were intact, but that the previous site contractors had removed the core rods, and the vessel had been decontaminated. SRNS believes that the additional weight could be attributed to the rods remaining in the heat exchanger. SRNS is reviewing the records and attempting to determine the source for the additional weight.