

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 17, 2017

TO: S. A. Stokes, Technical Director
FROM: Z. C. McCabe, Site Representatives
SUBJECT: Savannah River Site Weekly Report for Week Ending February 17, 2017

Defense Waste Processing Facility (DWPF): DWPF personnel continue to progress in the melter replacement efforts since the failure of Melter 2 (see 2/3/17). The melter was de-energized last week and the thermocouple temperature readings decreased accordingly. However, roughly six days after the melter was de-energized the thermocouple temperature readings leveled out at roughly 120 degrees C. The shutdown procedure requires the thermocouples to read 50 degrees C before the melter off-gas (MOG) system can be turned off. DWPF personnel believe the leveled out thermocouple readings are erroneous and suspect that the temperature continued to decline despite the temperature readings. DWPF personnel are still developing a plan to turn off the MOG system.

3H Evaporator: Tank Farms personnel have completed removing the lagging and insulation from the bottom of the evaporator pot (see 1/6/17 report). With all of the lagging and insulation removed, Tank Farms personnel filled the evaporator with heated flush water which allowed them to easily see three distinctive streams of liquid leaking from the pot. SRR and the subcontractor are currently developing a path forward for repairing the pot.

HB-Line: An HB-Line operator cracked a safety significant (SS) glass glovebox window panel when removing an empty product can from a glovebox assembly used to fill these cans with oxide. The tight-fitting design of the assembly requires an operator to carefully maneuver and adjust the can while removing it. Recent routine maintenance made the assembly tighter than in the past which made it more difficult to remove the product can. The added difficulty caused the operator to pull and adjust with more than the previously required amount of force to free the product can. The operator was able to release the product can from the assembly but was not able to overcome the resulting momentum quick enough before the handle struck and cracked the interior glass glovebox panel. After the panel was cracked the HB-Line personnel called a time-out and notified radiological protection (RP) and management. RP found no contamination on the personnel or on the outside of the glovebox. HB-Line personnel have conservatively posted the area as an Airborne Radioactivity Area and are not planning to do any glovebox work at this location until the panel is replaced. The glovebox panel consists of the (cracked) inner SS double-paned glass that is credited for confinement and the (undamaged) outer leaded glass that is used for radiological shielding. At this time HB-Line personnel do not know if both panes of the credited double-paned glass are damaged, but have concluded that it is still providing its SS function. HB-Line personnel are planning to document the damaged panel in a nonconformance report.

Tritium Facilities: The SRNS Tritium Extraction Facility (TEF) furnace extraction readiness assessment (RA) team completed their assessment. The team identified 15 findings with 8 pre-start corrective actions and 10 post-start corrective actions. Six of the pre-start corrective actions were related to conduct of operations. TEF personnel have completed all of the pre-start corrective actions and have declared operational readiness for the upcoming NNSA RA.

The site representative observed a Tritium Facilities shift operations manager requalification oral board. The board members prepared and discussed the questions prior to conducting the board.