

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 3, 2008

TO: T. J. Dwyer, Technical Director
FROM: M. P. Duncan and M. T. Sautman, Site Representatives
SUBJECT: Savannah River Site Weekly Report for Week Ending October 3, 2008

Contamination Events: Cesium-137 ($\sim 28,000$ dpm/100 cm²) was found on a H-Tank Farm Radiological Control Inspector (RCI) during a routine annual whole body count (WBC). The contamination appears to have been washed away when the RCI showered because it was not found during subsequent surveys of the RCI's clothing. The WBC Facility is reevaluating their response because their response focused on discriminating between internal and external contamination and differed from how a potential skin contamination would be handled in a nuclear operations facility. Extensive facility and equipment surveys did not identify the source of contamination or any further spread of contamination. Although the RCI had alarmed a personnel contamination monitor (PCM) when they exited a Radiological Buffer Area in the morning, that alarm was determined to be a false positive and several subsequent PCM surveys during the day did not detect any contamination.

At the Solid Waste Management Facility, contamination was found on a glove (20,000 dpm α) and pants (3000 dpm α) of two workers who had been unloading empty drums inside a Radiological Material Area. These drums had previously been used to store transuranic waste, but surveys performed months ago indicated that they were clean.

Tank Farms: While performing post-maintenance testing on the Tank 49 ventilation system, the exhaust stack continuous air monitor alarmed and steam was seen exiting the stack. Afterwards, interior duct smears found up to 180,000 dpm β - γ /100 cm² downstream of the high efficiency particulate air (HEPA) filter. It appears that the failure of the steam reheater wetted the filter media and allowed contamination to wick across the filter. Because the ventilation system is needed to support some time-critical transfers and caustic additions, the HEPA filter will be replaced and a temporary modification will install a second HEPA filter on the stack.

After waste transfers and flushes did not reduce dose rates in the processing cell sufficiently, the contractor decided to start the Interim Salt Disposition Project outage sooner than originally planned. The Decontaminated Salt Solution coalescer will be replaced during this outage.

DOE challenged a code equivalency that a contractor committee had approved concerning an alternative leak check for the Tank 18/19 mechanical cleaning service piping. DOE and the contractor are also reexamining the current practice of having the contractor grant equivalencies to industry standards to see if the DOE needs a formal role in their review and approval.

H-Area New Manufacturing: While performing post-maintenance testing on a function test station, an operator inadvertently turned on a pump, whose downstream valves were still closed, rather than the desired pump, whose downstream valves had been opened. The resulting pressure spike blew a rupture disc. There were several pump switches and pressure gages on the panel, but their configuration prevented the operator from looking at both the correct gage and switch at the same time.