

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 21, 2007

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: M. P. Duncan and M. T. Sautman, SRS Site Representatives
SUBJECT: SRS Report for Week Ending December 21, 2007

Facility Walkdowns: The Site Reps walked down H Area Old and New Manufacturing facilities, the Solid Waste Management Facility, H-Canyon and 235-F. Portions of 235-F are showing their age. In the East Maintenance Area of the Plutonium Fuel Form Facility (PuFF), tape used to attach plastic sheets over hood windows is peeling in several locations. Flexible ducting, previously used to exhaust a hood into a ventilation duct, is faded to the extent that it might be worthwhile surveying it to verify its integrity. A warning sign in the Plutonium Experimental Facility was unreadable since the ink had faded. Thick layers of oxide (likely aluminum) cover the manipulators and bottoms of the no-longer-inerted PuFF cells. Other observations include unlabeled bottles inside a glovebox, a posted Radioactive Material Area that no longer contained radioactive material, and an inactive contamination area that could have had more visible physical barriers (i.e., rope instead of just tape on the floor).

H Tank Farms: A leak collection device used to collect bearing water from the Tank 32 feed pump overflowed. About a pint of contaminated liquid (10^6 dpm β - γ large area smear dried) spilled onto the tank top. Management is increasing the rigor of how leak collection devices are tracked and monitored. In addition, the source of this specific leak will be identified and fixed.

Spent Nuclear Fuel: Operators were unable to engage the basket of a spent fuel cask using the Shielded Transfer System. During a subsequent attempt under senior supervisory watch, operators believed they achieved grapple to fuel basket engagement, but were unable to positively verify this due to the presence of moisture on the camera lens and later, failure of the camera lights. After necessary repairs are performed, unloading of the cask should occur next week under continued enhanced controls.

H Material Disposition: While decontaminating an empty plutonium-beryllium charging bundle, part of the bundle contacted a steam nozzle. As a result, the bundle became disengaged from the Hot Canyon crane hook and dropped ~20' into the "swimming pool" decontamination rig. The resulting damage affected two safety significant design features. This bundle will be taken out of service. Spares are available. At HB-Line, operators inadvertently pulled and rinsed a plutonium-tantalum item from a dissolver where dissolution was still ongoing rather than from one where dissolution was complete. After a critique, the material was recharged.

Liquid Waste Management: The Department of Energy and the contractor have chartered a joint Risk Management Board to improve the rigor with which they track risks and implement their risk handling strategies.

Tritium: The recently released draft Complex Transformation Supplemental Programmatic Environmental Impact Statement's preferred alternative is to consolidate gas transfer system design research and development at the Savannah River Site.