

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 17, 2006

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: J. S. Contardi/M.T. Sautman, SRS Site Representatives
SUBJECT: SRS Report for Week Ending March 17, 2006

DNFSB Activity: The Board's staff conducted reviews of the Salt Waste Processing Facility's ventilation system and fire protection issues at several existing and new facilities.

Savannah River National Laboratory: While opening a 15 ml, glass vial in a hood, a laboratory technician noticed the vial was pressurized. The technician covered the bottle with his hands to prevent material from spraying from the vial. After the vial quickly vented, a small amount of liquid was found on the technicians gloves. The vial contained 6 ml of an acidified high-level waste supernate sample. Following a survey by a radiological control technician, the laboratory technician continued with the sample preparation and analysis. Once facility management became aware of the event, a critique was held to identify the probable causes of the pressurization and assign corrective actions. However, the critique did not address the appropriateness of the technicians actions or the adequacy of the job-specific hazard analysis.

Radiological Uptake: Based on a routine bioassay and a subsequent sample, the contractor has determined that a worker from the Solid Waste Management Facility has received a low-level uptake of plutonium. The worker has been placed on a special bioassay program to better quantify the uptake. The contractor has begun an investigation to determine how the uptake occurred. The individual worked in the Transuranic Visual Examination Facility (TVEF), which is the same facility where another worker also received an uptake last year from the inhalation of plutonium (Site Rep. Weekly 6/17/05 & 8/12/05).

Facility Maintenance and Viability: The contractor consolidates critical information about their vital safety and other important systems in periodic System Health Reports. The Site Reps have observed a wide variability in the usefulness and quality of the System Health Report briefings to management. In several instances, facility management felt the need to reject the reports and review them once the deficiencies have been addressed. Attendance and participation in the briefings by senior operations and engineering management is good.

HB Line: After the Site Rep found cellulosic materials near nitric acid in a laboratory glovebox, these materials were removed and all other facility gloveboxes were inspected. In addition, facility glovebox operation and fire inspection procedures will be revised to prevent this from recurring. A lessons learned will be issued and this topic will be added to training courses.

Lightning Protection: A Department of Energy engineer identified that the lightning protection systems at the current and new Glass Waste Storage Buildings and the Defense Waste Processing Facility were not in compliance with NFPA 780 *Standard for the Installation of Lightning Protection Systems* and UL 96A *Installation Requirements for Lightning Protection Systems*. An Underwriters Laboratories inspector confirmed this issue. Other facilities with similar systems may also be affected.