

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 16, 2005

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: J. S. Contardi/M.T. Sautman, SRS Site Representatives
SUBJECT: SRS Report for Week Ending December 16, 2005

DNFSB Staff Activity: Staff member R. Kasdorf briefed the Waste Management Subcommittee of the SRS Citizens Advisory Board on Salt Waste Processing Facility confinement issues. In addition, Mr. Kasdorf was onsite for a review of interim storage and surveillance plans in K-Area.

Contamination Spread at Tank 43: While performing a survey of a continuous air monitor (CAM), a radiological technician identified higher than expected dose rates. The CAM is used to identify breakthrough of contamination downstream of filters on the Tank 43 ventilation system. However, the CAM detector was not operational and the aforementioned survey was implemented as a compensatory measure. A subsequent survey of the area indicated that some radiological material was released from the stack. Contamination levels up to 100,000 dpm beta/gamma were identified. The contractor believes the release was due to filter breakthrough due to moisture in the offgas. The tank's ventilation system has a reheater to prevent filter wetting, but the reheater has been inoperable for several months. As a temporary measure the compensatory survey was appropriate, however, the delays in restoring the reheater and CAM extended the reliance on these controls and ultimately contributed to the event.

H-Canyon Processing: Following a recent dissolver charge of plutonium contaminated scrap, the contractor identified a discrepancy between the fissile material charged and that in solution. Further analysis of the dissolved material indicated that the concentration of potassium fluoride (KF) was less than that required. Potassium fluoride is incorporated into the flowsheet to increase the dissolution rate and a lower concentration could prevent full dissolution for the prescribed runtime. Upon removal of the dissolver insert, the contractor identified undissolved portions of the scrap material. The KF used in the process was surplus from F-Area, which included chemical analysis of the KF concentration. Since KF can crystallize out of solution, the concentration will be reanalyzed for future operations.

Savannah River National Laboratory (SRNL): SRNL agrees that the Specific Administrative Control standard applies to their facility material inventory control program and will upgrade this administrative control in 2006 (Site Rep. weekly 12/02/05). In the interim, a team was formed to identify and implement changes to the inventory control program procedure to improve its rigor and reliability. This will be completed prior to the start of transuranic waste repackaging.

Solid Waste Management Facility (SWMF): In response to Site Rep observations (Site Rep. weekly 12/02/05) about weaknesses in drill packages, future drill packages will be revised to ensure the written scenario and objectives reflect actual performance and goals.

Tank 5: A new path forward is being developed because the second attempt to mix the sludge and transfer it out was not as successful as anticipated.