

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 14, 2005

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: J. S. Contardi, SRS Site Representative
SUBJECT: SRS Report for Week Ending January 14, 2005

Staff member Mark Sautman was onsite this week.

Citizens Advisory Board: On Monday, the site representative briefed the Citizens Advisory Board (CAB) on nuclear material stabilization and storage at SRS. The briefing focused on staff reviews and Board correspondence regarding spent nuclear fuel, plutonium storage, and canyon utilization.

Building 305-A Sealed Sources: The current hazard category for Building 305-A is listed as “other industrial.” Ten plutonium sealed sources stored in the facility may invalidate the hazard categorization. In order to exclude the sealed sources from the facility radiological inventory, the sources must meet Department of Transportation Special Form requirements or ANSI N43.6. Several of the sources were manufactured at other DOE sites, and documentation concerning the pedigree of the sources is not readily available. Since the total plutonium content exceeds the threshold for “other industrial”, WSRC declared a potential inadequacy in the safety analysis. The following compensatory measures have been undertaken:

- All operational work associated with the sources has been suspended,
- a radiological survey was conducted which identified no source leakage,
- activities initiated to obtain the source specific documentation,
- repack non-compliant sources in Type B shipping containers.

H-Canyon Waste Processing: This week, WSRC concluded a readiness assessment (RA) for transferring unirradiated Mk-22 waste to Saltstone. The RA covered waste transfers from H-Canyon to Tank 50. Approximately 20 findings and observations were reported. The RA was delayed several months, primarily due to problems with establishing adequate flow from H-Canyon to the tank farm (site rep. weekly 12/10/05). WSRC personnel believe the lack of flow was due to air pockets in the waste header from H-Canyon. They plan to take action to preclude future air pockets. The scope of the RA did not require an actual transfer with inhibited water. The lack of a signed Authorization Agreement prevented installation of jumpers to complete the transfer path.

Inadvertent Transfer: During a waste transfer within the 2H Evaporator system, approximately 2800 gallons of waste was inadvertently transferred to a pump tank. Upon termination of the transfer, the pump tank was within 350 gallons of overflowing. Operator error led to a misaligned transfer path and a required independent verification failed to identify the mistake. A procedure requiring a mass balance within 30 minutes of commencing waste transfers may not be adequate for preventing overfilling small tanks (i.e., pump tanks). During this event the mass balance was performed earlier than required. If the procedure had been strictly followed the pump tank would have overflowed.