DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 25, 2005

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: J. S. Contardi, SRS Site Representative
SUBJECT: SRS Report for Week Ending March 25, 2005

Transuranic Waste Processing: As previously reported (Site Rep weekly 12/10/04), transuranic (TRU) waste operations at the Solid Waste Management Facility (SWMF) were suspended in December 2004. Deliberate operations involving unvented drums resumed in February 2005. This week, the contractor reported two additional occurrences including a potential inadequacy in the safety analysis (PISA) involving TRU drum processing.

First, as a result of the SWMF stand down and subsequent investigations, contractor personnel reviewed past TRU drum data and found drums that were improperly labeled for curie content in 2003. Contractor personnel have corrected the discrepancy.

The second applies to a PI SA declared for operations at the F/H-Area Laboratory. Prior to the December 2004 stand down, WSRC personnel had been remediating TRU drums in the basement of the F/H-Area Laboratory. Here, operators were repackaging TRU waste drums within a plastic containment hut and removing prohibited items from the drums. The authorization basis for this operation allowed only vented TRU drums in order to preclude the potential for a drum deflagration. However, previous findings from SWMF indicated that drum vents may not be capable of preventing the accumulation of explosive vapors from volatile organic compounds (VOCs). Therefore, contractor analysts declared a PISA at the Laboratory to address this VOC issue.

Criticality Safety: In response to recent criticality related events, H-Canyon personnel have identified and implemented corrective actions. External reviews by the Site's Criticality Safety Committee (CSC) and the Facility Evaluation Board also identified similar weaknesses. Of particular interest were several events regarding implementation of the facility's sump flush program. Corrective actions for the sump flush program included procedural revisions and distributed control system improvements. To address processes changes, an improved configuration control process has been implemented to ensure adherence with criticality safety assumptions. The CSC also made six specific recommendations which primarily relate to clarification of requirements established within the Double Contingency Analysis.

In response to the recently discovered error in the KenoV.a criticality code, DOE-SR personnel have conducted a cursory review of fissile material processing. Thus far, no outstanding criticality issues have been identified which would affect site operations.

Depleted Uranium Oxide: Historic separations processing generated 36,000 drums containing depleted uranium oxide. Despite initial funding issues, approximately 2,300 drums were shipped in 2004. For 2005, $1 million has been committed and more than 3,000 drums are expected to be shipped to Envirocare.