

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 18, 2006

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: J. S. Contardi/M.T. Sautman, SRS Site Representatives
SUBJECT: SRS Report for Week Ending August 18, 2006

Transuranic (TRU) Waste Remediation: Recovery from the puncture wound is nearly complete (Site Rep weekly 8/11/06). With the exception of F/H Laboratory, all other remediation lines have resumed operations. The F-Canyon line will start up once all pre-start findings from the readiness assessment are complete including the incorporation of corrective actions from the puncture event. Based on the limited number of drums available, the design of the line, and the startup of F-Canyon remediation lines, the F/H Laboratory remediation line will not be restarted. The cause of recent continuous airborne monitor alarms in E Area has been traced to a batch of plastic sleeving that had prevalent fabrication defects.

Defense Waste Processing Facility: The contractor is recommending the following to address trapped hydrogen issues: 1) pipes that could fail without fragmenting would have their design credited; 2) seal pots that could fail with fragmenting would be reinforced with a carbon/epoxy composite wrap (approved for high pressure piping repairs); 3) components in personnel corridors would be upgraded, reinforced, contained, isolated or removed; and 4) a safety management program would be implemented to assure proper safeguards during maintenance.

H Tank Farms: Two workers handling waste samples inside a glovebag received extremity doses of ~ 9 and 13 rem although they fully complied with the prescribed controls. The Site Rep questioned whether it was appropriate to use a single job-specific radiation work permit (RWP) to cover tanks whose estimated dose rates varied by as much as 95 times. When a single suspension guide was applied to all seven tanks, the ratio between the suspension guide and the estimated dose rate was as high as 500 for skin and 67 for the whole body. Furthermore, there was not a suspension guide for extremity dose. Thus, when actual extremity dose rates were more than ten times the estimated dose rate, the RWP did not force the workers to pause and try to figure out what was wrong. In this case, it is believed that some thick sludge was on their glovebag gloves. After this was discussed with Radiation Control management, they initiated a site-wide review of RWP's to determine the extent of condition of these RWP issues.

A siphon was formed when a maintenance lock out placed a valve in an unanticipated position while a gravity drain line was being backflushed. This caused ~1360 gallons of flush water (but classified as waste) to be transferred from an evaporator pot to tank 38 while the tank farm was in a limiting condition of operation that prohibited waste transfers. The Site Rep discussed with operations managers the appropriate use of action steps and notes to preclude future siphons.

Four leaks have been identified in a high-level waste transfer line jacket near Tank 37. The contractor believes the leaks in the carbon steel jacket resulted from corrosion due to historic steam and process water failures. They are evaluating direct replacement and structural wraps.

Building 235-F Deinventory: 400+ drums of special nuclear material were transferred as part of the deinventory process. This completes the site-wide consolidation of nuclear materials in K-Area.