

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 14, 2000

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers / R. T. Davis
SUBJECT: SRS Report for Week Ending April 14, 2000

Workforce Restructuring: On Wednesday, WSRC announced a workforce restructuring program to meet their work scope, prepare for new missions, and increase critical skills, all within available resources. The program includes an early retirement incentive that could affect 300-400 employees.

Consolidated Incineration Facility: DOE-SR has begun to inform regulators that it intends to suspend Consolidated Incineration Facility (CIF) operations by the end of FY00. CIF has been used to treat PUREX canyon waste and will complete more than 20% of the FY09 Site Treatment Plan commitment by the end of FY00. DOE believes it can meet the commitment if CIF operations were resumed by FY05. In the interim, DOE will evaluate alternative disposition options. The site representatives believe it will be challenging to restart this facility after an extended outage. (3.a)

High Level Waste Evaporators: Last weekend, the feed pump for the 2F evaporator failed because of a motor short to ground. Since repair is difficult, WSRC plans to replace the pump early next week and hopes to resume evaporator operations late next week. The 2F evaporator has been the only operating HLW evaporator for awhile (site rep weekly 3/24/00). Backflush valve problems continue to prevent 3H evaporator startup. WSRC will test the valve actuator, verify installation, and compare it to an operating backflush valve on another tank to understand the failure mode. (3.a)

Canyon Operations: This week, H-Canyon reported that the quantity of enriched uranium held up in 1st Cycle during the past 8 months was greater than previously calculated. Specifically, it was assumed to be less than 50 grams but is now estimated to be greater than 1,500 grams. H-Canyon has not been processing since September 1999 due to limited available tank storage space and delays in starting up 2nd Uranium Cycle. At that time, H-Canyon flushed 1st Cycle and has since been conducting cold runs to maintain operator proficiency. The higher uranium inventory is still within the authorization basis, but it likely changes the disposition pathway for this solution.

DOE-SR has observed that this is the 3rd recent case of personnel executing approved procedures for prescribed canyon operations but achieving unintended results. The first was the addition of plutonium solution to an F-Canyon tank (13.7) with an alkaline heel (site rep weekly, 2/25/00). The second was an eruption of simulant solution in an H-Canyon tank (8.4) after a chemical addition in March (the addition was made to cold feed acid solution and would have been correct for an actual canyon solution). The site reps observe that similar events occurred last year when H-Canyon transferred enriched uranium solutions to an outside tank with inadequate acid heel (site rep weekly, 1/22/99) and when F-Canyon inadvertently transferred process water to a sump hold tank (site rep weekly, 7/23/99). DOE has requested WSRC to evaluate issues arising from the recent events, determine if a generic problem exists, and take action to prevent recurrence. (3.a)

Readiness Assessments (RAs): The following readiness assessments are scheduled during the next month (start dates listed): H-Canyon Phase-III / 2nd Uranium Cycle (DOE and WSRC, 4/24); F-Canyon 6.1D dissolver for Mk-42 (WSRC, 4/24; DOE 5/8); FB-Line Bagless Transfer System (tentative, WSRC 5/8; DOE 5/22); F-Canyon 6.4D dissolver for EBR-II (WSRC,5/24) . (3.a)