

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 20, 2009

TO: T. J. Dwyer, Technical Director
FROM: M. P. Duncan and M. T. Sautman, Site Representatives
SUBJECT: Savannah River Site Weekly Report for Week Ending March 20, 2009

Integrated Safety Management System: The Board's staff (R. Verhaagen and D. Burnfield) and Site Reps observed SRNS Phase II Verification Review activities, including field observations at the Savannah River National Laboratory, P Reactor, and K-Area. The staff questioned whether the lines of inquiry 1) included the review of site office action plans to improve work planning and work control and 2) incorporated *Assessment Criteria and Guidelines for Performing Assessments of the Effectiveness of Incorporation of Integrated Safety Management and Quality Assurance Principles Into Activity Level Work Planning and Control at NNSA Sites*. As part of commitment 23 of the Recommendation 2004-1 Implementation Plan, these were to be included in periodic ISMS reviews.

DOE Staffing: Considering that the current DOE-SR staff nearly meets the new, lower full-time-equivalent ceiling, DOE-SR may not be able to hire the remaining 26 critical hires that consisted of facility representatives, nuclear engineers, and safety system oversight engineers.

Radiological Protection: At several facilities, the posted anti-contamination clothing doffing instructions differ from that provided in site Radiological Worker II training. Furthermore, at P Reactor, the posted donning and doffing requirements are inconsistent.

Saltstone: Approximately 3 gallons of a radioactive waste and grout mixture sprayed throughout the Process Room when the rubber hose of the grout pump failed, spreading contamination up to several million dpm beta-gamma throughout the room. There was no release outside of the Process Room, which is normally controlled as a contamination area. After the room is decontaminated, the pump will have to be replaced, a non-trivial operation that was demonstrated years ago during the Readiness Assessment. An engineering evaluation to determine the cause of the failure is in progress. The contractor hopes to restart operations by 3/31/09.

Salt Waste Processing Facility: Further radiographic and ultrasonic testing confirmed that a significant fraction of the welds made by the person in question were defective (2/27/09 report). Also, a high failure rate during a 5% check of other people's welds led the contractor to require examination of all piping welds made by the subcontractor. To date, 159 of 351 welds have been examined; 52 have failed.

Defense Waste Processing Facility: In the process of removing a supposedly locked out component on the safety-class nitrogen purge system, maintenance personnel realized it was still pressurized. A three way valve had been used to lock out the system properly according to its operator aid, but the pictures on the operator aid were incorrect. Corrective actions resulting from some similar events last year have failed to fix the problem (2/15/08 report).

H-Tank Farms: 53 gallons of flush water overflowed into a pump tank sump when an erroneous specific gravity (SG) reading caused the tank level reading to be 8-9" lower than the actual height. Stratification resulted in flush water sitting on top of higher SG material.

L Basin: Fuel cropping was suspended and an independent team chartered after a third fuel assembly was damaged in 6 weeks.