

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 30, 2001

**TO:** K. Fortenberry, Technical Director

**FROM:** D. Grover and M. Sautman, Hanford Site Representatives

**SUBJ:** Activity Report for the Week Ending November 30, 2001

Plutonium Finishing Plant: Project W-460, Stabilization and Packaging Equipment, went hot this week although Department of Energy-Richland (DOE-RL) Manager expressed concern in his authorization letter that the DOE-RL team found a criticality safety non-conformance, criticality detector location issues, and unauthorized fire barrier penetrations after the contractor reviews. In a separate letter, he stated that Fluor Hanford declared readiness prematurely at both T Plant and PFP. DOE-RL has also identified negative performance trends in corrective action management, lessons learned, and contractor readiness verification. DOE-RL has requested that FH identify corrective actions, propose metrics for demonstrating the effectiveness of the corrective actions, and improve their lessons learned program. Mr. Sautman also met with PFP management to discuss staff concerns regarding the cause of last week's fire in the nitrogen supply system heater. They committed to determine why the heater started and did not shut off.

PFP hosted a workshop addressing outer can weld porosity. In the Site Rep's opinion, PFP and the Savannah River Technology Center have identified the likely cause of the pores and controls that should prevent the recurrence of unacceptable porosity. Finite element analysis and burst testing have shown that these pores do not affect the outer can burst pressure. Although, ASME code experts believe the cans are designed beyond code requirements, the pores exceed ASME criteria for allowable porosity in butt welds which the Savannah River Site (SRS) has imposed as part of their acceptance criteria. The SRS-imposed requirement to be "code compliant with two exceptions" appears to be driven by an authorization basis need to classify the cans as safety class and by commitments to stakeholders. Unless this impasse is resolved, PFP may need to radiograph several hundred cans (up to 17 shots per can) and then repackaging or justifying the acceptability of several dozen cans with welds likely exceeding the porosity criteria. (III-A, I-C)

Spent Nuclear Fuel Project (SNFP): The SNFP does not appear to be adequately implementing the requirements in the DOE directive for conduct of operations. The directive states that at a minimum, a matrix be prepared identifying whether the directive guidelines are applicable to a facility as well as where and how the guidelines are applied in the contractor's implementing procedures. The staff identified implementing procedures that are canceled or do not contain the guidelines they are supposed to. This included guidelines outlining responsibilities for operators controlling on-shift training. A further review of the impact of this omission identified that the training materials for on-the-job trainers also neglected these guidelines. It should be noted that two operational occurrences have resulted from improper control of trainees. (III-A)

Recommendation 2000-2: The Site Reps are skeptical of DOE-RL's proposal to reduce the number of Phase 2 assessments from 55 to 4. The Site Reps disagree with the FH Chief Engineer's position that FH's existing design authorities satisfy Board expectations for systems engineers. Mr. Sautman had a more positive discussion with the Project Operations Center Vice President about ways to improve the rigor of the program and shift some of the focus from reacting to daily issues to proactively assessing the overall condition of systems. (III-A)