

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 19, 1997

TO: G.W. Cunningham, Technical Director

FROM: P.F. Gubanc & D.G. Ogg, Hanford Site Representatives

SUBJ: Activity Report for Week Ending December 19, 1997

Mr. Ogg was on leave Friday.

A. Spent Nuclear Fuel Project (SNFP): In response to the Fluor Daniel Hanford (FDH) "cure notice" to Duke Engineering & Services Hanford (DESH), DESH is working on a response that is due to FDH on December 30. In the meantime, the whole project remains on a day-for-day slip while FDH and DOE-RL reconcile schedule and cost impacts of proceeding with the currently approved baseline, or moving forward with the new proposed technical strategy. This new strategy, which is viewed as technically feasible by most reviewers, would seal the Multi-canister Overpacks and eliminate inerting from Canister Storage Building systems. A decision is expected from DOE-RL by December 19.

B. Plutonium Finishing Plant (PFP): Jerry McKamy, EH-34, visited PFP this week to review criticality safety practices and support DOE-RL line management's determination of operational readiness. Mr. McKamy suggested five near-term and three long-term actions (details are provided in the attachment). Mr. McKamy's formal report is expected December 23. DOE-RL responded positively to these findings and expressed interest in having additional support from Mr. McKamy. FDH and B&W Hanford (BWHC) have not been as receptive. DOE-RL line management is withholding their agreement to resume the DOE-RL Readiness Assessment pending review of BWHC's response to Mr. McKamy's report.

C. Repackaging of Discrepant Cesium Capsules: As part of the Cs & Sr capsule recall program, 16 discrepant Cs capsules were collected in the 324 hot cells (about 50,000 Ci/capsule). To assure safe long-term storage, a project to overpack each of the capsules in a welded, stainless steel jacket has been underway for over a year. The project was assumed complete in late November with the shipment of the 16 overpacked capsules to WESF. Unfortunately, final inspection of the records and completed overpacks revealed that seven of the capsules had been overpacked in jackets which had failed pre-welding inspection but had been retained for in-process weld testing. BWHC (operator of 324 and WESF) is completing its review and a corrective action plan is due by mid-January 1998. Given the similarities between this event and the November 20th handling of mislabeled cans at PFP, we've suggested that DOE-RL consider a more comprehensive examination of the contractors' quality assurance program. Staff member Larry Zull has additional details, if desired.

cc: Board members

Highlights of EH-34 Review of Criticality Safety Practices at PFP

Mr. Jerry McKamy, EH-34, visited the Hanford Plutonium Finishing Plant (PFP) on December 16 and 17, 1997, to review criticality safety practices. On December 17, Mr. McKamy debriefed DOE-RL line management who subsequently met with senior contractor management. The following notes are distilled from discussions between Mr. Gubanc and Mr. McKamy, the DOE-RL Manager (Wagoner) and cognizant Assistant Manager (Knollmeyer), and the PFP Director (Crawford).

McKamy Observations: Mr. McKamy focused his review on PFP "Phase 1" at the working level.

General Comments:

1. DOE-RL Facility Reps. at PFP are good but need support with criticality expertise.
2. PFP operators are adequate but administrative systems "set them up for failure".
3. PFP Lab operations appear sound. Deserve recognition as "islands of excellence" at PFP.

Suggested Near-Term Actions: (pre-start, 4-8 weeks of dedicated effort to implement)

1. Use outside or PFP lab managers to improve pre-job brief process. Pre-evolution walkdown observed took over two hours and did not focus on the important work controls.
2. Implement a "graded" criticality infraction program similar to what is in use at Rocky Flats, Oak Ridge Y-12, and LANL. Current "one-size fits all" reporting diminishes significant issues and inflates trivial administrative problems.
3. Simplify the criticality limits. Specific areas singled out included:
 - a. Eliminate different spacing limits for material in storage and in transit.
 - b. Eliminate isolating vs. non-isolating wall control. This is used no where else in DOE.
 - c. Use material form directly for controls versus dubiously derived Hydrogen-Pu ratio.
4. Reconnect Criticality Safety Engineers (CSE) to PFP. Currently CSEs are contracted for on a case-basis only. Current PFP Criticality Safety Reps (CSR) are not capable as CSEs.
5. DOE-RL needs criticality safety expertise at PFP to supplement DOE-RL Facility Reps.

Suggested Long-Term Actions: (post-start)

1. PFP identify a dedicated function to assure the integration of process, criticality analysis, criticality specifications, criticality postings, procedures and training.
2. Establish reporting relationship between PFP Criticality Safety Reps and Plant Manager.
3. Update general criticality limits with bias towards eliminating administrative controls.

It is interesting to note that Mr. McKamy's review discovered an October 8, 1997, trip report from a B&W Naval Nuclear Fuels Division criticality expert to PFP management. The findings and recommendations in that report closely parallel those of Mr. McKamy.

Management Responses to McKamy Review:

1. Mr. Crawford (BWHC's PFP Director) is inclined to only correct those findings pre-start which are tied directly to a mandatory requirement.
2. Mr. Joe Stewart (sp?), CEO of BWX (BWHC's parent company), has committed to install six new permanent managers at PFP by the end of February 1998. He assures that they will be of demonstrated ability and drawn from outside the Hanford area.