DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 3, 1998

TO: G. W. Cunningham, Technical Director

FROM: M. T. Sautman

SUBJECT: RFETS Activity Report for Week Ending September 4, 1998

Recommendation 94-1/Readiness Reviews. As mentioned in last week's report, the findings of the B771 Tap and Drain Readiness Assessment (RA) highlight continuing problems with SSOC's ability to determine when they are ready to begin an activity. The Site Reps met with RFFO and K-H senior managers this week to discuss this issue, which has become a priority issue for top RFFO and contractor managers. K-H has directed SSOC to develop a comprehensive plan for addressing this issue by September 30. The Site Reps and RFFO are closely following SSOC's response to the findings, K-H's closure of the findings, and how K-H is ensuring that SSOC does not prematurely declare readiness for future systems.

SSOC was going to conduct a management review (MR) for removing the piping associated with drained solution systems in B771. The Site Reps and RFFO met with K-H nuclear operations and the SSOC MR team lead to discuss the scope of the MR, the adequacy of the work instructions, and other preparations. The piping removal work package has many of the same verification and validation problems as the draining ones. At this meeting, SSOC discovered that the planner had revised the final work package without their knowledge and without changing the revision number. Afterwards, the SSOC MR team lead delayed the start of the MR until the work package configuration control and content issues can be resolved. The Site Reps are still concerned about the scope of the MR. First, the operators will not perform an actual dry run of the work package. The MR will consist of just interviews, a walkdown, and an examination of the equipment. Second, although this review focuses on the oxalic acid system, it would authorize the removal of piping from high concentration solution lines. The residual solution in these actinide lines can have concentration levels more than a million times greater than that found in oxalic acid system (150 g/l vs. 1 to $4X10^{-5}$ g/l). However, none of the contamination control methods will be demonstrated although RFETS has experienced recent contamination control problems with similar work. The Site Reps will continue to pursue these issues with RFFO and the contractor.

The Site Reps met with RFFO to discuss the new proposed milestones for tap and drain in B771. The milestones are being extended to allow the piping to be removed after draining is complete. RFFO agreed to increase the number of systems to be drained in FY99 and 00 by 30% to avoid draining too many systems the last year. In addition, RFFO agreed to add a new milestone for completing the stabilization of all drained liquids and to strengthen other milestones. The Site Reps believe the revised milestones to be acceptable since they are complemented by a performance measure that requires an even more aggressive schedule that focuses on the higher risk systems.

However, if this performance measure is weakened during subsequent negotiations, the proposed milestone may need to be tightened up.

BNFL conducted a fourth demonstration of the plutonium packaging system to resolve test exceptions from previous demonstrations. The lid for one of the oxide convenience cans could not be remotely screwed on and had to be put on manually. Problems are still encountered with about a third of the runs. Of the last 44 cans, 14 experienced one or more test exceptions.

The dry residue repack lines began operations in B707 this week.

Seventeen scrub alloy items were brushed and brought into compliance with the site standard for potentially pyrophoric plutonium. (See May 22 report). Two of these items were found in direct contact with plastic and were repacked.

Contamination Events. In response to several recent contamination events in B779 and B776, the K-H COO appointed a senior technical team to review all high risk radiological work last week. The team identified several issues: insufficient level of instruction in work procedures, failure to perform design adequacy calculations for temporary engineered ventilation systems, inadequate implementation of ALARA work practices, insufficient in-process ALARA reviews, and poor contamination control practices. K-H intends to focus future efforts on B779 and B776 and to increase the use of engineered controls. A separate investigation team is reviewing these events to determine the causes, lessons learned, and corrective actions. RFFO is also concerned with the contractor's performance in identifying hazards.

Holes continue to be found in glovebox gloves, some in gloves that were replaced earlier the same day. Nearly all of the problems have involved salt processing gloveboxes. The SSOC VP-Operations is leading a team that is investigating this issue. Leather gloves will be used until Kevlar gloves arrive.

For the second time in a month, a worker in B779 inadvertently disconnected his breathing air hose while performing size reduction work. The worker used his emergency bottle to egress the area and was not contaminated. In both cases, the quick disconnect caught on something and became disconnected. SSOC is examining a design change to reduce the possibility of this recurring.

Oral Board. The Site Reps attended the second oral board of a configuration control authority (i.e., shift manager) in B771. Although the candidate exhibited an unsatisfactory incident command performance again, he passed. There were several issues with the board's conduct also. The Site Reps and RFFO training personnel discussed these concerns with the SSOC VP-Operations. The VP agreed with our position and is taking corrective actions.

cc: Board members