

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 8, 1998

TO: G. W. Cunningham, Technical Director

FROM: R. F. Warther, M.T. Sautman

SUBJ: RFETS Activity Report for Week Ending May 8, 1998

Recommendation 94-3. SSOC started their Phase III Management Review (MR) of the B371 BIO implementation this week. This MR addressed implementation of two limiting conditions for operation, seven administrative controls, and ten system evaluation reports (SER). The MR was evaluated as only partially satisfactory for four main reasons. First, the level of knowledge of the Shift Managers was considered inadequate. Both positions received only general BIO training, not the detailed training their positions require. Additionally, it appears that training deficiencies from months and years previous may be catching up with the facility. Second, the SSOC assessment of criticality safety was unsatisfactory because the responsible person did not participate for most of the review. Third, discrepancies were found between the requirements in the SERs and the surveillance procedures. Some of the previously known discrepancies had not been resolved before the start of the MA. This is disappointing since B771 was shut down for this issue. Fourth, the criteria for evaluating some of the administrative programs do not appear to be sufficient to show the program is fully adequate. Weaknesses noted in this MR are exacerbated by the fact that a significant amount of work is taking place in this facility. The following activities are occurring in B371:

- Room draining and CWTS
- SS&C repack
- Room decontamination and preparations for fogging
- Preparations for PuSPS installation
- Combustibles construction
- B371 upgrades and BIO implementation

Previous Uptake in B371. The site reps reported an occurrence where a worker received an uptake of Pu during the summer of 1996 (see weekly report dated 12/5/97). The final dose assignment has been determined. Based on the uptake, Health Physics calculated that the worker will receive 4.45 rem CEDE to the whole body (50 years), and 80 rem CEDE to the bone (50 years). These doses will be assigned this year. The legal limits are 5 rem to the whole body and 50 rem to the bone. K-H has asked DOE-EH to conduct a review of the dose calculation methodology to ensure it is correct.

Free Release Assessment at RFETS. RFFO hire two outside experts to assist its staff in evaluating the program for free release of material from RFETS. The scope of the review included compliance with orders and standards, evaluating the technical basis of RFETS' programs and comparing practices at RFETS with those of industry. The team noted that B123 release criteria were stringently applied and that it was highly unlikely there were any violations of release criteria associated with this facility. However, based on the number and complexity of equipment and materials at the site, the team was less certain that general equipment and materials were undergoing the same rigorous assays as B123 materials. However, it is important to note that they did not find any evidence that materials had been prematurely or inadvertently released.

Strengths noted by the team include historical knowledge of the site by the RCTs, the technical basis for instrument performance, and successes associated with Building 123. The team also has several

findings, including performing surveys at a rate exceeding instrument design (i.e., “turbo-frisking”), use of non-approved operator aids, and inconsistencies among implementation of procedures and RCTs performing release surveys. The final report will be issued on May 26.

Residues. Salt pyro-oxidation was shut down Tuesday for a criticality infraction. It was discovered that the average difference for the plutonium measured by the segmented gamma scanner and the calorimeter/gamma spectroscopy was much higher than the assumed 10%. The average was 40 to 60%, with some cans exceeding 100%. Some containers must be repacked to meet the 200 g fissile-gram-equivalent limit for WIPP. On Thursday, the SSOC President suspended the movement of approximately 100 residue categories.

Interaction with the Public. The Site Reps gave their quarterly brief to the RFETS Citizens Advisory Board (CAB). The CAB also requested a copy of the transcript for this week’s Recommendation 94-1 Public Meeting, which will be provided when it becomes available.

cc: Board Members