

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 2, 1997

TO: G. W. Cunningham, Technical Director
FROM: R.F. Warther, M.T. Sautman
SUBJECT: RFETS Activity Report for Week Ending May 2, 1997

Recommendation 94-3. RFFO and K-H top management (Card and Roberson) continue to meet on implementation of Recommendation 94-3. RFFO and K-H remain committed to the June 10th delivery date for the BIO. However, this delivery date is threatened by two factors. First, RFFO has asked that K-H consider the effects of losing an engineered barrier during an accident. The BIO contains 38 accident scenarios. K-H must review the effects of losing an engineered control or barrier during each of these accident scenarios. For example, what additional consequences are associated with loss of the fire suppression system coincident with a large fire. This approach is consistent with DOE-STD-3009 and commercial standards.

The second threat to the June 10th schedule is a DOE-HQ request to ensure that worker safety issues are addressed in the BIO. Two requests were made. First, DOE desires some assurance that the BIO addresses essentially all worker safety for essentially all activities. Second, DOE has indicated that some form of quantitative analysis should be conducted. In response to the first issue, the Board and Staff have accepted RFETS' concept of Activity Control Envelopes (ACEs) and Process Hazard Analyses (PHAs) to address worker risk from specific processing activities. With respect to quantifying worker risk, K-H likely will have a difficult time with that task. RFFO has indicated that they will discuss this issue with DOE-HQ in more detail early next week and resolve the issue. The Board Staff will also track this issue closely.

Recommendation 95-2. RFFO and K-H reviewed several activities recently completed at the site and evaluated how well they meet the tenets of Recommendation 95-2. Emphasis was placed on identifying the hazards and establishing appropriate controls to ensure safe completion of the activities. Individuals involved in the discussions reached several conclusions. First, work planning and implementation of a control set does not meet the guidance contained in the site's Integrated Safety Management Process Description and Implementation Plan dated March 10, 1997. It should be noted that many of the tasks reviewed were planned and completed before this document was issued. Second, many tasks were accomplished using the concepts of Enhanced Work Planning. Management's involvement in this process was minimal in some cases, and there is a general belief by some that this is consistent with Enhanced Work Planning principles. Third, some jobs were considered "routine" and were therefore completed under the Enhanced Work Planning, Integrated Work Control Planning or similar program as opposed to completing an ACE. Upon further investigation, it was apparent that some of these jobs may not have been routine because of relatively high uncertainty or because controls had not been validated. The job to decontaminate room 3559 in B371 is an example. Fourth, lessons learned are still not implemented in all cases. Fifth, operators and workers are sensitive to Recommendation 95-2 issues, but specific implementation protocols and procedures at the site remain variable. Sixth, readiness to conduct the activity is variable. A graded approach ranging from ORRs for major activity startups to dry-runs for small-scope activities to supervisors assessing worker readiness to work on routine tasks is not codified at RFETS. Finally, RFFO's involvement in the review remains variable. These points were discussed with RFFO management, and will be discussed in more detail with K-H managers next week.

Infrastructure Programs at RFETS. K-H is in the process of completing a full review of the 17 infrastructure programs at RFETS. These programs include functional areas such as conduct of operations, radiological protection, conduct of engineering and configuration management, etc. The review was very similar to the order compliance reviews conducted by the Board's Staff several years ago with some differences. First, the 17

program managers for K-H were asked to review the effectiveness of their programs. They were asked to review adequacy of the level one procedures, implementation at the K-H level, adequacy of the subcontractor's level one procedure, implementation at the subcontractor level, and implementation at the 3rd tier contractor level. Green, yellow and red color codes were used to indicate satisfactory, marginal or unsatisfactory performance. Following a self-assessment by the program managers, K-H independently reviewed the same factors in the programs. Finally, K-H asked building managers to review implementation of the infrastructure programs in their buildings. The results substantiate the view that level one program procedures exist, and are adequate. However, implementation is highly variable within the facilities, and implementation at the 3rd tier contractor level is problematic. When the report is completed, a copy will be provided to the Staff.

Building 886. Nuclear Fuel Services completed the conversion of 2663 liters of highly enriched uranyl nitrate solutions into oxide. Most of this solution was drained from tanks last Fall; some was removed as holdup earlier this year. In addition, all of the raschig rings in the pit surrounding the tanks have been removed. Preparations are being made to remove the raschig rings from the tanks.

Infinity Room Decontamination. Hydrolaser decontamination of Room 3559 in B371 commenced this week. After two entries this week in supplied air, the ceiling and about three-quarters of the equipment and walls have been sprayed. Another two entries will be required to finish the floor and remaining equipment and walls. The work so far has reportedly gone smooth. Approximately 600 liters of solution have gone down the criticality drain system and into the Caustic Waste Treatment System (CWTS) receiving tanks. The solution has contained a fair amount of particulates, plugging up a filter nine times. Air samples will be taken after the spraying is completed to find out how successful the decontamination was.

Recommendation 94-1. Transfer of Tank 452 solution bottles from B771 to B371 started last week and continued this week. This solution will be processed through CWTS. K-H has developed a technical plan for processing the B771 high level solutions through CWTS. The plan includes the process hazards and controls. They have also developed a recovery plan for tap and drain work in B771. This plan was developed partly in response to concerns expressed by the Site Reps about their ability to meet their Implementation Plan milestones. Both documents have been provided to the technical staff and are under review.

c: Board Members