DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 14, 1999

TO: G. W. Cunningham, Technical Director
K. Fortenberry, Deputy Technical Director

FROM: M. T. Sautman

SUBJECT: RFETS Activity Report for Week Ending July 14, 1999

The Site Rep will be out of the office July 15 and 16.

Recommendation 94-1. On Monday, a drum containing seven bottles of actinide solution was discovered in an infrequently visited room in B371. The solutions contained between 0.0018 and 0.018 g/l plutonium. This drum apparently had not been opened since 1994. RFETS had a milestone to stabilize all actinide solutions in B371 by the end of June. Although the drum was reportedly labeled as containing solutions, it appears that no one bothered to check the drum database to see if there were any solutions in B371 besides those drained from tanks and piping. RFFO has agreed to do a database search so that any additional solutions can be located and processed. (III-A.1.a)

B771 Deactivation. The management review for size reducing gloveboxes in the "birdcage" began this week. Preliminary issues are noted below.

- Although the workers responded well to a drill involving a torn Premaire suit, knowledge of emergency response was weak during some interviews.
- The B771 engineering manager and a birdcage engineer exhibited no familiarity with systems engineering in response to Site Rep questions. This raises questions whether past problems with systems engineering will be addressed in upcoming size reduction facility designs.
- Discussions with the radiological engineer about the process to be used for downgrading personnel protective equipment in the future revealed the same lack of rigor that has been previously described about birdcage testing. The technical staff believes that a formal plan needs to be developed describing the various types of data, performance tests, and criteria that will be used for this evaluation.
- Evaluation of the core team's readiness is difficult since the supervisor is leaving shortly and no replacement has been identified.

During the management review, a hot size reduction demonstration with a relatively clean glovebox is being conducted. Initial results during the removal of an airlock from a glovebox were encouraging. All of the air head measurement were below the minimum detectable limit of 61 DAC and the highest contamination found was 8000 dpm on a worker's glove. (III-B.1.a)

B779 Deactivation. The Site Rep's February 5 report discussed a B779 worker who cut himself while performing size reduction with a port-a-band saw within a glovebox. Preliminary dose estimates released this week are 3.1 rem CEDE whole body and 57 rem to the bone. This bone dose would exceed the 50 rem federal limit if it is confirmed. (III-B.1.a)

cc: Board members