

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 10, 1999

TO: G. W. Cunningham, Technical Director
K. Fortenberry, Deputy Technical Director
FROM: D. F. Owen, D. J. Grover, RFETS Site Representatives
SUBJECT: RFETS Activity Report for the Week Ending December 10, 1999

Building 707 Ventilation System Alarms. The DNFSB staff had recently noted the large numbers of ventilation system alarms triggered during operations and the lack of clear discrimination of alarms related to authorization basis requirements (see site rep. report of October 15, 1999). In response to the DNFSB staff observations, RFETS is upgrading the alarm system monitoring software to minimize the number of nuisance alarms due to software problems. RFETS is also evaluating options to better discriminate the remaining alarms to clearly identify those related to Building 707 authorization basis requirements. This effort is expected to be completed by January 2000. (3.A)

Building 771 Criticality Detection System. RFETS issued an occurrence report this week on the discovery of inadequate criticality detector coverage in an area of Building 771 (only two detectors versus the three required by the authorization basis). The report and an internal "fact finding" summary indicated that one of the detectors had been relocated without proper analysis implying an unauthorized change to a safety system. Upon site rep. inquiry, RFETS personnel stated the detector movement was authorized per work control/safety screen procedures but was based on faulty detector coverage analysis. The report and fact finding summary are being revised. The site reps. will review the revised detector analysis and corrective actions. (3.B)

Inner Tent Chamber Operations. The site reps. and DNFSB staff members held discussions with RFETS personnel on size reduction operations of gloveboxes and related equipment in the Inner Tent Chamber (ITC Phase 1) in Building 771 and progress on development of the next generation system (ITC Phase 2) to be used in Building 771 and Building 776/777.

Size reduction of five contaminated gloveboxes has occurred in the ITC Phase 1 since July 1999. Temporary spikes of airborne levels outside the inner chamber to several thousand DAC continue to be observed during transfer of size-reduced glovebox pieces from within the inner chamber to the waste box located outside the inner chamber. RFETS personnel indicated that this experience will not permit downgrading personal protective equipment (PPE) from the current PPE that includes a Level B Garment ("bubble suit").

ITC Phase 2, having a waste box integral with the inner chamber and hand ports for access in lieu of sliding doors, is to be installed in Building 771 by March 2000 and in Building 776/777 by April 2000. Authorization Basis changes and fire hazard analysis to permit the plasma-arc thermal cutting operations planned for ITC Phase 2 are in progress. ITC Phase 2 will be required to have an internal fire sprinkler system (in addition to the building fire sprinkler system) and a dedicated fire watch during thermal cutting operations. (3.B)

cc: Board Members