

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 11, 2000

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

FROM: D. F. Owen, D. J. Grover, RFETS Site Representatives

SUBJECT: RFETS Activity Report for the Week Ending February 11, 2000

Plutonium Stabilization and Packaging System. Regarding recent inner container welding problems, RFETS determined that the differential pressure between the inner can loading glovebox and welding fumehood plays a major role in weld quality. Testing to identify the range of acceptable pressures for the two boxes has been completed. Work is currently underway to retest the entire packaging system. At that point, testing will be performed to establish that the welds will still meet the acceptance criteria. Additionally, 20 inner containers will be welded to determine if the process repeatedly produces a quality weld, using the British containers known to work well in the system (see site rep. report of November 19, 1999). (3-A)

Criticality Safety. A criticality safety requirement was violated in Building 371 when workers assigned to package pipe-overpack containers (POC) improperly moved drums violating the 24 inch spacing requirement for a certain drum array. This violation was based on the following major deficiencies: 1) a POC was moved within 24 inches of the array; 2) a cart with 10-gallon drums was moved within 24 inches of the array; and 3) two additional 10-gallon drums were placed on the floor within 24 inches of the array. This occurrence also raised concerns with work control and conduct of operations because the movements were not authorized or performed in compliance with existing work procedures. As a result of these deficiencies, nuclear material moves have been suspended unless supervised by a criticality safety engineer, criticality safety officer, or a qualified shift manager. (3-A)

Building 371 Ventilation Upset. A radiological air monitor alarmed in the room housing the salt residue repackaging line; personnel promptly left the room. The alarm is believed to be due in part from a ventilation upset that occurred as the ventilation load was being transferred from one exhaust fan to another. As the new fan was being brought on line, abnormalities in ventilation pressure were noted. The shift operating engineers attempted to correct the abnormality before terminating the activity and notifying the shift manager. It was later determined that the problem resulted from the motor controller being switched off during a recent maintenance evolution and not being switched back on. This event raises concern with work control and conduct of operations as operation of the switch was not called for in the procedure and notification of the shift manager occurred only when the abnormal condition could not be fixed rather than when it was identified. (3-A)

cc: Board Members