

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 26, 1999

**TO:** G. W. Cunningham, Technical Director

**FROM:** M. T. Sautman

**SUBJECT:** RFETS Activity Report for Week Ending March 26, 1999

**Waste Storage and Disposal.** On Wednesday, EPA approved RFETS's quality assurance program and applicable waste characterization activities. The approval is limited to the systems and processes for characterizing debris waste that EPA has inspected. This allows RFETS to ship debris TRU waste once direction from DOE is received.

The technical staff conducted a videoconference with RFETS to discuss their waste storage plans and the hazards of storing a significant amount of plutonium in non-hardened facilities that do not have a filtered ventilation system (i.e., tents and Butler buildings). Although RFETS had examined the impact of a tornado-generated missile striking a container, they had not examined whether the containers themselves could become missiles. Based on RFETS wind speed/frequency and Fujita tornado scale data, it appears credible that containers could become airborne. RFETS agreed to analyze the frequencies and consequences of very high winds (either from a tornado or sustained winds) on both a regular 55-gallon drum and a pipe overpack container.

**High Efficiency Particulate Air (HEPA) Filters.** The Board has been concerned about whether past deluge system testing potentially degraded existing HEPA filters in plutonium facilities. In response to this concern, RFETS has installed new HEPA filters in the first credited filter stage in B371. The B707 filters are to be replaced later this year. In addition, funding was approved for the test program to determine the effectiveness of plenum demisters in preventing degradation of first stage HEPA filters due to automatic deluge system operation.

**Lock Out/Tag Out.** RFETS continues to have problems with performing required lock outs/tag outs (LO/TO). In the last 8 days, there have been three LO/TO incidents:

- In B771, a tap and drain supervisor signed off that he had verified the LO/TO of a valve without walking the system down. The LO/TO had been previously installed, but had been removed as part of another work package. This is the third LO/TO incident for this project.
- In B779, workers mistakenly tried to sample the wrong line. The pressurized line they were actually sampling required a LO/TO.
- In B371, the facility representative identified another occasion where employees worked on the SS&C hammer mill without LO/TO'ing the equipment beforehand.

**Criticality Program Improvements.** In response to a series of criticality infractions last Fall, K-H formed a team consisting of salaried and hourly workers to review the criticality safety program. The

team conducted interviews and tours of the plutonium facilities as well as reviewing the criticality programs at LANL, SRS, and B&W's Lynchburg plant. The team identified problems with the implementation of nuclear criticality safety limits, the training and qualification of criticality safety engineers, and criticality infractions. Observations by the technical staff are consistent with the team's findings. Many of the team's recommendations focus on reducing the complexity of criticality limits at RFETS that often set the workers up for failure. Other recommendations try to improve the performance of criticality engineers, revise the criticality infraction process, and improve the quality of criticality evaluations. The Site Rep plans to review how some of the recommendations are being implemented to make sure there is no impact on safety.

cc: Board members