

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 9, 1999

TO: G. W. Cunningham, Technical Director

FROM: M. T. Sautman

SUBJECT: RFETS Activity Report for Week Ending April 9, 1999

Waste Storage Facilities. As committed 2 weeks ago, RFETS performed an analysis of the velocities that 55-gallon drums and pipe overpack containers (POC) could attain in a high wind event or tornado and assessed the damage a POC could sustain upon impact. In addition, an analysis of the frequencies and intensities of high winds and tornados at RFETS was reviewed. The technical staff performed additional calculations to examine other scenarios as well as using Sandia drum impact experimental data to assess the damage that 55-gallon drums could sustain upon impact. The staff has completed their review and has prepared a presentation of their conclusions.

Year 2000 Emergency Drill/Contingency Planning. RFETS conducted a table top emergency drill to train Emergency Operations Center and Functional Work Center personnel on Y2K strategies and contingency plans. The scenario involved a complete loss of power to the site concurrent with a blizzard and an injured worker. The only power was that supplied by batteries and emergency generators. A major concern was B371/374 because their emergency generator is currently inoperable. The drill went well and identified several issues that contingency plans need to address.

RFETS is examining Y2K scenarios to identify what could lead to a site emergency. The two critical site systems are the site electrical distribution and fire protection water system. For an emergency to occur, a total loss of electrical power or loss of fire protection water is required to occur concurrent with a spill or fire. It is not believed that Y2K problems will initiate an accident, but just complicate the response. The RFETS utilities are manually controlled and it is not believed that losing the nitrogen system (for inerting) will trigger a fire. The major action to reduce the probability of an accident will be curtailing nearly all operations. Other actions like fuel procurement, staffing, and fire watches are being pursued.

Glovebox Glove Holes. As mentioned in previous weekly reports, there has been an increase in the number of glovebox glove failures. There have been two punctures since November 1998, 17 confirmed uptakes since the beginning of 1997, and several incidents of contamination spread due to failures. K-H and SSOC investigations did not identify any evidence that the increase has been due to procurement specifications, storage conditions, shelf life, or simply increased use. The majority of the failures have associated with B707 salt stabilization and B776 glovebox cleanout activities. It is believed that stronger gloves may be required for these operations since operator use does not seem to be the problem. The use of thicker gloves or additional outer gloves (e.g., leather or kevlar) is being investigated.

cc: Board members