DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 5, 1998

TO: G. W. Cunningham, Technical Director
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FROM: M. T. Sautman, R. F. Warther

SUBJ: RFETS Activity Report for Week Ending June 5, 1998

Emergency Preparedness. DOE-EH completed their draft report evaluating RFETS' Emergency Management. EH noted that RFETS has established a strong relationship with CDPHE, including agreement on the Emergency Planning Zone. They also noted that RFETS personnel have developed comprehensive Emergency Preparedness hazard assessments, taken steps to reduce chemical vulnerabilities, improved their emergency management program, and implemented a good incident command system. Weaknesses include : (1) emergency management at the facility level is weak, (2) emergency preparedness planning procedures have some holes, (3) a weak level of knowledge was observed in some key areas, (4) RFETS' personnel have not ensured the Joint Public Information Center can function during an emergency, (5) the alternate EOC may not be adequate to support a crisis, and (6) emergency response plans may not be adequate for initial responses to injured personnel.

Peña Visit. Secretary of Energy Frederico Peña visited RFETS to celebrate the deconstruction of B123 and announce that he is providing a Management Plan to the President, Congress and stakeholders to institutionalize a management team to ensure RFETS is closed down by 2006. This management team has already obtained increased funding to obtain additional security clearances, a long standing problem at the site because of the resource drain to provide escorts. He also announced that he is developing a Transition Plan for the workers at RFETS. He remained very firm in his commitment to 2006 closure.

Recommendation 94-3. The B371 deluge system was returned to service and this project is now complete. The supply ventilation HEPA filter installation project remains on schedule for completion in late July. Of the 30 upgrade projects needed to implement the new BIO, nine have been completed or canceled, twelve are scheduled for completion by July 31, and nine will be part of the Justification for Continued Operation (JCO) that will be submitted to DOE for approval.

3013 Plutonium Can. DOE contracted MPR Associates to review the structural design of the 3013 outer storage can to the requirements of the ASME Code, Section VIII, Division 1 as well as the adequacy of the laser weld. The Site Reps have reviewed a DRAFT report of their findings. MPR calculated a 472 psig maximum allowable working pressure (MAWP) for the outer can. MPR disagreed with BNFL's determination of a 700 psig MAWP based on burst testing. Per the Code, burst testing was acceptable for qualifying the can lid undercut, but MPR stated that the MAWP should be determined using Code formulas since they applied to the can's geometry. This may cause problems since DOE is considering raising the maximum credible pressure in 3013 above the current 466 psig. MPR concluded that the marginal laser power being used is causing problems with weld penetration and porosity. To meet the Code, MPR believes that full penetration must be consistently achieved in the outer can weld. However, recent weld

penetrations are sometimes as low as 90% of the wall thickness. MPR also determined that the current weld porosities being achieved are unacceptable per the code. Other porosity limits could be justified based on outer can burst tests, but this would require an exception to the Code.

The Site Reps point out there is no question whether the cans satisfy the 3013 standard. Burst tests found the cans did not fail until 4050 psig. The ASME Code is only an issue for RFETS because it is included in the PuSPS technical specifications and is required for storing RFETS plutonium at the Actinide Processing and Storage Facility.

B371 Tap and Drain. The Site Reps and RFFO met with K-H and SSOC to discuss the technical approach for removing liquids in B371. The configuration of many systems does not allow them to be purged before the taps are installed. For some piping segments, SSOC planned to install taps, beyond those at drain points, to allow the system to be purged. However, the main reason for purging is to remove any explosive gases *before* installing taps. The Site Reps questioned the wisdom of installing these additional taps on pipes to allow the pipes to be purged *after* the taps were already installed. SSOC is looking at an alternative to purge pipes from one opening by repeatedly drawing a vacuum and letting the pipe refill with air.

cc: Board members