

**DEFENSE NUCLEAR FACILITIES SAFETY BOARD**

September 25, 1998

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

**FROM:** M. T. Sautman

**SUBJECT:** RFETS Activity Report for Week Ending September 25, 1998

**Recommendation 95-2.** There are some very high estimated dose consequences in the draft B707 Basis for Interim Operations. Some of the major scenarios are summarized below:

<u>Scenario</u>	<u>Mitigated Frequency</u>	<u>Public (MOI) Dose</u>	<u>Collocated Worker Dose</u>
Earthquake with Fire	Unlikely	120 rem	13,000 rem
Earthquake	Unlikely	67	7,500
Drum H <sub>2</sub> Deflagration Dock	Extremely Unlikely	56	6,200
Residue Drum Fire on Dock	Extremely Unlikely	7.5	830

Please note that these are unmitigated doses for the scenarios. For an earthquake, the only mitigative controls are sheltering or evacuation due to emergency response. The effect of this control on the doses was not quantified, but the mitigated dose would still be very high. There are no mitigative controls for the dock scenarios. These dose consequences are much higher than those from similar scenarios in B371, B771, or B776/777.

In the new BIOs and BFOs, K-H has drastically reduced the number of engineered controls addressed by limiting conditions for operations (LCO). As a result, there was an increased emphasis on preventive administrative controls (AC). At the time, the contractors resisted making the requirements of the programmatic ACs too specific. Now K-H believes that: 1) too many resources are being spent trying to determine when these sometimes vague programmatic ACs are violated and 2) that the programmatic ACs duplicate safety functions already addressed by the safety management programs. K-H has proposed eliminating all programmatic ACs except for a few core requirements. RFFO developed the following counterproposal that K-H accepted. All the programmatic ACs would be replaced with one that says 8 specific safety management programs shall be developed, implemented, and maintained to preserve the required safety functions credited in the hazards and accident analysis. In addition, key program elements of the criticality safety, radiological protection, fire protection and emergency preparedness will be added as discrete ACs.

RFFO is also planning to revise their evaluation guidelines. LCOs would be required if the risk fell into the following ranges:

<u>Dose Receptor</u>	<u>Anticipated Events</u>	<u>Unlikely Events</u>	<u>Extremely Unlikely Events</u>
Public (MOI)	0.1 - 0.5 rem	0.5 - 5 rem	5 - 25 rem
Collocated Worker	2.5 - 5	5 - 25	25 - 100

If the risk was below these guidelines, administrative controls would be sufficient.

**Criticality Infractions.** In response to 2 recent criticality infractions and a contamination incident (see 8/21/98 report), the B776/777 facility manager ordered a one day facility stand down. In B771, a criticality infraction has stopped work in many gloveboxes. It was discovered that the height of some criticality drains exceeded that allowed for in the criticality evaluation. This affects most of the Recommendation 94-1 solution work in B771. There have been 20 criticality infractions in September with others pending. K-H and SSOC are investigating the cause(s) of this.

**B779 Deactivation.** During glovebox size reduction, a worker experienced a loss of supplied breathing air. It has not been determined whether this was due to a kink in the hose or a failure of the Premaire suit. In addition, the worker's emergency bottle only lasted a fraction of the time it should have and a connection to the cooling unit had become disconnected. Other recent problems with supplied air work have included 2 accidental disconnections of breathing air and 4 instances of tearing or ripping a hole in the suit.

**Residues.** A second meeting was held to discuss how combustible residues will comply with the Interim Safe Storage Criteria (ISSC). (See 8/21/98 report). All combustible residues will be packaged into ISSC compliant packages except for 3 categories. First, some HEPA filters are too large to fit in a slip lid can so they will be bagged out in plastic bags and placed in convenience cans and drums. Second, the 59 drums of filter media already repacked do not comply with ISSC since they are packaged in plastic bottles and clamshells rather than a metal can. Third, 317 combustible drums were not going to be repacked, but just be analyzed with nonintrusive methods: real time radiography, headspace gas sampling, and gas generation testing. K-H proposed that if WIPP does not open by March 2000, they would start repacking/overpacking the containers to make them ISSC compliant. The Site Rep believes that two conditions need to be added to the proposal. First, when WIPP opens, the non-ISSC compliant containers would have a higher priority for shipment. Second, all combustible residue containers remaining at RFETS in May 2002 (or whatever milestone for completing combustible repacking is agreed upon) would be ISSC compliant.

**Memorandum of Understanding (MOU).** The Site Rep met with representatives of CDPHE and EPA to discuss implementation of the Rocky Flats Cleanup Agreement (RFCA) MOU. Overall, communication and integration of activities have improved over the last year. This has ensured that there is a high degree of consistency between Recommendation 94-1 and Consent Order commitments, and RFCA targets. The oversight of deactivation and decommissioning activities in B779 and B771 was also discussed. Rather than trying to decide which activities fell into which category, it was recognized that the CDPHE and Board staffs focus on different aspects of the work. Unless there is an overlap, each organization would pursue their issues as they have been doing. For example, the Board's staff will continue to focus on hazards analyses, work instructions, radiological controls, and conduct of operations issues. On the other hand, the Site Rep and CDPHE agreed to coordinate resolution of waste management and tank closure issues better.

cc: Board members