

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 9, 2003

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
J. J. McConnell, Deputy Technical Director
FROM: R. T. Davis/ T. D. Burns
SUBJECT: SRS Report for Week Ending May 9, 2003

This week, staff members Ajit Gwal, Brett Broderick and Chuck March were on-site reviewing electrical and fire protection issues associated with K-Area Material Storage, Building 235-F and the FB-Line facility.

HLW Activities: Recently, DOE-SR approved a WSRC Authorization Basis change request for the High-Level Waste Concentration, Storage, and Transfer facilities' Documented Safety Analysis that establishes a new Removed-from-Service tank mode. The intent of this new mode is to allow relaxation of most safety basis controls for tanks that meet stringent waste inventory and isolation criteria that ensure evaluation guidelines will not be challenged under bounding accident conditions (i.e. complete collapse of a tank).

The Removed-from-Service mode entry criteria include: dose potential of tank contents well below thresholds for safety-related functional classification, infinite time to LFL under all conditions assuming a 100,000 gallon decrease in existing vapor space, isolation of transfer lines in to and out of tank and annulus, isolation of bearing and cooling water supply, isolation of air and steam supplies to transfer jets, isolation of power to transfer and slurry pumps, prohibition on waste transfers to and from the tank, and prior DOE-SR approval. Although the mode entry criteria are rigorous, the relaxations allowed under this mode are extreme and include: cessation of Technical Safety Requirement administrative programs for corrosion control, structural integrity, and flammable vapor monitoring; as well as elimination of safety related ventilation and liquid level monitoring equipment. Only site-wide safety programs, such as radiological protection, emergency response, quality assurance, and industrial hygiene would remain applicable.

Once a tank has been placed in the Removed-from-Service mode, reestablishment of a technical safety basis for future waste transfer operations (e.g. additional heel removal), should they become necessary, appears to be highly impractical from a cost perspective. Therefore, the implicit assumption is that no further waste transfer activities will be necessary prior to grout addition for final closure. Given the current legal uncertainty regarding regulatory authority and mechanisms for determining acceptable levels of residual tank waste, this may not be a prudent assumption.

A request to place Tank 19 into the Removed-from-Service mode has been tendered to DOE-SR and is currently pending. DOE-SR expects to issue a Safety Evaluation Report approving the mode change within the next week.