

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 16, 1997

TO: G. W. Cunningham, Technical Director
FROM: R.F. Warther, M.T. Sautman
SUBJECT: RFETS Activity Report for Week Ending May 16, 1997

Hydroxylamine Nitrate: Building 771 has 105 gallons of HAN which were originally bought for the oxalate precipitation process and are no longer needed. Arrangements have been made to have it removed within the next month.

Flame Retardant Anti-C's. K-H has procured flame resistant anti-C clothing for hot work in contaminated areas. These anti-C's are orange rather than yellow to differentiate between flame resistant and regular anti-C's. They are designed to allow "...a few seconds to react to an accidental exposure to a thermal source to allow escape." The procedure requiring use of flame retardant anti- C's for hot work is in effect. K-H and its subcontractors currently perform less than five jobs per week requiring hot work in contaminated areas. However, they expect the rate of hot work in contaminated areas to increase with increasing D&D activities.

Decon Activities. The raschig rings from the pit in B886 room 103 have been packaged in 31 55- gallon drums. These rings will be shipped to Erwin, TN. B886 personnel plan on removing raschig rings from the processing tanks beginning Monday.

DAC readings in Room 3559 of B371 continue to be very high. After two cleanings that covered the top 2/3 of the room using about 1000 liters of water, DAC readings range from 20,000 to 200,000 DAC. At least two more cleanings are planned. On the positive side, these DAC readings are an order of magnitude lower than before decon.

Residues: The schedule to start up salt pyro-oxidation in mid-August is tight. Construction was delayed 16 days because a new procedure for scoping operations terminations stopped all work. Construction is now expected to continue until the end of June. This is very close to the start of the RA in early July. Additionally, RFFO directed K-H to evaluate three alternatives for handling failed Direct Oxide Reduction salt batches because of Office of Safeguards and Security concerns about their plutonium content, which can exceed 50 percent. The alternatives are aqueous dissolution on- site, repacking them in 3013 containers, or sending them to Los Alamos for processing.

K-H has developed a new processing strategy to optimize their pyro-oxidation capability and avoid processing shutdowns,. Single-shift operation of ten furnaces would begin in August, switching to double shifts for 3 to 4 furnaces in November 1998 and distillation starting in late 1999 or early 2000. although it accelerates processing, the milestone for processing 10,000 kg would still be delayed an additional 15 months on top of last year's modification (itself a six-month delay). Additional processing of residues to meet Safeguards Termination Limits will continue until at least mid-2001 or 2002. This extra processing has little safety benefit and may delay building deactivation and repacking of dispersible residues. The Site Reps and other technical staff believe that there may be a way to address residue hazards quicker that DOE is not considering. The paper outlining this alternative is currently going through peer review by the technical staff.