

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 6, 1996

TO: G. W. Cunningham, Technical Director

FROM: R.F. Warther, M.T. Sautman

SUBJECT: RFETS Activity Report for Week Ending December 6, 1996

Budget. RFETS received \$538 million for FY97 activities. This is approximately the same amount as received for FY96. The site reps will discuss funding allocations with RFFO personnel to ensure activities of interest to the Board (i.e., Recommendations and commitments) are funded.

Tank Draining. The first plutonium solution tank in B371 was drained this week. Solution was drained from a ground floor tank to a sub-basement tank through the criticality drain (CD) system. Approximately 1100 liters of low level solution was drained into the receiving tanks. The Pu concentration of the solution is estimated at less than one g/?.

Prior to completing the draining evolution, SSOC experienced one problem. Draining stopped after approximately half the tank solution was drained because the filter repeatedly clogged, and the drain line became clogged just above the glove box at a 2" @ 3/4" reducer. This was confirmed by an ultrasonic test for dry versus wet pipe. SSOC performed well by stopping the evolution when the line became clogged, calling in engineering, modifying the procedure, and completing tank draining. During the troubleshooting period, the crit drain header was inspected hourly for leaks. Three removed filters and the filter canister were covered with black sludge believed to be absorbent material that was swept into the crit drain system from earlier years. The crit drain system remained operational because most of the system consists of 4" to 6" pipes. Additionally, the total crit drain system volume is estimated at 3000 liters, and about 300 liters of solution was clogged just above the glovebox.

K-H and SSOC continue OH- processing in B771. The second batch of liquid has been nearly completed. However, precipitation is proceeding more slowly than anticipated. As a result, SSOC plans to add another filter boat and intends for LANL personnel to assist in evaluating the process to determine how the processing rate can be increased.

Nuclear Criticality: Last week, we described an incident in B776 involving 55-gallon drums which were moved from a criticality infracted vault. This week SSOC discovered that two criticality infracted carts in B707 were repeatedly moved in a taped off crit infracted area and not reported. Several actions were taken in response to these conduct of operations problems with criticality infracted items. First, the movement of all 55- gallon drums was terminated. Second, the B776 Facility Manager has been relieved of his duties. Third, the B776 Shift Manager on duty at the time was fired. Fourth, RMRS and SSOC have developed corrective action plans and submitted these plans to K-H who forwarded them to RFFO. Fifth, SSOC is targeting an upgrade to Shift Managers' qualification program. The Site Reps have been pushing this last item for several months, and believe this should result in significantly improved performance. However, Shift Manager and Shift Technical Advisor upgrade programs will probably require over a year to really demonstrate results.

K-H and SSOC have nearly completed detailed inquiries in response to a criticality engineer's allegations of senior management inaction regarding recent criticality events. Based on current information, there does not

appear to be much substance to the allegations. The technical issues appear to be related more to the ability to demonstrate criticality safety and double contingency in an environment of uncertainty rather than a concern with an imminent criticality. Some "old timers" have stated that they have moved the drums that are infracted with no problems. Furthermore, following detailed analysis, SSOC has been able to de-infract all but eight 10 gal drums and all but 98 55 gal drums. Kasdorf and Hayes will meet with crit engineering next week to review the crit safety evaluations.

Special Nuclear Material. In a November 5 letter to the Board, DOE stated that they would miss two Recommendation 94-1 milestones by four weeks. These milestones were related to thermally stabilizing plutonium oxide and repacking metal and oxide. Unfortunately, the X-Y retriever in B707 broke down last week. As a result, the brushing of the last four items and stabilization of the last nine kg of oxide will be delayed for a couple weeks until the X-Y retriever is repaired.

SNM Transportation. Pits being shipped to Pantex next year will not be leak tested at RFETS, but their containers will be. RFETS will have not the ability to leak test pits until the crimp and seal project begins next Spring. Pantex personnel have indicated that a requirement to perform the leak tests at Pantex may impact the rate at which Pantex can accept RFETS pits. (See the 11/15/96 Pantex weekly report).

Interactions with Public. The site representatives attended a public meeting held to discuss the Notice of Intent for the residue EIS. This EIS will address the new/modified treatments that the residues require to meet the new safeguards termination limits (STL). Charles Head from DOE-HQ led the meeting. The following was noted:

- No dates were provided for Public comment, or final EIS issuance. The draft EIS is scheduled for issuance in Spring 1997. The ROD will be issued following 30 days waiting period.
- One of the community leaders was concerned with "EIS proliferation." He asked for information regarding how these multiple EIS' are related. This question was not answered by DOE, nor could it have been.
- The theme of some public participants was to not separate the material, and consider building a large vitrification plant at RFETS to ensure the Pu cannot proliferate or otherwise be diverted.

The Board's staff has discovered one point of confusion. RFETS is modifying residue treatment plans for about 40,000 tons of residues containing about 2.0 - 2.5 metric tons of Pu based on the new STLs. This plan of action has been repeatedly stated by RFFO personnel, was reiterated at the public meeting, and was reported in the November 26 Energy Daily. Discussions with DOE-HQ personnel indicate that the new STLs are not intended to apply to material that may be shipped to WIPP. The Staff (Kasdorf and Barton) have indicated that they will pursue this apparent conflict further.

cc: Board Members