

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 4, 2003

TO: J. Kent Fortenberry, Technical Director
FROM: Tim Hunt, Oak Ridge Site Cognizant Engineer
SUBJ: Activity Report for Week Ending April 4, 2003

Staff outside expert R. West was on site this week providing site representative coverage. Staff member D. Owen will begin permanent site representative duties next week.

A. Building 9212 Enriched Uranium Operations (EUO) Wet Chemistry Restart. Last week the indications of leakage across the steam calandria for the oxide dissolver postponed the startup of that equipment. This week the planned work was to transfer solutions to provide tank space for future operations and refurbishment of primary extraction product tanks after the long shutdown. However, a problem with expiration of the provisional certification of wet chemistry operators and supervisors delayed any operations until Thursday. By then, several operators and supervisors had had their provisional certifications extended by performing operational evaluations. On Thursday, the scheduled evolution was again delayed because of a question about the format of the procedure to be used to conduct the solution transfer. A work instruction has been developed with the intention to conduct the transfer on Friday, April 4.

The current plan for repairing the calandria in the oxide dissolver is to procure a new unit for replacement. It was reported that validation of the construction and capacity of the on-site replacement, which had been procured for a similar application in Building 9206 and is of a different design, would take longer than procuring a new calandria. (2-A)

B. Oak Ridge National Laboratory (ORNL) Sodium Fluoride (NaF) Trap Depressurization. ORNL has now completed the depressurization of six NaF traps using equipment in Building 4501. The expected and measured pressures are shown in the table below:

Trap Load Cycle Number	Date Trap Closed	Estimated Uranium Loading, grams	Expected Pressure (psia)	Measured Pressure (psia)
15	4/28/98	1042	287	130
14	4/20/98	977	277	151
13	4/13/98	816	243	146
12	3/30/98	1118	306	293
11	3/16/98	1141	316	337
10	2/23/98	1038	300	326

The data collected to date is not sufficient to confidently predict the pressures in the remaining 20 traps. ORNL will continue to depressurize traps until defensible conclusions can be drawn from the data or all the traps with potential vulnerabilities are depressurized. Funding is available to depressurize all traps this fiscal year, except the two pressure monitored traps in cell 1. (3-A)