DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 13, 2002

TO: J. Kent Fortenberry, Technical Director

FROM: Tim Hunt, Oak Ridge Site Cognizant Engineer

SUBJ: Activity Report for Week Ending December 13, 2002

Staff members Tim Hunt and Bob Quirk were on site this week providing site representative coverage.

A. BWXT Y-12 Enriched Uranium Operations Wet Chemistry Restart Preparations: The second contractor operational readiness review (CORR II) for wet chemistry operations in Building 9212 began this week. Based on staff observations of three demonstrations (secondary intermediate extraction, denitrator, and oxide dissolver), there appears to be a marked improvement since the previous CORR in operator training, conduct of operations, operator knowledge, equipment performance, and the clarity of operating procedures. Also, less simulation and more actual performance was used to demonstrate equipment and personnel readiness. There is a potential concern with the minimal number of qualified operators for each of the six wet chemistry systems. The secondary extraction (SX) system will not be demonstrated during this CORR due to one of the two qualified operators being out on medical leave. It is expected that SX system operations will be validated during a focused review sometime prior to the NNSA ORR. The CORR team has noted shortcomings in fire protection engineering assessments and the flowdown of personal protective equipment requirements from the job hazard analysis into procedures. The CORR team will evaluate demonstrations of the primary extraction and wiped-film evaporator processes next week and issue a final report next Friday. (2-A)

B. Oak Ridge National Laboratory NaF Trap Depressurization ORR. The DOE ORR of the depressurization of the uranium-233 laden sodium fluoride (NaF) traps began on Monday in the Hazard Category 2 areas of Building 4501. Depressurization activities will include venting, resealing, and repackaging up to 26 NaF traps, reducing the near-term hazard and providing data on actual pressure levels. The staff observed portions of two operational demonstrations; the movement of a shielded trap from the loading dock into the hot cell and of the depressurization evolution. The depressurization demonstration included the use of a helium-filled trap that was successfully vented to process system vessels. Also witnessed was a NaF trap spill drill on the loading dock. Equipment problems, including failures of the overhead crane used to move the NaF trap into the hot cell, and controls for the heat tracing on the process tubing, delayed the depressurization exercise. Technical knowledge of the operators was relatively weak as shown by the confusion among the operating crew as to why heat tracing was required. Additionally, the operating crew identified errors in the procedure for the high temperature alarms. Another procedural change involved performing the evolution without the failed heat trace. Procedural compliance and formal conduct of operations were generally noted as strengths. It appears that management oversight during initial operations may be warranted. The plan is to complete the DOE ORR next week. (3-A)