

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 17, 1999

TO: G.W. Cunningham, Technical Director
FROM: Paul F. Gubanc and David T. Moyle, Oak Ridge Site Representatives
SUBJ: Activity Report for Week Ending December 17, 1999

Staff members Andrews and White, and outside expert West visited Y-12 to review instrumentation and control, Y2K and furnace inspections associated with enriched uranium.

A. Nuclear Criticality Safety (NCS) "Stop Work" at Y-12: On December 13, the DOE Facility Representative (Fac Rep) in Building 9212 identified a fissile material container located in an inappropriate storage array. This NCS concern was immediately confirmed by the contractor but additional search identified no other suspect containers. On December 14, the DOE Fac Rep found an additional container not in accordance with storage array limits. Since this was the very same area that the contractor staff had just verified as acceptable, the DOE Fac Rep directed that all fissile material handling activities be stopped in 9212. The following has occurred since:

1. On December 16, DOE issued a memo formally confirming the stop work order, requesting a corrective action plan in five working days, and confirming that resumption of fissile material activities in 9212 will require DOE approval. (DOE Order 425.1 requires that both a DOE and contractor operational readiness review be conducted to support this resumption.)
2. A team of DOE criticality experts conducting a review at Savannah River was diverted to Y-12. Their one-day visit on December 16th produced the following recommendations:
 1. Improve work execution and planning, including establishment of a 100% baseline of fissile material storage.
 2. Simplify NCS requirements including reducing the plethora of storage container types.
 3. Improve operator involvement in the NCS program.
 4. Implement improvement and feedback practices, including assessments, operator mentoring, and simpler methods to disposition trivial NCS issues.
3. In response to the 9212 event, other Y-12 nuclear facilities commenced informal walkdowns (some prompted by the Site Reps) and identified additional storage concerns. Additional walkdowns are anticipated once the contractor corrective action plan is finalized. (2-A)

B. Y-12 Lithium Hydride (LiH) Fire: On December 14, a small LiH fire occurred during a maintenance activity in a glovebox in Building 9204-2. While the glovebox had been vacuumed out, an adherent LiH film and crust piles remained and were ignited by a hot metal drilling chip. The fire was quickly extinguished and no one was injured. Management identified that the job planning process had not identified the LiH fire hazard. Management subsequently stopped all maintenance in 9204-2 and of eleven ongoing jobs found that six did not identify the LiH fire hazard. Weaknesses in Y-12 job hazard identification was the subject of Board letters dated July 8 and January 28, 1999. (1-A)

C. Enriched Uranium Operations (EUO) Restart: On December 17, LMES advised that Mr. Leo Sain and several other Westinghouse Safety Management Solutions (WSMS) subcontractor personnel would be arriving on December 20 to assist with the EUO restart activities. (2-A)

cc: Board Members