DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 3, 2000

TO: J. Kent Fortenberry, Technical Director
FROM: Paul F. Gubanc and David T. Moyle, Oak Ridge Site Representatives
SUBJ: Activity Report for Week Ending November 3, 2000

A. Y-12 Contractor Transition and ISM: On November 1, BWXT Y-12 (BWXT) officially took control of the Y-12 National Security Complex (formerly Y-12 Plant). As of November 1, the NNSA Y-12 Area Office (YAO) had approved all of the prescribed safety-related contract deliverables from BWXT (e.g., ISM Program Description, S/RIDs, Authorization Agreements). Next week, the BWXT Deputy General Manager will kick-off preparation of the Y-12 ISM corrective action plan. (1-C)

B. Y-12 HEU Materials Facility (HEUMF): On November 3, BWXT briefed YAO and Mr. Beck (DP-20) on the status of their "challenge team review" of the HEUMF. Contrary to our last report, BWXT does not now expect to complete its review and issue a report until early December. Preliminary BWXT recommendations include:

1. Pursuing Design-Bid-Build in lieu of the current Design-Build approach. Aside from reducing technical risk, this would afford decoupling from the Site-Wide EIS Record of Decision.
2. Incorporating benefits of the new project management order, DOE O 413.3, by establishing the performance measurement baseline when the design is 35% complete.
3. Aside from recommending a slab foundation versus piers, BWXT did not identify any major concerns with the structural and geotechnical approaches.
4. Paul Rice will provide an independent assessment of BWXT's approach in mid-November.

On a related note, the HEUMF draft technical safety basis is being revised to use more realistic fire scenarios and is not expected to be available for review until late November at the earliest. (1-C)

C. Y-12 Enriched Uranium Operations (EUO): BWXT is still working to fully understand the requirements and assumptions associated with EUO restart. Over the next six weeks, BWXT intends to commit to schedules for restart of reduction, the HF system, and wet chemistry, as well as a fire safety strategy for the section of B-1 Wing which lacks sprinkler protection.

Engineering calculations to support the safety basis for the reduction process are still being worked. Most recently, BWXT self-identified an error which dramatically reduced the calculated reduction vessel useful life. As a result, BWXT is evaluating taking credit for the observed time lag between peak pressure and peak wall temperature to calculate back some safety margin. This "pencil sharpening" will require solid justification as it reduces the overall conservatism in the analysis. The staff will discuss this and other reduction issues in more detail next week. (2-A)

D. DOE Chemical Safety: As part of DOE Oak Ridge (DOE-ORO) Chemical Safety Action Plan (prompted by the Board's July 8, 1999, letter), chemical vulnerability identification training is to be provided to the DOE-ORO and YAO Facility Reps. This week, Mr. Gubanc attended the first of these 16-hour training sessions. The course was well attended and was delivered by two very experienced chemical safety experts for a major chemical supply company. Given the wide diversity of the students' backgrounds and the broad subject matter, the instructors did an admirable job of providing sufficient background to the Fac Reps to make them more effective in their observation and appreciation of chemical safety hazards. Equally important, the students were provided some key technical reference materials and points of contact to consult should they identify a concern. (1-B)

cc: Board Members