

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 27, 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 August 27, 1999

A. Reduction Process at Y-12 Enriched Uranium Operations (EUO): DOE has now agreed to conduct a fully independent readiness assessment (RA) of the reduction process which is tentatively scheduled to begin on September 13. The LMES RA is still slated to begin Monday, August 30. EUO's management self-assessment (MSA) has identified 19 findings. We have reviewed most of the MSA finding corrective action packages and the majority have a reasonable path to closure.

Our major concern remains, however, with the potential for a material release accident due to failure of the reactor vessel during firing. This issue relates to potential contaminants in the UF₄ feed material (e.g., water) as well as the integrity of the reactor vessel itself. Currently, there are no credited controls to prevent a reactor failure. Both EUO and DOE personnel do not believe this is a credible accident, but reference a mitigative control requiring personnel to exit the room during the reduction reaction as defense-in-depth. While we agree with the benefit of removing the operators from the potential hazard, this control is repeatedly referenced as justification for not pursuing other actions to prevent the potential accident. Some MSA findings relating to protection against the reactor failure are closed by taking credit for the fact that the operators will not be in the room. We will continue to pursue our concerns with feed material contaminants, pressure vessel integrity and preventative safety controls next week. (II-B.2)

B. Emergency Management: DOE Order 151.1, *Comprehensive Emergency Management System*, requires all sites to be in compliance with its requirements by September 30, 1999. On August 20, DOE-OR promulgated its "Action Plan" for its emergency management program with an overall goal of achieving most of its compliance actions by the end of 1999, with the remainder finishing up by March 31, 2000. While aggressive, the development of and commitment to a site-wide plan is a major step forward for DOE-OR and can be primarily attributed to the senior management attention precipitated by the Board's July 8, 1999, letter to Secretary Richardson. (I-A)

C. Molten Salt Reactor Experiment (MSRE): On August 23, DOE-OR formally advised its environmental regulators that the uranium deposit removal milestones would be delayed and not completed until early 2001. (This change was expected due to technical problems encountered with uranium deposits in the activated charcoal bed.) DOE also advised us this week that MSRE's FY2000 workscope (\$23M of work) might be underfunded by \$6M. However, Bechtel-Jacobs believes this shortfall can be accommodated by significantly reducing their subcontracting of ORNL staff. A staff review to assess MSRE's 94-1 progress would be appropriate for this Fall. (III-A.1)

cc: Board Members