

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 17, 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 March 17, 2000

Staff members Massie, Tontodonato and Winters were at ORNL this week to review and tour Building 3019, the D&D program, and Molten Salt Reactor Experiment (MSRE).

A. Hydrogen Fluoride Supply System (HFSS): LMES began an effort to reconstitute the technical baseline for the HFSS several weeks ago. Approximately 370 design requirements have been identified which must be tracked through implementation; over 60 discrepancies have been documented to date. Field verification walkdowns should begin in April. LMES is also evaluating the HFSS design to withstand natural phenomena hazards (NPH). To date, significant discrepancies from the design have been discovered. Of 51 structures, systems, and components required to meet NPH criteria, only 28 have documentation. There is also no clear understanding of what needs to function post-accident. LMES intends to have a subcontractor evaluate adequacy of the system to withstand NPH. While ongoing work to establish the technical baseline is necessary, accident analysis and scenario identification, from which many requirements are derived, may not be sufficient. We will continue to review the HFSS to ensure that credible accident scenarios are not overlooked, and controls are properly implemented. (2-A)

B. Bechtel Jacobs Company (BJC) Activities: BJC is the DOE Oak Ridge Operations (ORO) management and integration (M&I) contractor for environmental management.

1. Last week we received DOE's Final Report on the combined Phase I & II ISMS verification of BJC conducted from January 24 - February 18, 2000. While the report did recommend that DOE approve the BJC ISMS program description, of the 24 opportunities for improvement identified, over half concerned the adequacy of BJC authorization basis hazard identification and control. The impression left is more of major lapses as opposed to minor omissions.
2. During the staff's review of the MSRE project, we were informed that ORO/BJC intended to conduct "readiness evaluations" (described as something less rigorous than ORRs or Readiness Assessments) for two activities this Summer/Fall. In one instance, the MSRE team would be conducting a first-time evolution to cut open, fracture and vacuum out a uranium deposit measuring 600R/hr on contact. In another, a newly constructed UF₆ conversion facility would create a new Category II nuclear facility "island" inside of a major ORNL radiological laboratory. For both of these activities, we strongly suggested ORO reconsider their readiness strategy and review the recent exchange of correspondence between DOE and the Board on DOE O 425.1. Our opinion is that both of these activities demand ORRs in accordance with 425.1. (3-A)

C. Building 9212 Fissile Material Handling: The LMES ORR was conducted this week. Of the twelve teams evaluated, some were faced with conditions which required them to exercise management's response. Separate from the ORR, two management reviews were also held this week for actual criticality safety deficiencies discovered during walkdowns. The management response to these issues demonstrated some improvement since the stop work in December. As of mid-day Friday, only one prestart finding had been identified. The DOE ORR is expected to start next week unless there are any significant findings in the final LMES ORR report due out late today. (2-A)

cc: Board Members