

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 2, 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 June 2, 2000

The office was closed Monday for the federal holiday. Mr. Gubanc was on leave Friday.

A. Y-12 Employee Concerns: On June 1, Mr. Gubanc attended a meeting between several employees who operate equipment in Y-12 nuclear facilities and DOE-ORO representatives to discuss employee health and safety concerns. One issue discussed was the perceived inadequate disposition of an employee concern filed with the Y-12 contractor in August 1998. Following a U.S. Senator request for action, DOE-ORO recently completed a review of the disposition of the concern; and issued a letter to the contractor on May 31 declaring the basic employee health concern "credible" and asking for corrective actions. The letter focused on resolving the technical specifics, but Mr. Gubanc emphasized to the DOE representatives the need to examine several other aspects:

1. Why had the contractor's employee concern program taken well over a year to disposition a worker health concern?
2. Why was the contractor's disposition of the concern different than DOE's?
3. Why wasn't the DOE's employee concern program utilized?
4. The health concern stemmed from a 1997 disbanding of a contractor maintenance function. Was the technical basis and review process previously used to disband this function adequate?
5. As documented in our April 21, 2000, report, DOE and the contractor have previously agreed to assign additional resources to address perceived safety problems and then subsequently cut them. Does DOE have confidence that proposed solutions are well developed and that subsequent cost cutting decisions are adequately evaluated on their technical and safety merits?

We will continue to pursue these questions with DOE management. (1-B, 1-C)

B. Building 9206 Holdup Surveys: Non-destructive assay (NDA) work has been ongoing for several months in building 9206 to characterize U-235 holdup in process and ventilation systems. This tedious activity is an important step in understanding the hazards (e.g., criticality and personnel exposure) in upcoming deactivation work. The team sketches equipment layout and dimensions and conducts initial surveys to identify hot spots for focused characterization efforts. Detailed surveys at bar coded locations are then entered into a point, line, or area source model to estimate holdup. Detailed scanning is generally accomplished using a sodium iodide detector, but a cadmium zinc telluride (CZT) detector can be used to better resolve distorted spectra. The CZT detector is a new technology only in use at Y-12 and is currently cumbersome and temperature sensitive. At this time, the NDA work is approximately 20% complete and only one team is working in 9206. A second survey team has been diverted to building 9212 to conduct solution analysis for inventory accounting. At the current rate, complete 9206 NDA characterization may take 2 more years. (3-B)

C. Chemical Safety: Since we raised concerns about potential buildup of unstable peroxides in dibutyl carbitol (DBC) during long-term storage, LMES sampled all process columns containing DBC in buildings 9206 and 9212 and 7 safe bottles in 9206. Analysis shows less than 5ppm peroxide in all but two samples (which gave inconclusive results), indicating no discernible peroxide formation. Once the bottle rocking process is on line, 12-14 bottles in building 9212 will also be sampled. (1-C)

cc: Board Members