

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 3, 2002

TO: J. Kent Fortenberry, Technical Director
FROM: Matt Forsbacka, Oak Ridge Site Representative
SUBJ: Activity Report for Week Ending May 3, 2002

A. DOE ORO Facility Representative Program: Last week the results from an assessment of the ORO Environmental Management (EM) facility representative (FR) program reported significant deficiencies in the areas of FR coverage in some facilities and projects and performance assessment and feedback. On Thursday the site representative met with the ORO Deputy Assistant Manager for EM to discuss corrective actions in response to this assessment. Her near-term actions include:

1. Enhance the visibility of FRs with ORO senior management through regular meetings.
2. Increase the formality of reporting FR field activities.

Systemic reform of safety oversight is recognized in the ORO and Bechtel Jacobs Company Corrective Action Plan (CAP) for Integrated Safety Management System Improvements. The issue of inadequate technical expertise in ORO to manage the Safety Bases for nuclear facilities is compounded by inadequacies in the FR program, so close coordination with the CAP should be requisite to an overall improvement in ORO's safety oversight capabilities. (1-C)

B. BWXT Y-12 Enriched Uranium Operations (EUO) System Leak: At 0030 hours on Friday, a fire patrol found liquid slowly spilling out of the safebottle used to catch overflows from the Primary Extraction (PX) system. Line managers and process experts were called in to find the source of the leak and stop it. By 0430 hours, it was determined that process water had flowed into an out-of-service PX column causing its contents to overflow. The process water source was then secured and the overflow ceased. Cleanup operations commenced shortly thereafter. The site representative attended the management review and provides the following observations:

1. System overflows are directed to a common header, so the source of the leak was not readily apparent. The leak's source was a process water valve found to be open by 1/4 of a turn. The valve allowed water to flow into an air lift and entered the column via reverse direction.
2. The valve is located behind a railing, so it is unlikely that incidental contact could have occurred. No cycling of the process water system has occurred, so water hammer has been ruled out. The valve is constructed of stainless steel and was in contact with city water, so corrosion is unlikely. How the valve was actuated is unknown at this time.
3. The total volume of the leak was estimated at 22-liters, of which 11-liters was on the floor. The estimated volume of organic solution lost from the column is 1.5-liters; however, facility personnel reported that the presence of organic was not evident (e.g., an oily film or sheen).
4. Process isolation points for other systems were discussed, and an engineering evaluation is being conducted to ensure the integrity of the system boundaries. A work order was initiated to physically isolate process water lines from the two columns that have such a connection.
5. The Authorization Basis treats the out-of-service columns as static systems. Assumptions regarding the isolation of these systems should be revisited. (2-A)

cc: Board Members