

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 16, 2008

TO: Timothy Dwyer, Technical Director
FROM: Donald Owen and David Kupferer, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending January 16, 2008

Staff members D. Gutowski, J. Pasko, C. Roscetti, and J. Shackelford and outside expert J. King visited Y-12 to review Conduct of Operations.

Conduct of Operations. The staff and site reps. observed operations being performed in nuclear facilities and considered the Conduct of Operations demonstrated by production, operations, and maintenance personnel to be generally satisfactory. However, the staff identified some weaknesses. For example, some Conduct of Operations Manual requirements have not been consistently implemented including the requirements for equipment tagging and pre-job briefs. The site reps. previously documented similar observations regarding standing order and system control requirements (see the 4/18/08 and 6/6/08 site rep. reports). The staff observed one instance where a procedure was performed out-of-sequence. The wet chemistry operators involved acknowledged that their practice did not match the procedure. This observation was discussed with YSO and B&W management.

Work Control/Feedback and Improvement: In late July, deficient post-maintenance testing on the Criticality Accident Alarm System in the Assembly/Disassembly Building resulted in a Technical Safety Requirement violation (see the 8/1/08 and 8/8/08 site rep. reports). YSO subsequently determined that an improper declaration of the maintenance as "emergency work" was a factor in the event (see the 10/3/08 site rep. report). Site rep. questioning had led to the determination that the emergency work protocol allows the job supervisor to determine post-maintenance testing for nuclear safety systems without consulting the system engineer. The site reps. inquired with Y-12 personnel on actions taken for the event. While action has been taken on the improper emergency work declaration, B&W indicated that no action had been initiated to revise the emergency work protocol. B&W Engineering Division personnel have stated that an action to revise the protocol will be developed.

Criticality Safety. Last year, B&W acknowledged that the implementation of DOE Standard 3007-2007, *Guidelines for Preparing Criticality Safety Evaluations*, needed to be reworked and committed to submit a revised Implementation Plan (IP) to YSO by January 15th (see the 10/17/08 site rep. report). The revised IP was received by YSO this week. The revised IP states that any Criticality Safety Evaluation (CSE) initiated to support a new process/activity (including the Highly Enriched Uranium Materials Facility) shall meet the requirements of DOE-STD-3007-2007. B&W is not planning to revise currently approved CSEs to comply with the Standard. In addition, YSO previously granted one-year approvals for some processes that are not compliant with the Double-Contingency Principle (DCP) as defined in DOE-STD-3007-2007 (see the 11/21/08 site rep. report). In the revised IP, B&W described actions to address each of these non-compliances prior to the one-year approval expiration in November 2009. The revised IP notes that current funding uncertainties will likely result in B&W periodically updating the IP.

Work Control/Conduct of Operations. Last week, craft personnel replaced a sprinkler head in the safety-class fire suppression system in Building 9212. There were several work planning and execution deficiencies associated with the performance of this job: (1) craft personnel were confused about who was supervising the job, (2) craft personnel did not receive an adequate pre-job brief as required per the Conduct of Operations Manual, and (3) a formal lockout/tagout (LO/TO) had not been applied despite the work package specifying a formal hold-point for the LO/TO. B&W externally reported this event and is planning to brief all maintenance supervisors on the importance of performing a detailed pre-job briefs and thorough job package reviews.