

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 7, 2009

TO: Timothy Dwyer, Technical Director
FROM: Donald Owen and David Kupferer, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending August 7, 2009

Mr. Owen was out of the office on Thursday and Friday.

Conduct of Operations. In 2007, in response to a few spills of process condensate from the High Capacity Evaporator and Intermediate Evaporator, facility operations personnel in the Enriched Uranium Operations Building established a “compensatory measure.” The compensatory measure stated that the volume of condensate in two process condensate storage tanks should be limited to 400 gallons each (about half the tank volume). This week, B&W convened a critique after personnel discovered that this “compensatory measure” had been violated. Evaluation of the event (one tank had about 440 gallons) led facility management to conclude that further evaluation and action on use of such “compensatory measures” is needed. The site reps. note that the Y-12 Conduct of Operations Manual appears to call for such compensatory measures to be implemented by “Timely Orders,” which includes either Daily Orders or Standing Orders. The Manual provides requirements governing the use of such Orders, the need for implementing documentation, and expiration and/or eventual incorporation into procedures. In this case, there was no on-the-floor implementing documentation or driver for incorporating the 400-gallon limit into the evaporator operating procedures; rather, implementation relied solely on (sustained) operator knowledge over the past two years. The site reps. discussed these observations with YSO and B&W management.

Earlier this year, B&W revised the Y-12 Conduct of Operations Manual to allow personnel up to 180 days to develop permanent implementing documentation for administrative actions that are being implemented by Standing Orders (the previous requirement was 30 days for Standing Orders that implement safety basis requirements). During the past 18 months, B&W repeatedly re-issued a Standing Order that implements a safety basis inventory requirement during storage and transportation activities (see the 6/6/08 and 10/17/08 site rep. reports). In addition, Standing Orders affecting the processes for controlling hazardous energy sources during system maintenance activities (see the 10/31/08 site rep. report) and providing operational input to the Uranium Processing Facility design team (see the 1/9/09 site rep. report) have also been re-issued past their original 180 day expiration deadlines. B&W is planning an assessment to determine whether Standing Orders are being properly generated, distributed, tracked, and incorporated into procedures per the requirements of the Y-12 Conduct of Operations Manual.

Highly Enriched Uranium Materials Facility (HEUMF). B&W is performing detailed evaluations of the quality assurance documentation associated with HEUMF safety structures, systems, and components (SSCs) to ensure that requirements were adequately addressed during procurement, construction, and testing of these SSCs (see the 6/19/09 site rep. report). In addition to validating the flow-down of quality assurance requirements to the sub-tier vendors of each safety SSC, B&W expects these evaluations to document the following: the critical characteristics for acceptance, the associated acceptance criteria for each safety SSC, and a cross-walk to the evidence that the acceptance criteria were met. The Board’s staff and site reps. met with cognizant site personnel to discuss preliminary results of this effort. Based on questions posed by the staff during this discussion, B&W is planning to provide additional information for the staff to review.