

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 12, 2010

TO: Timothy Dwyer, Technical Director
FROM: Donald Owen and David Kupferer, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending March 12, 2010

Equipment Inspection and Calibration/Conduct of Operations. B&W externally reported use of a safety-related glovebox oxygen monitor in the Purification Facility for which the calibration had expired. A facility shift manager on a walkdown noted the monitor calibration was expired shortly after use of the glovebox had begun. During the critique, B&W determined that the applicable operating procedure calls for a pre-use check to ensure the oxygen level is acceptably low, but does not require a check of the calibration expiration. The facility relies on daily reviews of facility calibration status sheets (not actual checks at the equipment), but a current status sheet was not used and the review was inadequately performed due to various contributing factors among operators, the system engineer, and the supervisor.

Last week, a supervisor for wet chemistry operations discovered that solutions used in analytical equipment to estimate uranium concentration (e.g., prior to transferring primary extraction raffinate) were more than six months past their re-verification date (required annually). Operations management suspended all wet chemistry operations that rely on these uranium concentration estimates.

The site reps. have noted the repeated instances of use of equipment that was not calibrated or inspected within the required periodicity and the potential need for specific mechanisms for operators to systematically verify equipment is within required calibrations/inspections prior to use (see the 11/25/09 and referenced site rep. reports). YSO personnel have requested discussions with B&W next week on further actions needed to address this issue.

Building 9212 Facility Risk Review (FRR). In October 2009, NNSA Headquarters approved the Critical Decision-1 (CD-1) package for the Nuclear Facility Risk Reduction (NFRR) Project (see the 11/6/09 site rep. report). At that time, NNSA Headquarters requested that the project team re-evaluate the schedule to avoid a phased CD-2 approach and to allow for the release of construction funding in FY 2011. YSO has directed B&W to develop and submit the CD-2/3A package for the NFRR project to YSO by October 2010. YSO expects this package to include the preliminary design for the entire scope of the project in addition to the final design and procurement packages for some equipment. YSO believes that this project schedule will make it possible for NNSA to release construction funds to B&W in FY 2011.

B53 Dismantlement. In response to site rep. questions, YSO has directed B&W to revise their Startup Notification Report to require an independent Readiness Assessment prior to startup of B53 dismantlement operations (see the 2/19/10 site rep. report).

Y-12 Accomplishments and Improvement Priorities. In December, YSO issued its evaluation of B&W's performance in FY2009 and noted the following key accomplishments: making significant progress on the startup of the Highly Enriched Uranium Materials Facility (HEUMF) and the design of the Uranium Processing Facility (UPF), delivering W76-1 components ahead of schedule, exceeding baseline dismantlement objectives, reducing the backlog of safe bottles containing aqueous enriched uranium solutions, and removing large quantities of nuclear material from Building 9204-4 and 9201-5. YSO also identified areas that warrant improvement including the following: issues management, quality of technical documentation (particularly engineering, criticality safety, and safety basis documents), tracking of equipment calibration, and conduct of critiques.