

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 25, 2009

TO: Timothy Dwyer, Technical Director
FROM: Donald Owen and David Kupferer, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending November 27, 2009

Mr. Kupferer was out of the office. Mr. Owen will be out of the office Thursday and Friday.

Transuranic Waste Processing Center (TWPC). EnergX had declared a Potential Inadequacy in the Safety Analysis (PISA) due to the potentially inadequate description of a programmable logic controller (PLC) for the confinement ventilation system (see the 11/13/09 site rep. report). This week, EnergX issued the Unreviewed Safety Question Determination (USQD) regarding this PISA. EnergX declared a positive USQ due to a prior PLC modification in 2004 to shutdown supply fans when the air flow through the exhaust fans dropped below the threshold specified in the applicable Technical Safety Requirements. The USQD indicated that this PLC function and the potential for PLC failure is not described in the safety basis. EnergX updated the original PISA occurrence report to address the positive USQ (the site rep. notes that such updates are typically not distributed to DOE Headquarters and field management).

Unreviewed Safety Question Determination Process. B&W has been developing a new expert-based USQD screening process that included a pilot trial in the Assembly/Disassembly Building (see the 7/2/09, 10/10/08 and 6/6/08 site rep. reports). The intent of the revised USQ process was to allow for designated individuals to screen proposed changes from the standard USQD process if it is *readily apparent* that the proposed change would not result in a positive USQ. Last week, B&W submitted a revised USQD procedure to YSO for approval that allows an "Expert USQD" to be performed as an option to performing a standard USQD (the main differences being less required documentation and concurrences for the Expert USQD). YSO review of the revised USQD procedure (in consultation with NNSA Headquarters) is in progress.

Equipment Inspection and Calibration/Conduct of Operations. During the past few years, Y-12 personnel have identified numerous instances of equipment not being inspected or calibrated within the specified periodicity, including two recent events related to weapon component assembly operations (see the 10/16/09 site rep. report). In March, B&W senior management had initiated a calibrations improvement effort by tasking a team (with personnel from multiple Y-12 organizations) to identify the scope of the problem and develop corrective actions. This team is primarily focused on improving the database and user-interface with software used to track and schedule equipment inspections and calibrations. B&W is currently planning to deploy new software and associated training in mid-2010.

B&W has also completed investigation of the two events noted above where equipment had been operated for extended periods with expired inspection and calibration stickers. The investigation team made several recommendations to senior management including: (1) evaluate and update ownership of equipment and clarify associated responsibilities, (2) improve on-the-floor organization of tooling and equipment, and (3) incorporate additional features into the software upgrade noted above. The site reps. note that production procedures (including procedures used in the two events) typically include only a general prerequisite for operators to ensure that all equipment is within required periodic inspections/calibrations. The investigation team did not make a recommendation for developing specific mechanisms (e.g., equipment lists) for operators to more systematically verify that equipment is within required inspections/calibrations prior to use.