DEFENSE NUCLEAR FACILITIES SAFETY BOARD

TO: Timothy Dwyer, Technical Director
FROM: Rory Rauch, Site Representative
SUBJECT: Oak Ridge Activity Report for Week Ending November 9, 2012

F. Bamdad, R. Oberreuter, B. Sharpless, and D. Winters were in Oak Ridge this week to perform an initial scoping review of the Transuranic Waste Processing Center Sludge Project and DOE's plans for future Uranium 233 processing activities at Oak Ridge National Laboratory's Building 2026. J. Blackman and C. Shuffler were in Oak Ridge to observe NPO's evaluation of B&W's solution to the space fit issues encountered by the Uranium Processing Facility project.

Compensatory Measure Violation: Through the unreviewed safety question process (see 8/3/12 report), Building 9212 operations management issued a standing order last March as a compensatory measure following the discovery that analysts had applied non-conservative airborne release fraction (ARF) values to certain forms of material analyzed in the Building 9212 safety analysis report (SAR). The standing order prohibited the movement of certain types of materials in Building 9212 without operations manager approval—the intent was to ensure that the material-at-risk in certain areas of Building 9212 was limited to values at which the consequences of the affected analyses in the Building 9212 SAR remained bounding when the more conservative ARF values were applied. Last week, an NPO facility representative discovered that operators had violated the standing order by transferring two contaminated filters to a storage array in D-Wing without operations manager approval. Building 9212 operations management analyzed the presence of these contaminated filters in D-Wing and concluded that they do not challenge the existing safety analysis. B&W recently submitted a justification for continued operations to NPO that updates the Building 9212 SAR to reflect the new ARF values. Until NPO approval is obtained, B&W plans to improve the implementation of this standing order by proceduralizing some of its requirements.

Work Planning and Control: Last week, an NPO facility representative discovered that B&W had initiated a maintenance activity in Building 9204-2E without an approved beryllium work permit. During the critique for the event, B&W identified several work planning and control weaknesses. First, B&W had established the practice of approving job hazard analyses (JHAs) before all applicable permits had received final approval. Second, the work coordinator for the job failed to verify that all required permits were valid during the pre-job workability review, per the B&W Integrated Work Control Manual. Finally, weak document control practices allowed a draft copy of the permit to be placed in the work package, which the workers and the supervisor ultimately signed prior to starting work. Following the discovery of this issue, industrial hygiene personnel reviewed the draft permit and concluded that adequate hazard controls had been implemented for the tasks that maintenance personnel had performed to date for this job.

Microwave Casting: After additional evaluation, B&W found that the insulation on the lid of the crucible in the production microwave furnace has the attributes needed to perform its credited safety function (see 10/26/12 report). Nonetheless, B&W management remains concerned that microwave project personnel did not initially communicate the absence of this attribute from the procured insulation to operations management or responsible safety basis personnel. To strengthen the communication between those performing field activities on the production microwave furnace and those responsible for maintaining the configuration management of critical design and safety basis documentation, the Building 9212 operations management issued a standing order this week requiring operations manager approval prior to any field activities on the production microwave furnace. The standing order also requires intermittent oversight of production microwave field activities by personnel in the operations manager's organization.