

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

TO: Timothy Dwyer, Technical Director
FROM: Wayne Andrews and David Kupferer, Site Representatives
SUBJECT: Oak Ridge Activity Report for Week Ending November 25, 2011

ORNL Building 3019/Uranium-233 Disposition. Staff members R. Raabe and B. Sharpless visited ORNL to review the radiological control measures and safety basis associated with the initiative to begin shipping Zero Power Reactor plates to the Nevada National Security Site (NNSS) prior to the end of the calendar year (see 11/18/11 report).

ORNL Tank W-1A. UCOR initiated operations at Tank W-1A in early September and shipped the first B-25 box of contaminated soil to NNSS in early October (see the 9/9/11 and 10/14/11 reports). To date, the project has filled 67 boxes and shipped 54 boxes to NNSS. UCOR's current project schedule includes the following milestones: remove the tank in early December, complete soil removal and shipments to NNSS by February (estimated to be about 220 total B-25 boxes), complete site restoration and site decontamination by May.

Safety Analysis. During the past three months, B&W externally reported two Potential Inadequacies in the Safety Analysis (PISAs) subsequent to engineering personnel discovering non-conservative assumptions used in accident analysis calculations. In August, B&W discovered that non-conservative factors for liquid boiling of toxicologically hazardous materials were assumed in the accident analysis associated with Building 9720-5. Last week, B&W discovered that non-conservative airborne release fractions for uranyl nitrate hexahydrate crystals were used in the accident analysis associated with Building 9212. In both cases B&W issued Standing Orders that disallowed receipt of the subject materials to ensure that the current accident analysis results remain bounding. As a follow-up action, B&W has committed to perform an extent-of-condition review to ensure bounding parameter values were used in sitewide accident analysis calculations.

Onsite Transportation/Safety Analysis. B&W plans to procure new vehicles for transporting special nuclear material (SNM) within the protected area at Y-12. To support implementation of the new vehicles, B&W is developing a new Documented Safety Analysis and associated Technical Safety Requirements to support onsite shipments of SNM. YSO has approved the Startup Notification Report for this activity and determined that Operational Readiness Reviews will need to be performed prior to initiating use of the new vehicles. B&W is currently projecting 2013 for first use of the new vehicles.