

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 5, 2010

Highly Enriched Uranium Materials Facility (HEUMF). YSO recently approved B&W's first annual update to the Documented Safety Analysis (DSA) and Technical Safety Requirements for the Highly Enriched Uranium Materials Facility (HEUMF) (see the 7/10/09 report). YSO closed the last of its Conditions of Approval from the initial submittal of the DSA, which included B&W revising the accident analyses of the design basis fire to use alternative values for various parameters (e.g., airborne release fraction of 10^{-3} , dry deposition velocity of 1 cm/s, dose conversion factors from ICRP 68 and 72, breathing rates of $3.3E-4$ m³/s, etc.). Based on the reduced dose consequences resulting from the design basis fire, YSO is encouraging B&W to investigate the possibility of downgrading some or all of the safety controls that are currently credited for fire prevention and mitigation (e.g., the secondary confinement system). YSO has also asked B&W to consider developing a nuclear criticality safety document that demonstrates that the potential for a nuclear criticality accident in the storage areas and corridors of HEUMF is not credible (see the 3/21/08 report).

ORNL Tank W-1A. The preparation of the site Characterization Report continues. The current plan is to route the draft Characterization Report for review by late-November. The weather enclosure is almost complete. All the fabric has been installed as well as the majority of the interior electrical lines. The fire detection and video systems have arrived. The site is currently finalizing the details for removal and containerization of the tank. The practice tank is being assembled and will be used to further refine the removal and containerization methods.

The design for the shielded box for packaging and moving the contaminated soil is almost complete. Based upon field review, the project team was able to make several changes to the box to ensure it is usable, in particular to allow the forklift to lift the box from either the long or short side. Two boxes will be delivered the week of November 8th for the finalization of proof of process and practice.

The Documented Safety Analysis is complete and the project is expecting the Safety Evaluation Report from DOE-ORO soon. The Nevada Test Site (NTS) has approved the waste profile and there doesn't appear to be any issues with the disposition path to NTS. The Operational Readiness Review (ORR) Plan of Action has been completed and will be transmitted to DOE-ORO for approval next week (see the 12/31/09, 5/21/10 and 7/30/10 reports). The contractor ORR is expected to start in January.

Uranium -233 Building 3019 Alternative Analysis Core Team. The Core Team has been participating in weekly telephone conferences and will meet again in Oak Ridge on November 16 & 17 to discuss its progress regarding alternative disposition path options for the various chemical forms of Uranium-233 in Building 3019 at ORNL (see the 8/13/10, 10/1/10, and 10/8/10 reports).