

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 July 6, 2012

Transuranic Waste Processing Center (TWPC)/Cask Processing Enclosure (CPE). Last week, DOE ORO-EM issued the final report for its Readiness Assessment (RA) of CPE operations (see the 6/22/12 report). The DOE RA team concluded that (a) the prerequisites for initiating the DOE RA were met, (b) the contractor RA was adequately performed, and (c) WAI is ready to start operation of the CPE. The DOE RA team identified two post-start findings: (a) hazardous material labels were not affixed to two containers (this finding was closed during the DOE RA) and (b) DOE has not adequately implemented oversight of contractor activities for second shift operations per the intent of DOE Order 226.1B, *Implementation of DOE Oversight Policy*. There are two facility representatives assigned full-time to oversee TWPC operations. The performance plan for these FRs requires that the FRs conduct oversight of back-shift operations at least three times per year. During the RA, neither of the FRs could recall performing any oversight of back-shift operations during the previous 6 months. The DOE RA team also highlighted that DOE oversight of the contractor RA should have been more rigorous.

Highly Enriched Uranium Materials Facility (HEUMF). In 2010, NPO (formerly known as YSO) approved the first annual update to the Documented Safety Analysis (DSA) and Technical Safety Requirements (TSRs) for HEUMF (see the 11/5/10 report). In its approval report, YSO encouraged B&W to investigate the possibility of downgrading some or all of the safety controls that are currently credited for fire prevention and mitigation based on the documented reduction in the dose consequences resulting from the design basis fire. Last week, NPO approved the second annual update to the DSA and TSRs for HEUMF (see the 5/4/12 report). Despite that NPO previously directed B&W to improve the basis for the unmitigated fire and develop a more detailed discussion of the functional requirements for the fire suppression system (see the 12/2/11 report), NPO's recent approval report contains the following guidance: "given the low doses resulting from the design-basis fire accidents in various locations with HEUMF, the need for some of the safety-significant controls is not justified ... NPO [previously] suggested [B&W] should investigate the possibility of appropriately classifying the controls for the design-basis fire ... NPO is still concerned with the proper classification of controls."

Uranium Processing Facility (UPF). DOE Standard 3009, *Preparation for US DOE Nonreactor Nuclear Facility Documented Safety Analyses*, states that source term calculations and dose estimates be based on reasonably conservative estimates of the various input parameters. Last month, the Administrator of NNSA concurred with the method used by the UPF project team to determine a site-specific deposition velocity and concluded that the calculated deposition velocity is acceptable (see the 6/1/12 report). Subsequently, NNSA's Chief of Defense Nuclear Safety (CDNS) provided NPO with additional clarification regarding the calculated deposition velocity for UPF. CDNS identified three "potential non-conservatism or vulnerabilities in the analysis." Specifically, CDNS highlighted potential issues with the UPF project team's determination of friction velocity, Monin-Obukhov length, and particle transfer resistance.