

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 4, 2009

TO: Timothy Dwyer, Technical Director
FROM: Donald Owen and David Kupferer, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending December 4, 2009

Highly Enriched Uranium Materials Facility (HEUMF). YSO has completed its Readiness Verification Review (RVR) and issued its report. The Site Office Manager declared readiness for the NNSA Operational Readiness Review (ORR) to begin next week. The RVR team verified the corrective action plans that B&W developed to address the pre-start findings, post-start findings and weaknesses identified during both B&W's ORR and Implementation Validation Review (see the 11/13/09 and 10/2/09 site rep. reports). B&W has closed all of the findings and most of the weaknesses.

Construction Quality Assurance (QA). As reported on October 23rd, B&W planned to brief the Board on lessons learned from construction QA problems in the Highly Enriched Uranium Materials Facility (HEUMF). This week, B&W presented to the Board and staff a high-level causal analysis and lessons learned for some of the more significant events and discussed utilization for the planned Uranium Processing Facility. The identified causes included inadequate oversight, staffing, and experience with nuclear construction QA among various contractors. B&W management indicated that specific causal analyses of these HEUMF construction QA events has been performed and would be made available for review.

Transuranic Waste Processing Center/Conduct of Operations. Last week, EnergX operators moved loaded remote-handled (RH) waste drums from the hot cell into a steel canister. On Monday night, the same operators decoupled (which includes creating a "horse-tail" in and cutting through the plastic bag-out sleeve) the canister from the hot cell and moved the canister to the Canister Lid Station. At the Canister Lid Station, in violation of the operating procedure, the operators removed the bag-out sleeve remnant (the primary contamination barrier until the canister is closed) from the loaded canister rather than properly position the remnant in the top section of the canister. The operators erroneously believed that the canister they decoupled from the hot cell did *not* contain loaded RH waste drums despite receiving a pre-job briefing a few hours earlier covering the specific task to be performed. The assigned radiological control technician and other radiological control personnel in the area performed swipes and discovered several locations with unexpected contamination. These discoveries led the operators to realize the error of removing the bag-out sleeve remnant from the canister.

A contributing factor to this event is that operators occasionally decouple empty canisters from the hot cell (to allow for moving unused waste drums into the hot cell) and remove the bag-out sleeve remnant. There is no formal operating procedure for this task; however, operators have referred to the aforementioned operating procedure as an aid. During discussion with the site reps., EnergX management noted that it was fortunate that the spread of radioactive contamination was minor (below external reporting thresholds). Compensatory measures were established to resume operations (e.g., floor supervisor present during operations, specific pre-job brief for each decoupling and lidding evolution). EnergX management held an all-hands meeting on the event to emphasize the importance of adhering to procedures and the need for questioning attitude.

ORNL Building 3019/Uranium-233 Disposition. This week, DOE-ORO started its verification review of the Integrated Safety Management System (ISMS) for Isotek. This ISMS review effort includes both Phase I (ISMS description and associated documentation) and Phase II (facility and activity-level implementation) verifications.