

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

TO: Timothy Dwyer, Technical Director  
FROM: William Linzau and Rory Rauch, Site Representatives  
SUBJECT: Oak Ridge Activity Report for Week Ending December 21, 2012

**Unreviewed Safety Question (USQ) Process:** This week, NPO approved a justification for continued operations (JCO) that establishes reduced material-at-risk (MAR) limits for certain forms of uranium-bearing material in Building 9212. These reduced limits are intended to address a discovery that analysts had used non-conservative airborne release fractions (ARFs) for certain forms of uranium-bearing material analyzed in the Building 9212 safety analysis report (see 8/3/12 report). The reduced MAR limits keep the existing safety analysis bounding when the more conservative ARF values are applied.

After discovering this issue, B&W declared a potential inadequacy of the safety analysis (PISA) in March and a positive USQ in July. B&W originally submitted the JCO to address this USQ in October and submitted a revised version of the JCO this week. The site reps have expressed concern to NPO and B&W management that the time it took to perform the USQ determination and the time it took to submit the JCO following the positive USQ declaration was inconsistent with DOE G 424.1-1B, *Implementation Guide for Use in Addressing Unreviewed Safety Questions*. The guide states that the USQ determination should take hours to days and the JCO (or evaluation of the safety of the situation) submittal following a positive USQ declaration should take no more than a month. During this time, B&W continued to operate with a compensatory measure that was originally implemented following the PISA declaration. This compensatory measure, which was primarily implemented by standing order and required no form of implementation verification, was violated in October (see 11/9/12 report). B&W and NPO management have acknowledged the need to strengthen the Y-12 USQ procedure to prevent this situation from recurring. To that end, NPO issued a letter requesting that B&W revise the Y-12 USQ procedure to provide expectations consistent with DOE G 424.1-1B for the timing of the JCO submittal after a positive USQ has been declared. The letter also requests that B&W establish a medium separate from the occurrence reporting and processing system for notifying NPO when a USQ exists.

**Consolidated Edison Uranium Solidification Project (CEUSP):** As part of the Uranium-233 Direct Disposition Campaign at Oak Ridge National Laboratory (ORNL), Isotek Systems, LLC, is planning to ship CEUSP canisters (containing uranium oxide monoliths consisting of 10% U-233 and 75% U-235) to the Nevada National Security Site for disposal as low-level waste. This week, the contractor completed the readiness assessment for this campaign. ORO-EM provided direct oversight of the Contractor Readiness Assessment (CRA) and the site rep observed portions of the CRA, including demonstrations of the planned operations. The supervisors and workers conducted the operations using formal conduct of operations practices such as three-way communications and strict procedural compliance. The CRA team noted one pre-start finding, 17 observations, and seven proficiencies (noteworthy practices). The finding was associated with incomplete implementation of controls to keep occupational exposures as low as reasonably achievable (ALARA) and weaknesses in ALARA work practices, level of knowledge, and planning. The facility management agreed with the finding and started corrective actions during the review. The CRA team concluded that the project is ready to start CEUSP material movements once the noted deficiencies are addressed.