

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 22, 2010

TO: Timothy Dwyer, Technical Director
FROM: Donald Owen and David Kupferer, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending January 22, 2010

Highly Enriched Uranium Materials Facility (HEUMF). Late last week, YSO requested NNSA Headquarters to approve startup of HEUMF. On Friday, the NNSA Administrator provided his approval to startup HEUMF. YSO subsequently provided B&W authorization to startup HEUMF. B&W intends to commence nuclear operations in HEUMF early next week.

Uranium Processing Facility (UPF). B&W submitted a revised Critical Decision (CD) Strategy to YSO that proposes two stand-alone CD-2/3 packages. The scope of the first CD-2/3 package includes site preparation, utility relocation, excavation, mass fill placement, and long-lead procurement of some process equipment; B&W removed construction of the facility base mat from the scope of this initial CD-2/3 package (see the 10/23/09 site rep. report). The schedule contained in B&W's revised CD Strategy includes B&W submitting the initial CD-2/3 package to YSO in May, beginning site preparation in October, and submitting the second CD-2/3 package to YSO in 2012. To help support this schedule, B&W presented the YSO Integrated Project Team a comprehensive briefing regarding progress on preliminary design of UPF.

YSO approved a revision to the UPF Safety Design Strategy (see the 12/11/09 site rep. report). YSO identified a Condition of Approval that containers used for handling and storing enriched uranium must be designated as safety-significant controls and comply with the requirements of DOE Manual 441.1-1, *Nuclear Material Packaging Manual* (see the 12/5/08 site rep. report).

Assembly/Disassembly Operations. B&W conducted an Implementation Validation Review (IVR) of revised safety basis controls for a metal bell chamber used to moderately heat components. Regarding a control to verify that a reactive material has not been loaded in the chamber, the IVR identified a finding regarding inconsistent use of terminology related to "independent verification." In response to this IVR finding, B&W's extent-of-condition review has identified oven operations (capable of much higher temperatures) where a safety basis control also exists to verify that a reactive material has not been loaded. For these oven operations, B&W determined that the safety basis uses inconsistent terminology in both the analysis and the Technical Safety Requirements sections. Specifically, the terms "independent verification" and "double verification" are used. Independent verification as defined in the Y-12 Conduct of Operations Manual generally calls for separating the verification by time and distance from the operation whereas "double verification" is not formally defined. B&W management externally reported this concern, suspended applicable procedures, and identified actions to revise the procedures and safety basis.

Quality Assurance. This week, the site reps. attended training on Commercial Grade Dedication (CGD) that was given by the DOE Office of Environmental Management (EM) to personnel from DOE-ORO and its contractors (e.g., Isotek and Wastren Advantage). DOE-EM is planning to conduct this training at several sites in the Complex to emphasize proper planning for use of CGD in procurement of nuclear safety systems and components.