

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 31, 2009

TO: Timothy Dwyer, Technical Director
FROM: Donald Owen and David Kupferer, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending January 1, 2010

Criticality Safety/Conduct of Operations. In mid-December, YSO management inquired on actions B&W had taken to address conduct of operations concerns associated with recent criticality safety violation events in Building 9212 (see the 12/11/09 site rep. report). In response to YSO's inquiry, B&W management recently provided YSO a written summary of its corrective actions. This summary noted that B&W is making improvements to pre-job briefings and that nuclear operators in Building 9212 received various briefings that reinforced management's expectations with regards to conduct of operations. During discussion with YSO management and the site rep., B&W management indicated that a training session is also being planned in January for all nuclear operations personnel. B&W management indicated the training session will cover the event that occurred in August during which personnel loaded two bag filters into a single drum in violation of the procedural criticality safety limit of one bag filter per drum (see the 11/20/09 site rep. report). B&W management noted the training will address the chief causal factors of the event and reinforce attention to applicable conduct of operations principles.

Casting Operations. On Monday, prior to loading a casting furnace, operators observed that the pre-filter and portions of pre-filter housing had dislodged from the entrance to the vacuum system exhaust duct and fallen into the bottom section of the casting furnace. This pre-filter is made of bronze wool and is intended to remove larger particulates (including uranium) upstream of the main filters for the casting vacuum system. The procedure for loading the casting furnace requires operators to ensure that the pre-filter is in place prior to loading the furnace. This procedural requirement is highlighted in the procedure for its importance to criticality safety. B&W plans to retrieve all damaged items and make a determination of the failure mechanism. In discussion with the site reps, B&W personnel indicated that this type of damage to pre-filter housings has occurred multiple times during the past few years and that an effort to redesign the pre-filter housing is underway. The site reps. note that this event was not internally reported by an Initial Event Information report.

ORNL Tank W-1A. In 2006, Bechtel Jacobs Company (BJC) retrieved numerous samples of highly contaminated soil from 57 bore holes drilled in the immediate vicinity of Tank W-1A. As reported on October 30th, BJC was developing the technical basis to dispose of the 350 yd³ of contaminated soil around Tank W-1A as remote-handled, low-level waste. DOE's Central Characterization Project (CCP) has completed a technical evaluation of the radiological data collected from the aforementioned bore hole samples. The CCP agreed with BJC's expectation that the contaminated soil can be disposed of as low-level waste. BJC recently finalized its technical basis document and has submitted it to the Nevada Test Site for further review.