

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 19, 2006

TO: J. Kent Fortenberry, Technical Director
FROM: R. Todd Davis/Donald Owen, Oak Ridge Site Representatives
SUBJECT: Activity Report for the Week Ending May 19, 2006

Mr. Davis was out of the office this week.

A. Vacuum Pump Filter - Criticality Safety. As reported last week, BWXT declared an Unreviewed Safety Question and a Significance Category-1 nuclear criticality safety concern regarding indications of excessive enriched uranium hold-up and presence of moderation (oil) in a filter housing associated with casting furnaces. Late last week, BWXT submitted a Justification for Continued Operation (JCO) to YSO that provides a proposed approach and technical basis for remediating the situation. The JCO (including referenced documentation) proposes that the filter housing drain valve (a globe valve) be removed and any oil or other material be allowed to drain out. The drain line would be probed with a rod to check for any obstructions. Non-Destructive Assay (NDA) of the filter housing would then be performed to compare mass estimate results against the prior measurement. The JCO states as a main technical basis for personnel to approach the filter housing that uranium solids are assumed to have settled to the bottom of the filter housing. The JCO does not propose any specific restriction(s) on personnel approaching the filter housing (e.g., number of people and/or minimum distance to the housing).

The staff and site rep. inquired on details regarding the assumption that uranium solids have settled and the lack of any specific restriction on personnel approaching the filter housing. In a subsequent discussion between Board members, staff, the site rep. and Y-12 personnel, BWXT management noted that additional information regarding settling of the uranium solids was to be documented and submitted to YSO. BWXT and YSO management also noted that a proposed specific restriction on personnel is being developed and documented. These technical basis documents are expected to be submitted to YSO by early next week.

BWXT management also identified to YSO several actions being taken to assess and correct deficiencies with the Y-12 Uranium Holdup Survey Program. Among these actions is an immediate extent-of-condition review of any other routine NDA holdup measurement points that exceed threshold values and require additional NDA for mass estimation.

B. ORNL Tank W-1A Soil Sampling. As reported on April 21st, Bechtel Jacobs Company (BJC) had suspended their Readiness Assessment (RA) for sampling of the contaminated soil surrounding Tank W-1A. This week, BJC resumed and completed their RA and briefed results to BJC management and DOE-ORO personnel. The RA team noted that the demonstrations of the sampling activity were generally satisfactory. The RA team did identify a few pre-start findings regarding improper setting of radiation detection equipment and incomplete training and training documentation for certain primary and backup personnel. The RA team plans to issue its report by next week. BJC management noted that the sampling operation is now expected to be started by mid-June.