

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 4, 2008

TO: J. Kent Fortenberry, Technical Director
FROM: R. Todd Davis/Donald Owen, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending January 4, 2008

The site reps. were out of the office Monday through Wednesday. Y-12 nuclear facilities were on holiday routine Monday and Tuesday and with reduced staff the remainder of the week.

A. Secondary Extraction. As noted on December 21st, B&W was investigating the presence of heavy organics in the raffinate phase separator. During a previous secondary extraction run in October 2007, an upset condition occurred when power was lost to the contactor motors that resulted in solvent (tributyl phosphate) carryover in the raffinate line. Although the raffinate phase separator was drained to remove the solvent at that time, B&W believes that residual solvent remained in the phase separator and concentrated via evaporation of the diluent over time. B&W believes the solvent concentrated to the point where the density exceeded the aqueous density and resulted in the heavy organics identified by operators. Sampling of other areas in the system has not indicated the presence of any other heavy organics. Nuclear safety personnel concluded that the Justification for Continued Operations adequately covered this scenario in that it recognized the potential for heavy organics in this particular location and requires operator sampling to ensure aqueous solution is present at the bottom of the phase separator. However, B&W intends to revise the procedure for sampling to ensure operators recognize when heavy organics are present. Secondary extraction operations are expected to resume next week.

B. Uranium Processing Facility. YSO issued their oversight plan for the Uranium Processing Facility (UPF) project in late-December. The plan outlines roles, responsibilities, and processes to be used by YSO in meeting the federal oversight requirements defined in various DOE project management and nuclear safety directives. The plan is intended by YSO to cover the duration of the project, but is focused on oversight of UPF design activities with little mention of UPF construction oversight. An update to the plan is intended within a few years prior to any construction. The site reps. consider, however, that near-term incorporation of oversight plans/strategies for UPF construction may be warranted to most effectively capture lessons-learned on construction of the Highly Enriched Uranium Materials Facility over the past few years. The site reps. discussed this observation with YSO management.

C. Oak Ridge Transuranic Waste Processing. Foster Wheeler has been preparing to startup remote-handled transuranic waste processing in the new hot-cell at the Transuranic Waste Processing Center (see the 11/9/07 site rep. report). The contractor Operational Readiness Review (ORR) that was planned to start in early-January has been delayed due to a failure in the main lift mechanism used for moving concrete casks into the hot cell. The contractor ORR is now projected to start no earlier than late-January followed by the DOE ORR in mid-February.

cc
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