

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 7, 2004

TO: J. Kent Fortenberry, Technical Director
FROM: Donald Owen, Oak Ridge Site Representative
SUBJ: Activity Report for Week Ending May 7, 2004

Staff members Contardi, Gutowski, Robinson and Von Holle visited Y-12 to review implementation of corrective actions from the May 2003 glovebox fire/explosion in Building 9202 and progress on the Purification Facility project.

A. Oxide Conversion Facility (OCF) Startup. As reported on April 8th, the site rep. discussed the the BWXT Plan of Action (POA) prerequisites for declaring readiness and starting the Operational Readiness Review with YSO management. The POA prerequisites did not provide a clear minimum standard for practice of procedures after stability of the procedures is reached nor address if full, integrated evolutions (hydrogen fluoride loading through uranium tetrafluoride product canning) were to be demonstrated. Late last week, YSO formally directed a change to the BWXT POA to include a prerequisite that at least two integrated evolutions be performed without issues related to procedure, equipment or operator performance.

BWXT started their (line) Management Self Assessment this week. Various practice cold operations continue. YSO approval of a substantial revision to the OCF portion of the Building 9212 Basis for Interim Operation (BIO) is expected by early next week. As a result of overall delays due to cold operations and revised BIO implementation issues, the planned start of the BWXT Operational Readiness Review has been delayed from late May to mid-June.

Late last week, upon an initial practice of an operation in the product receiver glovebox, about three liters of water flowed from the product receiver into the glovebox when the product discharge valve was opened. The product receiver glovebox ventilation exhaust piping is below and routed to a low point in the B-1 Wing Scrubber tank exhaust piping. Water from a mist eliminator assembly and condensation in the B-1 Wing Scrubber tank exhaust piping is considered to be the source of the water. BWXT is planning to modify the product receiver glovebox exhaust piping to go directly to the stack (and with a low-point drain), thereby isolating this piping from the B-1 Wing Scrubber.

B. Plutonium-238 at ORNL. As reported on April 16th, ORNL had been planning to repackage nine items containing approximately 700 grams of plutonium-238 into special-form capsules for interim storage prior to use in the planned ORNL plutonium-238 production program. Work planning for three of the nine items that have suspect seals (metal O-rings) on the inner container had been in progress. The staff and site rep. discussed plans for the repackaging with DOE-ORO and ORNL personnel. Some glovebox repackaging steps and placement of the inner container (contained in a metal sleeve with a press-fit plug closure) into the special-form capsule were planned to be performed without worker respiratory protection. The latter task was planned to be performed outside of the ventilated glovebox room. Following site rep. and staff inquiry on these issues, DOE-ORO management informed the site rep. this week that respiratory protection will be required for all glovebox steps and for placement of the sleeved inner container into the special form capsule, and that the entire operation will be conducted in the ventilated glovebox room.

C. Y-12 Review of the Columbia Accident Investigation Board (CAIB) Report. Late last week, YSO submitted a report on Y-12's review of the CAIB report to NNSA Headquarters. Among lessons-learned with applicability to Y-12 as noted in the Y-12 report were the need for: adequate technical analysis to support management decisions; management understanding and challenge of the accuracy and quality of details on a recommendation; and proper root cause analysis.