

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 27, 2006

TO: J. Kent Fortenberry, Technical Director
FROM: R. Todd Davis/Donald Owen, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending October 27, 2006

A. Conduct of Operations/Uranium Holdup Survey Program. This week, Nuclear Criticality Safety (NCS) personnel declared a criticality deficiency at the Enriched Uranium Metalworking Building for failure to complete required uranium holdup surveillances. Multiple Criticality Safety Requirements documents are in place for various facility operations that require periodic surveillances to identify uranium holdup. These requirements are implemented via the Uranium Holdup Survey Program that requires surveillances be conducted bi-monthly by production personnel. Completion of these surveillances was discovered to be overdue since July 2006 by the facility Criticality Safety Officer (CSO). Following interaction with the CSO, production crew management informed NCS of the issue on Monday. Subsequent investigation identified that facility operations and shift management personnel had been aware of the late surveillances but did not stop operations nor notify NCS personnel.

On Tuesday, NCS personnel completed evaluation of previous holdup survey data and concluded that facility operations could continue and that current surveillances should be completed as soon as possible. On Thursday, facility personnel completed the holdup surveillances and provided this information to NCS for review. Although some of the holdup survey data exceed action levels and will require further investigation (e.g., shielded surveys), initial NCS review does not indicate a significant increase in uranium holdup levels. BWXT management has assigned an independent investigator to review this event.

Site rep. review of the NCS evaluation supporting continued operations indicates it was based on uranium holdup survey data obtained prior to May 2006. The site reps. have inquired with YSO management as to whether adequate technical basis existed to support continuing facility operations on Tuesday prior to completing the current holdup surveillances.

B. Oxide Conversion Facility. As noted last week, investigation of the small release of hydrogen fluoride (HF) during a safety interlock surveillance had determined that a required vaporizer draining evolution had not been fully completed. While a majority of the HF was drained, BWXT personnel did not use nitrogen to force residual HF back into the cylinder before the evolution was suspended (the interlock surveillance occurred several days after the draining evolution). Failure to complete this portion of the draining evolution left the vaporizer slightly pressurized. This week, in discussion with the site reps. on progress of BWXT's causal analysis, BWXT management stated that a management decision had been made to proceed with the surveillance with the vaporizer pressurized. BWXT's causal analysis is expected to address this issue.

C. Special Processing Activity. As reported on September 22nd, the site rep. had inquired with YSO management on need for control or limitation of the beaker leaching operation. This inquiry was based on BWXT's readiness review for a limited campaign of special machining chips and site rep. review of the new process procedure that allows for a much broader scope of materials including fines, filters, oxides and combustibles. This week, YSO management informed the site reps. that YSO considers that the operation needs to be limited to the reviewed scope pending review of the broader scope of materials. YSO provided direction to BWXT to place a limitation on the beaker leaching operation and requested that justification be provided for processing other materials including a proposal regarding need for additional readiness review.