

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 29, 2001

TO: J. Kent Fortenberry, Technical Director
FROM: Paul F. Gubanc, Oak Ridge Site Representative
SUBJ: Activity Report for Week Ending June 29, 2001

A. Y-12 Disassembly: This week, YAO and BWXT continued to struggle to understand each other's perspective and divine a mutually agreeable path forward to address the issues which were identified and/or revalidated by the terminated NNSA Readiness Assessment (RA) of the new disassembly campaign. A chronology of related formal communications since June 4 is attached. At the root of this difficulty is:

1. YAO has not communicated unequivocally its issues with BWXT line management's failure to recognize what constitutes, and thus its ability to achieve, operational readiness.
2. BWXT senior management has yet to fully appreciate that the readiness recognition problem resides primarily with line management; not with the review teams brought in to assist and assess operations. BWXT's June 27 letter demonstrates this concern.
3. Clear lines of authority, responsibility and communications are not readily apparent within BWXT's manufacturing organization. In particular, the role of the Director's several senior technical advisors vis-a-vis his subordinate managers is unclear. (2-A)

B. Y-12 Development Event: Last week's report described an accident on June 19, where a researcher experienced a violent chemical reaction when scraping experiment residue from a beaker inside a glovebox. Several observations from this week:

1. YAO has reassigned one of their strongest personnel to oversee BWXT's investigation and response to this event. (The assigned YAO Facility Rep for Development has been in qualification for two years and came to the job with little prior relevant experience.)
2. The event was caused in part by a deviation from the standard process which was not reviewed as to the hazard implications. The March 2001 BWXT ISM review specifically identified job hazard identification weaknesses in Development as a significant concern.
3. Last week's letter incorrectly identified Development as a nuclear facility. The several facilities which constitute Development are classified as non-nuclear. (1-C)

C. ORNL Building 3019: The UT-Battelle ORR for the U-233 inspection project, which started on June 18, concluded with an exit brief and report on June 28. The ORR team identified nine pre-start and ten post-start findings. None of the pre-starts appear difficult to resolve and thus the DOE ORR is expected to start on July 16 as planned. With the exception of one individual, the ORR found "formality and discipline of operations was adequate to conduct work safely."

A concern with the DOE ORR Plan of Action is that it does not include review of the vessel off-gas system (VOG). The VOG draws on the storage wells and inspection chamber and is the only credited ventilation barrier to a release from a storage container. Operational ownership for the VOG transitions from ORNL to Bechtel-Jacobs (BJC) at the Bldg. 3019 boundary and the BJC portion includes the HEPAs, blowers and stack. I've discussed this concern with DOE. (3-A)

Attachment

cc: Board Members

Chronology of Events Regarding Response to, and Recovery From, Terminated NNSA Readiness Assessment (RA) of New Disassembly Campaign.

- June 4** The NNSA RA of a new disassembly campaign is terminated due to inadequate readiness. Findings include concerns with walk-in hoods ventilation and non-compliance with DOE's training order. Walk-in hoods in both disassembly and quality evaluation are subsequently secured pending further review and technical justification.
- June 5** BWXT formally requests YAO to suspend the NNSA RA. (The BWXT RA of this activity was also suspended midway to correct numerous findings.)
- June 6** Citing this RA and another premature restart effort, YAO formally requests 1) BWXT provide a plan in one week to address "why the problems discovered by the NNSA reviews were not identified and corrected during the BWXT Y-12 readiness preparations and reviews" and, 2) BWXT's schedule for conducting the NNSA RAs.
- June 11** YAO forwards the NNSA RA report and formally requests BWXT to 1) prepare a plan to start up the new disassembly campaign which, at a minimum, should address the NNSA RA findings, and 2) submit a justification for continued operations within 9204-2E considering the generic issues within one week.
- June 15** BWXT formally responds to the YAO June 6 letter. BWXT announces two new personnel assignments, indicates specific findings are being worked, and identifies two additional BWXT reviews underway to identify generic and cross-cutting issues. The failure of line management to adequately judge readiness is not identified or addressed. BWXT subsequently retracts the letter after YAO's informal response.
- June 19** After months of discussion, YAO formally advises BWXT that it is not complying with DOE's training Order 5480.20A with regard to control manipulations. A corrective action plan is requested in 30 days.
- June 21** BWXT formally provides its justification for continued operation of 9204-2E in response to the YAO June 11 letter. BWXT cites as basis appointment of a new line manager, line management oversight of procedure use, updating of the fire hazard and criticality safety analyses, no adverse findings from review of radiological and industrial hygiene monitoring data, and management oversight of equipment test and inspection (ET&I) activities. BWXT intends to resume 9204-2E work on June 27.
- June 25** In response to BWXT's June 21 letter, YAO formally directs that BWXT "shall not begin operations in the walk-in hoods located in the Building 9204-2E Disassembly Area or the QE [Quality Evaluation] Lab" until YAO has reviewed the supporting technical basis. (Although not stated, the implication is that YAO found the non-hood operations in 9204-2E acceptable to resume. As of June 29, YAO had received BWXT's technical basis, found it wanting, and was assembling additional technical information to develop a defensible path forward.)
- June 27** BWXT formally issues a letter superceding its June 15th submission and responding to

YAO's June 6 letter on inadequate readiness preparations. Of the seven major contributors to inadequate preparedness identified by BWXT, only one potentially appears to touch on line management's failure to recognize what constitutes readiness. BWXT's corrective actions include additional on-going assessments which BWXT declares "equivalent to a Contractor Readiness Assessment." For the disassembly campaign, BWXT then suggests that the NNSA RA simply be restarted following BWXT's corrective actions.

This letter demonstrates BWXT's fundamental lack of understanding regarding the readiness verification process prescribed by DOE O 425.1B. A formal response from YAO to this letter was in preparation on June 28.

June 28 DNFSB issues letter to NNSA Administrator requesting two briefings 1) on actions taken to ensure the disassembly campaign is ready to conduct operations safely, and 2) within 60 days on longer-term corrective actions for both BWXT and YAO.