



Department of Energy
National Nuclear Security Administration
Washington, DC 20585

September 18, 2007

OFFICE OF THE ADMINISTRATOR

Mr. George Dials
General Manager
BWXT Y-12, LLC
Y-12 National Security Complex
Bear Creek Road
Oak Ridge, TN 37831-8245

Dear Mr. Dials:

This letter refers to the Department of Energy (DOE) investigation following the discovery by BWXT Y-12 LLC (BWXT) in May 2006 of the failure to maintain criticality safety controls associated with a Dollinger filter at the Y-12 National Security Complex (Y-12). Based upon our evaluation of the evidence in this matter, including information presented by you and members of your staff during the Enforcement Conference on March 29, 2007, the National Nuclear Security Administration (NNSA) has concluded that violations of Title 10 C.F.R. Part 830, Subpart A, *Quality Assurance Requirements*, occurred. A Preliminary Notice of Violation (PNOV) with a proposed civil penalty is enclosed.

The PNOV identifies violations associated with the failure to maintain effective criticality controls on both mass and moderator in a Dollinger filter. The failure to maintain controls represents an unacceptable decrease in the margin of safety for this nuclear operation. Consequently, the violations were characterized as Severity Level II violations. Specific violations involve deficiencies in the criticality safety evaluation, the processes designed to control work, management processes used to manage the Uranium Holdup Survey Program, and quality improvement processes used to correct and prevent recurrence of problems. As stated above and in accordance with the "General Statement of Enforcement Policy," Title 10 C.F.R. Part 820, Appendix A, each of these violations has been categorized as a Severity Level II violation with a proposed combined civil penalty of \$137,500. Since the violations cited in this PNOV were identified in BWXT's response to a discovery of excess material holdup in the Dollinger filter and subsequent discovery of oil holdup in the filter, no mitigation is provided for self-identification for any of the cited violations. Additionally, because these problems existed for some time, were clearly discoverable, and thus should have been corrected much sooner, NNSA has concluded it is not appropriate to mitigate the proposed penalty for the quality improvement violation. In this case, NNSA also has concerns regarding ineffective conduct of operations associated with this work activity, including poor attention to detail in casting operations and



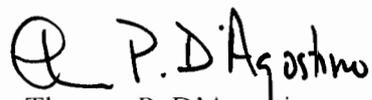
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maintenance, and a lack of technical analysis of abnormal conditions during the period leading up to this incident.

NNSA considered BWXT's timely steps in responding to this potentially serious incident after the condition was identified, the conservative approach to decisions by BWXT management, the rigorous BWXT independent investigation, and the extent of the corrective actions taken by BWXT. In recognition of these steps, NNSA decided to apply 50 percent mitigation for corrective action in determining the proposed penalty for the criticality safety evaluation, work controls, and management processes violations.

You are required to respond to the PNOV within 30 days after it is filed. Instructions for your response are specified in the enclosed PNOV. After reviewing your response, NNSA will determine whether further actions are necessary to ensure compliance with quality assurance and criticality safety requirements.

Sincerely,


Thomas P. D'Agostino
Administrator

Enclosures

cc: Richard Azzaro
Defense Nuclear Facilities Safety Board

September 18, 2007

Preliminary Notice of Violation

BWXT Y-12, LLC
Y-12 National Security Complex

EA-2007-04

A Department of Energy (DOE) investigation into the facts and circumstances surrounding the failure to maintain criticality controls associated with a uranium casting process Dollinger filter identified multiple violations of DOE nuclear safety requirements. The violations included inadequacies in the: (1) Criticality Safety Evaluation (CSE), (2) processes designed to control work, (3) management processes used to manage the Uranium Holdup Survey Program (UHSP), and (4) quality improvement processes used to correct and prevent recurrence of problems. The failure to maintain uranium mass control was discovered on April 25, 2006, and failure to maintain moderator control was identified on May 3, 2006.

In accordance with 10 CFR Part 820, Appendix A, "General Statement of Enforcement Policy," the violations are listed below. Section 830.121(a) requires contractors conducting activities that may affect the nuclear safety of DOE nuclear facilities to conduct work in accordance with the Quality Assurance criteria in 10 CFR 830.122. The following sections of the PNOV enumerate the specific BWXT Y-12, LLC (BWXT) violations of Section 830.122 that occurred in the management of the vacuum system supporting Y-12 uranium casting operations in Building 9212 to include the establishment of process limits and maintenance procedures for the purposes of nuclear criticality control.

VIOLATIONS

I. Criticality Safety Evaluation Deficiencies

Section 830.122(e)(1) states that DOE contractors are to "perform work consistent with technical standards, administrative controls, and other hazard controls adopted to meet regulatory or contract requirements, using approved instructions, procedures, or other appropriate means."

The BWXT CSE documents the analysis process and activities used to determine limits and controls for the safe handling, processing, and storage of fissionable material.

Contrary to the above, the BWXT CSE (all revisions prior to the event) for the uranium casting vacuum system was insufficient in evaluating and identifying the controls, limits, and contingencies necessary to assure that the Dollinger filter remains subcritical under both normal

and credible abnormal conditions. The deficiencies in the uranium casting vacuum system CSE include:

- A. CSE-CE/W-016, *Casting (East and West Lines)*, identified mass as one of three nuclear criticality safety control process parameters. The CSE administratively controlled this process parameter through the UHSP, whereby uranium accumulation in the Dollinger filter housing is detected and cleaned out if needed. However, the CSE was inadequate in that it did not quantify the mass limit or level of concern at which uranium cleanout of the Dollinger filter housing or filter replacement is necessary, even though mass levels of concern are delineated in nuclear criticality safety technical documentation that supported the preparation of the CSE.
- B. CSE-CE/W-016, *Casting (East and West Lines)*, identified moderation as one of three nuclear criticality safety control process parameters. The CSE administratively controlled this parameter through periodic draining of oil from the Dollinger filter housing. However, this control of oil accumulation in the filter housing was inadequate in that (1) no specific time period between draining was specified, (2) the critical quantities of oil were not well established and evaluated, and (3) the possibility of formation of a plug in the filter housing drain was not evaluated or controlled.
- C. CSE-CE/W-016, *Casting (East and West Lines)*, identified reflection as one of three nuclear criticality safety control process parameters. The CSE assumed that neutron reflection would be required to attain criticality. However, a BWXT reanalysis of the CSE following the event determined that reflection was not necessary to attain criticality for large-geometry equipment, such as the Dollinger filter, that has a wide concentration range of homogenous fissile material. The reanalysis therefore determined that reflection was not a credible criticality control for the Dollinger filter.

Collectively, these violations constitute a Severity Level II problem.

Proposed Civil Penalty – \$27,500

II. Work Process Violations

Section 830.122(e)(1) requires that contractors “perform work consistent with technical standards, administrative controls, and other hazard controls adopted to meet regulatory or contract requirements, using approved instructions, procedures, or other appropriate means.”

Contrary to the above, BWXT procedures were not followed or were inadequate to control work activities associated with uranium casting system operations. The failures in work processes include:

- A. Procedure Y/MA-7317, *Uranium Holdup Survey Program*, section VII.A.2, Revision 5, required that Non-Destructive Assay (NDA) Technical Support investigate high points (monitoring points that show readings above pre-established alarm values), and if the high points indicated a significant increase in fissile material, quantitative measurements were to be taken in the region of accumulation. The results of the

quantitative mass estimate were to be reported to Operations and the Nuclear Criticality Safety Organization prior to the next scheduled survey (typically every two months). However, in some cases mass estimates were not resolved within the timeframe required by the procedure. For example, the quantitative mass estimate for the L Dollinger filter was not taken until April 2006, when the need for the mass estimate (high point on the L Dollinger filter) was first identified in January 2005. Further, when the mass accumulation in the L Dollinger filter housing was discovered in April 2006, 21 additional high points were identified that remained unresolved after the next scheduled survey period.

- B. The technical basis document, Y/DD-810, Rev. 2, *Revised Cleanout Guidance for the Dollinger Filter Housings and Associated Ductwork*, May 28, 1998, states that the Dollinger filters are to be periodically replaced. However, no maintenance procedures were established for such periodic replacement, and the filters had not been replaced since 1998.
- C. UHSP survey procedures were not adequate to accurately identify the buildup of fissile material in the Dollinger filter. A single survey point for each Dollinger filter housing, located in the upper third of the housing, is specified in the Y/MA-7318, *Uranium Holdup Point List*, Rev. 14, July 31, 2004. BWXT later determined that fissile material had accumulated elsewhere in the Dollinger filter housing and had not been adequately detected at the specified survey point.
- D. CSE-CE/W-016, *Casting (East and West Lines)*, takes credit for roughing filters (bronze wool filter) in removing larger uranium particulate prior to entry into the vacuum system header. However, no corresponding requirement was specified in the associated CSR-CE/W-016, *Criticality Safety Requirements for Casting (East and West Lines)*, which establishes the controls to support the assumptions and conclusions of the CSE. Additionally, no maintenance procedures were developed for replacing the bronze wool or inspecting the bronze wool filter baskets.
- E. Draining oil from the Dollinger filter housing is addressed by procedure JPA-EW-C-DOLL-001, *E-Wing Casting Drain Dollinger Filter Housings*. However, this procedure did not instruct maintenance personnel to check for any obstruction in the drain valve that could prevent free drainage of the oil from the Dollinger filter housing.
- F. The Roots blowers indicated a constant buildup of oil in the air chamber sight glasses, indicating potential seal failure and subsequent oil leakage to the Dollinger filter housing. However, there was no preventive maintenance procedure to require inspection of the seals for the Roots blowers or recording of how much oil accumulated in and was then removed from the air chambers of the Roots blowers, or how much oil was periodically added to the Roots blowers or Stokes vacuum pumps.
- G. In some cases, BWXT surveillance and maintenance procedures deviated from the vendor recommendations with no established technical basis. The vendor manuals for the Stokes vacuum pumps (CC-87925, *Operating Instructions for Stokes Model 1723 & 1724 Mechanical Pumps*) and the Roots blowers (IRB-201-784, *Instructions – Rotary Lobe Blowers*) used in the casting vacuum system recommend certain surveillance and maintenance actions. Two examples of deviations from these recommendations include:

1. The vendor manual for the Roots blower recommends that after each shutdown of the blower, any accumulated oil should be drained from the blower air chamber. At the time of the L Dollinger filter loss of criticality safety control, BWXT procedures did not specify draining of these chambers after each blower shutdown.
2. The Stokes vacuum pump vendor manual recommends that the gas ballast valve be fully opened, and further notes that the check valve used for gas ballast should be inspected for wear or a broken spring. However, BWXT did not address gas ballast valve position in any operating procedure, and had no preventive maintenance procedure for the gas ballast or check valves.

Collectively, these violations constitute a Severity Level II problem.
Proposed Civil Penalty – \$27,500

III. Management Process Violations

Section 830.122(a) states that DOE contractors are to “(1) establish an organizational structure, functional responsibilities, levels of authority, and interfaces for those managing, performing, and assessing the work and, (2) establish management processes, including the planning, scheduling, and providing resources for the work.”

Contrary to the above, BWXT failed to adequately establish organizational responsibilities and interfaces, to establish management processes, or to provide adequate resources for the UHSP as described below:

- A. The UHSP did not adequately define responsibilities to ensure effective implementation. The UHSP serves as the primary means by which BWXT controls the gradual buildup of uranium mass in equipment in order to ensure that an inadvertent nuclear criticality accident does not occur. In 2003, BWXT management of the UHSP shifted from the Manufacturing organization to the Quality organization, but there was no corresponding formal transition of the interface protocols and authorities to Quality. Several positions that provide support to the UHSP (e.g., criticality safety officer and UHSP database manager) had no defined roles within the UHSP. Also, at the time of the event, responsibility for the nuclear criticality safety aspect of the UHSP was spread among three separate organizations (Quality Assurance, Manufacturing, and Engineering) with no clear process owner, and no group had clear responsibility for trending of survey data.
- B. Established interfaces were not effective in ensuring adequate communications in implementing the UHSP. Specifically, Operations personnel are to notify NDA Technical Support and Nuclear Criticality Safety (NCS) personnel whenever any UHSP survey points are found to be above their alarm point threshold. The NDA staff is then required to perform a qualitative follow-up survey using a shielded detector. If this survey determines that the value is below the alarm point threshold, then the point is considered resolved. If the survey point is confirmed to be high, the NDA Technical Support Team is to perform a mass quantification. However, the status of high points was not always known, communicated, or tracked in a manner to ensure timely resolution. Breakdowns in

communication among the three organizations involved in the nuclear criticality aspect of the UHSP contributed to the delay in resolving high point survey data. In several instances, high points remained unresolved when the next scheduled survey period arrived, and Operations personnel did not follow up to assure that previously-identified high points had been resolved. Operations personnel regarded a lack of response from the NCS organization or the NDA Technical Support Team as an indication that the high point had been resolved. Further, the NCS organization assumed that high points were being processed by the NDA Technical Support Team, with mass estimates being reported accordingly. The three UHSP stakeholders never met to discuss concerns or potential process improvements to the program.

- C. The personnel resources allocated to the UHSP were insufficient to ensure timely resolution of survey high points. In 2001, the NNSA Y-12 Site Office (YSO) issued an independent assessment report regarding the UHSP, noting concerns with the adequacy of human resources assigned to the program. However, UHSP staffing was insufficient to maintain routine operations and support to the UHSP, as evidenced by the UHSP backlog that was present when the L Dollinger filter mass accumulation was discovered in April 2006. The BWXT incident investigation report further supports this conclusion, stating that the UHSP staffing levels in April 2006 were “insufficient to maintain day to day operations and support critical projects on a consistent basis.” The Office of Enforcement’s interviews with both YSO and BWXT personnel also confirmed this conclusion.

This violation constitutes a Severity Level II problem.
Proposed Civil Penalty - \$27,500

IV. Quality Improvement Violations

Section 830.122(c) states that DOE contractors are to “(1) establish and implement processes to detect and prevent quality problems, (2) identify, control, and correct items, services, and processes that do not meet established requirements, and (3) identify the causes of problems and work to prevent recurrence as a part of correcting the problem.”

Contrary to the above, BWXT failed to establish processes to detect and prevent quality problems, to identify and correct conditions that did not meet requirements, and to identify causes of problems and work to prevent recurrence as described below:

- A. Y60-101PD, *Quality Program Description*, section 4.3.2(a), dated February 8, 2006, commits to establish and implement processes to detect and prevent quality problems. However, BWXT failed to detect and prevent problems that contributed to the loss of criticality controls. Specific examples include:
1. Building 9212 Operations personnel performing surveys under the UHSP report their survey data to the NDA Technical Support Team for incorporation into the NDA database. In addition, Operations notifies the NDA Technical Support Team and the NCS organization of any survey points that exceed alarm point thresholds. However,

the UHSP implementing procedure in use at the time of the L Dollinger filter loss of criticality control event did not require tracking and trending of UHSP data, and the UHSP Lead took no action to accomplish this task. By not tracking and trending survey high points, BWXT failed to identify in a timely manner the UHSP weaknesses in the resolution of high point data.

2. Both the Stokes pump and the Roots blower are equipped with sight glasses to monitor the oil levels in the equipment. However, BWXT failed to periodically check the oil levels in the pumps and blowers and to subsequently track and trend the data to determine whether the equipment was experiencing seal leakage. Lack of awareness of the oil levels increased the potential for oil to be transferred to the Dollinger filter housing without the leak being detected.
 3. The BWXT assessment program failed to identify the deficiencies in the UHSP that were subsequently revealed by the investigation of this event. In the years prior to this incident, BWXT had performed no independent assessments covering the UHSP, and BWXT management assessments were collectively inadequate to detect the deficiencies in the UHSP. During the years before the event, management assessments, including those conducted by the Plant NCS Committee, the NCS Advisory Committee, the NCS organization, and the BWXT Analytical Chemistry Group, did not focus substantively on: (1) the basis and adequacy of UHSP actions, (2) the adequacy of flowdown of criticality safety assumptions and bases for uranium casting operations into requirements documents or procedures, or (3) the adequacy of vacuum system operating or maintenance procedures or controls.
- B. Y60-101PD, *Quality Program Description*, section 4.3.2(c), dated February 8, 2006, commits to identify, control, and correct items, services, and processes that do not meet established requirements. However, BWXT failed to correct items and processes that were known to not meet established requirements. Specific examples include:
1. Operations first detected an initial high point on the L Dollinger filter housing in January 2005 and reported the data to the NDA Technical Support Team and the NCS organization. In April 2005 and again in January 2006, the NDA Technical Support Team performed shielded gamma surveys. However, the uranium mass quantification was not completed until March 2006; this measurement was performed by the UHSP as part of a corrective action for a previously identified filter measurement issue, not as a part of routine UHSP alarm point resolution. By neglecting to resolve known high points in a timely manner, BWXT failed to take timely steps (e.g., through filter replacement and housing cleanout) to limit uranium buildup in the Dollinger filters to levels below the 600 gram cleanout threshold established in the technical basis documentation.
 2. After the incident, BWXT discovered that two of the baskets holding the bronze wool filters were damaged, and one basket was found to contain no bronze wool. In some cases, intact bronze wool filters were found in the downstream Stokes filters, apparently having been drawn out of the degraded bronze wool baskets by the system vacuum. However, prior to the incident, maintenance personnel did not report to

management the degraded condition of the baskets during bronze wool filter changes, and the baskets were never repaired. By not correcting the known problems with the bronze wool filter baskets, BWXT increased the potential for enriched uranium buildup in the Dollinger and Stokes filters.

3. Y/DD-810, *Revised Cleanout Guidance for the Dollinger Filter Housings and Associated Ductwork*, Revision 1, dated April 30, 1998, states that “oil will be periodically drained from the Dollinger filter housings” and that “the oil drain valve at the bottom of the Dollinger filter housings shall be periodically checked for operability.” However, the Dollinger filter housing drains are equipped with globe valves, which are not amenable to checking by means of a rod or thin wire. BWXT did not take any action to assure operability of the drain valves by other means. BWXT’s failure to assure that the valves in the Dollinger filter housing drain lines were not obstructed with sludge in the bottom of the housings increased the potential for buildup of oil in the Dollinger filter housing.
 4. Y/DD-810, *Revised Cleanout Guidance for the Dollinger Filter Housings and Associated Ductwork*, recognized in 1998 that pump seal failures resulted in oil backflowing into the Dollinger filter housing. In response to this observation, Y/DD-810 states that seals “will be monitored more closely in the future.” Although the Stokes pump is subject to scheduled preventive maintenance that includes inspection of the pump seals, the Roots blower did not receive this level of attention. Specifically, there is no indication that the Roots blower seals were inspected, even though the constant buildup of oil in the chamber sight glasses is indicative of seal leakage. BWXT’s failure to inspect the Roots blower seals, even though the potential for such leakage was known since 1998, increased the potential for buildup of oil in the Dollinger filter housing.
- C. Y60-101PD, *Quality Program Description*, section 4.3.2(d), dated February 8, 2006, commits to identify the causes of problems and prevent recurrence. However, BWXT failed to identify the causes of problems and take appropriate corrective actions to prevent recurrence. Specific examples include:
1. In June 2005, a high efficiency particulate air (HEPA) filter was determined to contain 170 grams of uranium, exceeding the action level for the filter. This condition was communicated to the NCS organization and the affected Manufacturing supervisor. However, the filter was not replaced at that time. When the NNSA YSO Facility Representative brought this discrepancy to the attention of the area supervisor, the filter was replaced and sent to the NDA Technical Support Team for further analysis. This analysis revealed the filter was loaded with approximately 800 grams of uranium, exceeding the action value stated in the criticality safety evaluation. Subsequent analysis of the HEPA filter by the Analytical Chemistry group indicated the actual loading in the filter to be approximately 1700 grams of uranium. One of the corrective actions resulting from this event was to revise Y/MA-7317, *Uranium Holdup Survey Program*, to include (1) formality of response to NDA identification of high points, (2) assignment of a point of contact to track high points, and (3) guidance for the maximum amount of time that an item can be kept as a high point before final

disposition. The target completion date for this corrective action was February 22, 2006, but as of April 2006 the action had not been completed. Although known problems with the UHSP and high point resolution were identified in August 2005, the corrective actions taken by BWXT to prevent recurrence were neither effective nor timely, as evidenced by the facts surrounding the L Dollinger filter loss of multiple criticality safety controls.

2. BWXT noted that one of the oil gauges on the air chamber of one of the Roots blowers indicated a level that was above the top of the sight glass. The buildup of oil in the chamber of the sight glasses is an indicator of seal leakage, which would increase the potential for oil transfer to the Dollinger filters. However, there is no indication that BWXT sought to identify the cause of oil buildup in the chamber sight glasses or to inspect the Roots blower seals.

Collectively, these violations constitute a Severity Level II problem.

Proposed Civil Penalty - \$55,000

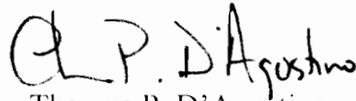
REPLY

Pursuant to the provisions of 10 CFR 820.24, BWXT Y-12 is hereby required, within 30 days after the date of filing this Preliminary Notice of Violation (PNOV), to submit a written reply by overnight carrier to the following address:

Director, Office of Enforcement
Attention: Office of the Docketing Clerk
270 Corporate Square Building
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874-1290

Copies should also be sent to the Y-12 Site Office Manager as well as to my office. This reply should be clearly marked as a "Reply to a Preliminary Notice of Violation" and should include the following for each violation: (1) any facts, explanations and arguments which support a denial that a violation has occurred as alleged; (2) facts that demonstrate any extenuating circumstances or other reason why the proposed remedy should not be imposed or should be mitigated; and (3) full and complete answers to any questions set forth in the Notice. Copies of all relevant documents shall be submitted with the reply. The reply shall include a discussion of the relevant authorities which support the position asserted, including rulings, regulations, interpretations, and previous decisions issued by DOE. Corrective actions that have been or will be taken to avoid further violations should be delineated with target and completion dates in DOE's Noncompliance Tracking System. If BWXT Y-12 agrees to comply with the proposed remedy and waives any right to contest the Notice or the remedy, this PNOV will constitute a Final Order upon the filing of the reply.

If BWXT Y-12 agrees to comply with the proposed remedy in its reply, the penalty of \$137,500 must be paid within 60 days after the reply is filed by check, draft, or money order payable to the Treasurer of the United States (Account 891099) mailed to the Director, Office of Enforcement, Attention: Office of the Docketing Clerk, at the above address. If BWXT Y-12 should fail to reply within the time specified, the Director will request that a default order be issued against BWXT Y-12. If additional mitigation of the proposed civil penalty is requested, BWXT Y-12 should address the adjustment factors described in 10 CFR 820, Appendix A, Section IX.3.



Thomas P. D'Agostino

Administrator

National Nuclear Security Administration

Washington, DC

this 1st day of SEPT. 2007

BWXT Y-12
Failure to Maintain Criticality Controls Associated with a Dollinger Filter
Enforcement Conference Summary

On March 29, 2007, the Department of Energy's Office of Enforcement held an Enforcement Conference with BWXT Y-12 (BWXT) senior management in Germantown, Maryland. The conference was held to discuss apparent violations identified in the Office of Enforcement Investigation Summary Report that was provided to BWXT on January 9, 2007.

Mr. Tony Weadock, Senior Enforcement Officer, Office of Enforcement, presided over the conference and provided introductions and an overview of the conference's purpose and objectives.

The BWXT presentations were opened by the President and General Manager, Mr. George Dials. Mr. Dials introduced the BWXT personnel who were present and provided an overview of the topics to be addressed. Mr. Dials stated that he took the failure to maintain criticality controls associated with the L Dollinger filter very seriously and that BWXT responded conservatively in categorizing the event as a category 1 occurrence. Mr. Dials further stated that he disagreed with some of the conclusions drawn in the Office of Enforcement Investigation Summary Report and in the significance placed on some the issues as noted below by Mr. Gertsen.

Mr. John Gertsen, Engineering Division Manager, continued the BWXT presentation providing:

1. A summary of the event.
2. The BWXT response to the event.
3. The BWXT response to the Office of Enforcement Investigation Summary Report, including BWXT's conclusion that no safety basis violation occurred, that the report implied a higher level of severity than actually existed, that the report duplicated a significant number of issues, and that the assessment program deficiencies were overstated.
4. The corrective actions taken by BWXT to prevent recurrence.

Mr. Gertsen concluded the BWXT presentation by stating that (1) BWXT took the event seriously and responded conservatively, (2) BWXT developed a thorough and comprehensive set of corrective actions, and (3) BWXT disagreed with portions of the Office of Enforcement Investigation Summary Report.

Mr. Weadock concluded the conference by indicating that DOE would consider the information presented in its enforcement deliberations. The conference was then adjourned.

Enforcement Conference List of Attendees

BWXT Y-12

Failure to Maintain Criticality Controls Associated with a Dollinger Filter

March 29, 2007

DOE – Office of Enforcement

Tony Weadock, Senior Enforcement Officer
Kathy McCarty, Acting Director Office of Worker Safety and Health Enforcement
Howard Wilchins, Senior Litigator
Richard Day, Enforcement Officer
Hank George, Technical Advisor

DOE – National Nuclear Security Administration

Roger Lewis, Deputy Administrator for Military Applications, NA-12
Sam Johnson, Manager, NA-173
Edward Blackwood, Enforcement Coordinator, NA-3.6
Tracey Bishop, Engineer, NA-171
Janelle Zamore, Engineer, NA-171

DOE – NNSA Y-12 Site Office

Ted Sherry, Manager
Charles Hughey, Quality Assurance Chief

Central Technical Authority – Chief of Nuclear Safety Office

Larry Berg, Criticality Safety Specialist

BWXT Y-12

George Dials, President and General Manager
John Gertsen, Engineering Division Manager
Les Reed, Manufacturing Division Manager
Bill Tindal, Production Manager
Glenn Pfennigwerth, Uranium Holdup Survey Program, Program Manager
Conard Stair, Enforcement Coordinator
Rebekah Bell, Legal Counsel