



Department of Energy
Washington, DC 20585

June 12, 2002

Dr. B. D. Shipp
[]
Bechtel BWXT Idaho
Idaho National Engineering and Environmental
Laboratory
2525 N. Freemont Avenue
Idaho Falls, ID 83415

EA-2002-02

Subject: Preliminary Notice of Violation and Proposed Imposition of Civil Penalty,
\$41,250

Dear Dr. Shipp:

This letter refers to a Department of Energy (DOE) evaluation of the facts and circumstances concerning events and deficiencies at the Idaho National Engineering and Environmental Laboratory occurring in 2000 and 2001. The DOE Office of Price-Anderson Enforcement (OE), in coordination with the DOE Idaho Field Office, (DOE-ID) conducted investigations of these matters. The results of these investigations were provided to you on April 8, 2002, and an enforcement conference was held with members of your staff on May 2, 2002, to discuss these matters. An Enforcement Conference Summary Report is enclosed.

Based on DOE's investigations and information your staff provided during the enforcement conference and thereafter, the DOE has concluded that violations of 10 CFR 830, *Nuclear Safety Management*, have occurred. These violations are described in the enclosed Preliminary Notice of Violation (PNOV).

Sections I and II of the PNOV describe breakdowns in your work processes. Section I describes performance deficiencies related to drum venting activities at the [] on November 27, 2001. Specifically, the [] Safety Analysis Report establishes the following requirements for drum venting operations: evacuation of personnel from the containment silo, operation of the Air Sweep System, and securing of the silo door. These requirements were not implemented on November 27, 2001, when personnel entered the silo to clear a misfed filter and venting operations resumed prior to their exit from the silo.

Section II of the PNOV describes performance deficiencies associated with a November 6, 2001, event at the [] facility, when Bechtel BWXT Idaho (BBWI) personnel initiated a Lockout/Tagout activity in preparation of changing a coolant pump without an approved work order and without using approved procedures to ensure that the necessary safety measures were met. As a result, the [] 2E NW Experiment Loop was placed in a partially drained condition for over two hours without controls to ensure that an installed experiment in the in-pile -tube remained covered as required by facility procedures.

Section III of the PNOV describes violations of the quality improvement provisions of 10 CFR 830 over a period of many months. The breakdowns cited in this section demonstrate a failure by BBWI to correct quality assurance problems previously identified to BBWI management by BBWI's internal assessment processes, DOE-ID, and OE. In particular, we note the relationship between the matters set forth in the OE Enforcement Letter dated December 7, 2000, and quality assurance events subsequent to the issuance of the letter.

In accordance with the General Statement of Enforcement Policy, 10 CFR Part 820, Appendix A, the violations associated with the [] drum venting event as described in Section I of the enclosed PNOV are classified as one Severity Level II problem with a civil penalty of \$41, 250. In determining the Severity Level, DOE considered the actual and potential safety significance of the event. This event did not result in an actual consequence to personnel who had entered the silo. However, this event is of concern to DOE because it raised issues about lack of operator and supervisor knowledge of the automated drum venting operations, which could have led to matters of consequence. The event is consequential because the contractor's hazard identification and mitigation process was not adequate to identify hazards associated with inadvertent actuation of the drum vent system and to establish positive controls to prevent such actuation, which could result in the potential for an explosion and worker radiological uptake. DOE determined that no mitigation for identification was warranted due to the self-disclosing nature of the event. Twenty-five percent mitigation for corrective actions was awarded in recognition of the actions taken by the contractor in response to the event.

The violations associated with the November 6, 2001, [] loop-draining event as described in Section II of the PNOV have been classified as one Severity Level III problem with no civil penalty. Even though there was no actual consequence to workers, DOE is concerned that the deficiencies spanned different shifts, involved multiple personnel, and represented programmatic breakdowns of key work processes.

The quality improvement violations described in Section III of the PNOV have been classified as one Severity Level III problem with no civil penalty. In reaching this determination DOE recognized the positive efforts of the BBWI Facility Evaluation Board to identify deficiencies through its assessment activities. However, the failure of BBWI to correct recurring or similar quality assurance type deficiencies is of regulatory concern and warrants formal enforcement action.

You are required to respond to this letter and follow the instruction specified in the enclosed PNOV when preparing your response. Your response should document any additional specific actions taken to date. Corrective actions should also be tracked in the Noncompliance Tracking System (NTS). You should enter into the NTS (1) any actions that have been or will be taken to prevent recurrence and (2) the target and completion dates of such actions. After reviewing your response to the PNOV and your proposed corrective actions, DOE will determine whether further enforcement action is necessary to ensure compliance with DOE nuclear safety requirements.

Sincerely,



Howard M. Wilchins
Acting Director
Office of Price-Anderson Enforcement

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Enclosures:

Preliminary Notice of Violation
Enforcement Conference Summary
List of Attendees

cc: W. Bergholz, DOE-ID
S. Somers, DOE-ID PAAA Coordinator
K. Whitham, DOE-ID PAAA Coordinator
L. Fife, BBWI PAAA Coordinator
A. Wagner, BBWI PAAA Coordinator
B. Cook, EH-1
M. Zacchero, EH-1
J. Roberson, EM-1
H. Himpler, EM-5
S. Johnson, EM-5
W. Magwood, NE-1
L. Miller, NE-40
R. Azzaro, DNFSB
S. Hurley, OE
P. Rodrik, OE
Docket Clerk, OE

**Preliminary Notice of Violation
and
Proposed Imposition of Civil Penalty**

Bechtel BWXT Idaho, LLC (BBWI)
Idaho National Engineering and Environmental Laboratory (INEEL)

EA-2002-02

During Department of Energy (DOE) investigations conducted in October 2001, and March 2002, violations of DOE nuclear safety requirements were identified. In accordance with 10 CFR 820, Appendix A, "General Statement of Enforcement Policy," DOE issues this Preliminary Notice of Violation, with Civil Penalty, pursuant to Section 234A of the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2282a. The particular violations and civil penalties are set forth below.

I. Work Process Violations at the []

10 CFR 830.122(e)(1) requires that work be performed 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 [] Safety Analysis Report (SAR) prohibits personnel inside the drum vent silo while drum venting operations are in progress. The [] SAR also requires that the Air Sweep System be operational and the silo door be closed during drum venting operations.

BBWI Management Control Procedure MCP-2981, Revision 1, *Operations Turnover*, requires the off-going shift to discuss and explain any important items that affect facility operations and safety with the on-coming shift or relief personnel.

Contrary to the above, on November 27, 2001, during drum venting operations at the [] facility on drums containing transuranic waste:

1. A BBWI operator was inside the drum vent silo while venting operations were in progress.

2. The silo door was open during drum venting operations.
3. The Air Sweep System was not operational during drum venting operations.
4. The off-going shift failed to fully describe the facility condition to the oncoming shift personnel. Specifically, on-coming personnel were directed to make entry into the silo to align a misfed filter without being informed that the computer controlling the drum venting cycle had been given a command to vent a drum.

Collectively, these violations constitute a Severity Level II problem.
Civil Penalty - \$41,250 (This penalty has been revised downward from \$55,000 in recognition of the corrective actions taken by the contractor in response to the event.)

II. Work Process Violations at the []

10 CFR 830.122(e)(1) requires that work be performed 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.

Technical Procedure OMM 3.15.3.2.15, *Draining the Loop*, Revision 3, Section 2.1, prohibits draining the loop, or any portion of the loop with the test assembly installed unless specifically requested by the Project Engineer and Shift Supervisor.

Technical Procedure OMM 3.15.3.2.15, *Draining the Loop*, Revision 3, Section 3, requires that the IPT Level Transmitter LT-5 be in service and that a temporary fill line be connected to supply makeup water to the loop.

Management Control Procedure, MCP- 2981, *Operations Turnover*, Revision 1, Section 3.1 requires that on-coming personnel conduct a comprehensive review of appropriate logs and records and visual information before responsibility for the operational position is transferred.

Contrary to the above, on November 6, 2001, BBWI personnel performed a Lockout/Tagout (LO/TO) activity in preparation to change an [] Experimental Loop coolant pump. During this activity drain valves were opened without using the appropriate procedures and approved instructions. These failures resulted in the [] Experimental Loop drain valve being opened for approximately 2 hours and 20 minutes and the loop was partially drained with the Experiment Test Assembly still installed in the loop. Specific violations include the following:

1. The [] 2E NW Experimental Loop was partially drained with a test assembly still installed in the loop without the Project Engineer and Shift Supervisor being aware of or approving this action.

2. The [] 2E NW Experimental loop was partially drained while the IPT Level Transmitter LT-5 was not in service and no makeup water was supplied to the loop.
3. Crew 3 personnel assumed responsibility for implementing a LO/TO on the experimental loop without reading or understanding the Loop Operating Control System logbook which contained a caution against draining the loop until the test train was removed or a similar caution note displayed on a white board with the LOCS that is used to provide loop status and turnover information.

Collectively, these violations constitute a Severity Level III problem. In the exercise of its discretion as set forth in 10 CFR 820, Appendix A, DOE has decided to refrain from imposing a civil penalty for these violations.

III. Quality Improvement Violations

10 CFR 830.122(c) requires that DOE contractors (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, BBWI failed to adequately establish and implement processes to detect and prevent quality problems and to identify, control, and correct items, services, and processes that did not meet established requirements. Specifically, DOE issued an Enforcement Letter and Investigation Summary Report to BBWI in December 2000 describing certain quality assurance issues at INEEL. Corrective actions for some of these quality assurance problems were not adequate since these problems continued to occur after DOE issued the Enforcement Letter and Investigation Summary Report. Examples include the following:

1. The December 2000 Investigation Summary Report noted the failure of self/management assessments at various INEEL nuclear facilities to adequately identify quality assurance implementation problems. DOE and BBWI assessments identified the quality assurance problems with self-assessments at nuclear facilities in February 2000, and again in May 2000. In January 2001, the BBWI Facility Evaluation Board (FEB) conducted an independent assessment of the [] Complex and identified quality assurance deficiencies that were long standing and in some cases widespread. BBWI determined that a root cause of these quality assurance deficiencies was ineffective line management self-assessment. Additionally, a March 2001 BBWI FEB assessment of the Power Burst Facility identified deficiencies for which inadequate self-assessment was determined by BBWI to be a cause.
2. The December 2000 Investigation Summary Report described a quality assurance problem associated with the INTEC B-10 Valve Box upgrade project. In this matter,

BBWI personnel initiated work on the project before work control documents were issued. Two similar events occurred at INEEL following the issuance of the Investigation Summary Report to BBWI. One event occurred in January 2001 and involved work on the [] Crane Modification project using unapproved vendor drawings. The second event occurred in November 2001 when work activity began on the [] 2E NW Experimental Loop without an approved Work Order.

Collectively, these violations represent a Severity Level III problem. In the exercise of its discretion as set forth in 10 CFR 820, Appendix A, DOE has decided to refrain from imposing a civil penalty for these violations.

Pursuant to the provisions of 10 CFR 820, BBWI is hereby required within 30 days of the date of this Preliminary Notice of Violation to submit a written statement or explanation to the Acting Director, Office of Price-Anderson Enforcement, Attention: Office of the Docketing Clerk, EH-10/270CC, 19901 Germantown Road, Germantown, MD 20874-1290. Copies should also be sent to the Manager, DOE-Idaho Operations Office, and to the Cognizant DOE Secretarial Offices for the facilities that are the subject of this Notice. This reply should be clearly marked as a "Reply to a Preliminary Notice of Violation" and should include the following for each violation: (1) admission or denial of the alleged violations; (2) any facts set forth which are not correct; and (3) the reasons for the violations if admitted, or if denied, the basis for the denial. Corrective actions that have been or will be taken to avoid further violations will be delineated with target and completion dates in DOE's Noncompliance Tracking System. In the event the violations set forth in this Preliminary Notice of Violation are admitted, this Notice will constitute a Final Notice of Violation in compliance with the requirements of 10 CFR 820.25.

Any request for remission or mitigation of civil penalty must be accompanied by a substantive justification demonstrating extenuating circumstances or other reasons why the assessed penalty should not be paid in full. Within the 30 days after the issuance of this Notice, unless the violations are denied, or remission or mitigation is requested, Bechtel BWXT Idaho shall pay the civil penalty of \$41,250 imposed under section 234a of the Atomic Energy Act of 1954, as amended, by check, draft, or money order payable to the Treasurer of the United States (Account 891099) and mailed to the Director, Office of Price-Anderson Enforcement, Attention: Office of the Docketing Clerk, at the above address. Should Bechtel BWXT Idaho fail to answer within the time specified, Bechtel BWXT Idaho will be issued an Order imposing the civil penalty.

In requesting additional mitigation of the proposed civil penalty, Bechtel BWXT Idaho should address the adjustment factors described in 10 CFR 820, Appendix A, section IX.

A handwritten signature in cursive script that reads "Howard M. Wilchins". The signature is written in black ink and is positioned to the left of a vertical line.

Howard M. Wilchins
Acting Director
Office of Price-Anderson Enforcement

Dated at Washington, DC,
this 12th day of June

Enforcement Conference Summary
Bechtel BWXT Quality Issues at [] and []

The Department of Energy (DOE) held an Enforcement Conference with Bechtel BWXT on May 2, 2002, in Germantown, Maryland, at 10:00 a.m., to discuss quality assurance issues that were identified in an Investigation Summary Report dated April 8, 2002. A summary of the Enforcement Conference is provided below.

Howard Wilchins, Office of Price-Anderson Enforcement, chaired the Enforcement Conference and made introductory remarks for DOE. Paul Divjak provided opening remarks for Bechtel BWXT.

Arthur Clark, Bechtel BWXT, provided a discussion of work process improvements that had been implemented following the issuance of a DOE Enforcement Letter Bechtel BWXT in December 2000. A copy of the slides from which Mr. Clark spoke has been placed in the docket file for this matter.

David Bright, Bechtel BWXT, provided a summary of the Drum Venting event. The handout provided by Mr. Bright has been placed in the docket file. During the discussion, Mr. Bright made a number of points addressing the safety consequences of the event. These points, which were contained in the handout as well, were placed in the docket file and given appropriate consideration.

Christopher Midget, Bechtel BWXT, provided a summary of the [] Loop Draining event. A copy of the handout provided by Mr. Bright has been placed in the docket file.

Alan Wagner discussed the Bechtel BWXT position in requesting mitigation consideration. A summary has been placed in the docket file.

Mr. Divjak provided closing remarks on behalf of the contractor.

DOE asked Bechtel BWXT if any factual accuracy issues were identified in the Investigation Summary Report. Mr. Midget identified one issue on page 9 of the Investigation Summary. The fourth paragraph, 1st sentence reads, "The Crew 3 Plant Foreman and personnel performing this work did not read the log entry and status board and/or did not understand the instructions prohibiting the loop draining." Mr. Midget stated this fact only is true for the Crew 3 personnel and not the Plant Foreman. The change identified was incorporated by reference into the Report.

Mr. Wilchins adjourned the Enforcement Conference at 1:00 p.m.

May 2, 2002

Bechtel BWXT Idaho
Potential Violations of 10 CFR 830.120

Enforcement Conference List of Attendees

Office of Price-Anderson Enforcement

Howard M. Wilchins, Presiding Officer
Sharon Hurley, Senior Enforcement Officer
Peter Rodrik, Enforcement Officer
Anthony Weadock, Enforcement Officer
Steven B. Hosford, Technical Advisor

Office of Environmental Management

Henry Himpler, DOE PAAA Coordinator
George Dixon, [] Scientist
John Serocki, ID Site Liaison

Office of Nuclear Energy

Lawrence Miller, PAAA Coordinator

Idaho Operations Office

Edward Ziemianski, Director, []
W. Stephen Somers, PAAA Coordinator

Bechtel BWXT Idaho

Paul Divjak, Executive Vice President and Chief Operating Officer
Arthur Clark, General Manager, Site Operations
David Bright, [] Site Area Manager
Christopher Midgett, Site Area Director, [] Area