



Department of Energy
Washington, DC 20585

October 4, 2007

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. William Elkins
Project Director
Bechtel National, Inc.
2435 Stevens Center Place
Richland, WA 99354

EA-2007-05

Dear Mr. Elkins:

This letter refers to the Department of Energy (DOE) investigation into the facts and circumstances associated with design and procurement deficiencies at the Waste Treatment and Immobilization Plant (WTP), currently under construction on the Hanford Site. The Investigation Summary Report, dated May 9, 2007, was provided and an Enforcement Conference conducted on July 11, 2007, in Richland, Washington. A summary of the conference is enclosed.

Observed deficiencies in your quality assurance program have raised DOE concerns about the quality level of certain structures, systems, and components necessary to support their intended function in planned highly-radioactive waste treatment plant operations. Based on our evaluation of the evidence in this matter, including information that you and members of your staff presented during the conference, DOE has concluded that violations of 10 C.F.R. Part 830, *Nuclear Safety Management*, have occurred. The enclosed Preliminary Notice of Violation (PNOV) EA-2007-05 describes the violations and a total proposed civil penalty of \$165,000.

DOE recognizes that the issues referenced in this PNOV are contemporaneous with those issues identified in the previous enforcement action and concludes that corrective actions previously taken would not have been expected to prevent recurrence of the current issues. The investigation revealed programmatic breakdowns in which design changes were not properly staffed, such as the lack of As Low As Reasonably Achievable design reviews prior to the removal of radiation shielding from joggles. Other violations were the result of repetitive failures to review supplier submittals adequately in order to verify that equipment or components met engineering and quality specifications. Violations associated

with the commercial grade dedication (CGD) process included the use of CGD to purchase equipment based on cost and schedule drivers when a nuclear quality assurance level 1 (NQA-1) supplier was available and the failure to appropriately identify critical characteristics in assessing the quality of commercial grade items.

In considering the severity of the violations, DOE considered the fact that the noncompliances were corrected before construction progress made correction unfeasible or, in the case of some joggles installed without radiation shielding, the condition was determined to be acceptable upon further analysis. The penalties associated with these noncompliances were reduced from 25 to 75 percent due to the Bechtel National Incorporated's (BNI) self-reporting of the noncompliances, the rigor of the causal analysis, and the thoroughness of corrective action taken to prevent recurrence. As identified in a previous Office of Enforcement notice of violation, this investigation revealed instances in which technical staff was either too inexperienced or not sufficiently trained and indoctrinated to properly consider nuclear quality in making project decisions. The proposed penalty is also merited because of BNI's inability to consistently identify problems in a timely manner which can lead to an unacceptable delay in detecting conditions adverse to quality. For example, there was a delay in realizing that the fixes to the CGD process implemented in December 2004 were ineffective and introduced additional problems. With regard to the deficiencies with joggle installations, an employee first identified the problem in January 2005, but BNI failed to investigate the full scope of the problem until December 2005. The consequence of the untimely identification of quality problems will be magnified as the waste treatment plant design and construction moves forward and is accelerated, where possible.

We note that you have made significant improvements during a period in which construction was suspended to include training of staff on revised procedures. However, DOE remains concerned that you sustain these improvements once construction resumes. It is DOE's expectation that BNI will take aggressive actions to enhance its ability to proactively identify problems in a timely manner and take prompt corrective action to prevent recurrence. We also expect that you and your staff will properly balance safety and quality with construction cost and schedule pressures.

In accordance with 10 C.F.R. Part 820.24, *Preliminary Notice of Violation*, you are required to respond within 30 days of the date of this letter and to follow the instructions specified in the enclosed PNOV when preparing your response. After reviewing your response to the PNOV, including any proposed, additional corrective actions entered into the Noncompliance Tracking System, DOE will

determine whether further enforcement action is necessary to ensure compliance with DOE nuclear safety requirements. DOE will continue to monitor the completion of corrective actions until these matters are resolved.

Sincerely,

A handwritten signature in black ink, appearing to read "A. Guevara", with a large, stylized initial "A" and "G".

Arnold E. Guevara
Director
Office of Enforcement
Office of Health, Safety and Security

Enclosures

cc: Michael Cochrane, BNI Enforcement Coordinator
Richard Azzaro, DNFSB

Preliminary Notice of Violation

Bechtel National, Inc.
Hanford Site

EA-2007-05

As a result of a Department of Energy (DOE) investigation into the facts and circumstances associated with design and procurement deficiencies at the Waste Treatment and Immobilization Plant (WTP), currently under construction on the Hanford site, multiple violations of DOE nuclear safety requirements were identified. The violations included: (1) deficiencies in the implementation of design changes to radiation shielding of wall penetrations called joggles; (2) deficiencies in implementing a commercial grade dedication (CGD) program; (3) deficiencies related to the review and acceptance of supplier submittals; and (4) deficiencies in the procurement and testing of Integrated Control Network (ICN) system software. The associated violations have been grouped and categorized as six Severity Level II violations and two Severity III violations for a combined proposed civil penalty of \$165,000.

In accordance with 10 C.F.R. 820, Appendix A, *General Statement of Enforcement Policy*, the violations are listed below. 10 C.F.R. 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 C.F.R. 830.122. The following sections of the Preliminary Notice of Violation (PNOV) enumerate the specific Bechtel National, Incorporated (BNI) violations of 10 C.F.R. 830.122 that occurred in the design of the WTP and in the processes used by BNI to procure items necessary for construction.

VIOLATIONS

I. Deficiencies Associated with Joggled Wall Penetrations

A. Work Processes

10 C.F.R. 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.”

10 C.F.R. 830.122(f)(2) states that DOE contractors are to (2) “incorporate applicable requirements and design bases in design work and design changes;” (3) “identify and control design interfaces;” and (5) “verify or validate work before approval and implementation of the design.”

Contrary to the preceding requirements, multiple instances of procedural noncompliance occurred during a design change allowing for the removal of shield plates from certain joggles. These deficiencies involved: (1) failure to incorporate design requirements; (2) failure to adequately coordinate design changes with all affected organizations; (3) failure to incorporate As Low As Reasonably Achievable (ALARA) reviews; and (4) failure to identify these problems in the review and approval process. Specific examples are listed below.

1. The BNI *Quality Assurance Manual* (24590-WTP-QAM-QA-01), Policy Q-03.1, requires design work, including changes, to incorporate applicable requirements and design bases. Contrary to this requirement, BNI failed to incorporate necessary requirements in a joggle shield plate design change. In February 2004, BNI approved and issued Design Change Notice (DCN) 24590-HLW-M0-30-00028002, *Offset Pipe Shield Plate Installation Table*, to remove shield plates from joggles not already installed at WTP. The Responsible Engineer for this DCN failed to incorporate necessary design requirements that were established in the supporting calculation 24590-HLW-Z0C-30-00021. This problem was first identified in January 2005 through a BNI field inspection.
2. The BNI *Engineering Drawings* procedure (24590-WTP-3DP-G04B-00046), section 3.2.1, requires that design changes, including DCNs, be reviewed by all affected organizations to ensure that the design approach is adequate and that design changes comply with applicable calculations. Contrary to this requirement, in February 2004, BNI approved and issued DCN 24590-HLW-M0-30-00028002 without first performing the required reviews by affected organizations. The BNI causal analysis (24590-WTP-RCA-ENG-06-0001) found that the DCN was not reviewed by all affected disciplines, resulting in failure to revise individual joggle drawings, failure to revise the design guide, and failure to revise the mechanical equipment installation specification. Further, section 3.4.2 of the procedure requires the Area Discipline Supervisor to confirm that the required coordination reviews have been completed, and to review the DCN for technical adequacy and conformance to project design requirements. Contrary to this requirement, the supervisor who approved the DCN failed to ensure that necessary coordination reviews were performed, a new or revised ALARA Design Review (ADR) was performed and documented, and that the DCN was technically adequate to address limitations in the supporting calculation 24590-HLW-Z0C-30-00021.
3. The BNI *Design Change Control* procedure (24590-WTP-3DP-G04T-00901), section 3.2, requires design changes to be reviewed in accordance with the BNI procedure *Application of ALARA in the Design Process* (24590-WTP-GPP-SRAD-002). Procedure 24590-WTP-GPP-SRAD-002, section 3.4.4, requires ADRs to be performed and

documented as the design develops. Contrary to this requirement, DCN 24590-HLW-M0-30-00028002 to remove joggle shield plates was approved and issued without the required ADR first being performed.

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

B. Training

10 C.F.R. 830.122(b)(1) requires DOE contractors to “train and qualify personnel to be capable of performing their assigned work.”

The BNI *Quality Assurance Manual* (24590-WTP-QAM-QA-01), Policy Q-02.2, requires that personnel managing or performing activities affecting quality shall receive indoctrination in their job responsibilities and authority, and general criteria (including applicable codes and standards, company procedures, and quality assurance program requirements) before performing quality-affecting work.

Contrary to these requirements, BNI supervisors assigned inexperienced personnel to perform quality-affecting work who had not received adequate indoctrination in company procedures and their job responsibilities. Specific examples are listed below.

1. BNI assigned an inexperienced engineer to develop DCN 24590-HLW-M0-30-00028002. The BNI causal analysis (24590-WTP-RCA-ENG-06-0001) identified that this individual was a recent college graduate who did not understand the intricacies of the design and the impact of applicable limitations of the supporting calculation to the design change. The BNI management processes in place were insufficient in providing the engineer with adequate oversight by more senior personnel to assure that quality-affecting tasks were properly executed. The BNI decision to (1) place a recent engineering graduate who did not fully understand the impact of the design changes being made, and (2) fail to provide sufficient oversight of his work, contributed to the engineer’s failure to include necessary design requirements in the DCN, failure to coordinate the DCN with all affected groups, and failure to perform the required ADR.
2. The BNI *Engineering Drawings* procedure (24590-WTP-3DP-G04B-00046), section 3.2.2, requires the accuracy of a DCN to be checked by a person who is adequately qualified. Contrary to this requirement, the BNI causal analysis (24590-WTP-RCA-ENG-06-0001) identified that the checker assigned to review DCN 24590-HLW-M0-30-00028002 was inexperienced and failed to identify the discrepancies described in paragraph A.1 above.

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

C. Quality Improvement

10 C.F.R. 830.122 (c) requires DOE contractors 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 these requirements, BNI failed to control and correct processes for the design and installation of new joggles, following the discovery in January 2005 of installed joggles that were not in compliance with design calculations. BNI continued to install non-complying joggles until December 9, 2005, when a hold on further installations was put into effect by BNI. The causal analysis for the noncompliances discovered in January 2005 was not completed until May 2006. Of the 15 joggles installed between January and December 2005, several were found to be noncompliant with the ALARA calculations. Noncompliant joggles were either relocated before the concrete wall was poured, or were found to be acceptable by further analysis.

This violation constitutes a Severity Level III problem.
No proposed Civil Penalty

II. Deficiencies Associated with Review of Supplier Submittals

A. Work Processes

10 C.F.R. 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.”

Contrary to this requirement, BNI identified eleven instances between March 2004 and January 2006 where supplier submittals did not conform to specified requirements, but were accepted. The deficiencies included (1) failure to adequately review submittals for all necessary requirements, and (2) acceptance of submittals without first resolving a known noncompliance in accordance with BNI procedures. Examples of these deficiencies are listed below.

1. The BNI *Supplier Engineering and Quality Verification Documents* procedure 24590-WTP-3DP-G04B-00058, Revision 4, section 3.2, requires the engineer to identify and document a comprehensive set of engineering and quality verification requirements, and section 3.4 requires the engineer to conduct a review of supplier submittals for compliance with these engineering and quality requirements. Contrary to these requirements, BNI engineers approved six supplier submittals in which the necessary engineering and quality verification requirements were either not identified or not reviewed as required. As a result, these supplier submittals were accepted, but did not conform to specification requirements:

- a. 24590-WTP-CAR-QA-04-031 identified a supplier submittal that was accepted with ultrasonic testing rather than the required radiological weld inspection.
 - b. 24590-WTP-CAR-QA-04-090 identified a vendor submittal that was approved, but did not incorporate an issued DCN.
 - c. 24590-WTP-CAR-QA-04-127 identified that a supplier submittal was accepted with a welding procedure that was noncompliant with the specification.
 - d. 24590-WTP-CAR-QA-05-004 identified a supplier submittal that was accepted, but did not comply with the specification requirements for surface finish and sandblasting material, and did not address descaling requirements.
 - e. 24590-WTP-CAR-QA-05-203 identified that BNI accepted nine hatches that did not meet design requirements.
 - f. 24590-WTP-CAR-QA-06-032 identified a supplier submittal that was accepted, but did not comply with the weld inspection qualification requirements in the specification.
2. BNI *Supplier Engineering and Quality Verification Documents* procedure 24590-WTP-3DP-G04B-00058, Revision 4, contains requirements for BNI personnel to review supplier-provided products to assure that terms and conditions of the procurement documents are met. This review is intended to identify nonconforming products that could adversely impact safety if accepted and installed. Section 3.4.5 of this procedure requires the engineer to identify and document the acceptance status of supplier submittals following the review. Status level 3 indicates the supplier submittal does not conform to specification requirements or is otherwise unacceptable. The engineer must obtain supervisory approval for assignment of status level 3.

Contrary to this requirement, on two occasions the engineer or BNI management approved a supplier submittal when a nonconforming condition was identified during the review or known to exist by BNI management. These violations are discussed in more detail below.

- a. CAR 04-148 identified that the engineer approved a vendor *Safe Change HEPA Filter Housing* submittal that was not compliant with the specification. The BNI causal analysis (24590-WTP-RCA-ENG-06-0001) identified that the engineer knew the submittal did not include a required code compliance matrix and had asked the vendor to submit this information. However, the engineer failed to assign the required status level 3 to this submittal that would have required the vendor to comply with the specification before initiating fabrication. As a result, the vendor designed, fabricated, and shipped the HEPA filter housing without providing the required code compliance matrix.

- b. CAR 05-283 identified the approval of fireproofing supplier submittals that were not in compliance with the specification requirements. The BNI causal analysis (24590-WTP-RCA-ENG-06-0001) identified that the engineer was aware of the noncompliant condition and brought it to the attention of BNI management. Management decided to assign a status level 2 to this submittal allowing work in the field to continue, rather than the required status level 3 requiring the vendor to comply before the initiation of field work. Subsequently, the vendor failed to address the noncompliant condition and BNI put a hold on this work.

Collectively, these violations constitute a Severity Level II problem.
Proposed Civil Penalty - \$13,750

III. Deficiencies Associated with the Commercial Grade Dedication Process

A. Noncompliance with the DOE Approved Quality Assurance Program (QAP)

10 C.F.R. 830.121(b) requires DOE contractors to (1) “submit a QAP to DOE for approval...” and (4) “conduct work in accordance with the QAP.”

Contrary to these requirements, BNI failed to conduct work in accordance with the DOE approved QAP requirements. The QAP requirements are established in the BNI *Quality Assurance Manual* (24590-WTP-QAM-QA-01). Specific examples are provided below.

1. On October 29, 2001, BNI issued the implementing CGD procedure, 24590-WTP-3DP-G04T-00909, *Commercial Grade Dedication*, Revision 0. This procedure failed to include the requirements and limitations in the approved *Quality Assurance Manual* (QAM) that limited commercial grade items to those identified in the manufacturer’s published description (catalog). In May 2004, BNI issued CGD package 24590-WTP-CGD-M-04-0002, *HLW Canister Grapples*, Revision 0, in which the grapples were not ordered from the specifications set forth in the manufacturer’s product description. This deficiency existed until August 2005, when the QAM was revised to remove this requirement.
2. On October 29, 2001, BNI issued the implementing CGD procedure, 24590-WTP-3DP-G04T-00909, Revision 0. This procedure included the application of CGD to procurement activities outside the scope of the requirements and limitations in the approved QAM, in that the QAM did not provide for the CGD of services. In December 2004, BNI issued CGD package 24590-WTP-CGD-M-04-0001, *Analytical Laboratory Shielded Glass Windows*, Revision 5, which required the vendor to provide design services for the glass window to be specifically designed to WTP specifications. This deficiency existed until May 2006, when the CGD procedure was revised to remove all references to the CGD of services.
3. On December 14, 2004, BNI issued the implementing CGD procedure, 24590-WTP-3DP-G04T-00909, Revision 1. This procedure allowed exceptions to the requirements of the QAM. Specifically, the procedure allowed the use of the CGD process in cases

where cost, schedule, technical, or other factors would make it impossible, impractical, or significantly cost-disadvantageous to purchase from an available NQA-1 supplier. In addition, the CGD procedure provided an exception that allowed the use of the CGD process in cases where the definition of a commercial grade item was not met. In December 2004, BNI issued CGD package 24590-WTP-CGD-M-04-0001, *Analytical Laboratory Shielded Glass Windows*, Revision 5, in which an available NQA-1 supplier was not selected for the procurement based on cost. The Manager of Engineering approved this CGD procurement. This deficiency existed until May 2006, when the CGD procedure was revised to remove these exceptions.

Collectively, these violations constitute a Severity Level II problem.

Proposed Civil Penalty - \$27,500

B. Work Processes

10 C.F.R. 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 BNI *Commercial Grade Dedication* procedure, 24590-WTP-3DP-G04T-00909, requires the engineer to identify and document the critical characteristics for acceptance (CCFA) of the commercial grade item in the CGD package, and requires the engineer to identify the appropriate acceptance method for verifying the critical characteristics.

Contrary to these requirements, BNI failed to identify the CCFA and to perform the appropriate acceptance review for commercially dedicated items. BNI surveillance, 24590-WTP-SV-QA-06-113, dated April 12, 2006, found five CGD packages, out of a sample of 11, which did not identify the CCFAs or properly verify implementation of the CCFAs. Details of the five CGD package noncompliances identified in the April 12, 2006, surveillance are provided below.

1. CGD package 24590-WTP-CGD-M-04-0003, *Remote Clamp Connectors*, dated December 30, 2004, required a Certificate of Compliance as verification of CCFAs. BNI CGD procedure 24590-WTP-3DP-G04T-00909, Revision 3, section 2.2, stated that Certificates of Compliance are not acceptable for verification of CCFAs.
2. CGD package 24590-WTP-CGD-M-03-0003, *Thermal Catalytic Oxidizer/Reducer*, dated May 10, 2004, required a Certificate of Compliance as verification of CCFAs. BNI CGD procedure 24590-WTP-3DP-G04T-00909, Revision 3, section 2.2, stated that Certificates of Compliance are not acceptable for verification of CCFAs.
3. CGD package 24590-WTP-CGD-PL-05-0001, *Air Permit SS Pipe Spools*, dated October 06, 2005, identified a failure mode of “containment failure due to gasket sealing surface damage or incorrect configuration.” However, no CCFAs were identified to ensure gasket seating surface integrity or configuration.

4. CGD package 24590-WTP-CGD-PL-04-0004, *Valves, Butterfly, Stainless Steel-Resilient Seated*, dated November 30, 2005, identified a failure mode of “incorrect dimensions could cause a structural failure.” However, no measurement of material thickness, a critical assumption in the seismic analysis, was required as a CCFA.
5. CGD package 24590-WTP-CGD-M-04-0002, *HLW Canister Grapples*, dated May 11, 2004, used a CGD verification process that was not an approved process identified in the CGD procedure 24590-WTP-3DP-G04T-00909, Revision 3.

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

C. Quality Improvement

10 C.F.R. 830.122(c) requires DOE contractors 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 these requirements, BNI failed to implement effective corrective actions when discrepancies between the *Quality Assurance Manual* (24590-WTP-QAM-QA-01) and CGD implementing procedure, 24590-WTP-3DP-G04T-00909, were initially discovered and documented in CAR 04-095 dated July 17, 2004. This deficiency continued to exist until it was identified again through a BNI-initiated surveillance of their CGD process (documented in 24590-WTP-SV-QA-06-113) in March 2006.

This violation constitutes a Severity Level II problem.
Proposed Civil Penalty - \$41,250

IV. Deficiencies in ICN Software Procurement

A. Work Processes

10 C.F.R. 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.”

Contrary to these requirements, BNI failed to comply with established procurement requirements when procuring the ICN software. Specific examples are listed below.

1. Procedure 24590-WTP-GPP-GPX-00402_1, *Evaluation of Proposals/Source Selection*, states that the technical evaluation of the proposal shall include, at a minimum, a determination of whether the proposal meets minimum requirements of the solicitation.

However, at the time of the award of the Purchase Order, the selected vendor was not qualified to supply Quality Level (QL) 3 items.

2. Procedure 24590-WTP-3DP-G04T-00905, *Determination of Quality Levels*, dated October 8, 2001, Revision 0, defines a QL-3 procurement as “IHLW [Immobilized High-Level Waste] product quality-affecting items and services that affect the functionality of a SSC [systems, structures, and components] item that are not designated as SDC [safety design class] or SDS [safety design significant].” This QL determination is based on the evaluation contained in the *IHLW Acceptance Items and Activities List*. On April 24, 2000, BNFL Inc., the former prime contractor for the design and construction of the WTP, in their *HLW Waste Acceptance Items and Activities*, defined what was to become the ICN as an item that does affect the quality of IHLW, thus requiring a QL-3 procurement. On October 24, 2001, two weeks after the determination was made to change the procurement of the ICN from QL-3 to Commercial Material (CM), BNI issued its *Waste Acceptance Impacting Items and Activities* (Revision 0), which deferred determination of whether or not the ICN was IHLW-affecting. Given that the ICN was previously determined to be IHLW-affecting and that BNI deferred reconsideration of this position when the ICN software was procured, the conservative and regulatory approach to the procurement of the ICN should have been at QL-3.
3. Procedure 23490-WTP-GPP-GPX-00301_1, *Solicitations*, states that Requests for Proposals should be written and contain all information necessary to enable prospective offerors to prepare proposals properly. Additionally, the procedure provides a list of items that should be included in the solicitation. Quality Assurance/Quality Control requirements are included on the list. The procedure goes on to state that if BNI changes, relaxes, increases, or otherwise modifies its requirements, either before or after receipt of offers, a written addendum to the solicitation must be issued. However, when the quality level of the procurement was changed from QL-3 to CM after award of the Purchase Order, no written addendum to the solicitation was generated, circumventing the established procurement process.
4. As stated previously, the quality level for the procurement of the ICN software was changed on December 17, 2001, from QL-3 to CM. However, the QAM and procedure 24590-WTP-3DP-G04T-00905, *Determination of Quality Levels*, Revision 0, which were in effect at the time of the change, do not address a CM level of procurement.

Collectively, these violations constitute a Severity Level III problem.
No proposed Civil Penalty

REPLY

Pursuant to the provisions of 10 C.F.R. 820.24, BNI is hereby required, within 30 days after the date of filing this 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 Assistant Secretary for Environmental Management and the Manager of the DOE Office of River Protection, 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 reasons 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 BNI 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 BNI agrees to comply with the proposed remedy in its reply, the penalty of \$165,000 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) and mailed to the Director, Office of Enforcement, Attention: Office of the Docketing Clerk, at the above address. If BNI should fail to reply within the time specified, the Director will request that a default order be issued against BNI. If additional mitigation of the proposed civil penalty is requested, BNI should address the adjustment factors described in 10 C.F.R. 820, Appendix A, Section IX.3.



Arnold E. Guevara
Director
Office of Enforcement

Washington, DC
this 4th day of October 2007

Bechtel National Incorporated
Design and Procurement Deficiencies at the Waste Treatment and Immobilization Plant
Enforcement Conference Summary

On July 11, 2007, the Department of Energy's (DOE) Office of Enforcement held an Enforcement Conference with Bechtel National Incorporated (BNI) senior management in Richland, Washington. The conference was held to discuss apparent violations identified in the Office of Enforcement Investigation Summary Report (ISR) that was provided to BNI on May 9, 2007.

Mr. Arnold Guevara, Director, Office of Enforcement, presided over the conference, and provided introductions and an overview of the conference's purpose and objectives.

The BNI presentation was opened by the Project Director, Mr. William Elkins. Mr. Elkins opened with a safety remark, introduced the BNI personnel who were present, and provided an outline of the topics to be addressed. Mr. Elkins provided an overview of the Waste Treatment and Immobilization Plant (WTP) project. In response to the Office of Enforcement ISR, Mr. Elkins acknowledged the four issues that were the subject of the report and committed to actions to change the WTP project nuclear safety culture. Mr. Elkins concluded his opening remarks by noting BNI nuclear culture change progress achieved thus far through the BNI Nuclear Safety & Quality Imperative (NSQI) project.

Mr. Leon Lamm, Manager of Engineering, addressed the four issues contained in the Investigation Summary Report. Mr. Lamm discussed the joggle penetration deficiencies associated with work processes, training, and quality improvement to include the BNI corrective actions taken and performance improvement results achieved. Mr. Lamm continued with a background discussion on the BNI supplier submittal process and addressed the work process deficiencies included in the ISR. Some discussion focused around the issue of the acceptance of supplier submittals with known deficiencies and a sentence in the ISR which stated that "these cases were more serious because they represent an apparent intentional violation of requirements." The BNI position is that the intent of the actions taken was to assure conformance to authorization basis requirements. Mr. Lamm then presented the deficiencies associated with the procurement of the Integrated Control Network software and the associated corrective actions. Mr. Lamm stated that BNI had completed a review of all plant components, that had been designated as a Quality Level procurement but are now designated as Commercial Material, and no issues were discovered. Mr. Lamm concluded his presentation with a discussion of the deficiencies associated with the BNI Commercial Grade Dedication (CGD) process to include quality improvement, non-compliances with the Quality Assurance Manual, and work processes. Mr. Lamm covered the BNI corrective actions that have been taken and

stated that some additional corrective actions are planned, and that the review of all existing CGD packages is ongoing.

Mr. George Clare, Deputy Project Manager for Operations & Assurance, continued the BNI presentation by covering their NSQI project. Mr. Clare provided an overview of past and future NSQI initiatives, a graphic depicting the NSQI work breakdown structure and associated actions, a timeline for major milestones, and a crosswalk of issues in the ISR and the NSQI focus areas. Mr. Clare then provided several pieces of data indicating nuclear safety culture improvements at the WTP project. Mr. Clare summarized his presentation by stating that initial enhancements to WTP project processes are complete and showing improvement, emphasis on WTP project nuclear safety culture will continue, and that the NSQI project is addressing the issues highlighted in the ISR.

Mr. Dave Jantosik, Quality Assurance Manager, presented recent quality process improvements taken by BNI to include: (1) the establishment of the Project Issue Evaluation Report database; (2) a new causal analysis procedure; (3) institutionalizing the concept of Human Performance Improvement; (4) a revised management assessment procedure; (5) the establishment of a Differing Professional Opinion process; and (6) the establishment of the Contractor Assurance Department within BNI.

Mr. Elkins then concluded the BNI presentation by addressing factors for the Office of Enforcement to consider when exercising its application of enforcement discretion and mitigation. Mr Elkins stated, in part, that the issues contained in the ISR are taken seriously by BNI and Washington Group International management, issues were self-identified through assessment or a questioning attitude, issues were promptly identified and reported, in-depth causal analyses were performed, and there was no risk to BNI workers or the public. Mr. Elkins summarized the BNI presentation by stating that BNI has made substantial progress, the NSQI project has allowed for the identification of obscured program weaknesses, BNI has a balanced set of priorities, and the BNI management team has the experience and commitment to implement a strong nuclear safety and quality culture.

Mr. Guevara 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

**Bechtel National Incorporated
Design and Procurement Deficiencies at the Waste Treatment and Immobilization Plant**

July 11, 2007

DOE – Office of Enforcement

Arnold Guevara, Director
Kathy McCarty, Acting Director Office of Worker Safety and Health Enforcement
Peter Rodrik, Acting Director Office of Price-Anderson Enforcement
Richard Day, Enforcement Officer
Steve Hosford, Technical Advisor

DOE – Office of River Protection

Shirley Olinger, Acting Manager
Lewis Miller, Senior Technical Advisor
Wahed Abdul, Project Director for High Level Waste
Patrick Carrier, PAAA Coordinator

Bechtel National

Dennis Dreyfus, Manager of Quality Assurance

Bechtel National Incorporated

William Elkins, Project Manager
George Clare, Deputy Project Manager for Operations & Assurance
Leon Lamm, Manager of Engineering
Steve Lynch, Deputy Manager of Engineering
David Jantosik, Quality Assurance Manager
Michael Cochrane, PAAA Coordinator